International Journal of Nursing Studies 64 (2016) 120–129

Contents lists available at ScienceDirect

International Journal of Nursing Studies

journal homepage: www.elsevier.com/ijns

Nurses' perceptions of feedback to nursing teams on quality measurements: An embedded case study design

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ARTICLE INFO

Article history:
Received 17 May 2016
Received in revised form 29 August 2016
Accepted 9 October 2016

Keywords:
Feedback
Hospitals
Motivating
Nursing
Team
Quality improvement
Quality indicators
Healthcare

ABSTRACT

Background: Providing nursing teams with feedback on quality measurements is used as a quality improvement instrument in healthcare organizations worldwide. Previous research indicated contradictory results regarding the effect of such feedback on both nurses' well-being and performance.
Objectives: Building on the Job Demands-Resources model this study explores: (1) whether and how nurses' perceptions of feedback on quality measurements (as a burdening job demand or rather as an intrinsically or extrinsically motivating job resource) are respectively related to nurses' well-being and performance; and (2) whether and how team reflection influences nurses' perceptions.
Design: An embedded case study.
Settings: Four surgical wards within three different acute teaching-hospital settings in the Netherlands.
Methods: During a period of four months, the nurses on each ward were provided with similar feedback on quality measurements. After this period, interviews with eight nurses and the ward manager for each ward were conducted. Additionally, observational data were collected from three oral feedback moments on each of the participating wards.
Results: The data revealed that individual nurses perceive the same feedback on quality measurements differently, leading to different effects on nurses' well-being and performance: 1) feedback can be perceived as a job demand that pressures nurses to improve the results on the quality measurements; 2) feedback can be perceived as an extrinsically motivating job resource, that is instrumental to improve the results on quality measurements; 3) feedback can be perceived as an intrinsically motivating job resource that stimulates nurses to improve the results on the quality measurements; and 4) feedback can be perceived neither as a job demand, nor as a job resource, and has no effect on nurses' well-being and performance. Additionally, this study indicates that team reflection after feedback seems to be very low in practice, while our data also provides evidence that nursing teams using the feedback to jointly reflect and analyse their performance and strategies will be able to better translate information about quality measurements into corrective behaviours, which may result in more positive perceptions of feedback on quality measurements among individual nurses.
Conclusions: To better understand the impact of feedback to nursing teams on quality measurements, we should take nurses' individual perceptions of this feedback into account. Supporting nursing teams in team reflection after them having received feedback on quality measurements may help in eliciting positive perceptions among nurses, and therewith create positive effects of feedback on both their well-being and performance.

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http://dx.doi.org/10.1016/j.ijnurstu.2016.10.003
0020-7489/

What is known already about the topic

- Providing nursing teams with feedback on quality measurements is a widely used strategy for quality improvement.
- Previous research shows variability, both in the effect of feedback to nursing teams on quality measurements on nurses' well-being (motivating versus alienating) and in its effect on performance.

What this paper adds

- The effect of feedback to nursing teams on quality measurements on nurses' well-being and performance depends on nurses' individual perceptions of this feedback; that is, negatively in case of perceptions as a job demand while positively when seen as a job resource.
- When nursing teams engage in meaningful team reflection after having received feedback on quality measurements, nurses are able to use feedback more effectively.

1. Introduction

1.1. Background

With increasing frequency, nursing teams are provided with feedback about the quality of care they deliver, based on quality measurements such as the number of patient falls and the incidence of pressure ulcers. Previous research highlighted that feedback to nursing teams on quality measurements can lead to a higher motivation among nurses (e.g., Lindblom et al., 2012), but the focus on quality measurements may also possibly lead to alienation and demotivation among nursing staff (e.g., Struijs and Vathorst, 2009). In addition to this variability in effects of feedback on nurses' well-being, earlier studies on the effects of feedback on performance, both within and outside healthcare, showed similar heterogeneous results (Gabelica et al., 2012; Ivers et al., 2012; Kluger and DeNisi, 1996). For example, the extensive review by Ivers et al. (2012) of 140 studies (randomised trials) showed that the effect of performance feedback to healthcare professionals on professional behaviour and on patient outcomes ranged from little or no effect to a substantial effect. The complexity regarding the effects of feedback on well-being and performance, led Kluger and DeNisi (1998) to refer to feedback as 'a double-edged sword' that calls for more empirical work. Therefore, this study is aimed at better understanding *how* feedback to nursing teams on quality measurements affects nurses' well-being and performance.

1.2. Job demand versus job resource

This study builds on the Job Demands-Resources (JD-R) model (Bakker and Demerouti, 2007; Demerouti et al., 2001) which is a widely used framework by scholars around the world to investigate the effect of job characteristics on employee well-being and performance. Within nursing studies, the JD-R model plays an important role in research on work engagement, burn-out and intention to leave the nursing profession (e.g. Hansen et al., 2009; Jourdain and Chênevert, 2010; Keyko et al., 2016). Although the JD-R model is non-limitative in terms of the study concepts (Schaufeli and Taris, 2014), the use of the model within quality improvement research has been sparse to date. Some researchers have used the JD-R model to study safety outcomes, such as incidents and unsafe behaviour, within and beyond the healthcare industry (e.g. Hansez and Chmiel, 2010; Nahrgang et al., 2011).

The JD-R model distinguishes two different categories of job characteristics – job demands and job resources – which have different effects on employee well-being and performance. In this article, we follow the definitions by Schaufeli and Taris (2014, p.56): "1) *job demands* are negatively valued physical, social, or organizational aspects of the job that require sustained physical or psychological effort and are therefore associated with certain physiological and psychological costs; and 2) *job resources* are positively valued physical, social, or organizational aspects of the job that are functional in achieving work goals or that reduce job demands (extrinsically motivating job resource), or stimulate personal growth and development (intrinsically motivating job resource)". These value-based definitions of job demands and job resources indicate that not all job characteristics are perceived the same by employees.

Feedback is often described as a job resource that can motivate employees to increase performance (Bakker and Demerouti, 2007; Demerouti et al., 2001). Based on an integration of scholarly literature on feedback provision and strategic human resource management, Giesbers et al. (2013) argued that feedback to nursing teams on quality measurements can be perceived by individual nurses either as a job demand or as an extrinsically or intrinsically job resource and that these perceptions are differently related to nurses' well-being and performance. First, nurses may perceive feedback on quality measurements as a job demand in a situation wherein, for example, feedback on quality measurements shows that the nurses' practice is inconsistent with a desirable target. This may pressure nurses to improve their performance resulting in stress, which may, in its turn, contribute to an increased effort by nurses to improve performance. This process, where performance is 'indirectly' – by negatively affecting nurses' well-being – influenced by feedback on quality measurements, is referred to as the 'conflicting outcomes perspective' by Giesbers et al. (2013).

Second, nurses may perceive feedback on quality measurements as an extrinsically motivating job resource that is instrumental in their work as a nurse. For example, feedback may increase nurses' knowledge, by which nurses are more informed of what to do, and how to improve performance. This process where performance is 'directly' influenced by feedback on quality measurements, is referred to as the 'parallel outcomes perspective' by Giesbers et al. (2013). From the parallel outcomes perspective, the effect of feedback on quality measurements on nurses' well-being is analogous to the side effect of the treatment, and may range from a negative or no effect, to a positive effect.

Finally, nurses may perceive feedback on quality measurements as an intrinsically motivating job resource when, for example, the feedback increases their understanding 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 ward managers expect from them. As a result, these nurses may be intrinsically motivated to improve performance. This process where performance is 'indirectly' – by positively affecting nurses' well-being – influenced by feedback on quality measurements, is referred to as the 'mutual gains perspective' by Giesbers et al. (2013).

This study explores how feedback to nursing teams on quality measurements is perceived by individual nurses (as a burdening job demand or rather as an intrinsically or extrinsically motivating job resource), and how this is related to nurses' well-being and performance. More specifically, based on the above, the validity of the following assumed 'perspectives' is explored:

1) *Conflicting outcomes perspective*: when nurses perceive feedback on quality measurements as a job demand, it is assumed

that this negatively affects their well-being resulting in an increase in performance.
2) *Parallel outcomes perspective*: when nurses perceive feedback on quality measurements as an extrinsically motivating job resource, it is assumed that this directly results in an increase in performance.
3) *Mutual gains perspective*: when nurses perceive feedback on quality measurements as an intrinsically motivating job resource, it is assumed that this positively affects their well-being, resulting in an increase in performance.

1.3. Team reflection

If feedback on quality measurements can be perceived by individual nurses as both a job demand and as an extrinsically or intrinsically motivating job resource, then which factors explain nurses' different perceptions? Based on previous research we may expect that the extent to which team reflection (conscious reflection on team functioning) occurs after feedback on quality measurements may be an important explanatory factor. The underlying assumption is that feedback gives information but that teams are still responsible for its mindful uptake (Gabelica et al., 2014). Earlier studies on the effectiveness of feedback alone versus feedback in combination with reflection all indicated that a reflection strategy after feedback stimulates deeper learning (Anseel et al., 2009; Gabelica et al., 2014; Seifert et al., 2003; Smither et al., 2003). It seems that teams which consciously reflect on how to improve their performance will be more able to use feedback effectively, to learn from mistakes, and will be in a better position to fix what went wrong. Teams which are initially low-performing might particularly benefit from team reflexivity (Schippers et al., 2013).

Theoretically, team reflection consists of three steps: (1) evaluating performance and strategies; (2) looking for alternatives; and (3) making a clear decision about how to implement changes (Gabelica et al., 2014). The first step refers to team members evaluating their goals, performance, strategies, and possible reasons behind success or failures. The second step occurs when teams make an inventory of possible ways to achieve the task. Finally, the third step, consists of clearly stating a decision about how to handle the task differently and acting upon it. This study explores how differences in team reflection after feedback on quality measurements may explain nurses' different perceptions of feedback on quality measurements. We may expect that when full cycles of team reflection occur after teams have received feedback on quality measurements, including all three steps mentioned above, nurses will more likely perceive feedback as an extrinsically or intrinsically motivating job resource.

2. Method

2.1. Design

Our study can best be described as an embedded case study design (Yin, 2003), based on a phenomenologist orientation (Benton and Craib, 2001). The case study is about feedback to nursing teams on quality measurements within an acute teaching-hospital setting, and involves the nursing teams within four different hospital wards as the embedded units of analysis. Using multiple, qualitative research methods, our study provides us with an advanced understanding about how nurses perceive and react to feedback on quality measurements, within its real-life context.

2.2. Participating wards

For reasons of comparability, we included only surgical wards from one type of hospital, i.e. acute teaching-hospitals in the Netherlands. Moreover, to be able to properly study our feedback intervention, we included only wards where nurses were not provided with regular feedback on quality measurements before. Based on convenience sampling, we found four wards (hereafter referred to as ward one to four) within three different hospitals that volunteered to participate in this study. The hospitals in our study were institutions with numbers of beds ranging from 643 to 1070 and numbers of staff (fte) ranging from 2640 to 2915. Table 1 shows the demographic characteristics for each of the participating wards. The participating wards were informed about the findings on their individual wards. The feedback the researchers received from them, did not affect the findings that are presented in this paper.

2.3. Feedback intervention

The first author developed a framework for the design of feedback on quality measurements on each participating ward. The framework implied that, during a period of four months, the nurses on each ward were regularly (at least once every two weeks) provided with oral and written feedback on a maximum of six quality measurements, linked to a clear target and presented in a chart. The ward manager subsequently determined how the feedback on quality measurements was implemented (see Table 2):

Table 1
Demographical characteristics, data collection methods and participants' characteristics.

Ward	1	2	3	4
Hospital	A	B	C	C
Demographical characteristics				
Number of nurses working on the ward	29	30	69	56
Medical specialties on the ward	Neurosurgery and orthopaedics	Lung surgery	Urology, plastic surgery and gynaecology	General surgery
Data collection methods and participants' characteristics				
Interviews	Nurses: n = 8 Male: n = 2 Female: n = 6 Average age: 30.86 Ward manager (n = 1, female)	Nurses: n = 8 Male: n = 1 Female: n = 7 Average age: 29.86 Ward manager (n = 1, male)	Nurses: n = 8 Male: n = 1 Female: n = 7 Average age: 42.00 Ward manager (n = 1, female)	Nurses: n = 8 Male: n = 1 Female: n = 7 Average age: 31.25 Ward manager (n = 1, female)
Observations	Oral feedback moments (n = 3) Average number of participants: 8	Oral feedback moments (n = 3) Average number of participants: 16	Oral feedback moments (n = 3) Average number of participants: 9	Oral feedback moments (n = 3) Average number of participants: 23

Table 2
Feedback Characteristics for each of the four wards.

Ward Hospital	1 A	2 B	3 C	4 C
Source	Sample from the electronic medical records of admitted patients	A database of a defined data set for every admitted patient (quality registry). All data are entered on a daily basis by nurses working on this ward	The electronic medical record of every admitted patient	The electronic medical record of every admitted patient
Agent of delivery	Ward manager or senior nurse	Ward manager or senior nurse	Ward manager or senior nurse	Ward manager or senior nurse
Format and intensity of the written feedback	Poster in the team room *Renewed once every two weeks*	E-mail *Once every two weeks*	E-mail (attached to weekly newsletter) *Once every week* Poster in the team room *Renewed once every week*	E-mail (attached to weekly newsletter) *Once every week*
Format and intensity of the oral feedback	Presentation and discussion during team briefings in the morning *Twice every two weeks*	Presentation and discussion during coffee breaks *Once every two weeks*	Presentation and discussion during team meetings or debriefings in the afternoon *Only occasionally*	Presentation and discussion during team meetings or debriefings in the afternoon *Only occasionally*
Content: Quality measurements and related targets (written in brackets)	The percentage of patients screened for: *the (risk of) pressure ulcers* (>80%) *pain* (>90%) *acute ill-ness* (>75%) The percentage of patients who experienced *severe pain* (<5%) The number of patients who developed *pressure ulcers* (=0)	The percentage of patients screened for: *the (risk of) pressure ulcers* (>90%) *the (risk of) delirium* (>90%) *the (risk of) malnutrition* (>90%) The percentage of patients who did not experience *severe pain* (>80%) The percentage of patients who rated the *quality of care* >7,5 (>80%)	The percentage of patients screened for: *the (risk of) pressure ulcers* (>80%) *the (risk of) malnutrition* (>80%) *frailty in elderly* (>80%) The percentage of patients who experienced *severe pain* (<10%)	The percentage of patients screened for: *the (risk of) pressure ulcers* (>80%) *the (risk of) malnutrition* (>80%) *frailty in elderly* (>80%) The percentage of patients who experienced *severe pain* (<10%)
Content: Results on quality measurements	*Targets*: Mostly not met *Trend*: Strongly fluctuating results	*Targets*: Mostly met *Trend*: Constantly positive results	*Targets*: Met for the second half of the feedback period *Trend*: Constantly improving results	*Targets*: Mostly met *Trend*: Somewhat fluctuating results

which quality measurements were selected, which target was set, how the quality measurements were carried out, and when and how exactly oral and written feedback was provided to the nurses.

2.4. Data collection

After four months, during which regular feedback on quality measurements was provided to the nurses, individual, semi-structured face-to-face interviews with eight nurses and the specific ward manager were conducted by the first author. The eight nurses per ward were selected by the manager from all the nurses working on one specific day that was indicated by the first author. The first author requested the ward manager to take into account the nurses' gender and age at this selection, in order to safeguard a representative sampling strategy. All nurses were approached face-to-face by their ward manager. This resulted in a sample consisting in total of 32 nurses and their four ward managers (see Table 1).

Out of the 32 nurses, 27 were females and five were males, and their average age was 32.93 years (SD = 11.66). From the four ward managers, three were females and one was male, and their average age was unknown. The interviews were conducted at the workplace in a private room and focused on: (1) how the participants perceived the feedback on quality measurements, and what was the effect of the feedback on their well-being and performance; and (2) the participants' descriptions of the feedback as implemented on their wards (including the extent to which team reflection occurred). Interviews lasted between 9 and 37 min, with an average of 19 min. Each participant was interviewed once and no repeat interviews were carried out. All participants consented to the interviews being taped, and all interviews were transcribed verbatim. Transcripts were not returned to participants to comment on, as we aimed to precisely report on participants' initial and spontaneous utterances and wanted to prevent participants to edit information they provided in the original interview (Hagens et al., 2009). Participant data was anonymized using 2-digit codes.

In addition to the interview data, we collected observational data based on the 'observer as participant' approach (Anderson, 2009). The first author observed three oral feedback moments on each of the participating wards, and her main role was merely to observe. The first round of observations took place at the beginning of the four-month feedback period, the second round of observations was conducted when the feedback period was halfway and the third round of observations took place at the end of the feedback period. Observations lasted between approximately five and 20 min, with an average of 14 min. The number of participating nurses ranged between 6 and 50, with an average of 14 nurses. Both descriptive (including date, time, location, participants, activities and discussions) and reflective (including impressions, insights and unanswered questions) field notes were written during and directly after the observation.

2.5. Data analysis

The steps taken to analyse our data are visualised in Fig. 1. First, the data from the interviews and observations were analysed separately. To analyse the interview data for this article, the first author undertook three cycles of coding, using the Atlas.ti software package. Phase 1 comprised open coding and focused on identifying different perceptions of feedback on quality measurements, different effects of the feedback on nurses' well-being and performance, and descriptions of team reflection during oral feedback moments. Phase 2 consisted of axial coding, and focused on categorizing nurses' perceptions of feedback on quality measurements based on the JD-R model (Bakker and Demerouti,

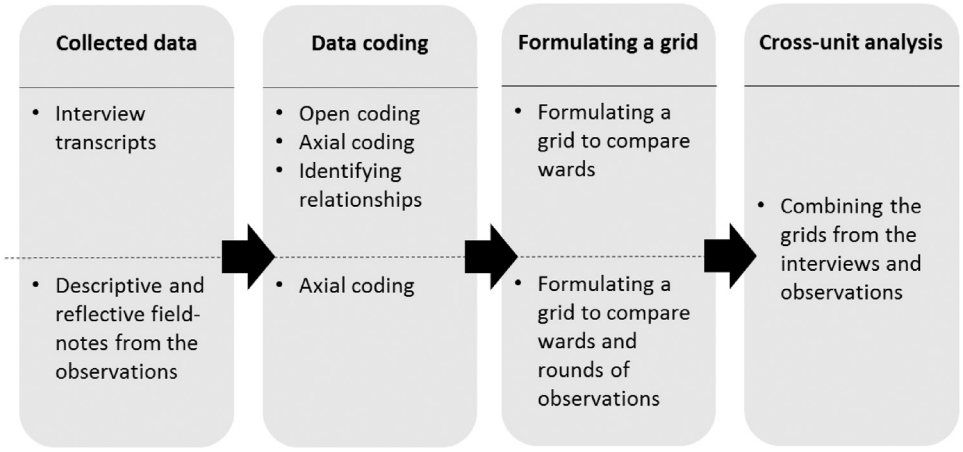

Fig. 1. Data analysis steps.

2007; Demerouti et al., 2001) as a 'job demand', as an 'extrinsically motivating job resource' or as an 'intrinsically motivating job resource', and on categorizing statements regarding team reflection based on the three steps of team reflection (Gabelica et al., 2014). as 'evaluating performance and strategies', 'looking for alternatives' and 'making a clear decision about how to implement changes'. Phase 3 consisted of identifying relationships between the different perceptions of feedback on quality measurements, the effects of feedback on nurses' well-being and performance, and on team reflection. Additionally, we formulated a grid to compare the data from the different wards. Differences in perceptions and effects of feedback on quality measurements could not be explained by differences in feedback characteristics as outlined in Table 2. Data saturation was discussed and assessed as adequate by the first three authors.

The observational data was also coded by the first author using Atlas.ti software, and focused on identifying the extent to which full cycles of team reflection occurred after feedback on quality measurements. The occurrence of each step of team reflection ('evaluating performance and strategies', *and* 'looking for alternatives', *and* 'making a clear decision about how to implement changes') (Gabelica et al., 2014) was identified for each quality measurement that was presented to the nursing team during the oral feedback moments (axial coding). Additionally, we identified the number of nurses that actively participated at each step of team reflection ('none', 'one', 'more than one'). Moreover, we formulated a grid to compare the data from the different wards and from the different rounds of observation (at the beginning, halfway or at the end of the four-month feedback period).

Second, the results from the two sets of data analyses were merged with the purpose of comparing and refining the results. More specifically, the grids based on the interview data and the observational data from the different wards were combined, to conduct a cross-unit analysis and explore how team reflection is related to nurses' perceptions of feedback on quality measurements as a job demand or as an extrinsically or intrinsically motivating job resource.

Coding outputs and grids (all in Dutch) are available upon request at the authors. The coding book (including the number of quotations per theme) is available as a Supplementary file to this paper.

2.6. Ethical considerations

As our study was outside the scope of the Netherlands' Medical Research Involving Human Subjects Act (Central Committee on Research Involving Human Subjects, 2016), no formal ethical approval was needed. However, thorough considerations were given to ethical guidelines that were present within the authors' research domains. Before the study on each ward commenced, the ward manager and nurses from the participating wards were given comprehensive information about the details of the study. General research permission was obtained from the ward managers. Additionally, before each interview and observation the participants were informed about the details of the study. All interviews were voluntary; the participating nurses gave their verbal consent to participate. The ward managers gave permission for the observations. All data were anonymized.

3. Findings

First, we will present the findings from the interview data regarding nurses' individual perceptions of feedback on quality measurements (as a job demand or as an intrinsically or extrinsically motivating job resource), and how these are related to nurses' well-being and performance. Second, we will present the findings from the observations and interviews regarding the relationship between nurses' perceptions and the extent to which team reflection occurred after feedback on quality measurements. Although the individual wards serve as the evidentiary base for this study, there are no separate sections devoted to the individual wards because the main focus of this paper is on lessons learned from all of them in aggregation.

3.1. Job demand versus job resource

The interview data revealed evidence for the three perspectives Giesbers et al. (2013) distinguished on the relationship between nurses' perceptions of feedback on quality measurements and nurses' well-being and performance: the *conflicting outcomes perspective, the parallel outcomes perspective, and the mutual gains perspective*. Additionally, the interview data revealed a fourth perspective on the relationship between nurses' perceptions of feedback on quality measurements and nurses' well-being and performance: when nurses perceive feedback on quality measurements neither as a job demand nor as a job resource, this feedback has no effect on both nurses' well-being and performance. We will refer to this perspective as the 'indifference perspective'. The outcomes regarding each 'perspective' will be discussed below, with illustrative interview extracts incorporated. The extracts include a reference to the participant's code, job, and ward and in order to guarantee anonymity, they exclude a reference to the

participant's sex. That is to say, all references to participants in the text are written in female form.

3.1.1. Conflicting outcomes perspective: feedback as a job demand

Some nurses (n = 3; 9%) mostly perceived feedback on quality measurements negatively, that is as a *job demand* that is threatening and is associated with certain 'costs' (Bakker and Demerouti, 2007; Demerouti et al., 2001; Schaufeli and Taris, 2014). The nurses who perceived feedback as a job demand explained that they felt pressured to change their behaviour in response to the feedback that was provided to them, and improve the results on the quality measurements. The following nurses' experience captured this:

> "It [feedback] is quite nice, however it irritated me a bit. [. . .] I understand the importance of these quality measurements, however I think it's a pity that it is only about these quality measurements. [. . .] There is no added value for me in that. It does not really interest me when I hear we performed well this week. [. . .] Because I know the hospital will be judged on these quality measurements, – I don't want that to happen, I am happy with my job – that is why I do it [change behaviour and improve the results on the quality measurements]." (participant 22, nurse, ward 1)

The pressure that nurses who perceived feedback on quality measurements as a job demand experienced, comes from different directions. On the one hand, these nurses felt they had to meet external demands, such as quality standards imposed on the hospital by the healthcare inspectorate. The above interview excerpt reflects this. On the other hand, nurses felt they were being watched closely by their colleagues and/or supervisor. For example, reflecting on the feedback on quality measurements that was provided to her during team briefings, the following nurse explained:

> "Back then I was not really thinking about the results that were presented during the briefing [oral feedback]. I was thinking about my own performance and how I feel about that. [. . .] However, this does not originate from a personal necessity, nor because I believe this is really important for patient safety. It is only about how I can improve my own results. It's purely aimed to improve that result and in my opinion it misses its purpose. [. . .] It does not make my job more fun. You get the feeling you are looked over your shoulder. You have lost your autonomy." (participant 24, nurse, ward 1)

Nurses who perceived feedback on quality measurements negatively as a job demand do not believe that better results on the quality measurements, will result in better patient outcomes, as also comes forward in the above interview excerpts. The nurse below explained that she believed the quality measurements mainly reflect the extent to which things are registered properly and this does not necessarily mean that high-quality nursing care is provided:

> "[. . .] it is purely about what we register in the computer at admittance or, if applicable, what we repeat every week. I think, when I look at myself and what I see from others, the registration part is done quickly [. . .] I do not believe we always act upon it. It is registered, but if it really makes a difference, if the quality of care is improved by that, it keeps me wondering." (participant 16, nurse, ward 4)

3.1.2. Parallel outcomes perspective: feedback as an extrinsically motivating job resource

The majority of the nurses (n = 19; 59%) mostly perceived feedback on quality measurements positively as an extrinsically motivating job resource, that is instrumental in fostering goal attainment (Bakker and Demerouti, 2007; Demerouti et al., 2001; Schaufeli and Taris, 2014). These nurses explained how the feedback on quality measurements reminded them of their work goals, raised their awareness on the results regarding quality measurements and/or provided them with knowledge on how to improve the results on the quality measurements. The interview excerpts below reflect these different ways through which feedback on quality measurements can be instrumental to improve the results on the quality measurements.

> "I believe it [feedback on quality measurements] is a good initiative. It keeps you alert . . . It keeps you thinking about it, so I think it works. I am more alert. For example, I very often forgot to fill in the pain measurements [one of the quality measurements focused on this subject], and it [feedback] reminded me: I have to fill them in." (participant 23, nurse, ward 1)

> "It creates awareness. Because you think you are performing well, however sometimes it shows we can do better. I believe it is important to be confronted with that, because these are the facts, so to say." (participant 02, nurse, ward 3)

> "By talking about it with each other, we are much more aware. Also, because it turned out that some nurses still do not know how to properly screen patients. What should you do when a patient has a pain score of 4 [one of the quality measurements focused on this subject]?" (participant 19, ward manager, ward 1)

As expected based on the study by Giesbers et al. (2013), the effect of feedback on quality measurements on nurses' well-being is analogous to the side effect of the treatment and ranged from a negative or no effect, to a positive effect. The nurses believed it was a good thing that they were provided with feedback on quality measurements, however, they did not always enjoy it and sometimes even experienced negative feelings. One nurse explained how feedback on quality measurements was perceived as 'merely' functional to improve the results on quality measurements:

> "It provided us with a clear view of how we are performing on our ward. 'Fun' is not the correct word to describe it. However, it is a good thing to clarify what things we do better than other things." (participant 07, nurse, ward 3)

Several nurses who perceived feedback on quality measurements as an extrinsically motivating job resource warned us that improved results on the quality measurements, do not necessarily mean high-quality nursing care is provided to the patient. The following nurse's experience captured this:

> "You don't want to depend on numbers. However, you want that number to be as high as possible. So, that is a kind of conflicting. Kind of ambiguous, so to say. Of course, it is nice to see the upward trend and that's very good to see. However, we should ensure the patient always comes first." (participant 34, nurse, ward 2)

3.1.3. Mutual gains perspective: feedback as an intrinsically motivating job resource

Some nurses (n = 7; 22%) mostly perceived feedback on quality measurements as an *intrinsically motivating job resource*, that satisfies basic human needs (Bakker and Demerouti, 2007; Demerouti et al., 2001; Schaufeli and Taris, 2014). In line with our expectation based on the study by Giesbers et al. (2013), these perceptions had a positive effect on nurses' well-being and performance. The nurses who perceived feedback as intrinsically motivating, truly enjoyed receiving feedback on quality measurements which motivated them to improve the results on the quality measurements. The following nurse's experience captured this:

"It motivated me. It made me think about it. I was curious; did we do better or not? And what is causing that? [. . .] I thought it was nice to get feedback on that." (participant 21, nurse, ward 1).

Another nurse explained how the feedback motivated her to address her colleagues to improve the results on the quality measurements and to think about other opportunities for quality improvement related to the quality measurements:

"Every week I was interested to see the results. Especially, because I am working with 'vulnerable elderly' [one of the items on which feedback was provided], I was very interested to see the results. [. . .] Especially, when you see that the results are not good and have to be improved, you are motivated, like, come on, we have to work on this. At that moment you try, secretly, to take a colleague on board. [. . .] I think it is interesting and fun to know if we are heading in the right direction." (participant 06, nurse, ward 3)

The nurses who perceived feedback as an intrinsically motivating job resource all seemed to have a personal interest in figures, at least more than other nurses. In contrast to the nurses that perceive feedback on quality measurements as a job demand, these nurses believed that better results on the quality measurements, will result in better patient outcomes. The nurse below explained this:

"I like this kind of numbers. I have the urge to improve them. There may be quite some colleagues who have a different opinion. However, I enjoy it. I really want to know if I am delivering good work or not. [. . .] When a number goes down tenths of a percentage point, off course, that is negligible. It only represents a snapshot in time. However, when you are deteriorating with a number of percentage points, I feel like 'oh' something is going wrong." (participant 36, nurse, ward 2)

3.1.4. Indifference perspective: feedback as neither a job demand, nor a job resource

The interview data showed that several nurses (n = 3; 9%) mostly perceived feedback on quality measurements neither as a job demand, nor as a job resource. As a result, the feedback did not affect nurses' well-being and performance. These nurses were not interested in the feedback and/or explained that the feedback on quality measurements did not provide them with individual starting-points to improve the quality of nursing care. Consequently, they did not adjust their behaviour. For example, the following nurse explained how she did not see any room for improvement in her behaviour related to the quality measurements:

"I don't always take a look at that [written feedback]. However, I am performing well, so I don't have to know how we are performing as a team. However, I believe it is a good thing for the people who are not really working on this yet. [. . .] I am quite alert on these items. When it works for me, I don't have to receive that feedback every week. It has no added value for me. So I do not pay any attention to it." (participant 12, nurse, ward 4)

One of the nurses observed the above-mentioned reaction to feedback on quality measurements among many of her colleagues. She experienced that it can be very difficult to make individual nurses feel responsible for results from quality measurements at the team level. For the nurse herself, the feedback on quality measurements is an important job resource, because it allows her to guide the team to improve the quality of care:

"For us, as senior nurses and the ward manager, it [feedback on quality measurements] is relevant to see how the team is performing and what needs to be improved. I believe it has little added value for the team. [. . .] It is nice to give back something positive. The team experiences that positively, like, gosh we are performing well. However, when performance was low, some time ago, then everyone thinks, like, okay. Individually, they do not feel responsible." (participant 11, nurse, ward 4)

3.2. Team reflection

We expected that when full cycles of team reflection, including 'evaluating or reviewing performance or strategies', 'looking for alternatives' and 'making decisions' (Gabelica et al., 2014), occurred after feedback on quality measurements, nurses would more likely perceive feedback as an extrinsically or intrinsically motivating job resource. Based on the observational data, Table 3 shows the frequency in which the steps of team reflection occurred, which was calculated from the coding of every quality measurement that was communicated to the team during all observations. Additionally, Table 3 shows the frequency in which no, one, or more than one nurse actively participated at each step

Table 3
Frequencies of occurrence of each team reflection step after feedback on quality measurements.

Team reflection steps (and the number of nurses that actively participated at this)	Frequency of occurrence[a]
1) Evaluating or reviewing performance or strategies	
No nurse actively participated	22
One nurse actively participated	15
>One nurse actively participated	11
Total	48
1) Evaluating or reviewing performance or strategies & 2) Looking for alternatives	
No nurse actively participated	0
One nurse actively participated	2
>One nurse actively participated	4
Total	6
1) Evaluating or reviewing performance or strategies & 2) Looking for alternatives & 3) Making decisions	
No nurse actively participated	0
One nurse actively participated	0
>One nurse actively participated	0
Total	0

[a] Calculated based on the coding of every quality measurement that was communicated to the team during all observations.

of team reflection. From this it can be concluded that full cycles of team reflection did not occur, suggesting that teams were not naturally systematic in their reflective process. The observational data showed no differences between wards in team reflection after feedback on quality measurements. On all of the participating wards, the quality measurements were mostly only presented to the team by the ward manager or senior nurse, sometimes including some statements about the target and possible explanations for the results, as is illustrated by the following excerpt from the field notes:

> "The results on each quality measurements are presented to the team by the senior nurse. [. . .] The senior nurse tells the nurses that the results on the quality measurement 'the percentage of patients screened for the (risk of) pressure ulcers' are fluctuating. The senior nurse requests the other nurses to really carry out this task. None of the nurses react to this." (field note 43, ward 1, observational round 2)

Only at some occasions the nurses actively reacted to the feedback on quality measurements, which subsequently resulted in a lively discussion on how to improve the quality of care. The following excerpt from the field notes illustrated this:

> "The results on the quality measurement 'the percentage of patients who experienced severe pain' is presented to the team. The senior nurse tells that at some moments a relatively large group of patients experience severe pain. Additionally, she explains the quality measurements show that quite often patients are not screened for pain within 30 min after pain medication was given [the follow-up screening]. Subsequently, this problem is discussed by several nurses. The nurses explain they do screen patients for pain, but the result from this screening is not, or not directly registered. One of the nurses asks the senior nurse if you should only conduct a follow-up screening when patients experience severe pain. The senior nurse explains that you should always conduct a follow-up screening when you have given pain medication to the patient. One of the nurses suggests to communicate the rules regarding this again through the weekly newsletter. [. . .] Next, the discussion continues about how to react to patients who say they experience servere pain, while the nurse does not observe this much pain at the patient. The nurses discuss how you should enter into a dialogue with these patients and assess, together with these patients, how much pain is experienced and which intervention is suitable. The nurses discuss that this is also important when patients say they experience little pain, while the nurse observes the patient is in pain." (field note 44, ward 4, observational round 3)

These findings from the observational data are similar to the findings from the interview data. Nurses explained that during the oral feedback moments the results on the quality measurements were most often 'merely' presented to the team by their ward manager or senior nurse. The following nurse's experience captured this:

> "The senior nurse would then tell us how we performed in the last week or period. I don't even know exactly in what period. She showed us a chart with a target line and our result. [. . .] It [oral feedback] was all rather vague. It was implemented, and as it was happening, I thought: well, that is nice to know, but what do you expect from us?" (participant 20, nurse, ward 1)

Although the data in Table 3 does not capture this, the observational data did show that the number of nurses that actively participated at the first step of team reflection ('evaluating performance and strategies') increased during the four-month period of the feedback intervention. From the first round of observations on the participating wards, only two occurrences of 'evaluating performance and strategies', including more than one participating nurse, were identified. At the second round of observations, three of these situations were identified. At the third round of observations, this number increased to six. This may imply that teams need time to develop reflection strategies after feedback on quality measurements, which was also recognized by two of the ward managers. For example, the following ward manager described that the oral feedback that was provided to her nursing team by the senior nurses, improved over time:

> "The senior nurses would tell about the team's performance in the last two weeks; whether it was good or not, and what could be improved. The latter was explained in more detail, later on during the four-month period of the feedback intervention. Not just 'is our performance good or bad?', but also 'it seems that during the day shifts, or the evening – and night shifts, we are performing badly'. I believe this is more useful to people. Also, I experienced that people feel more personally responsible." (participant 19, ward manager, ward 1)

The absence of differences in team reflection after feedback on quality measurements at each of the participating wards does not allow us to conduct a cross-unit analysis to explore how team reflection is related to nurses' perception of feedback on quality measurements as a job demand or as an extrinsically or intrinsically motivating job resource. Still, the interview data did present us with some insights on how team reflection can be important in relation to nurses' different perceptions of feedback on quality measurement. Several nurses (n = 10; 22%) described that team reflection can help to make the feedback on quality measurements more useful to nurses, when it focuses on the 'story' behind the numbers. For example, the following nurse who perceived feedback on quality measurements as an extrinsically motiving job resource, explained that the oral feedback on her ward provided her with little information on how to improve the results on the quality measurements. She explained that the feedback would be more useful to her if it was combined with an explanation of what is expected from the nurses.

> "You see the numbers and know how things should change. However, what seems to be the bottleneck and how we can jointly tackle this in practical terms, does not become clear." (participant 32, nurse, ward 2)

Another nurse, who perceived feedback on quality measurements neither as a job demand, nor as a job resource, explained that discussing the results on the quality measurements with her colleagues, makes the feedback more effective. On this nurse's ward, feedback on quality measurements was mainly provided in writing. Even though this nurse participated only once in an oral feedback moment she perceived it very positively because it clarified to her what could be improved.

> "I believe it is good to hear what went well, what did not go well, what can be improved. Like with the pain measurements [one of the quality measurements focused on this subject], that we discussed during the last meeting. It was a good point to pay attention to. [. . .] Through 'Kijk op de week' [newsletter in Dutch] you receive a lot of information, you read the attachment [written feedback] and just think 'Okay'. However, when you talk about it, when you discuss it, I believe it sinks in." (participant 12, nurse, ward 4)

In conclusion, although we did not conduct a cross-unit analysis to explore how team reflection is related to nurses' perception of feedback on quality measurements, based on individual statements by nurses across the different wards, it seems that team reflection can be important to elicit more positive perceptions of feedback on quality measurements.

4. Discussion

This study contributes insights to the issue of how feedback to nursing teams on quality measurements works in practice. Because feedback to nursing teams on quality measurements is used as a quality improvement instrument in healthcare organizations in many countries, we believe that our findings will prove interesting to quality improvement practitioners worldwide. By building on the JD-R model and the conceptual framework by Giesbers et al. (2013), this study advances our understanding of the theoretical mechanisms underlying feedback on quality measurements. This is important as the use of theory in earlier studies about feedback to healthcare professionals has been sparse to date (Colquhoun et al., 2013). For example, from the 140 studies included in the review by Ivers et al. (2012) mentioned before, only 20 studies (14%) reported use of theory in any aspect of the study design, measurement, implementation or interpretation (Colquhoun et al., 2013).

More specifically, this study contributes to our understanding of feedback to nursing teams on quality measurements in a number of important ways. First, our study demonstrates how individual nurses may respond differently to the same feedback on quality measurements. While the existing literature on feedback in healthcare focused less on these individual differences, we cannot compare our outcomes with similar empirical work, yet our findings are in line with studies outside healthcare on individual differences in responses to feedback (e.g., Anseel et al., 2011; VandeWalle et al., 2001). More specifically, the empirical findings of this contribution confirm our expectation that nurses can perceive feedback on quality measurements as a burdening job demand but also as an intrinsically or extrinsically motivating job resource. Additionally, we empirically identified a group of nurses who were indifferent to feedback on quality measurements.

Second, our study confirms the importance of studying both nurses' well-being and performance-related outcomes jointly, and in relation to each other. Our study empirically identifies four 'perspectives' on the relationship between individual nurses' perceptions of feedback on quality measurements, on the one hand, and both nurses' well-being and performance, on the other hand. The *conflicting outcomes perspective* describes how some nurses perceive feedback as a job demand that pressures them to improve the results on the quality measurements. This perspective is worrisome, especially within the context of global nursing shortages and nurse retention (World Health Organization, 2006), since it shows that for some nurses feedback on quality measurements has detrimental effects on their well-being, even though their performance can be potentially improved. The phenomenon wherein stress forms a modern type of coercion, has previously been described as 'management by stress' (Parker and Slaughter, 1988). The *parallel outcomes perspective* was most common in this study and is in line with what is widely assumed to be the effect of feedback. Based on this perspective feedback is perceived as an extrinsically motivating job resource, that is instrumental to improve the results on quality measurements. The *mutual gains perspective,* which was identified among some nurses in this study, describes a win-win situation, wherein the nurses, the hospital and the patient benefit from feedback on quality measurements. Based on this perspective feedback is perceived as an intrinsically motivating job resource that stimulates nurses to improve the results on the quality measurements. The *indifference perspective* was also quite common in this study, and describes how feedback is perceived neither as a job demand, nor as a job resource, and has no effect on nurses' well-being and performance. Just like the conflicting outcomes perspective, this perspective is worrisome for nursing practice, because it indicates feedback on quality measurements is ineffective as a quality improvement instrument for certain groups of nurses.

Third, our study shows that nursing teams using the feedback to jointly reflect and analyse their performance and strategies will be able to better translate information about quality measurements into corrective behaviours, which may result in more positive perceptions of feedback on quality measurements among individual nurses. Additionally, from this sample population the data showed nursing teams are not naturally systematic in their reflective process, which brings out the need to provide nurses with appropriate support. For example, previous research has shown that active reflection can be instigated by asking individuals to give examples of presumed accurate and inaccurate behaviour on the basis of the feedback they received (Anseel et al., 2009).

5. Limitations and researcher reflexivity

This study has a number of limitations that deserve further attention. First, during this study the first author (female), being the primary researcher who conducted the interviews and observations, also worked as a consultant at the Quality and Patient Safety department in one of the participating hospitals. To avoid the first author's background to lead to preconceptions and biases, this study was designed and executed under the supervision of experienced researchers. Also the first author made it explicitly clear to all participants that in this case being an empirical researcher was her only role. Nevertheless, participants would sometimes explicitly appeal to the first author's own quality background. The first author was trained and experienced in the use of interview and observation techniques to counteract this appeal.

Second, although the embedded case study design provided us with rich information about feedback on quality measurements within its real-life context, it also has its limitation. Most importantly, our study mainly focused on the lessons learned from all of the wards. The absence of differences in team reflection after feedback on quality measurements at each of the participating wards did not allow us to conduct a cross-unit analysis to explore how team reflection is related to nurses' perception of feedback on quality measurements. Additionally, caution should be taken when generalizing the findings to other wards, to different occupations and/or countries. Although the data from our case study are built on theory and help to explain the heterogeneous results from previous research on feedback, future quantitative research is necessary to test our findings in a broader context. As Ivers et al. (2012) stated earlier, these quantitative studies need to be large enough to detect small and heterogeneous effects.

Third, a remark regarding the sampling strategy has to be made. Wards were included in our study in case the ward manager volunteered to participate. Subsequently, the ward manager selected the nurses for the interviews. This strategy is a potential source of bias and must be borne in mind when considering the results. However, we believe the diverse findings suggest that a critical attitude of participants was not suppressed.

6. Conclusion

Individual nurses can perceive the same feedback to nursing teams on quality measurements negatively, as a burdening job demand, positively, as an intrinsically or extrinsically motivating job resource, or nurses can be indifferent to the feedback. These different perceptions have varying effects on nurses' well-being and performance. Although in this study most nurses appear to perceive feedback on quality measurements as a job resource, some of their colleagues perceive feedback as a job demand, and it would be irresponsible to ignore these nurses. For the latter ones, feedback on quality measurements appears to have a detrimental

effect on their well-being. Additionally, we should take notice of the group of nurses who are indifferent to the feedback because for these nurses feedback on quality measurements is an ineffective quality improvement instrument.

Team reflection after having received feedback on quality measurements may help in eliciting positive perceptions among nurses, and therewith create positive effects of feedback on both nurses' well-being and performance. However, we should be aware that team reflection after feedback seems to be very low in practice, which brings out the need to provide nurses with appropriate support.

Conflict of interest

None

Ethical approval

None.

Funding

None.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.ijnurstu.2016.10.003.

References

Anderson, V., 2009. Research Methods Human Resource Management, second ed. Chartered Institute of Personnel and Development, London.

Anseel, F., Lievens, F., Schollaert, E., 2009. Reflection as a strategy to enhance task performance after feedback. Organ. Behav. Hum. Decis. Processes 110, 23–35.

Anseel, F., Van Yperen, N.W., Janssen, O., Duyck, W., 2011. Feedback type as a moderator of the relationship between achievement goals and feedback reactions. J. Occup. Organ. Psychol. 84, 703–722.

Bakker, A.B., Demerouti, E., 2007. The job demands-resources model: state of the art. J. Managerial Psychol. 22 (3), 309–328.

Benton, T., Craib, I., 2001. Philosophy of Social Science: The Philosophical Foundations of Social Thought. Palgrave, New York.

Central Committee on Research Involving Human Subjects, 2016. Your Research: Does It Fall Under the WMO. (Retrieved 27.08.16 from http://www.ccmo.nl/en/your-research-does-it-fall-under-the-wmo).

Colquhoun, H.L., Brehaut, J.D., Sales, A., Ivers, N., Grimshaw, J., Michie, S., Carroll, K., Chalifoux, M., Eva, K.V., 2013. A systematic review of the use of theory in randomized controlled trials of audit and feedback. Implement. Sci. 8, 66.

Demerouti, E., Bakker, A.B., Nachreiner, F., Schaufeli, W.B., 2001. The job demands – resources model of burnout. J. Appl. Psychol. 86, 499–512.

Gabelica, C., Van den Bossche, P., Segers, M., Gijselaers, W., 2012. Feedback, a powerful lever in teams: a review. Educ. Res. Rev. 7 (2), 123–144.

Gabelica, C., Van den Bossche, P., Segers, M., Gijselaers, W., 2014. Dynamics of team reflexivity after feedback. Frontline Learn. Res. 2 (3) doi:http://dx.doi.org/10.14786/flr.v2i3.79.

Giesbers, A.P.M., Schouteten, R.L.J., Poutsma, E., Van der Heijden, B.I.J.M., Van Achterberg, T., 2013. Feedback provision, nurses' well-being, and quality improvement: towards a conceptual framework. J. Nurs. Manage. s1. doi:http://dx.doi.org/10.1111/jonm.12196.

Hagens, V., Dobrow, M.J., Chafe, R., 2009. Interview transcript review: assessing the impact on qualitative research. BMC Med. Res. Methodol. 9 (47) doi:http://dx.doi.org/10.1186/1471-2288-9-47.

Hansen, N., Sverke, M., Näswall, K., 2009. Predicting nurse burnout from demands and resources in three acute care hospitals under different forms of ownership: a cross-sectional questionnaire survey. Int. J. Nurs. Stud. 46, 95–106.

Hansez, I., Chmiel, N., 2010. Safety behavior: job demands job resources, and perceived management commitment to safety. J. Occup. Health Psychol. 15 (3), 267–278.

Ivers, N., Jamtvedt, G., Flottorp, S., Young, J.M., Odgaard-Jensen, J., French, S.D., O'Brien, M.A., Johansen, M., Grimshaw, J., Oxman, A.D., 2012. Audit and feedback: effects on professional practice and healthcare outcomes (Review). Cochrane Database Syst. Rev. 2012 (6) doi:http://dx.doi.org/10.1002/14651858(CD000259.pub3).

Jourdain, G., Chênevert, D., 2010. Job demands–resources, burnout and intention to leave the nursing profession: a questionnaire survey. Int. J. Nurs. Stud. 47, 709–722.

Keyko, K., Cummings, G.G., Yonge, O., Wong, C.A., 2016. Work engagement in professional nursing practice: a systematic review. Int. J. Nurs. Stud. 61, 142–164.

Kluger, A.N., DeNisi, A., 1996. The effects of feedback interventions on performance: a historical review a meta-analysis, and a preliminary feedback intervention theory. Psychol. Bull. 119 (2), 254–284.

Kluger, A.N., DeNisi, A., 1998. Feedback interventions: toward the understanding of a double-edged sword. Curr. Dir. Psychol. Sci. 7, 67–72.

Lindblom, A.K., Bäck-Pettersson, S., Berggren, I., 2012. A quality registers impact on community nurses in end-of-life care – a grounded theory study. J. Nurs. Manage. 20, 206–214.

Nahrgang, J.D., Morgeson, F.P., Hofmann, D.A., 2011. Safety at work: a meta-analytic investigation of the link between job demands, job resources, burnout, engagement, and safety outcomes. J. Appl. Psychol. 96, 71–94.

Parker, M., Slaughter, J., 1988. Choosing Sides: Unions and The Team Concept. Labor Notes, Detroit, MI.

Schaufeli, W.B., Taris, T.W., 2014. A critical review of the job demands-resources model: implications for improving work and health. In: Bauer, G.F., Hämmig, O. (Eds.), Bridging Occupational, Organizational and Public Health: A Transdisciplinary Approach, doi:http://dx.doi.org/10.1007/978-94-007-5640-3_4.

Schippers, M.C., Homan, A.C., Van Knippenberg, D., 2013. To reflect or not to reflect: prior team performance as a boundary condition of the effects of reflexivity on learning and final team performance. J. Organ. Behav. 34, 6–23.

Seifert, C.F., Yukl, G., McDonald, R.A., 2003. Effects of multisource feedback and a feedback facilitator on the influence behavior of managers toward subordinates. J. Appl. Psychol. 88 (3), 561–569.

Smither, J.W., London, M., Flautt, R., Vargas, Y., Kucine, I., 2003. Can Working with an executive coach improve multisource feedback ratings over time? A quasi-experimental field study. Personnel Psychol. 56, 23–43.

Struijs, A., Vathorst, S.V., 2009. Dilemma's van verpleegkundigen en verzorgenden. Centrum voor ethiek en gezondheid, Den Haag, The Netherlands.

VandeWalle, D., Cron, W.L., Slocum Jr., J.W., 2001. The role of goal orientation following performance feedback. J. Appl. Psychol. 86 (4), 629–640.

World Health Organization, 2006. The World Health Report 2006: Working Together for Health. World Health Organization, Geneva.

Yin, R.K., 2003. Case study research: design and methods, third ed. Applied Social Research Methods Series, vol. 5. Sage Publications, California.