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# Feedback provision, nurses' well-being and quality improvement: towards a conceptual framework

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**Feedback provision, nurses' well-being and quality improvement: towards a conceptual framework**

*Aim* This contribution develops a conceptual framework that illustrates how feedback on quality measurements to nursing teams can be related to nurses' well-being and quality improvement.
*Background* It is assumed that providing nursing teams with feedback on quality measurements will lead to quality improvement. Research does not fully support this assumption. Additionally, previous empirical work shows that feedback on quality measurements may have alienating and demotivating effects on nurses.
*Evaluation* This article uniquely integrates scholarly literature on feedback provision and strategic human resource management.
*Key issue* The relationship between feedback provision, nurses' well-being and quality improvement remains unclear from research until now.
*Conclusion* Three perspectives are discussed that illustrate that feedback provision can result in quality improvement at the expense of or for the benefit of nurses' well-being. To better understand these contradictory effects, research should examine nurses' perceptions of feedback as mediating variables, while incorporating context factors as moderating variables.
*Implications for nursing management* Nursing management can use feedback on quality measurements to nursing teams, as a tool for enhanced quality and as a motivating tool. However, nurses' perceptions and contextual variables are important for the actual success of feedback.

*Keywords*: feedback, nurses' well-being, quality improvement, quality measurement

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## Introduction

Understanding the quality of hospital care through quality measurements has become increasingly important. Patients, insurers, politicians and the media demand an ever-increasing amount of transparency on the results of health care. This has led to a proliferation of quality measurement and reporting activities within health care organisations (Ketelaar *et al.* 2011). One of the primary purposes for measuring and reporting



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health care performance is to stimulate quality improvement within health care organisations (Berwick *et al.* 2003, Ikkersheim & Koolman 2012). There are several ways in which quality measurements can be used for quality improvement. A thorough review of the literature shows that, within hospitals, feedback is one of the most frequently used instruments (De Vos *et al.* 2009). In the present article, we focus on feedback provided to nursing teams on a regular basis, that is based on measurable aspects of nursing care that indicate potential problems or a good quality of care. Examples of such quality measurements are the incidence of pressure ulcers and the rates of falls (Needleman *et al.* 2007).

The underlying idea of providing nursing teams with feedback on quality measurements is that the quality of care will be improved if nurses are – regularly – informed about their performance, thereby allowing them to assess and adjust their performance (Flottorp *et al.* 2010). Feedback, in this sense, has a developmental purpose (Aguinis 2013). However, although it seems logical that feedback will lead to quality improvement, worldwide research does not empirically support this assumption fully (Jamtvedt *et al.* 2006). Recent studies have also indicated that feedback on quality measurements can have alienating and demotivating effects on nurses and thereby decrease nurses' well-being at work. To nurses, it may seem that what is not measurable is not considered to be of importance by the nursing management (Doherty 2009, Struijs & Vathorst 2009). This is worrisome, since nurses' well-being at work is crucial for effective, efficient and high-quality care (Franco *et al.* 2002). In addition, a decrease in nurses' well-being may boost nurses' intention to leave their profession (Hasselhorn *et al.* 2008).

Research until now has mostly studied the effect of feedback provision on nurses' well-being and the effect of feedback provision on quality improvement separately and not in relation to each other (Struijs & Vathorst 2009, Jamtvedt *et al.* 2006). However, quality improvement in nursing care through feedback provision, can only be achieved by the nurses themselves. Hence, a better understanding of the role of nurses in linking feedback to quality improvement is needed. In this article, we focus on nurses' well-being, since it may mediate the effect of feedback provision on quality improvement, and because it is an important outcome in its own right (Franco *et al.* 2002).

We argue that a better understanding of the inter-relationships between feedback provision, nurses' well-being and quality improvement is important to create insight in how feedback provision on quality measurements to nursing teams works most effectively. In this contribution, we develop a conceptual framework that illustrates these inter-relationships. With this, we contribute to the literature in three ways. First, based on new insights from strategic human resource management (HRM) literature we argue that well-being can mediate the relationship between feedback provision and quality improvement. Second, based on job demands–resource theory and attribution theory, we argue that the effect of feedback provision on nurses' well-being and quality improvement is mediated by nurses' perceptions of feedback. Third, we argue that the context, i.e. the feedback environment, influences nurses' perceptions of feedback. Nursing management can use these new insights to refine feedback on quality measurements to nursing teams, as a tool for enhanced quality and as a motivating tool.

## The current literature on feedback provision

Research about feedback provision on quality measurements in health care is relatively new. Historically, the individual health care professional was considered to be the only person who could evaluate his or her own performance (Flottorp *et al.* 2010). This view is no longer tenable since empirical research has shown that health care professionals, with nurses being no exception, are not always in the best position to assess their own performance accurately (Gunningberg & Idvall 2007, Flottorp *et al.* 2010). Therefore, in the past two decades, measuring the quality of (nursing) care and providing feedback on this has become increasingly important. However, feedback defined more generally as all actions taken by (an) external agent(s) to provide information regarding some aspect (s) of one's performance, has for a long time been one of the most widely applied psychological interventions inside and outside health care organisations (Kluger & DeNisi 1998, Kluger & Van Dijk 2010). Not surprisingly, research about feedback in general dates back almost 100 years (Kluger & DeNisi 1998). Both research about feedback on quality measurements in health care, as well as research about feedback in general, will be discussed here in order to conceptualise the inter-relationships between feedback provision, nurses' well-being and quality improvement.

### Feedback provision and well-being

The relationship between feedback provision and well-being has generally been ignored in research until now. This applies to both research about feedback on

quality measurements in health care, as well as to research about feedback in general. However, recently, a qualitative (grounded theory) study has been published on the impact, from a nurses' perspective, of a quality register that provides nurses with feedback on the quality of end-of-life care (Lindblom *et al.* 2012). In the focus group interviews in this study, nurses described feedback from the quality register as an opportunity to become aware of and to reflect upon the care provided. Moreover, the nurses described how they became motivated for quality improvement (Lindblom *et al.* 2012). However, other studies show less positive reactions from nurses. For example, qualitative research in the Netherlands about nurses' perspective on, among other things, the use of quality measurements, shows quality measurements can undermine the value of work that is non-measurable and non-visible, like 'comforting patients' or 'showing empathy', thus leading to alienation and demotivation among nurses (Struijs & Vathorst 2009).

## Feedback provision and quality improvement

Most studies about feedback published to date, focused on the relationship between feedback provision and organisational outcomes, such as quality improvement or performance in general. The results are heterogeneous. From a literature review of 53 papers, Van der Veer *et al.* (2010) concluded that the effect of feedback on the quality of care remains unclear. Van der Veer *et al.* (2010) focused on feedback provided to health care professionals based on medical registries; a systematic and continuous collection of a defined data set for patients with specific health characteristics. Without distinguishing between different types of health care professionals, such as nurses or physicians, they found that some studies in the review indicated a positive effect on the quality of care, while some studies indicated a mix of positive and no effects, and some studies did not indicate any significant effects at all. Similarly, in an extensive meta-analysis of 118 randomised trials, Jamtvedt *et al.* (2006) have shown that the effects of feedback in health care vary greatly across the different studies: ranging from a negative effect to a positive effect. In only three studies in this review were the providers under study nurses, and they appeared to differ regarding the effects of feedback; one study found a significantly positive effect of feedback on the quality of care (Jones *et al.* 1996), one study only found temporary positive effects (Moongtui *et al.* 2000) and in one study no significant effects were found at all (Rantz *et al.* 2001). Research about feedback in general, also shows heterogeneous results. Kluger and DeNisi (1996) presented a meta-analysis on the results of feedback research that has been performed over the last century, which showed the widely shared assumption that feedback consistently improves performance to be false. On the contrary, in more than one-third of the interventions included in their meta-analysis, feedback appeared to actually lead to a reduction in performance.

## The underlying mechanisms and interrelationships

Little is known about the mechanisms underlying the effectiveness of feedback. Van der Veer *et al.* (2010) found that the following factors may influence the effectiveness of feedback on quality measurements in health care: (trust in) quality of the data, motivation of the recipients, organisational factors (e.g. support by the management and availability of resources) and outcome expectancy of the feedback recipients. From the review by Jamtvedt *et al.* (2006), no conclusions can be drawn about the dynamics underlying feedback, since they only reported on effects without considering the underlying mechanisms. A problematic issue in both reviews comprises the heterogeneity of the feedback interventions included, which makes straightforward comparisons between feedback interventions complicated, and makes it hard to draw definite conclusions on the effects of feedback. For example, feedback can be an important intervention tool by itself, or it can be linked to other activities, such as training (De Vos *et al.* 2009, Van der Veer *et al.* 2010). Besides the variation in the way feedback provision is shaped, variation also exists in the way it is implemented. For example, some hospitals may take a top-down approach, while other hospitals take a more bottom-up approach by involving the nurses in the design phase (Van der Most 2010).

To better understand the mechanisms underlying the effectiveness of feedback in relation to performance, Kluger and DeNisi (1996) developed the preliminary 'feedback intervention theory' (FIT). The central explanatory theme of this FIT is not how feedback affects one's learning or motivation to perform a task, but rather how the feedback focuses one's attention. A key insight from Kluger and DeNisi (1996) is that the effectiveness of feedback decreases when it shifts attention toward meta-task processes (e.g. implications of the feedback for the self) and away from the task at hand. For example, instead of motivating nurses to improve the quality of care, feedback may raise concern among nurses about their own competencies.

How feedback affects the attention depends on: (1) the cues of the feedback message; (2) the nature of the task performed; and (3) situational and personality variables. In recent years, steps have been taken in empirical work to provide insight in these variables, for example: feedback framing (positively or negatively), feedback type (comparative or task-referenced), amount of procedural information and information specificity, contract type (performance-contingent or fixed wage), task type (promotion or prevention tasks) and performer level (high or low performer) (Anseel *et al.* 2006, Feys *et al.* 2011, Murthy & Schafer 2011, Van Dijk & Kluger 2011). The FIT and affiliated studies certainly provide clues for effectively using feedback provision to stimulate quality improvement. However, the relationship between feedback provision and employee well-being seems to be neglected.

As presented, the current literature on feedback does not sufficiently provide us with insight to conceptualise the inter-relationships between feedback provision, nurses' well-being and quality improvement. Research that links the effect of feedback on employee or nurses' well-being, to the effect of feedback on organisational outcomes, such as quality improvement or performance, is missing. Therefore, in this article, we build upon the literature on strategic HRM to conceptualise the relationship between feedback provision, nurses' well-being and quality improvement.

## Three perspectives from strategic HRM

Within the literature on strategic HRM, a lively debate exists on the relationship between HRM practices – all employee management activities –, employee well-being and organisational performance (Guest 2002, Peccei 2004, Boselie *et al.* 2005, Paauwe 2009, Van de Voorde 2009). Examples of important HRM practices in hospitals are aimed at performance management, training, decentralisation, participation, team working and employment security (West *et al.* 2006). Given the variability in HRM practices (in terms of content, but also in terms of implementation) and context, the impact of HRM practices on performance will always be heterogeneous (Wright & Nishii 2007, Boxall & Macky 2009). Therefore, research about the 'black box' of HRM is aimed at understanding how HRM practices affect performance, by identifying the processes and mediating variables that link HRM practices to performance. Several HRM scholars argue that bringing employees into the equation between HRM practices and performance, is a 'conditio sine qua non' when studying the 'black box' of HRM (Guest 2002, Paauwe 2009). More specifically, the integration of employee well-being is an important issue, as employee well-being is an essential outcome in its own right (Peccei 2004, Van de Voorde 2009). Moreover, competing perspectives stand out with respect to the position of employee well-being in the equation between HRM practices and performance (Peccei 2004, Van de Voorde 2009). Within the HRM literature, three competing perspectives can be distinguished on the relationship between HRM practices, employee well-being and performance: a mutual gains perspective, a conflicting outcomes perspective and a parallel effects perspective. These perspectives can be used to describe the relationship between feedback provision, nurses' well-being, and quality improvement (see Figure 1).

### Mutual gains: positive well-being as a mediator between feedback provision and quality improvement

From a *mutual gains perspective*, employee well-being is a mediating variable between HRM and

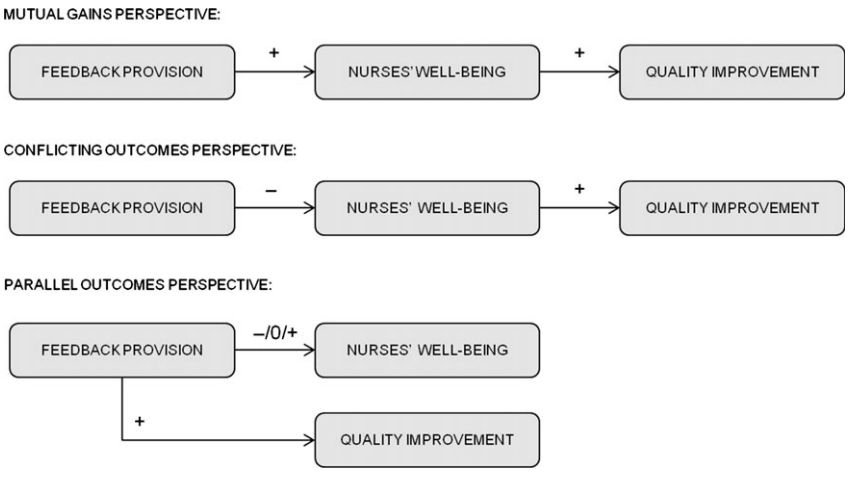


**Figure 1**
Schematic representation of the mutual gains, conflicting outcomes and parallel outcomes perspective on the relationship between feedback provision on quality measurements to nursing teams, nurses' well-being and quality improvement (–, negative effect; +, positive effect; –/0/+, negative, no, or positive effect).

performance; that is to say, HRM practices can foster employee well-being resulting in improved performance. It is assumed that HRM practices can lead to employee empowerment and more interesting, rewarding and supportive work environments, and this, in turn, will result in higher employee well-being (Peccei 2004). In return to an increased well-being, employees are assumed to 'repay' the organisation by working harder and by engaging in various forms of citizenship behaviour, which, over a certain period of time, are expected to enhance organisational performance (Peccei 2004, Boxall & Macky 2009, Van de Voorde 2009, Wood *et al.* 2012). Hence, from the mutual gains perspective both employees and employers can benefit from HRM practices. This optimistic perspective (Peccei 2004) is described by Boxall and Macky (2009) as the motivational path by which performance is 'indirectly' – by affecting employee well-being – influenced by HRM practices.

From the mutual gains perspective, feedback provision on quality measurements to nursing teams can improve the quality of care through an increase in nurses' well-being, which may take place through several routes. First, feedback provision can lead to a greater understanding amongst nurses of the hospital's objectives, and their role in the achievement of these goals. This may give nurses more control over their work and may reduce their uncertainty, because they know what their supervisors expect from them resulting in more intrinsically enjoyable and less stressful work (Harley *et al.* 2010, Wood & De Menezes 2011, Wood *et al.* 2012). Second, being informed about the quality of care, and its improvements, may increase nurses' pride in their work and in their contribution to the success of the hospital, reinforcing feelings of contentment and enthusiasm (Wood & De Menezes 2011). Third, feedback provision may increase the meaningfulness of the work for the nurses themselves, which, in turn, may increase the perceived social value of the work (Wood & De Menezes 2011). Finally, the feedback provision may increase satisfaction and contentment through its impact on the nurses' ability to learn (Wood & De Menezes 2011). Indeed, nurses' might welcome the chance, provided by the feedback information, to develop themselves. When feedback provision leads to an increase in nurses' well-being, this will, from a mutual gains perspective, automatically result in quality improvement. Nurses will, in return for an increased well-being, 'repay' the hospital by putting more effort in quality improvement.

## Conflicting outcomes: negative well-being as a mediator between feedback provision and quality improvement

The *conflicting outcomes perspective* follows the idea that HRM practices can intensify work demands, resulting in stress. This stress contributes to an increased effort by employees which will lead to improved performance. Or, as Parker and Slaughter (1988) formulated it: HRM practices are based on 'management by stress'. Stress in this sense forms a modern type of coercion and this may generate conflicting outcomes for employers and employees (Peccei 2004, Wood *et al.* 2012). Employers benefit in terms of performance, while employees have less control, have to work harder and are under greater pressure at work. Employers, from this perspective, use HRM practices to efficiently exploit their human resources, who are, according to some critics, mostly unaware of this exploitative nature of HRM practices (Guest 2002).

Following this pessimistic perspective (Peccei 2004), feedback provision on quality measurements to nursing teams could improve the quality of nursing care through a decrease of nurses' well-being. First, feedback may have a negative effect on well-being because it may imply or be accompanied by pressures to improve the quality of care. When quality measurements show that the quality of nursing care is below the desired level, this forces nurses to initiate quality improvement actions. The pressure to improve the quality of care may raise concern among nurses about their own competencies. Such questioning may reduce nurses' self-efficacy and psychological and economic security, as they perceive that jobs are threatened if performance does not improve (Wood & De Menezes 2011). Especially in recent times of cost-cutting in health care, and an overall decrease in job security, this may be relevant. Second, pressures to improve the quality of care, based on the feedback that is provided, may also enhance nurses' perceived obligations or job demands. This increase in job demands, can lead to job strain (Karasek 1979, Bakker & Demerouti 2007). Third, nurses may perceive feedback as an instrument for management to closely supervise and judge them and therewith increase the nurses' subordination, which may decrease nurses' trust in the nursing management. When feedback provision leads to a decrease of nurses' well-being, this will, from a conflicting outcomes perspective, result in quality improvement, since a decrease in nurses' well-being, contributes to an increased effort by nurses to improve the quality of care.

### Parallel outcomes: the direct effect of feedback on well-being and quality improvement

From the parallel outcomes perspective, employee well-being is an outcome of HRM practices parallel to performance-related outcomes. From the *parallel outcomes perspective* organisational performance is 'directly' influenced by HRM, by enhancing knowledge and skills (Batt 2002). This is what Boxall and Macky (2009) call the cognitive path. Thus, from this perspective feedback can improve the quality of care through an increase in nurses' knowledge, by which nurses simply know better what to do, and how to improve the quality of nursing care.

From the parallel outcomes perspective, the effect of HRM practices on well-being is analogous to the side effect of the treatment (Wood *et al.* 2012). Following this perspective, feedback on quality measurements to nursing teams may have a positive or a negative effect on nurses' well-being, but this is secondary to the direct positive effect that feedback has on quality improvement. For example, a possible negative effect of feedback on well-being, parallel to the direct effect of feedback on quality improvement, may be a reduction in role clarity. As described earlier, to nurses, it may seem that the value of work that is non-measurable and non-visible, yet also more intrinsically motivating, is undermined (Doherty 2009, Struijs & Vathorst 2009), which may result in uncertainty about what nursing care is all about.

Also, from this perspective, feedback on quality measurements to nursing teams may have no effect, whatsoever, on nurses' well-being. This possible limited effect of feedback on well-being can be explained by the multi-dimensional character of well-being (Peccei 2004). Employee well-being can be categorised in psychological, physical and social well-being (Grant *et al.* 2007, Van de Voorde 2009). Psychological well-being focuses on the subjective experiences of individual employees, such as job satisfaction and commitment to the organisation. Physical well-being is about the health of employees (Grant *et al.* 2007, Van de Voorde 2009). Social well-being refers to the quality of interactions between employees, or between employees and their supervisor or the organisation they are working for (Grant *et al.* 2007, Van de Voorde 2009). The diversity of dimensions within the concept of employee well-being makes it difficult to study well-being as a whole (Grant *et al.* 2007, Van de Voorde 2009). Feedback might have multiple effects on various aspects of employee well-being. The effects may be mutually contradictory, so that, in practice, they may end up crowding each other out. For example, feedback might be motivating, but at the same time, it may lead to stress.

Knowing that the relationship between feedback provision, nurses' well-being, and quality improvement can be described from a mutual gains, a conflicting outcomes and a parallel outcomes perspective, the next question to be asked is: 'What determines which perspective is followed in practice?'. Important here is how nurses perceive the feedback provision.

## Nurses' perception of feedback

Do nurses perceive the feedback provision on quality measurements to nursing teams as a burdening job demand or as a job resource that helps them to improve the quality of nursing care? Do they perceive the feedback provision as an act by management to exploit them or as an act of support? These perceptions may influence nurses' reactions in attitude and behaviour. Indeed, HRM literature indicates that HRM practices exist objectively, yet must be perceived and interpreted subjectively by each employee him or herself, and it is based on these perceptions that employees will react (Bakker & Demerouti 2007, Wright & Nishii 2007, Boxall & Macky 2009). The differentiation between 'objective' and 'perceived' feedback provision is very important, yet is generally not explicitly made in research on feedback provision.

### Job demand or job resource

In general, feedback is 'objectively' described as a job resource; something that is functional in achieving work goals, reduces the effect of job demands, or stimulates personal growth, learning and development (Demerouti *et al.* 2001, Bakker & Demerouti 2007). Indeed, it is often assumed that feedback provision on quality measurements to nursing teams helps nurses to understand the larger context of their performance better, so that they can think of better ways of doing their jobs, make more effective decisions and take more appropriate actions. However, this assumption is not based on how nurses perceive feedback provision. Feedback provision can be perceived by nurses as a job resource, but it can also be perceived as a job demand; something that requires sustained effort or skills and are therefore associated with certain costs (Demerouti *et al.* 2001, Bakker & Demerouti 2007).

From a mutual gains perspective, nurses will perceive feedback as a job resource. Feedback is interpreted here as a means to decrease uncertainty and

ambiguity and is assumed to increase the meaningfulness of work and nurses' pride in their work. From the conflicting outcomes perspective, nurses will perceive feedback as a job demand, since feedback may increase nurses' perceived obligations and may raise concerns about nurses' own competencies. From the parallel outcomes perspectives, nurses will perceive feedback first and foremost as a job resource, since feedback may increase nurses' knowledge about the quality of nursing care. However, from this perspective, feedback may, at the same time, also be perceived as a job demand, since it may for example raise concerns about what nursing care is all about.

### Attribution of the 'why' of feedback

An important factor that might influence nurses' perception of feedback provision on quality measurements to nursing teams as a job demand or a job resource, is the attribution the nurses make about management's purpose in implementing feedback. In other words, what are the nurses' causal explanations regarding management's motivation for providing feedback on quality measurements? Nishii *et al.* (2008) have shown that this attribution matters when studying the relationship between HRM, employee well-being and organisational performance. Nishii *et al.* (2008) distinguish between internal and external attributions. Attributing feedback provision to external factors implies that management is perceived as a passive recipient of external, environmental forces. In relation to feedback on quality measurements, the societal pressure for transparency could be a particular relevant external attribution; nurses might believe that management's purpose in implementing feedback is only to adhere to societal norms on transparency. Nurses that make such types of attributions will probably perceive feedback as a job demand, requiring extra effort.

Attributing feedback provision to internal factors can be either commitment- or control-focused (Arthur 1994, Nishii *et al.* 2008). Commitment-focused attributions connote positive consequences for employees. For example, nurses may believe that management's purpose is to support nursing teams in their quality improvement endeavour. As a result, nurses may perceive feedback as a job resource. Control-focused attributions connote negative consequences for employees. For example, nurses may believe that management's purpose with implementing feedback provision is to closely supervise and judge the quality of care delivered by the nursing team. Nurses that make such types of attributions will probably perceive feedback as a job demand.

From the above it can be assumed that nurses' attribution about management's purpose in implementing feedback, followed by nurses' perception of feedback as a job demand or job resource, determines if the relationship between feedback provision, nurses' well-being and quality improvement can best be described from a mutual gains, a conflicting outcomes or a parallel outcomes perspective. Additionally, we advocate a more contextual approach in studying feedback provision on quality measurements to nursing teams.

## The importance of context

Several studies on the interrelations between HRM practices, well-being and performance, have pleaded for a more contextual approach (Boselie *et al.* 2003, Boxall & Macky 2009, Paauwe 2009). The concept of 'fit' is often used in the HRM literature to come to a better understanding of the impact of the context on the success of HRM practices (Wood 1999, Paauwe 2009). For example, the 'organisational fit' between HRM practices and the cultural heritage (e.g. existing norms and values amongst employees) within the organisation is of great importance when studying the effectivity of HRM practices. Also within the field of quality improvement methods in health care, the particular context is becoming more important (Fixsen *et al.* 2005, Kaplan *et al.* 2012).

The tendency in the literature on feedback has largely been to neglect the impact of the context. Differences in the context, such as features of the nurses and the hospital, matter when studying the relationship between feedback provision, nurses' well-being and quality improvement. For example, research in the field of feedback provision shows that an organisation's 'feedback environment' is important in relation to the impact of feedback provision on performance (Dahling *et al.* 2012). A strong feedback environment, also called a feedback culture (London & Smither 2002), can generally be described as an organisational environment that is supportive of feedback interaction and processes in an organisation (Steelman *et al.* 2004, Anseel & Lievens 2007). Here employees continuously receive, solicit and use formal and informal feedback to improve their job performance. Dahling *et al.* (2012) provided evidence that a supportive feedback environment contributes to higher feedback orientation (receptivity to feedback) among employees. Feedback orientation directly shapes the way that employees perceive and use feedback information, and

indirectly improves their performance (London & Smither 2002). Thus, it can be assumed that when feedback on quality measurements is provided to nursing teams with a strong feedback environment, where nurses will more likely have strong feedback orientations, the nurses will more likely perceive feedback as a job resource and use the feedback provided to them for quality improvement.

## Conclusions

The core argument in this article is that in order for research on feedback provision on quality measurements to nursing teams and quality improvement to reach a higher level of sophistication, more attention should go to nurses' well-being. Nurses' well-being can mediate the relationship between feedback provision and quality improvement, but it is also an important outcome in itself. Additionally, more attention should be paid to nurses' perceptions of the feedback provision, since the latter influences how they will react. Finally, we strongly recommend, based on the literature review, a more contextual approach when studying feedback provision as an instrument for quality improvement. An attempt has been made in this article to justify this new approach to research on feedback.

The conclusions in this article are summarised in the conceptual framework that is shown in Figure 2. Figure 2 indicates that the relationship between feedback provision, nurses' well-being and quality improvement can be described from three different perspectives: (1) the mutual gains, (2) the conflicting outcomes and (3) the parallel outcomes perspective. From the mutual gains perspective, feedback provision on quality measurements to nursing teams can improve the quality of care through an increase of nurses' well-being. For example, by creating a greater understanding amongst nurses of the hospital's objectives, feedback may make work more intrinsically enjoyable and less stressful, and nurses may 'repay' the hospital for this by putting more effort in quality improvement. From the conflicting outcomes perspective, feedback provision can improve the quality of care through a decrease of nurses' well-being. For example, providing feedback on quality measurements to nursing teams may increase nurses' perceived obligations at work, which will pressure them to improve the quality of care. The parallel outcomes perspective places nurses' well-being as an outcome of feedback provision on quality measurements to nursing teams, parallel to quality improvement. From the latter perspective feedback may directly lead to quality improvement and may, secondary to this direct effect, have a positive, a negative or no impact on nurses' well-being. For example, feedback can improve the quality of care through an increase in nurses' knowledge, but at the same time feedback may have alienating effects on nurses, because to nurses it may seem that the value of work that is non-measurable is undermined. Which perspective is the most appropriate, depends on nurses' attribution about management's purpose in implementing feedback, followed by nurses' percep-

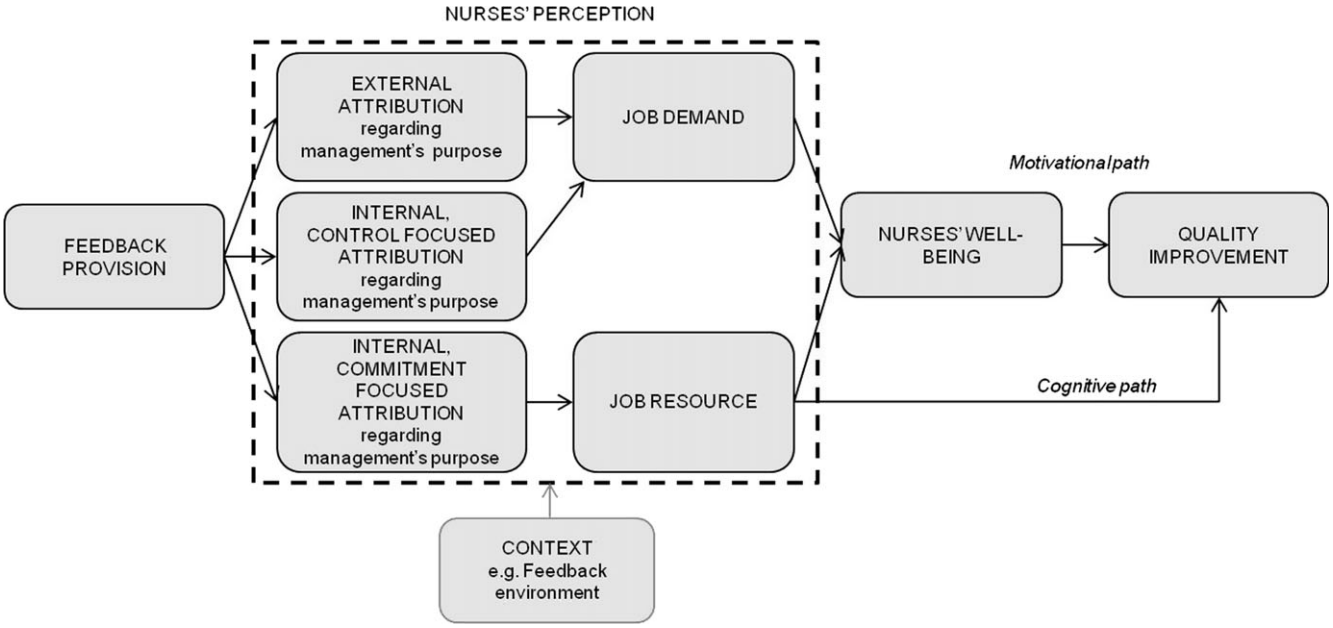


**Figure 2**
Feedback provision on quality measurements to nursing teams: a conceptual framework.

tion of feedback as a job demand or job resource. Indeed, feedback provision exists objectively, yet must be perceived and interpreted subjectively by each nurse. For example, when nurses truly believe that management's purpose in providing feedback on quality measurements is to support nursing teams in their quality improvement endeavour, they will more likely perceive feedback as a job resource; something that is functional in achieving work goals. This is expected positively to mediate the relationship between feedback provision, nurses' well-being and quality improvement. Nurses' perception of feedback is influenced by variables in the context in which the feedback is provided, such as the feedback environment. Within a strong feedback environment, nurses will more likely perceive feedback as a job resource.

Our conceptual framework illustrates that nursing management can use feedback provision based on quality measurements for nursing teams as a tool for enhanced quality and as a motivating tool as well. However, both nurses' perceptions and contextual variables are important in the light of the actual success of the feedback provided. Future empirical research that examines the relationship between feedback provision, nurses' well-being and quality improvement is necessary. Our conceptual framework provides a starting point for this research.

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