The Influence of Feedback on Team Effectiveness

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ABSTRACT

This study examines actual feedback behaviors of leaders as predictors of the team effectiveness. Data was used from video-recorded regular staff meetings (N=29) and follower surveys (N=405). The leaders and followers are employed by a large Dutch public-sector organization. The goal of this study was to find out what effects different types of feedback coming from the leader (i.e., positive and negative feedback) had on the team effectiveness in the organization. This study shows that there is a positive relationship between both negative and positive feedback on the team effectiveness. These findings highlight the importance of further research into this subject. Future research is likely to hold important implications on how leaders should behave to enhance the team effectiveness.

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Prof. Dr. C.P.M. Wilderom

Keywords
Positive feedback, negative feedback, team effectiveness, leader behaviors, video-observation method.

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1. INTRODUCTION

In the area of performance management, feedback is critical to improving human performance in organizations (Ilgen, Fisher, & Taylor, 1979; London, 2003). Feedback is seen as an essential part for goal accomplishment. The information about successful and ineffective actions helps individuals to adjust and direct their efforts to match their actions to the desired outcome (Bandura, 1991; Dweck and Leggett, 1988; Festinger, 1954; Locke and Latham, 1990). The importance of feedback in an organizational context can also be found in several theories. Many theories like the goal-setting theory (Locke & Latham, 1990), control theory (Carver & Scheier, 1990), or social-cognition theory (Bandura, 1991) include feedback as an element which is related to job performance or the overall organizational performance. There are different organizational actors which can provide feedback on goal pursuit and accomplishment. Feedback can come from various sources as for example from coaches and bosses (Fishbach, Eyal, & Finkelstein, 2010).

Another important source of feedback is the feedback coming from team members. Teams have become prevalent in many organizations (Lum, Sims, & Salas, 2011). Consequently, the team cognition and performance are areas of increasing interest and importance. Good functioning and effective teams are important because it has a close relationship with the overall organizational performance. There are many studies available on feedback as well as on team effectiveness, but none of those studies researches these two concepts together and elaborates a relationship between the concepts. Previous studies have mainly focused on the link between feedback and the employee’s individual performance (Kluger & DeNisi, 1998; London, 2003; Kluger et al., 1998). This study distinguishes itself by focusing on team performance instead of merely on the individual performance. Also, current studies only speak of feedback in general, but often do not make a distinction between the specific kinds of feedback.

Central in this study is the feedback that is given from the leader to his or her employees in an organization, in relation to the team effectiveness. In order to provide a more complete understanding of the impact of feedback, it is important to make a distinction between the different types of feedback. The feedback that has been examined in this study is divided into positive and negative feedback. These two types of feedback might have different effects on team performance. In this study we will examine how these different types of feedback are related to team effectiveness. In order to do so, we will analyze the feedback behaviors of the leader, taking into account the positive and negative dimensions. Further on, we will measure the team effectiveness in relation to this. Hence, the purpose of this paper is to answer the following research question:

How do positive and negative feedback of the leader influence team effectiveness?

2. THEORETICAL BACKGROUND

2.1. Team Effectiveness

In order to understand the requirements for team effectiveness, it is important to define what a team is. There are numerous definitions of teams. These definitions all share common attributes and only have subtle differences. In this study, we use the definition of Kozlowski and Bell (2003: p. 334). They define a team as follows: “a team consists of collectives who exist to perform organizationally relevant tasks, share one or more common goals, interact socially, exhibit task interdependencies, maintain and manage boundaries, and are embedded in an organizational context that sets boundaries, constrains the team, and influences exchanges with other units in the broader entity”.

Not all teams are able to obtain good results. Multiple studies have been conducted to investigate why some teams are more effective and efficient than others (McGrath, 1984; Hackman, 1987; Shea & Guzzo, 1987; Cohen & Bailey, 1997; Ilgen, Hollenbeck, Johnson & Jundt, 2005). In deciding whether a team is effective, we used the definition of Hackman (1987: p. 323). A team is considered to be effective if its productive output meets or even exceeds the performance standards, if it enhances the capability of its members to work together on team tasks, and if the individual experience of being part of the group satisfies the personal needs of each member.

According to Cannon-Bowers and Salas (1998) there are two kinds of skills that are of influence on the team performance. First, there are technical skills of the individual team member. These skills include the necessary competencies that are required to accomplish his or her task. Second, there are skills related to being an effective team member. These skills are more related to effectively interacting with other team members. These skills include the knowledge, social skills and attitude that are needed to work effectively with others in pursuit of a common goal. To act effective as a team, the team members need to know their teammates’ characteristics like their strengths and weaknesses. Besides that, they must also be aware of the different roles and tasks within a team in order to coordinate the tasks efficiently.

2.2. Feedback

Within leadership and performance management, feedback is regarded as an important management tool. London (2003) explains that feedback guides, motivates, and reinforces effective behaviors. Kunich and Lester (1996) say that feedback is “any kind of return information or instruction from a source which is helpful in regulating behavior”. It gives a person or group information on how their behavior is perceived by one or more individuals. Providing individuals with feedback about their performance has been seen as an effective intervention in any learning process and achievement (Shute, 2008). Individuals need feedback to improve their strategies and to gain deeper understanding of their task, but also to regulate and monitor their work (Hattie & Timperley, 2007).

According to Latting (1992) effective feedback serves two basic purposes: (1) it clarifies the differences between the actual behavior and the desired behavior of the employees, and (2) it motivates employees to perform well to gain intrinsic and extrinsic rewards or to avoid penalties. Although there are various social actors that can provide feedback, this study addresses the feedback that is coming from the leader. Reasoning behind this choice is that many studies address the leader, and his leadership style, as an important actor influencing the organizational performance (Bass and Avolio, 1994; Conger, 1999; McColl-Kennedy and Anderson, 2002). In this study we examine the effect of positive, negative and the absence of feedback on the team effectiveness. We include agreement and disagreement coming from the leader as a part of positive feedback respectively negative feedback. Reasoning for this is that agreement and disagreement both serve the same basic purposes as feedback: it gives information about the desired behavior and it motivates employees to perform well. Hence, it is important to make a distinction between the content of the feedback, and the affective manner in which the message is brought to someone. This study focuses on the positive content of the feedback.
2.2.1 Individuals and the Team

An increase in individual performance cannot be simply applied to the team performance. Although research shows that feedback on performance has the power to steer, motivate, support and reinforce future behavior, the feedback effects on team performance also show inconsistencies (Gabelica et al., 2012). It has been stated that teams need to critically process and discuss the content of feedback, before it can be effectively used by the team. The team members need to build a common ground and come to a consensus on whether the feedback contains cues for improved future team behaviors (London and Sessa, 2006; Prins et al. 2006).

Throughout this study we examine the effect on team performance also through the received feedback on the individual-level in a group context. We choose to do so because an increase in the team members’ performances will eventually positively affect the team performance (see Figure 1).

![Figure 1. Influence of the individual on team performance](image)

2.2.2 Positive Feedback

The interpretation of feedback that is provided by the leader often results in the employee feeling either rewarded or punished for their behavior. Positive feedback is in this context defined as a reward from the leader towards the follower, mostly in the form of positive and supportive comments on his or her job performance. The leader agreeing with the follower’s statement is also seen as a positive or supportive message and can therefore be categorized as positive feedback. Positive feedback occurs when the performance of the employee was better than expected (Boyatzis, 1982).

Literature often relates the effect of feedback to a change in the motivation of an individual. There are several motivation theories (e.g., expectancy theory, reinforcement theory) that attest that positive feedback is more effective than negative feedback in relation to goal pursuit and accomplishment. The argumentation of this statement is that it increases the outcome expectancy of the goal as well as the confidence of the individual on the performance. Therefore, it increases the perceived self-efficacy of the pursuer of the goal, the individual (Atkinson, 1964; Bandura & Cervone, 1983; Lewin, 1935; Weiner, 1974; Zajonc & Brickman, 1969). Herzberg (1968) also noted a positive effect on individual performance. He stated that the recognition of a good performance can provide management with a powerful tool to motivate employees to live the company’s values and implement its mission. According to London (2003), positive feedback itself is reinforcing individual performance. People appreciate knowing if they perform well. He also stated that it heightens their sense of achievement and the internal motivation to perform above expectations.

The basic assumption of all these theories is that the positive feedback increases an individual’s confidence in their ability to pursue their goals and consequently allows them to do so successfully (Fishbach, Eyal & Finkelstein, 2010). In combination with improvements in interactive skills of the individual, this effect of increased confidence can also enhance the team performance. Drawing upon these theories we propose the following:

H1. Positive feedback from the leader enhances team effectiveness.

Although Herzberg (1968) and London (2003) both mention that performance increases with providing positive feedback, there is also literature suggesting otherwise. Leslie and Taylor (2005) highlight a possible negative effect on individual performance. The reasoning behind this is that overemphasis on the strengths can be detrimental to individual performance. An overdependence on strengths through positive feedback can become a drive for further development of these strengths. This seems to be a positive development, but the potential risk of this may be that the learning and development of an individual’s weaknesses will be neglected. As result, these skills or tasks will stay underdeveloped. Hence, we propose:

H2. Positive feedback from the leader shows a curvilinear relationship with team effectiveness.

2.2.3 Negative Feedback

Delivering negative feedback has been viewed as one of the more challenging tasks of being a leader. Rosen and Tesser (1970) introduced a term for the reluctance or failure to share negative information, called the ‘mum effect’. Managers may feel a certain level of discomfort when delivering negative feedback. This discomfort can result in inaccurate feedback. Based on this ‘mum effect’ we expect that the frequency of negative feedback will be a relatively small part compared to the overall feedback.

Whereas there are several motivation theories that support that positive feedback is more effective than negative feedback, there are also motivation theories that make the opposite prediction (Carver & Scheier, 1998; Higgins, 1987; Kluger & DeNisi, 1996; Miller, Galanter & Pribram, 1960; Powers, 1973). It is said that negative feedback does indeed increase the motivation of individuals. They propose that positive feedback leads to partial goal attainment. It creates a sense that less effort is needed to accomplish the goal, resulting in a lower motivation for the individual to work harder. On the contrary, negative feedback shows the lack of successes, signals that more effort is needed and encourages goal pursuit. Negative feedback therefore motivates individuals to actively increase their performance (Fishbach, Eyal & Finkelstein, 2010).

Already in the early 1900s there were feedback studies that showed a positive relationship between negative feedback and individual performance. These first studies were conducted with rats and found that punishment-only training caused faster learning than reward-only training. (Hoge, & Stocking, 1912; Warden, & Aylesworth, 1926). Later human studies on this assumption also showed the same effect (Buss & Buss, 1956; Meyer & Offenbach, 1962). There are several researchers stating that the advantage occurring from negative feedback has to do with the amount of information that negative feedback contains. Positive feedback is less informative than negative feedback and therefore less effective (Buchwald, 1962; Jones, 1961; Meyer & Offenbach, 1962).

We assume that the relationship between negative feedback and team effectiveness shows an inverted-U form relationship. The explanation for this can be well understood through the work of Pierce and Aguinis (2011). In this study
this curvilinear effect is proposed by the ‘Too-Much-of-a-Good-Thing Effect’. This effect shows that seemingly positive relations have a negative effect after a certain breakpoint. It seems that ordinarily beneficial aspects cause harm when taken too far, resulting in an overall pattern of curvilinearity. Hence, we propose the following hypotheses:

H3. Negative feedback from the leader is positively related to team effectiveness.

H4. Negative feedback from the leader shows a curvilinear relationship with team effectiveness.

2.2.4 Absence of Feedback

There is also a possibility that there is neither positive nor negative feedback provided by the leader; in other words, there is an absence of feedback. Research shows there is often a lack of feedback on the team’s performance from the leader (Kunich and Lester, 1996). Individuals must therefore regulate themselves more instead of relying on a leader who gives them direction. Issues of self-regulation have been an increasingly focus of interest in the work motivation research (Allen et al., 2003; Castaneda et al., 1999; Frayne and Geringer, 2000; Kanfer, 2005; Vancouver & Day, 2005; Wood, 2005). Karoly (1993) defines self-regulation as the capacity to guide one’s activities over time and across changing circumstances. Previously there has been shown that feedback can play a big part in influencing the motivation of employees. Self-regulation requires individuals to set goals and to revise these goals when needed (Richard & Diefendorff, 2010). Little to no feedback from the leader to the employees often occurs in situations of decentralization of organizations. An increased autonomy of the decentralized subsystems can affect the frequency of feedback (Minssen, 2006). This situation of feedback can be mostly found in self-managed or empowered teams, which are also the most common team types found in organizations (Lawler, Mohrman & Ledford, 1995). However, in teams where a formal leader is appointed, Locke and Latham (1990) stated that in the absence of direct feedback, assessing progress and deciding whether to proceed in a certain way can be difficult. As a result, the absence of feedback from the leader, employees search for other sources that provide information to estimate their current progress and derive a sense whether they are on target to reach their goals.

An example of such a source can be the individual’s teammates. Cannon-Bowers and Salas (1998) mentioned the effect of feedback between team members on the team performance. They stated that team members often already have much of the information and expertise they need to identify and solve their own problems. This process of diagnosing problems and developing effective solutions to these problems is referred to as ‘self-correction’. Minssen (2006) also describes the importance of feedback and communication within teams with the absence of feedback from the leader.

Another possible consequence of the lack of feedback from the leader can be the ‘social loafing’ effect. Individuals tend to put more effort in an individual task than working on a group task as a team (Jackson & Williams, 1985; Kerr, 1983; Latané, Williams & Harkins, 1979). This effect appears when it seems that the efforts of the individuals are not being evaluated and rewarded (Kerr, 1983; Kerr & Bruun, 1981; Shepperd, 1993; Szymanski & Harkins, 1987). To reduce this effect, it is important to change the individual’s perceptions that their work is being monitored. Feedback from the leader can serve as a tool for reducing this effect. Hence, we propose the following:

H5. The absence of feedback from the leader results in lower team effectiveness.

3. METHOD

3.1. Design of Study

This exploratory, cross-sectional study uses two different data sources: (1) systematic video-coding was used to capture the behaviors of leaders and followers during staff meetings, and (2) a survey that measured the followers’ perceptions after these meetings. By using these different sources and methods for collecting data, the common source bias was reduced in this study (Podsakoff et al., 2003).

3.2. Sampling

The sample consisted of 29 leaders employed by a large Dutch public sector organization. These leaders all had a middle-management position within the organization. The sample was compromised of 20 male (69.0%) and 9 female (31.0%) leaders. The leaders were on average 50.9 years old, ranging from 42 to 61 (SD=5.2). The average job tenure of the leaders was 22.2 years, ranging from 6 months to 43 years (SD=12.7).

Immediately after each recorded staff meeting, the followers were asked to fill out a survey on their perceptions of the leader behaviors and team effectiveness. This sample of followers consisted of 405 employees, employed in the same public sector organization as the leaders. The sample was compromised of 261 male (64.4%) and 104 female (25.7%) followers. The gender of 40 followers is unknown (9.9%). These followers were on average 49.4 years old, ranging from 21 to 64. The followers have an average job tenure of 24.8 years, ranging from 3 days to 46 years (SD=13.5).

3.3. Key Measures

3.3.1 Positive and Negative Feedback

The feedback from the leaders was measured by the observed leadership behavior during a staff meeting. These behaviors were coded by the observers using a predefined coding scheme based on the literature of Bales (1950), Borgatta (1964), Feyerherm (1994), and Yukl (2002). Within this coding scheme, these behaviors are referred to as ‘providing positive feedback’ and ‘providing negative feedback’. Since we approached agreeing and disagreeing from the leader as a form of feedback, we will also use the behaviors ‘agreeing’ and ‘disagreeing’ from the coding scheme. To be sure that the observed behaviors of the leader were representative compared to other staff meetings, we asked the followers about the representativeness of their leader. The representativeness was scored from 1 (not representative) to 7 (highly representative). The average score of the leaders was 5.23 (SD=1.4), which indicates that the behaviors displayed by the leader were representative.

3.4. Data Analysis

To test the hypotheses, we will use the following statistical tests:
3.3.2 Team Effectiveness

Team effectiveness was measured through the use of the survey the followers were asked to fill out after each staff meeting. The survey contained 4 different items on team effectiveness. When these scores are aggregated, they must provide representative information on the followers’ perceptions on the team effectiveness.

The items that were used in the survey are as follows: ‘This team is effective’, ‘This team makes few mistakes’, ‘This team is consistently a high performing team’ and ‘This team does high quality work’. The answers are given on a 7 point scale, ranging from 1 (totally disagree) to 7 (totally agree).

3.4. Video observation method

All 29 leaders in this sample were videotaped during a randomly selected, prescheduled, regular staff meeting with their followers. Through the use of the behavioral software program “The Observer XT” that has been developed for the analysis, management and presentation of observational data (Noldus et al., 2000), the videos were precisely coded and analyzed.

The observers were third year bachelor students International Business Administration and master students Business Administration of the University of Twente. The students all received training about “The Observer XT” and how to apply the behavioral coding scheme. These instructions helped to enhance the accuracy of the coding of different behaviors.

Of each video-recorded staff meeting the behaviors of the leaders as well as the behaviors of the followers were precisely coded. The predefined coding scheme contained a detailed description of each behavior. In order to avoid subjectivity bias, each video was coded by two different observers. The results were compared through the use of a reliability test in “The Observer XT”. This inter-reliability was defined as the percentage of agreement between the coded behaviors of the observers within a time range of two seconds. When significant differences or disagreements occurred, the observers re-viewed their findings. All videos in this study obtained an inter-reliability rate of 85% or higher.

3.5. Behavioral Coding Scheme

The behavioral coding scheme was developed in order to capture specific leadership behaviors during the daily work practices (Gupta et al., 2009; Hoogeboom et al., 2011; van der Weide, 2007). Appendix A includes a table which contains different possible behaviors that have been coded in this current study. Each behavior has been given a short description and a couple of examples to understand the differences between the behaviors in more detail. Bales (1950) and Borgatta (1964) formed a solid base for this behavioral coding scheme. They observed in their early studies interaction processes between leaders and their followers. In their exploratory work they made a distinction between three broadly defined behaviors: (1) neutral task oriented behavior; (2) positive-social emotional behavior and (3) the remaining social-emotional behavior. The work of Bales (1950) and Borgatta (1964) was then used as a practical scheme for coding a range of leadership behaviors (Yukl, 2002). Bales’ and Borgatta’s work was extended by Feyerherm (1994). He used a more experimental approach towards measuring leadership behaviors and added some behaviors to the already existing task-oriented and social-oriented behaviors. The work of Bales (1950), Borgatta (1964) and Feyerherm (1994) all share two important commonalities: (1) all of three schemes assess the directly observable behavior, and (2) all three schemes are used to observe leader behavior in a group context (e.g. Avolio, Howell, & Sosik, 1999; Bass & Avolio, 1995; Pearce et al., 2003; Yukl et al., 2002). The behavioral taxonomy of the work of Yukl et al. (2002) was also used in the development of the behavioral coding scheme. It helps to more accurately describing the different observable behaviors.

3.6. Data Analysis

The objective of this study is to examine how the leader’s feedback to their followers influence the team effectiveness. Correlation analysis was used to examine whether there is a relationship between the key variables. Besides, a regression analysis is performed to give greater insight into the associations and to test the hypotheses.

4. RESULTS

4.1. Reliability Team Effectiveness

The four items on the survey about the perceived team effectiveness of the followers must provide a clear image about this effectiveness. To decide whether these items can be combined, a reliability analysis has been conducted.

The reliability analysis showed a Cronbach’s alpha of .87 on these survey questions. This means that the questions that were asked about the team effectiveness are reliable. Also, it indicates that the scores on these items can be combined together to distract a mean value on the overall team effectiveness.

4.2. Observations

Table 1 presents an overview of the average observed behaviors of 29 leaders during the staff meetings. The table shows the duration and the frequency of each displayed behavior. The descriptive results show that ‘informing’ is displayed in a high amount with a total duration of 40.2%. It also scores the highest in frequency (24.0%). The second most frequently displayed behavior is ‘visioning’, with a frequency of 18.1% and a duration of 23.3%. Next to these two behaviors, was ‘verifying’ shown the most in both duration and frequency (11.4%; 9.7%).

Further on we look at the duration and frequency of

<table>
<thead>
<tr>
<th>Displayed behaviors</th>
<th>Duration</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Showing disinterest</td>
<td>0.51%</td>
<td>0.17%</td>
</tr>
<tr>
<td>Defending own position</td>
<td>2.80%</td>
<td>2.97%</td>
</tr>
<tr>
<td>Providing negative feedback</td>
<td>1.08%</td>
<td>0.99%</td>
</tr>
<tr>
<td>Disagreeing</td>
<td>0.54%</td>
<td>1.48%</td>
</tr>
<tr>
<td>Agreeing</td>
<td>2.12%</td>
<td>7.17%</td>
</tr>
<tr>
<td>Directing</td>
<td>2.95%</td>
<td>7.10%</td>
</tr>
<tr>
<td>Verifying</td>
<td>5.24%</td>
<td>12.42%</td>
</tr>
<tr>
<td>Structuring the conversation</td>
<td>11.44%</td>
<td>9.66%</td>
</tr>
<tr>
<td>Informing</td>
<td>40.20%</td>
<td>24.02%</td>
</tr>
<tr>
<td>Visioning</td>
<td>23.28%</td>
<td>18.11%</td>
</tr>
<tr>
<td>Providing positive feedback</td>
<td>1.17%</td>
<td>1.94%</td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>3.22%</td>
<td>4.03%</td>
</tr>
<tr>
<td>Individualized consideration</td>
<td>2.87%</td>
<td>5.87%</td>
</tr>
<tr>
<td>Humor</td>
<td>1.44%</td>
<td>2.95%</td>
</tr>
<tr>
<td>Personally informing</td>
<td>1.15%</td>
<td>1.14%</td>
</tr>
</tbody>
</table>

Total 100.00% 100.00%
the following behaviors: ‘providing positive feedback’ (1.17%; 1.94%), ‘providing negative feedback’ (1.08%; 0.99%), ‘agreeing’ (2.12%; 7.17%) and ‘disagreeing’ (0.54%; 1.48%).

The variables we used are approached as normally distributed variables. To make the variables ‘providing negative feedback’ and ‘providing positive feedback’ in duration normally distributed, we used a log transformation.

The scores for team effectiveness derived from the answers to the surveys that have been filled out. We conducted a test of normality and it turned out that the variable ‘team effectiveness’ is normally distributed. Hereafter, Pearson correlation analyses are conducted in order to test whether there is a significant relationship between the dependent and independent variables.

4.3. Correlations
Table 2 shows the mean, standard deviations and bivariate correlations of the key variables in duration. There is a significant relationship between negative feedback and team effectiveness in duration (r = .31, p < .05, one-tailed). It is a positive relationship in the same direction as predicted in hypothesis 3 (‘negative feedback is positively related to team effectiveness’). It also shows significant associations between negative feedback and positive feedback (r = .37, p < .05) and between disagreeing and agreeing (r = .40, p < .05).

Table 3 presents the mean, standard deviations and de bivariate correlations of the key variables in frequency of this study. The table shows that only agreeing in frequency is significantly related to the agreeing variable team effectiveness (r = .46, p < .05). The correlations also show a significant negative relationship between agreeing and negative feedback (r = -.39, p < .05).

4.3. Hypotheses Testing
Two regression analyses have been conducted in order to accept or reject the formulated hypotheses. A regression analysis on the key variables in duration and frequency are shown in table 4, respectively table 5.

4.3.1 Positive Feedback
Hypothesis 1 posits a positive relationship between the leader providing positive feedback and the overall team effectiveness. The regression analysis in both duration and frequency do not support the hypothesis on the basis of the variable ‘providing positive feedback’ (β = .04, n.s.; β = -.02, n.s.). Though, table 5 shows an interesting finding. The perceived team effectiveness can be explained by the frequency of leader behavior ‘agreeing’ during a staff meeting (β = .59, p < .01). Since we approached the variable ‘agreeing’ as a part of positive feedback, we cannot exclude a significant relationship between positive feedback and team effectiveness.

We also tested the curvilinear hypothesis stating the ‘Too-Much-of-a-Good-Thing-Effect’ (hypothesis 2: ‘Positive feedback from the leader shows a curvilinear relationship with team effectiveness’). This hypothesis cannot significantly be confirmed by the model that we used. We tested the curvilinearity of both variables ‘providing positive feedback’ and ‘agreeing’. Neither one shows a significant relationship.

4.3.2 Negative Feedback
Hypothesis 3 proposed that the leader providing negative feedback is positively related to the team effectiveness. Table 5 shows that the frequency of providing negative feedback does not significantly support the hypothesis. Also, the variable ‘disagreeing’ supports neither in duration nor in frequency this hypothesis. However, based on the regression results in duration, this hypothesis is accepted (β = .37, p < .05, one-tailed). According to this table 37% of the variance in team effectiveness can be explained by the duration of the provided negative feedback from the leader. However, a limitation to this finding is that the model is not significant ($R^2 = .23, p = .16$).

Table 2. Means, Standard Deviations and Correlations (Duration)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Team effectiveness</td>
<td>4.94</td>
<td>.53</td>
<td>.12</td>
<td>.12</td>
<td>.23</td>
<td>.23</td>
</tr>
<tr>
<td>2. Positive feedback</td>
<td>1.17</td>
<td>1.43</td>
<td>.31</td>
<td>.31</td>
<td>.12</td>
<td>.12</td>
</tr>
<tr>
<td>3. Negative feedback</td>
<td>1.08</td>
<td>1.47</td>
<td>.37</td>
<td>.37</td>
<td>.12</td>
<td>.12</td>
</tr>
<tr>
<td>4. Agreeing</td>
<td>2.12</td>
<td>1.23</td>
<td>.10</td>
<td>.10</td>
<td>.23</td>
<td>.23</td>
</tr>
<tr>
<td>5. Disagreeing</td>
<td>5.45</td>
<td>.59</td>
<td>.10</td>
<td>.10</td>
<td>.23</td>
<td>.23</td>
</tr>
</tbody>
</table>

* p < .05, two-tailed; ** p < .01, two-tailed; † p < .05, one-tailed.

1 Variable based on surveys filled out by followers of the participating leader; based on a 7 point scale.

2 Variable in percentages of overall leadership behaviors during the video-recorded staff meeting.

Table 3. Means, Standard Deviations and Correlations (Frequency)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Team effectiveness</td>
<td>4.94</td>
<td>.53</td>
<td>.07</td>
<td>.07</td>
<td>.23</td>
<td>.23</td>
</tr>
<tr>
<td>2. Positive feedback</td>
<td>1.94</td>
<td>1.72</td>
<td>.03</td>
<td>.03</td>
<td>.12</td>
<td>.12</td>
</tr>
<tr>
<td>3. Negative feedback</td>
<td>1.94</td>
<td>1.72</td>
<td>.03</td>
<td>.03</td>
<td>.12</td>
<td>.12</td>
</tr>
<tr>
<td>4. Agreeing</td>
<td>2.12</td>
<td>1.23</td>
<td>.10</td>
<td>.10</td>
<td>.23</td>
<td>.23</td>
</tr>
<tr>
<td>5. Disagreeing</td>
<td>5.45</td>
<td>.59</td>
<td>.10</td>
<td>.10</td>
<td>.23</td>
<td>.23</td>
</tr>
</tbody>
</table>

* p < .05, two-tailed; ** p < .01, two-tailed; † p < .05, one-tailed.

1 Variable based on surveys filled out by followers of the participating leader; based on a 7 point scale.

2 Variable in percentages of overall leadership behaviors during the video-recorded staff meeting.
Tolerance relationship with team effectiveness. It is surprisingly to see effect size is hard to find due to the small sample size that is normally distributed, an independent samples t-test was conducted to compare team effectiveness between teams getting feedback (M=5.10, SD=.44) and teams getting no to little feedback (M=4.93, SD=.65). The t-test did not show a significant difference in the scores for both groups (t(7) = .44, n.s.). Possibly a larger sample is needed to investigate such a relation more thoroughly.

4.3.3 Absence of Feedback
To see whether feedback in general enhances the team effectiveness, we compared the team effectiveness of the teams that got no or little feedback to the teams that got the most feedback in our sample. Since the variable ‘team effectiveness’ is normally distributed, an independent-samples t-test was conducted to compare team effectiveness between teams getting feedback (M=5.10, SD=.44) and teams getting no to little feedback (M=4.93, SD=.65). The t-test did not show a significant difference in the scores for both groups (t(7) = .44, n.s.). Possibly a larger sample is needed to investigate such a relation more thoroughly.

5. DISCUSSION, LIMITATIONS AND FUTURE RESEARCH
5.1. Discussion
In order to examine or explore the relationship between feedback and team effectiveness, this study used two different sources of data: video-recorded and -coded leader behaviors and the follower perceptions on team effectiveness. During regular staff meetings 29 leaders were video-taped and their behaviors were inter-reliably coded with a detailed observation scheme. Correlation analyses have been performed including the key measures of this study in frequency as well as duration. Besides, regression analyses have been used to describe possible relationships in more detail. With the use of these analyses it appears that not all of the initiating behaviors are related to the dependent variable ‘team effectiveness’. Therefore, not all of the stated hypotheses can be confirmed. Though, the results do indeed present several important implications for effective leadership and effective teams. First, we found that the leader agreeing with his or her followers during a staff meeting explains a part of the variance in team effectiveness. This finding confirms London’s (2003) and Herzberg’s (1968) contentions that positive feedback increases the individual performance as well as the team performance (hypothesis 1). Remarkable is that the variable ‘providing positive feedback’ itself does not show any association with team effectiveness, whereas ‘agreeing’ does indeed show a strong and significant relationship with the dependent variable. Although there is no significant association found for the curvilinear hypothesis predicting that the effect of positive feedback will turn negative after a certain breakpoint, the data still shows an interesting finding for further exploration. Though not significant, a curvilinear relationship between ‘agreeing’ and the team effectiveness is indeed present. Further research using a larger sample size can possibly significantly support hypothesis 2 (‘Positive feedback from the leader shows a curvilinear relationship with team effectiveness’).

Secondly, de analysis showed support for hypothesis 3 on negative feedback (β = .37, p < .05, one-tailed). The results support the predictions that we made on the basis of Fishbach et al. (2010). So, providing negative feedback is positively associated with the team effectiveness. It is surprisingly to see that disagreement from the leader towards the followers showed no significant association with team effectiveness. Also, no support has been found on hypothesis 4 (‘Negative feedback from the leader shows a curvilinear relationship with team effectiveness’). As been said before, an effect of curvilinearity is hard to find due to the small sample size that was used.

Unfortunately, no results have been found to support an effect of the absence of feedback on the team effectiveness. Although hypothesis 5 can therefore not be confirmed, we did find another interesting aspect worth mentioning. Feedback is

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Collinearity Statistics</th>
<th>Squared</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>Tolerance</td>
<td>VIF β</td>
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<tr>
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<tr>
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<td>.37**</td>
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<td>.08</td>
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<tr>
<td>Agreeing</td>
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<td>.33</td>
<td>.84</td>
<td>1.19</td>
<td>-61</td>
</tr>
<tr>
<td>Disagreeing</td>
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<td>.08</td>
<td>.76</td>
<td>1.32</td>
<td>-.18</td>
</tr>
<tr>
<td>R²</td>
<td>.10</td>
<td>.10</td>
<td>.23</td>
<td>.03</td>
<td>.10</td>
</tr>
<tr>
<td>F</td>
<td>1.41</td>
<td>1.39</td>
<td>1.79</td>
<td>.41</td>
<td>1.48</td>
</tr>
</tbody>
</table>

* p < .05, two-tailed; ** p < .01, two-tailed; † p < .05, one-tailed.

Note: Results do not change when control variables (i.e. Age and Gender) are added (R² = .33, ∆R = .07, n.s.)

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<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
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<th>Collinearity Statistics</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>Tolerance</td>
<td>VIF β</td>
</tr>
<tr>
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<td>.90</td>
<td>1.12</td>
<td>.50</td>
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<tr>
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<td>.07</td>
<td>.26</td>
<td>.84</td>
<td>1.12</td>
<td>.33</td>
</tr>
<tr>
<td>Agreeing</td>
<td>.47*</td>
<td>.59**</td>
<td>.77</td>
<td>1.29</td>
<td>-.74</td>
</tr>
<tr>
<td>Disagreeing</td>
<td>-.08</td>
<td>-.11</td>
<td>.86</td>
<td>1.17</td>
<td>-.24</td>
</tr>
<tr>
<td>R²</td>
<td>.01</td>
<td>.21*</td>
<td>.27†</td>
<td>.01</td>
<td>.04</td>
</tr>
<tr>
<td>F</td>
<td>.07</td>
<td>3.56</td>
<td>2.23</td>
<td>.18</td>
<td>.51</td>
</tr>
</tbody>
</table>

* p < .05, two-tailed; ** p < .01, two-tailed; † p < .05, one-tailed.

Note: Results do not change when control variables (i.e. Age and Gender) are added (R² = .31, ∆R = .01, n.s.)
seen as an essential part of performance management (London, 2003; Ilgen, Fisher, & Taylor, 1979). All 29 leaders were employed in the same organization, but surprisingly there were leaders who did not provide feedback to their followers at all. When feedback is viewed as such an important part of leadership in the literature, it is remarkable to notice that not all leaders use this insight in their every day practices. The differences between the teams getting feedback from their leader and the teams getting no feedback from their leader was not substantial enough. Self-regulation as mentioned by Karoly (1993) and Richard and Diefendorff (2010) is also an important aspect to keep in mind here. A possibility exists that the absence of feedback from the leader requires the individuals to use more self-regulation, i.e., the absence of feedback can be moderated by self-regulation. Another explanation for the absence of feedback can be allocated to the fact that all meetings took place in group setting. Leaders may intentionally not provide individual feedback to the follower during a staff meeting to prevent the occurrence of social comparison between team members (Barr & Conlon, 1994). So, the option exists that the leaders who are not providing any feedback during the staff meetings, choose to give feedback to their followers in a one-on-one meeting.

The correlation analysis showed a significant association in duration between the leader providing negative and positive feedback ($r=.37, p < .05$). So, it seems that leaders either provide feedback in general, or they do not. According to this association leaders tend to keep their provided negative and positive feedback in balance.

5.2. Limitations and Future Research
This study showed some interesting findings and therefore delivers suggestions for further research. One of the limitations in this study is the small sample size. A bigger size will enhance the chance of obtaining significant results. The sample size that has been used is too small to significantly support the statement that feedback (negative and positive) enhances the team effectiveness. This leaves an opportunity for future research to investigate this relationship in more detail. The correlation analysis showed a significant association between providing negative and positive feedback. If the effect of feedback on team performance is substantiated by empirical data, this association can be used in finding important implications on how leaders should behave in order to enhance their team’s effectiveness.

The significant results on the relationships of both agreeing and negative feedback on the team effectiveness are also interesting to investigate in future research. Especially in relation to the ’Too-Much-of-a-Good-Thing-Effect’ (Pierce and Aguinis, 2011). This research was unable to investigate this effect thoroughly, due to the sample size, but it already showed some promising results for further exploration. With a larger sample size it is also possible to investigate the ‘mum effect’ as proposed by Rosen and Tesser (1970), stating that individuals feel a certain reluctance to share negative information.

Besides the small sample size, the generalizability of this study’s findings to other organizations and countries may also be a limitation. The sample was drawn from one Dutch public-sector organization. The findings may not be applicable to other organizations and countries, due to cultural differences.

6. CONCLUSION
The goal of this study was to find out if feedback behaviors of the leader will enhance the team effectiveness. During this study we focused on the leader behaviors during regular staff meetings. This was done in order to answer the following research question: “How do positive and negative feedback of the leader influence team effectiveness?” This exploratory research delivered some interesting findings and can be a good base for further research on leader feedback. The present study advances current research by using the video-observation method to reduce common-method bias and shows urgency for further exploration on feedback as a leadership tool.

REFERENCES


Appendix A

<table>
<thead>
<tr>
<th>Behavior Category</th>
<th>Behavior</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-defending</td>
<td>Showing disinterest</td>
<td>Not showing any interest, not taking problems seriously, wanting to get rid of problems and conflicts</td>
<td>Not actively listening, talking to others while somebody has the speaking term, looking away</td>
</tr>
<tr>
<td></td>
<td>Defending one’s own position</td>
<td>Protecting the own opinion or ideas, emphasizing the own importance</td>
<td>“We are going to do it in my way.” Blaming other people</td>
</tr>
<tr>
<td></td>
<td>Providing negative feedback</td>
<td>Criticizing</td>
<td>“I do not like that…” “But we came to the agreement that…”</td>
</tr>
<tr>
<td>Steering</td>
<td>Disagreeing</td>
<td>Contradicting ideas, opposing team members</td>
<td>“That is not correct” “I do not agree with you”</td>
</tr>
<tr>
<td></td>
<td>Agreeing</td>
<td>Saying that someone is right, liking an idea</td>
<td>“That is a good idea” “You are right”</td>
</tr>
<tr>
<td></td>
<td>Directing</td>
<td>Telling others what (not) to do, dividing tasks</td>
<td>“I want that” “Kees, I want you to” Interrupting</td>
</tr>
<tr>
<td></td>
<td>Verifying</td>
<td>Getting back to previously made agreements/visions/ norms</td>
<td>“We came to the agreement that…”</td>
</tr>
<tr>
<td></td>
<td>Structuring the conversation</td>
<td>Giving structure by telling the agenda, start/end time etc.</td>
<td>“The meeting will end at…” “We are going to have a break now”</td>
</tr>
<tr>
<td></td>
<td>Informing</td>
<td>Giving factual information</td>
<td>“The final result is…”</td>
</tr>
<tr>
<td></td>
<td>Visioning</td>
<td>Giving the own opinion</td>
<td>“I think that…” “Within the next years, we want to…”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Giving long-term visions</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Giving own opinion organizational vision</td>
<td></td>
</tr>
<tr>
<td>Supporting</td>
<td>Intellectual stimulation</td>
<td>Asking for ideas, inviting people to think along or come up with own ideas, brainstorming</td>
<td>“What do you think is the best way to…” “What is your opinion about…”</td>
</tr>
<tr>
<td></td>
<td>Individualized consideration</td>
<td>Rewarding, complimenting, encouraging, being friendly, showing empathy</td>
<td>“Good idea, thank you” “You did a great job” “Welcome” “How are you?”</td>
</tr>
<tr>
<td></td>
<td>Humor</td>
<td>Making people laugh, saying something with a funny meaning</td>
<td>Laughing, making jokes</td>
</tr>
<tr>
<td></td>
<td>Positive feedback</td>
<td>Rewarding, complimenting</td>
<td>“Well done”</td>
</tr>
<tr>
<td></td>
<td>Personally informing</td>
<td>Giving non-factual, but private information</td>
<td>“Last weekend, my wife…”</td>
</tr>
</tbody>
</table>