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The effects of employee perceptions of monitoring procedures on turnover

Abstract

This study applies social exchange theory to examine the effects of employees' perceptions of monitoring procedures on turnover intentions in call centers. Social exchange theory suggests that employees can have exchange relationships with their organizations (Blau, 1964). The authors suggest that reactions to monitoring systems may either strengthen or weaken those exchanges to the point where negative reactions may cause employees to consider leaving their organizations. Random samples of employees from an inbound (n = 80) and outbound (n = 90) call center are analyzed. Three different types of monitoring systems are examined: monitoring done in-house by the call center; monitoring performed by an external agency; and monitoring the time spent between calls. Employee perceptions of each of the monitoring procedures significantly predict their intentions to turnover. From a practical standpoint, turnover is a major problem in the call center industry due to the high costs associated with training new employees. The finding that specific monitoring procedures are contributing to employees intentions to turnover suggests that changes to problematic monitoring procedures could help to alleviate turnover problems and reduce call center costs. Theoretically, the findings of this study suggest that positive reactions to monitoring strengthen the social exchange relationship between employees and their organizations decreasing the likelihood that employees will express intentions to turnover. Conversely, negative reactions to monitoring systems weaken the social exchanges between employees and their organizations to the point where employees are more likely to express intentions to turnover.

Keywords: turnover intentions, monitoring, call centers, social exchange, inbound calls, outbound calls.
JEL Classification: M10, M19.

Introduction

This paper examines the effects of employees' perceptions of organizational monitoring systems on employees' turnover intentions. Drawing on social exchange theory, we contend that employees' perceptions of the monitoring systems employed by their organizations affect their exchanges with their organizations. If monitoring systems are perceived positively this should decrease the likelihood that employees will express intentions to leave their organizations. Conversely, if monitoring systems are perceived negatively, this should increase the likelihood of turnover intentions.

Specifically, this study examines the effects of employees' general perceptions of monitoring procedures on turnover intentions in two call centers in the Atlantic Province of New Brunswick, Canada. The call center industry is a growing part of the Canadian economy. Between 1987 and 2004, employment in this industry increased 560% from 20,000 to 112,000 employees (Akyeampong, 2005). This has had a significant impact on the labor market in the Atlantic Provinces of New Brunswick and Nova Scotia which, in 1994, accounted for 25% of all call center employment in Canada (Akyeampong, 2005). The industry is human resources intensive with about 70% of the costs of running a call center related to staffing (Ojah & Kasturi, 2005).

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Approximately 17,000 people (5% of the working population of the Province) work in call centers in New Brunswick (Department of Finance, 2005). Moreover, at the time of this study, New Brunswick call center employees earned well above the provincial minimum wage of $6.70, with an average salary of $11.37 per hour for an entry level customer service representative (Contact NB, 2006). Despite this favorable pay differential, employee turnover is one of the largest human resource related problems currently facing the industry. In New Brunswick call centers, the annual turnover rate is 25% (Contact NB, 2006).

Although it has been suggested that some turnover might be good for an organization (Shaw, Gupta & Delery, 2005), the more common view is that turnover disrupts productivity (Mueller & Price, 1989). For this reason, it is critical that organizations gain a better understanding of human resource practices and procedures which might affect voluntary employee turnover. One such practice is employee monitoring, which has now become virtually ubiquitous within the call center industry (Ambrose & Alder, 2000; Stanton & Weiss, 2000; Zweig & Webster, 2002). Given its widespread application across the industry, it makes sense to explore whether monitoring procedures have an effect on turnover in this context.

1. Turnover intentions

Turnover is a major financial concern for call centers due to the costs associated with training new

employees. In a study of 2,500 call centers in 17 countries Holman et al. (2007) reported that on average newly hired employees receive 15 days of initial training and take between 8 to 16 weeks to become proficient at their jobs. The call centers in our study indicated that training consisted of an average of four weeks in class, followed by 3 weeks on-the-job.

Holman et al. (2007) also found that the average direct cost to replace a call center employee is 16% of employees' gross annual earnings. Direct costs are those associated with recruiting, hiring and training new employees. It has also been suggested that there are intangible costs associated with lower levels of customer service and lower efficiencies before new hires become proficient at their jobs (Hillmer et al., 2004).

In this study we measure turnover intentions which have shown strong significant correlations with actual employee turnover. For example, in their meta-analyzes Steel and Ovall (1984) found a statistically significant correlation of $r = .50$ between turnover intentions and actual employee turnover; Hom et al. (1992) reported a correlation of $r = .36$; and Griffeth, Hom and Gaertner (2000), $r = .38$. More recently Zimmerman (2008) meta-analyzed the relationship between personality factors and turnover and reported a significant standardized pathway of .42 between intentions to quit and turnover. Similarly in their meta-analysis of the relationship between job performance and turnover Zimmerman and Darnold (2009) found a significant standardized pathway of .43 between intentions to quit and voluntary turnover.

2. Social exchange

Social exchange involves interdependent interactions between two parties that generate obligations between them (Emerson, 1976). The resultant relationship can be conceptualized as a series of social exchanges in which individuals attempt to balance the benefits and costs of maintaining the relationship (Homans, 1958). A social exchange relationship develops when one party offers another a benefit. If the receiving party reciprocates with something of value a series of exchanges can develop. Social exchange involves a continuous exchange of benefits over time in which both parties feel obligated to reciprocate (Coyle-Shapiro & Shore, 2007).

Examination of social exchange in organizational settings has a long history (e.g., Adams, 1965; Blau, 1964; Homans, 1973). More recently attention has focussed on the types of parties that may be involved in social exchange relationships (Cropanzanno & Mitchell, 2005). For example, Masterson et al. (2000) have suggested that employees can form social exchange relationships with their supervisors or their organizations. The focus of our study is on the conditions that might cause employees to end their exchanges with their organizations and the role that perceptions of monitoring systems play in this.

3. Existing knowledge about monitoring

Monitoring involves tracking employees at work (Adler, 2001) and has been linked to effective supervision (Komaki, 1986), and organizational structure (Eisenhardt, 1989; Jones, 1987). Employer justifications for monitoring employees include: need for security (Miller & Wells, 2007; Oz, Glass & Behling, 1999); health and safety (Kierkegaard, 2005); increases to productivity and work quality; and cost reduction (Adler, 2001; Friedman & Reed, 2007). It has been suggested that monitoring may reduce legal liability, negative publicity, and security breaches (D'Arcy & Hovav, 2007; Stanton & Wiess, 2000; Williams, 2000). It has also been proposed that monitoring could result in improvements in performance appraisal and feedback systems (Angel, 1989; Henriques, 1986a; 1986b, Ludwig & Goomas, 2009).

Opponents of monitoring claim that it invades employee privacy and decreases both job satisfaction and employee trust (Greengard, 1996; Piturro, 1989). Monitoring has been linked to negative outcomes such as fear of job loss (Oz et al., 1999); emotional exhaustion (Wilk & Moynihan, 2005); stress (Aiello & Kolb, 1995; Carayon, 1993; 1994); increased workload dissatisfaction, irritation, tension (Schleifer, Galinsky & Pan, 1995); fatigue, increased blood pressure (Henderson, Mahar, Saliba, Deane & Napier, 1998); and chronic health disorders (Smith, Carayon, Sanders, Lim & LeGrande, 1992). The key issue is that monitoring may have either positive or negative consequences. Therefore, in order to maximize the beneficial outcomes of monitoring, it is critical for organizations to understand ways to mitigate any negative outcomes.

4. Monitoring and turnover

It seems that many studies linking monitoring to organizational outcomes have focused on employee affect. However, to the best of our knowledge, no studies have attempted to determine if a difference in employees' general perceptions of monitoring procedures might affect turnover intentions. Our study is designed to address this gap in the monitoring literature.

Research has already established that monitoring can have both positive and negative outcomes. We posit that positive reactions to monitoring systems should strengthen the exchange relationship between employees and their organizations decreasing the likelihood that employees will express intentions to turnover. Conversely, negative reactions to monitoring should weaken the exchange relationship between employees and their organizations to the point that employees should increase the likelihood of expressing turnover intentions.

The relationship between perceptions of monitoring and turnover intentions is illustrated in Figure 1 and forms the basis of the hypothesis of this study.

Hypothesis: Employees' general perceptions of monitoring procedures inversely affect employees' turnover intentions.

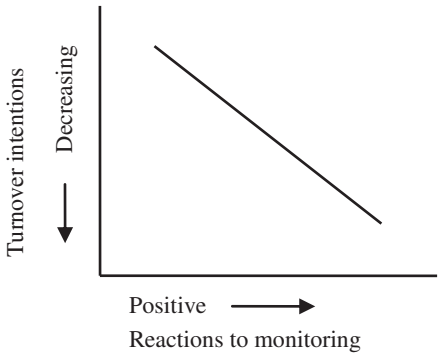

Fig. 1. Effects of reactions to monitoring on turnover intentions

5. Methods

Research has examined monitoring in call centers from both a productivity and service quality perspective. From a productivity standpoint, employers have monitored employees' use of telephones by programming computers to count the number and types of calls and call-backs; the number of messages opened and waiting; the number of seconds before the call is answered; the number of times a caller is put on hold (King, 2003); the duration of calls (King, 2003; Miciak & Desmarais, 2001); and the time between calls (King, 2003). Attempts have also been made to monitor service quality. Companies concerned about customer satisfaction focus on the quality of employee-customer interactions (Bain, Watson, Mulvey, Taylor & Hall, 2002) by having employees' calls with customers rated for performance.

Our study examines the effects of employees' perceptions to both productivity and service quality measures of monitoring on their turnover intentions. The effects of two service quality measures are explored: the evaluation of employees' calls by supervisors within the organization and the evaluation of calls by an external rating agency. The productivity measure examined is time taken between calls. These particular measures were chosen because they fall within the current practices of the organizations under study.

5.1. Study 1. *5.1.1. Participants.* A survey was directed to agents at an inbound call center where employees handle calls from customers. They book services and deal with customer problems with service delivery. The organization had 428 agents at the time of this survey. A program in use by the organization to survey its employees was used to randomly select the participants of this study. Of the 80 employees chosen to participate two were unavailable at the time of the study.

5.1.2. Measures. In order to test the relationship between monitoring systems and turnover intentions we adapted a scale developed by Flint, Haley, and McNally (2008) which measures employees' perceptions of the effectiveness of a variety of monitoring procedures. This scale captures general perceptions by asking questions concerning whether the monitoring procedures were effective, provided good feedback, and made employees feel good about, and secure in, their jobs. All monitoring scales have four items (see Table 1).

In both study 1 and study 2, employee conversations were monitored in house. In both studies, the employees' perceptions of this type of monitoring were measured. The inbound call center in study 1 also had employee conversations monitored by an outside rating agency and the effects of employees' perceptions of this type of monitoring were measured in the first but not the second study (this is indicated in Table 1 under the column headed study). The monitoring items were rated on seven-point Likert-type scales ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach's α for items measuring perceptions of in house monitoring procedures is 0.91 and for items measuring perceptions of external agency procedures is 0.93.

Two items measure turnover intentions. These were adapted from Kononsky and Cropanzano (1991). Konovsky and Cropanzano's (1991) scale employed three items to measure turnover intentions which are: "How likely is it that you will look for a job outside of this organization during the next year?" "How often do you think about quitting your job at this organization?" "If it were possible, how much would you like to get a new job?".

Table 1. Monitoring items

Scale	Study	Items
Internal monitoring of conversations	Study 1 Study 2	1. My organization's monitoring of my conversations with customers is effective. 2. My organization's monitoring of my conversations with customers provides good feedback. 3. My organization's monitoring of my conversations with customers makes me feel good about my job. 4. My organization's monitoring of my conversations with customers makes me feel secure about my job.
External monitoring of conversations	Study 1	1. The outside organization's monitoring of my conversations with customers is effective. 2. The outside organization's monitoring of my conversations with customers provides good feedback. 3. The outside organization's monitoring of my conversations with customers makes me feel good about my job. 4. The outside organization's monitoring of my conversations with customers makes me feel secure about my job.
Monitoring of time spent between calls	Study 2	1. Monitoring the time between my calls is effective. 2. Monitoring the time between my calls provides good feedback. 3. Monitoring the time between my calls makes me feel good about my job. 4. Monitoring the time between my calls makes me feel secure about my job.

Source: Adapted from Flint, Haley and McNally (2008).

The first two items were adapted to fit the rating scales in our questionnaire which asked respondents to Disagree/Agree with statements. The adapted items are: "It is likely that I will actively look for a new job in the next year"; and "I often think about quitting". A focus group of managers and service representatives examined the questionnaire with the three items from Konovsky and Cropanzano (1991) and found the third item to be confusing so it was removed. The reliability of the two item scale in this study is .82. There were several significant differences in the demographics of the participants in this study compared with those in Study 2. In Study 1 there were significantly more women (t = 4.36, p < .001); employees were significantly older (t = 3.79, p < .001); and had been with the organization significantly longer (t = 5.05, p < .001) than the participants in Study 2.

The mean and standard deviations of the demographic variables is shown in Table 2. These were controlled in the regression analyzes that follow. Time spent with the industry showed no significant difference between the two organizations and was not included as a control variable. Control of the demographic variables was accomplished by entering them in the first step of the regressions and entering the monitoring variable in a second step. Gender was coded as a dummy variable with 0 = male and 1= female.

Table 2. Mean values for the inbound and outbound call center

	Inbound call center (Study 1)		Outbound call center (Study 2)		t
	Mean	SD	Mean	SD	
Monitoring conversations in-house	5.03	1.15	3.40	1.33	8.11***
Monitoring conversations externally	4.42	1.57	N/A		N/A
Monitoring time between conversations	N/A		3.16	1.70	N/A
Turnover intentions	3.72	1.98	5.36	1.51	5.98**
Gender (0 = male, 1 = female)	0.77	0.43	0.45	0.50	4.36***
Age (years)	30.8	10.9	25.0	8.5	3.79***
Time with organization (months)	22.4	20.2	10.4	8.7	5.05***
Time with industry (months)	10.6	18.4	11.5	27.6	0.24

Notes: ** p < .01, *** p < .001. N/A – not available.

5.1.3. Results. Table 3 shows the correlations between reactions to monitoring, turnover intentions, and the demographic variables. The demographic variables were entered in the first step of the regressions, monitoring was entered in a second step.

Table 3. Correlations between variables at inbound call center

	1	2	3	4	5	6	7
1. Gender	1.00						
2. Age	.07	1.00					
3. Time with org.	-.10	.18	1.00				
4. Time with industry	.12	.05	-.16	1.00			
5. Monitoring in-house	.07	.15	.06	-.09	1.00		
6. Monitoring externally	.12	.15	.03	-.20	.87***	1.00	
7. Turnover intentions	.08	-.20	-.13	.16	-.31*	-.36**	1.00

Notes: *p < .05, **p < .01, ***p < .001.

Table 4 shows the regression analyzes for the effects of reactions to inhouse monitoring on turnover intentions. Reactions to the monitoring of these conversations show a significant effect on turnover intentions (β = -.31, p < .01). This finding provides support for our research hypothesis.

Table 5 shows the regression analyzes for the effects of reactions to monitoring done by an external agency. These reactions show a significant effect on turnover intentions (β = -.35, p < .01). This finding is also consistent with our research hypothesis.

Table 4. Effect of in-house monitoring of conversations on turnover intentions: inbound calls

Predictor		B	Std. error	Beta	t	Sig.
Step 1	Gender	.55	.55	.11	.99	.32
	Age	-.04	.02	-.21	-1.76	.08
	Tenure with organization	-.01	.01	-.08	-.66	.51
Step 2	Gender	.65	.53	.14	1.2	.22
	Age	-.03	.02	-.17	-1.5	.15
	Tenure with organization	-.01	.01	-.07	-.64	.52
	Monitoring conversations	-.42	.16	-.31	-2.70	<.01

Table 5. Effect of the third party monitoring of conversations on turnover intentions: inbound calls

Predictor		B	Std. error	Beta	t	Sig.
Step 1	Gender	.55	.55	.12	.99	.32
	Age	-.04	.02	-.21	-1.76	.08
	Tenure with organization	-.01	.01	-.08	-.66	.51
Step 2	Gender	.71	.52	.15	1.36	.18
	Age	-.03	.02	-.17	-1.45	.15
	Tenure with organization	-.01	.01	-.08	-.70	.49
	Monitoring conversations	-.43	.14	-.35	-3.06	<.01

5.2. Study 2. *5.2.1. Participants.* In this study the survey was directed to agents at an outbound call center. The agents telemarket long-distance telephone plans. The organization employed 312 agents at the time of this study. A program in use by the organization to survey its employees was used to randomly select the participants of this study. Of the 90 employees chosen to participate one was unavailable at the time of the study.

5.2.1. Measures. The scales used to measure reactions to monitoring conversations in house, and turnover intentions are the same as those employed in Study 1. The outbound call center in study 2 also monitored the time employees spent between calls; so the employees' general perceptions of this type of monitoring were measured in the second but not the first study (see Table 1).

The Cronbach's α for items measuring employee perceptions of monitoring procedures regarding time spent on each call is 0.93. The demographic variables of gender, age, and time spent with the organization were controlled for in the regression analyzes that follow in the same manner as in Study 1. Table 6 shows the correlations between the demographic variables, the monitoring variables, and turnover intentions.

Table 6. Correlations between variables at outbound call center

	1	2	3	4	5	6	7
1. Gender	1.00						
2. Age	.13	1.00					
3. Time with organization	-.02	.36**	1.00				
4. Time with industry	.08	.27*	.12	1.00			
5. Monitoring conversations	.08	-.17	-.07	.05	1.00		
6. Monitoring time	.07	-.18	.01	.03	.69***	1.00	
7. Turnover intentions	-.01	.13	.01	.03	-.26*	-.33**	1.00

Notes: *p < .05, **p < .01, ***p < .001.

5.2.3. Results. Table 7 shows the regression analyzes for the effects of monitoring, done in house on agents' telephone conversations, on turnover intentions. Reactions to this type of monitoring shows significant effects on turnover intentions (β = -.23, p < .05). This finding provides support for our research hypothesis.

Table 8 shows the regression analyzes for the effects of the monitoring of time spent between calls on

turnover intentions. These reactions show a significant effect on turnover intentions (β = -.32, p < .01). This finding is also consistent with our research hypothesis.

Table 7. Effect of in-house monitoring of conversations on turnover intentions: outbound calls

Predictor		*B*	Std. error	Beta	*t*	Sig.
Step 1	Gender	.03	.35	-.01	-.09	.93
	Age	.03	.02	.17	1.46	.15
	Tenure with organization	<.01	.02	<.01	.03	.98
Step 2	Gender	.02	.34	.01	.06	.96
	Age	.03	.02	.13	1.162	.25
	Tenure with organization	<-.01	.02	-.02	-.13	.89
	Monitoring time between calls	-.22	.11	-.23	-2.03	<.05

Table 8. Effect of monitoring time between calls on turnover intentions: outbound calls

Predictor		*B*	Std. error	Beta	*t*	Sig.
Step 1	Gender	-.15	.34	-.05	-.46	.65
	Age	.02	.02	.14	1.12	.27
	Tenure with organization	-.01	.02	-.05	-.44	.66
Step 2	Gender	-.09	.63	-.03	-.26	.79
	Age	-.01	.32	-.08	-.64	.52
	Tenure with organization	-.01	.02	-.05	-.42	.68
	Monitoring conversations	-.29	.10	-.32	-2.92	<.01

Discussion and conclusion

Social exchange theory posits that employees can have exchanges with their organizations (Masterson et al., 2000). In this study we explored the effects of employees' perceptions of their organizations' monitoring systems on those exchanges. Previous research has suggested that monitoring systems can have either positive (e.g., Miller & Wells, 2007; Friedman & Reed, 2007, Ludwig & Goomas, 2009), or negative consequences (e.g., Oz et al., 1999; Wilk & Moynihan, 2005; Aiello & Kolb, 1995). Our findings suggest that positive perceptions of monitoring systems are likely to strengthen employees' exchanges with their organizations by reducing the likelihood of turnover intentions; and conversely, negative perceptions of monitoring systems are likely to weaken employees' exchanges with their organizations to the point where they consider leaving their organizations.

Our study generalized the effects of employee perceptions of their organizations' monitoring systems on turnover intentions across two call centers: one that handled inbound customer reservation calls, and the other outbound telemarketing calls. These call centers were significantly different on a number of demographic characteristics. The effects were found when monitoring was performed in house or by an external agency; or when the time agents spent between calls was monitored.

The findings of our study must be interpreted with caution. Two apparent limitations involve causality and generalizability. The methodology employed in this study made use of a survey of employee perceptions. The cross-sectional nature of the data collected does not lend itself to conclusions about the cause of the effects. The data were collected in orga-nizational settings and other variables, not measured, could have contributed to the effects found here.

Our study provides limited generalizability of the effects of reactions to monitoring systems and turnover intentions. In order to build confidence in these findings, further research is needed to determine if these effects will generalize to other call centers or other types of organizations. Future research is also needed to determine if the effects generalize to other types of monitoring such as the number of messages opened and waiting; the number of seconds before the call is answered; the number of times a caller is put on hold (King, 2003); and the duration of calls (King, 2003; Miciak & Desmarais, 2001).

Practical implications

Turnover is a costly problem for call centers as there is a substantial upfront investment in employee training. It has been estimated that, in general, the average cost of replacing one call center worker amounts to 16% of the gross annual earnings associated with the position (Holman et al., 2007). For example, the average time to train a new employee in the two call centers that agreed to participate in our study is four weeks of in-class training followed by three weeks of on-the-job training on the telephones. In the month following training, only one employee is retained for every four

employees that are trained. Thus, when an employee leaves an organization at an average salary of $11.37 per hour, after seven weeks of full-time training, the call center must incur a cost of $12,734.40 to train four employees in order to replace the employee with a new hire. In a call center of 500 employees, with a turnover rate of 25% per year (as experienced in New Brunswick), this represents a training cost of $1,591,800 per center per year. For every one percent reduction in turnover, the call center in this example could potentially save $63,672 per year.

The measure of reactions to monitoring systems employed in this study could be used as a diagnostic tool to determine which monitoring systems may be contributing to turnover in specific organizations. The measures of perceptions of monitoring procedures, developed for our study, are fairly general in nature. In order to diagnose specific problems with specific monitoring procedures, follow-up with organizations would be necessary.

In organizations that show poor reactions to monitoring systems, the follow-ups could take the form of focus groups with employees and/or supervisors to determine the components of monitoring systems that are leading to poor reactions to monitoring systems and their subsequent effect on high turnover intentions. This could provide an opportunity for organizations to intervene to correct problematic monitoring systems and effectively lower employee turnover.

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