

The Long-Term Impact of the Feedback Environment on Job Satisfaction: A Field Study in a Belgian Context

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This study examines (1) the relationship between the feedback environment and job satisfaction and (2) the mediating role of leader–member exchange in a Belgian context. Results from a sample of 155 employees of a governmental service for employment and vocational training supported our hypotheses. A favorable supervisor feedback environment was related to higher levels of job satisfaction 5 months later, and this relationship was fully mediated by the quality of leader–member exchange. These findings highlight the usefulness of diagnosing and assessing the feedback environment for a better understanding of feedback processes and for enhancing feedback interventions in organisations.

Ce travail examine dans un contexte culturel belge 1) la relation entre la satisfaction professionnelle et le feedback provenant de l'environnement 2) le rôle médiateur des échanges leader-collaborateurs. Nos hypothèses ont été confirmées par les conclusions issues d'un échantillon composé de 155 employés d'un service d'Etat de retour à l'emploi et de formation professionnelle. Un environnement rétroactif positif provenant du chef immédiat était en rapport avec un niveau plus élevé de satisfaction professionnelle cinq mois plus tard, et cette relation était maximisée par la qualité des échanges entre le leader et les membres du groupe. Ces résultats montrent qu'il faut prendre en compte et évaluer la rétroaction environnementale pour une meilleure appréhension des processus de feedback et pour améliorer les interventions dans les organisations portant sur le feedback.

INTRODUCTION

Providing feedback to employees is believed to be essential for maintaining and increasing employee motivation and satisfaction (Hackman & Oldham, 1976; Lam, Yik, & Schaubroeck, 2002). Traditionally, the formal performance appraisal review has been considered as the ideal platform for supervisors

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to provide feedback to employees about how they view employee performance (Murphy & Cleveland, 1995). However, the performance appraisal review is no panacea for employee motivation and satisfaction (e.g. Longenecker, Sims, & Goia, 1987). Recently, calls have been made for putting more emphasis on the development of an organisational culture that is supportive of feedback processes to increase motivation and satisfaction (London & Smither, 2002).

A qualitative case study by Longenecker and Nykodym (1996) in the public sector illustrates some of the problems associated with performance appraisal. Employees noted that feedback in performance appraisal was problematic for improving employee motivation and performance, and as a communications tool to improve the manager/subordinate relationship. Employee suggestions for improving the feedback process were (a) that managers make more time available, (b) increase their knowledge of actual performance, (c) better clarify performance expectations, (d) put greater emphasis on employee development, (e) do not dwell on negatives, (f) provide more ongoing feedback, and (g) increase two-way communication.

These suggestions indicate that supervisors might adopt a number of specific behaviors to support feedback processes in the organisation, which in turn might lead to an enhanced manager/subordinate relationship and increased employee satisfaction. This hypothesis, central to the present study, fits nicely within the developing literature on the feedback environment. This research stream has demonstrated that a supportive feedback environment in organisations is positively related to a range of workplace outcome variables (e.g. Steelman, Levy, & Snell, 2004). Building on this literature, the focus of the present study is to replicate previous findings about the relationship between the supervisor feedback environment and work attitudes in a new international context (Belgium), and to extend previous research by examining the mediating role of leader–member exchange.

THE FEEDBACK ENVIRONMENT

Early work on the feedback environment originated from the observation that traditional feedback research primarily relied on experimental lab studies (e.g. Chapanis, 1964; Erez, 1977; Locke, 1967; Schrauger & Rosenberg, 1970; Schmitt, Coyle, & Saari, 1977; Steinman, 1976; Strang, Lawrence, & Fowler, 1978). These experimental studies examined the effects of a performance-specific feedback message after an isolated performance episode, which is not consistent with organisational reality. As noted by Herold and Parsons (1985), and Becker and Klimoski (1989), more information is typically available to employees in organisations than these isolated performance feedback interventions. Feedback environment researchers stressed that employees have continuous access to performance-related information from a variety of sources, that different cues can serve as feedback information, and that

available feedback is affected by a range of factors other than an objective performance episode (Ashford, 1993; Ashford & Cummings, 1983; Herold & Parsons, 1985). Consequently, the feedback environment was defined as the total set of information that tells individuals how well they are performing in an organisation (Hanser & Muchinsky, 1978). The first empirical studies on the feedback environment have primarily focused on the amount and type of feedback information provided by different feedback sources (e.g. positive/negative feedback available from supervisors, co-workers, self, and the task) (Greller & Herold, 1975; Herold & Parsons, 1985), the importance employees attach to feedback cues from these sources (e.g. cues from company and supervisor seem most important) (Ashford, 1993; Greller, 1980), and the relationship between perceptions of the feedback environment and different criteria of performance (Becker & Klimoski, 1989).

More recent conceptualisations of the feedback environment have abandoned typologies of available feedback information and have put more emphasis on the development of an organisational environment that is supportive of feedback interactions and processes in an organisation (Levy & Williams, 2004; London & Smither, 2002). For instance, Levy and colleagues (Norris-Watts & Levy, 2004; Rosen, Levy, & Hall, 2006; Steelman et al., 2004) have referred to the feedback environment as “the contextual aspects of day-to-day supervisor–subordinate and coworker–coworker feedback processes rather than to the formal appraisal feedback session” (Stelman et al., 2004, p. 166). The feedback environment is believed to play a vital role in determining how employees seek, receive, process, accept, and use feedback messages. Therefore, a better understanding of the feedback environment is crucial to gain more insight into the feedback process and to improve feedback interventions in organisations.

A number of recent studies have empirically examined the effects of organisational environments that are supportive of feedback processes. Most of these studies have used the Feedback Environment Scale (FES) as a measure of the feedback environment (Stelman et al., 2004). The FES was specifically developed and validated for diagnosing the extent to which an organisation supports the feedback processes. In this questionnaire, a global appraisal of the feedback environment is made by focusing on the employee’s perceptions of feedback source credibility, feedback quality, feedback delivery, frequency of both diagnostic favorable and unfavorable feedback, source availability, and the extent to which feedback seeking is encouraged from both the supervisor and the co-worker’s perspective (Stelman et al., 2004).

A first empirical study (Stelman et al., 2004) focused on the validity of the FES and examined how employees in a feedback-rich environment dealt with feedback. Results showed that employees in a favorable feedback environment were more motivated to use feedback, were more satisfied with the

provided feedback, and sought feedback more frequently (Steelman et al., 2004). A second study documented the relationship between the feedback environment and organisational citizenship behaviors. Results indicated that a favorable feedback environment was positively related to supervisory reported organisational citizenship behavior and that this relationship was partially mediated by affective commitment (Norris-Watts & Levy, 2004). A third study tested a mediated model suggesting that the effects of the feedback environment on job satisfaction, and supervisory rated in-role and extra-role performance are mediated by perceptions of organisational politics. In general, this model was supported, again demonstrating the relationship between the feedback environment and several work-related outcomes (Rosen et al., 2006).

THE PRESENT STUDY

In the current study, we aim to replicate the finding that the feedback environment is positively related to employee job satisfaction (Rosen et al., 2006) in a different cultural context and examine whether this relationship is mediated by leader–member exchanges. In line with Norris-Watts and Levy (2004), we chose to focus on the supervisor part of the feedback environment because the supervisor's role offers more opportunities for organisational intervention. As delineated in the introduction, the organisation can encourage (e.g. by training) managers to adopt a number of specific behaviors to enhance the feedback environment. In contrast, the co-worker part of the feedback environment might appear to be less controllable by the organisation.

The present study contributes to the growing literature on the feedback environment in three ways. First, all studies examining the feedback environment in organisations have taken place in the US. Research on the feedback environment in contexts other than the US is important as recent theoretical and empirical work in the feedback area suggests that feedback processes in organisations are highly dependent on cultural and societal values (Early, Gibson, & Chen, 1999; Gelfand, Higgins, Nishii, Raver, Dominguez, Murakami, Yamaguchi, & Toyama, 2002; Lam, Yik, & Schaubroeck, 2002; Morrison, Chen, & Salgado, 2004; Stone-Romero & Stone, 2002; Sully de Luque & Sommer, 2000). These findings have led scholars to conclude that “some of the implicit assumptions concerning feedback-seeking may be less valid outside of the US” (Morrison et al., 2004, p. 1) and “more studies are needed to determine the generality of feedback effects across societal cultures” (Lam et al., 2002, p. 199). There are some notable cultural and societal differences between the US and Belgium that warrant an examination of the generalisability of feedback effects to this new international context. First, in terms of Hofstede's (1980, 2001) culture dimensions, Belgium (5/53) ranks

very high on the uncertainty-avoidance dimension, in contrast to the US (43/53). As outlined by Sully de Luque (Sully de Luque & Sommer, 2000, see also Shackleton & Ali, 1990), organisations operating in a high uncertainty-avoidance culture will use more formal rules, procedures, and structures for providing feedback than cultures depicted by low uncertainty avoidance. This might indicate that in Belgium, the informal feedback environment might be less dominant in predicting work attitudes than in the US. Second, Belgium (20/53) and the US (38/53) also differ considerably on the Power Distance dimension (Hofstede, 1980, 2001). Again, Sully de Luque and Sommer (2000) argued that differences on this culture dimension are highly relevant for feedback processes in organisations. According to her argument, organisations operating in a high power distance culture (e.g. Belgium) will convey feedback more frequently through a top-down feedback process (e.g. performance appraisal), whereas organisations in low power distance cultures (e.g. the US) will convey feedback more frequently through an interactive process review (e.g. informal feedback). Third, the employment relationship in the public sector in Belgium is characterised by high job security and a highly structured internal labor market with fixed salaries (Sels, Janssens, Van Den Brande, & Overlaet, 2000). In practice, this means that supervisors have little control over their subordinates' career and pay. In terms of the feedback environment, this might indicate that the supervisory supported feedback environment might be less important for Belgian employees in the public sector.

A second contribution of this study is that recent studies have related the feedback environment to a number of work-related outcomes but have only started to explore intermediate mechanisms that may explain how a favorable feedback environment might affect work-related outcome variables. Two mediating variables have been examined. First, Norris-Watts and Levy (2004) found that the relationship between the feedback environment and the employee's organisational citizenship behaviors was partially mediated by affective commitment. Second, it seems that the relationship between the feedback environment and employee morale is mediated by perceptions of employee politics (Rosen et al., 2006). However, several other variables may serve as an intermediate mechanism in the feedback environment–outcome chain. Therefore, as suggested by Rosen et al. (2006), additional work is needed on psychological mechanisms that may be useful in understanding the feedback environment–outcomes relationship. In the current study, we propose and examine the quality of leader–member exchanges as a potential mediator.

Leader–member exchange theory posits that the quality of the relationship developed between a leader and a follower is predictive of outcomes at the individual, group, and organisational level of analysis (Graen & Schieman, 1978). On the one hand, we expect that the quality of leader–member exchange will be determined by the supervisor component of the feedback environment. We envision that employees who regularly receive high-quality

feedback from a credible supervisor in a supportive manner will develop higher liking for their supervisor because his behavior is instrumental in achieving performance goals. Previous research indicated that supervisor liking is an important predictor of leader–member exchange in laboratory experiments (Dockery & Steiner, 1990; Wayne & Ferris, 1990) and field studies (Liden, Wayne, & Stilwell, 1993; Wayne & Ferris, 1990). Therefore, we expect feedback environment to be a significant predictor of the quality of leader–member exchange. On the other hand, a meta-analytic review of leader–member exchange theory demonstrated that the quality of leader–member exchange was a meaningful predictor (corrected $r = .50$, $N = 6887$) of general job satisfaction (Gerstner & Day, 1997). This line of reasoning on the interpersonal mechanism of leader–member exchange leads to the hypothesis that leader–member exchange will mediate the relationship between the feedback environment and job satisfaction.

A third strength of this study is that we examined the long-term effects of the feedback environment. Until now, most studies have studied the relationship between the feedback environment and work outcome variables within a short time frame (Norris-Watts & Levy, 2004; Rosen et al., 2006). In this study, we extended current research by assessing leader–member exchange and job satisfaction 5 months after the feedback environment to examine if its effects endured over longer periods of time, supporting the stability of the feedback environment.

METHOD

Participants and Procedure

Participants were employees of a regional division of a governmental service for employment and vocational training. Data were collected at two times. At Time 1, the feedback environment questionnaire was distributed. Four hundred and sixty-two employees were emailed a cover letter discussing the study and containing a link to the actual questionnaire. Surveys were coded with an identification number to facilitate the matching of the respondents' survey over time. Study participation was voluntary. Two hundred and fourteen employees filled out the questionnaire (70% female, 30% male), yielding a response rate of 41.5 per cent. Their ages ranged from 21 to 62 years ($M = 39.1$ years, $SD = 9.7$). The participants had an average tenure of 9.5 years ($SD = 7.1$) in the company and an average experience of 2.1 years ($SD = 1.3$) in their current position. In addition, 72.7 per cent held at least an undergraduate degree.

Data on leader–member exchange and job satisfaction were collected 5 months (Time 2) after Time 1. Of the 214 individuals who completed Time 1 data, 155 completed the Time 2 questionnaire, yielding a response rate of

72.4 per cent. We examined whether there were differences between those who participated in the study at Time 2 and those who did not participate at Time 2. Independent sample *t*-tests for continuous variables and χ^2 -tests for categorical variables indicated that there were no significant differences between respondents and non-respondents in (1) organisational tenure, (2) job tenure, (3) age, (4) education level, and (5) perceptions of the feedback environment ($p > .05$). Thus, respondent drop-out does not seem to be a threat to the representativeness of our results.

Measures

Control Variables (T1). As employees' need for performance feedback has been found to be negatively related to their tenure (Ashford, 1986; Ashford & Cummings, 1985; VandeWalle, Challagalla, Ganesan, & Brown, 2000), it is possible that job and organisational tenure will affect the effect of the feedback environment on job satisfaction. Therefore, we included both job and organisational tenure as control variables in our analyses. They were assessed with a single item that asked the participants how many years and months of tenure they had in the organisation and their job.

Feedback Environment (T1). The Feedback Environment Scale (FES) was used to assess perceptions of the supervisor component of the feedback environment (see also Norris-Watts & Levy, 2004). The typical procedure of back-translation with the help of professional translators was used to translate the questionnaire from English to Dutch. The FES consists of 32 items, measuring perceptions of seven different facets of the feedback environment on a 7-point Likert-type scale ranging from (1) *strongly disagree* to (7) *strongly agree*. Example items were "My supervisor gives me useful feedback about my job performance", "My supervisor is usually available when I want performance information", and "I feel comfortable asking my supervisor for feedback about my performance". Reliability for the Feedback Environment Scale was .94.

Quality of Leader–Member Exchange (T2). There is some debate regarding the most appropriate measure of LMX. On the basis of recommendations provided by Graen and Uhl-Bien (1995) that it be adopted as the standard measure of LMX, we used the 7-item measure of LMX (LMX7; Graen & Uhl-Bien, 1995). Meta-analytic evidence indicates that this measure provides the soundest psychometric properties and the highest correlations with outcomes of all available LMX measures (Gerstner & Day, 1997). Respondents indicated the extent to which the items characterised the quality of their exchange relationships with their supervisors ($\alpha = 0.95$). An example item is: "How would you characterise your working relationship with your leader?"

Job Satisfaction (T2). Three items from Cammann, Fichman, Jenkins, and Klesh (1983) were used to measure employees' global job satisfaction. An example item is "All in all, I am satisfied with my job". These items were rated on a 7-point scale, ranging from 1 = *strongly disagree* to 7 = *strongly agree*. The internal consistency of this scale was .91.

RESULTS

Descriptive statistics between study variables are reported in Table 1. As can be seen, the Feedback Environment Scale (FES), quality of Leader–Member Exchange (LMX), and job satisfaction were all positively related ($p < .01$). We tested for the mediating effects of LMX using Baron and Kenny's (1986) multi-step regression procedure. In each regression, we first controlled for job and organisational tenure. As the control variables were not significant in any of the regressions, they are not explicitly reported. A three-step analysis was conducted by: (a) regressing the mediator (LMX) on the independent variable (FES); (b) regressing the dependent variable (job satisfaction) on the independent variable (FES), and (c) regressing the dependent variable (job satisfaction) on both the independent (FES) and mediator (LMX) variables. According to Baron and Kenny, for "perfect" mediation to occur: (a) the independent variable must affect the mediator in the first equation; (b) the independent variable must be shown to affect the dependent variable in the second equation; (c) the mediator must affect the dependent variable in the third equation; and (d) the independent variable must no longer be significant in the third equation. As shown in Table 2, all of these conditions were met; thus, our basic hypothesis was supported: The impact of the feedback environment on job satisfaction is fully mediated by the quality of leader–member exchanges.

To further test these mediated paths, a direct test of the full mediational path (FES → LMX → job satisfaction) was conducted. This Sobel test (Sobel, 1982) is a conservative test examining the significance of the product

TABLE 1
Descriptive Statistics and Correlation Coefficients between Study Variables

	M	SD	1.	2.	3.	4.	5.
1. Job Tenure	2.03	1.28	(–)				
2. Organisational Tenure	9.00	6.92	.83**	(–)			
3. Feedback Environment Scale	5.14	1.07	–.09	–.13	(.94)		
4. Leader–Member Exchange	5.44	1.14	–.03	–.10	.66**	(.95)	
5. Job Satisfaction	6.06	1.04	–.01	–.06	.32**	.43**	(.91)

Note: $N = 155$. Cronbach's alphas are reported in parentheses on the diagonal. ** $p < .01$.

TABLE 2
 Mediation Analysis of Feedback Environment, Quality of Leader–Member Exchange, and Job Satisfaction

	<i>Variable</i>	b	t	ΔR^2	F
Equation 1	Dependent variable = Leader–Member Exchange				
	Independent variable = Feedback Environment	.70	1.34**	.43	115.91**
Equation 2	Dependent variable = Job Satisfaction				
	Independent variable = Feedback Environment	.31	4.07**	.10	16.59**
Equation 3	Dependent variable = Job Satisfaction				
	Independent variable = Feedback Environment	.06	0.66	.18	16.52**
	Independent variable = Leader–Member Exchange	.35	3.86**		

Note: Job and organisational tenure were included as control variable in all analyses. ** $p < .01$.

terms of the paths from the independent variable to the mediator as well as the path from the mediator to the dependent variable (Baron & Kenny, 1986; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Results of the Sobel test showed that the indirect path from FES to job satisfaction was significantly different from zero ($z = 5.14, p < .001$), so mediation can be concluded (Baron & Kenny, 1986).

DISCUSSION

Over recent years, there has been a surge of interest in the effects of the feedback environment on work-related outcomes (e.g. Norris-Watts & Levy, 2004; Rosen et al., 2006). The aim of this study was to constructively replicate and extend previous research relating the feedback environment to work-related outcomes. The results of this study extended previous research (a) by demonstrating the positive long-term effect of the feedback environment on job satisfaction in a different cultural context, and (b) by indicating that the quality of leader–member exchange fully mediated the relationship between the supervisor feedback environment and job satisfaction. These results are particularly interesting for two reasons. First, as noted, Belgium and the US differ on a number of cultural and societal dimensions that are deemed highly consequential for feedback processes in organisations. The fact that previous findings (Rosen et al., 2006) were replicated in this different international context provides preliminary evidence for the generalisability of the beneficial consequences of a favorable feedback environment in organisations. Second, this study suggests that one of the psychological mechanisms through which the feedback environment influences work outcome variables is the quality of leader–member exchange. An employee’s perception of his/her supervisor feedback environment related strongly to

the quality of the relation with his/her supervisor, which was related to job satisfaction.

We acknowledge a number of limitations of our study, which suggest that our findings should be cautiously interpreted. First, although the long-term design seems to suggest causal mechanisms between the variables or change in variables, these conclusions cannot be inferred. In future research, a longitudinal design with several measures collected at multiple times is needed to increase our understanding of the development of the feedback environment over time. Furthermore, omitted variables may also explain the results. The variance that the mediator shares with the independent and the outcome variable may be due to another variable that causes both the predictor, the mediator, and the outcome, but that was not included in this study. Future research should try to specify and measure potential important variables and control for their effects. Second, all measures were self-report questionnaires. Although a temporal separation (5 months) between the independent and the dependent variables is known to reduce common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), self-report data may have inflated relations among the variables. However, as previous research has reported similar relationships using other rating sources (Norris-Watts & Levy, 2004; Rosen et al., 2006), common method variance does not seem to be a major threat to our conclusions.

In terms of future research, the next step is to relate the feedback environment to specific attitudes and behaviors of employees. For instance, future research should look at whether a strong feedback environment is equally beneficial for different types of employees. It is possible that a favorable feedback environment is especially advantageous for employees who are already very feedback-oriented (e.g. goal orientation) and thus, only makes "the strong stronger". Another direction is to examine the value of specific organisational interventions in creating and developing a favorable feedback environment. In the introduction, we suggested a number of supervisor behaviors that should be instrumental in shaping a supportive feedback environment. Future studies might examine the impact of training supervisors in these behaviors on the feedback environment. Another interesting avenue for future research consists of examining whether implementing a 360-degree feedback system is beneficial for the feedback environment. Multi-source feedback typically emphasises the importance of openly exchanging feedback information between employees, co-workers, and supervisors, and thus, might contribute to a more favorable feedback environment.

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