Work Related Monitoring- Lit Review

Computer-based	Performance Eval	Jobs	Employee attitudes	Considerations
Computer-based monitoring, the practice of collecting performance information on employees through the computers they use at work, has emerged as a popular topic in North America in the past decade (George, 1996, p. 459).	According to a study conducted by the now-extinct Office of Technology Assessment (U.S. Congress 1987) some four to six million office workers are dependent on computer-generated statistics for all or part of their performance evaluations (George, 1996, p. 459).	These jobs include word processing operators, airline reservation agents, telephone operators, data entry clerks, telemarketing clerks, and insurance claim clerks; they also include some stockbrokers and computer programmers (George, 1996, p. 460).	The general conclusion from the advocacy literature on employee attitudes toward computer-based monitoring is that workers uniformly dislike these practices (George, 1996, p. 462).	Additional studies show that employee satisfaction with computer-based monitoring depended on specific characteristics of monitoring practices (George, 1996, p. 462).
Computer-based monitoring was seen as such a serious issue in the 103rd U.S. Congress that bills, which would have made illegal many practices commonly associated with monitoring in the workplace, were introduced in both houses (S.984 and H.R. 1900 as cited by George, 1996, p. 459).	It is important to distinguish between organizations where performance information is used as the basis for pay increases and promotions and those where the information is used to discipline employees who are not working at established levels (Lund, 1991 as cited by George, 1996, p. 461).	Most clerical workers whose work is monitored usually use both a computer system and a telephone system to perform their daily work tasks (George, 1996, p. 460).	"We're tired, the stress level (…) there is not a week in there where somebody doesn't cry" (9to5, 1985, p. 35 as cited by George, 1996, p. 462).	Hawk (1994) found that the more supervisors rely on monitoring data for employee evaluation and the greater the number of employee task monitored, the less satisfied employees are with the fairness of the evaluation process; the more employees have an opportunity to discuss monitoring output with their supervisor and the more often they received such output, the greater their satisfaction with

				evaluation (George, 1996, p. 462).
No reliable figures on how extensively employers are using computer-based monitoring, but the estimate about 20% to 35% of office workers in both the public and private sectors of the U.S. economy were being monitored in 1987 (George, 1996, p. 460).	Just as monitoring consists of several different distinct practices, organizations that use monitoring have the ability to use the information they gather in many different ways (George, 1996, p. 461).	Monitoring is a topic of interest to researchers as well as to managers, employees, unions , privacy advocates, members of Congress and others (George, 1996, p. 461).	"Workers may feel violated and powerless in the face of the new monitoring technologies" (Marx and Sherizen, 1989 as cited by George, 1996, p. 462).	Kidwell and Bennett (1994) found that positive feedback, frequent feedback, the extent of supervisor consideration, and the extent to which employees felt the evaluation process to be fair were all positively associated with satisfaction with computer-based monitoring (George, 1996, p. 462).
The Wall Street Journal (1992) reported that as many as 26 million U.S. office workers were possibly being monitored through their computers (George, 1996, p. 460).	One of the most often discussed issues related to computer-based monitoring is whether monitored workers will shift their primary attention to quantitative aspects of their jobs, those things that can be counted through monitoring, and away from the level of service in the process (George, 1996, p. 462).	One of the most celebrated cases is that of Harriet Ternipsede, an airline reservations agent who suffered a nervous breakdown because she was monitored at work (Piller 1993a; Ternipsede, 1993 as cited by George, 1996, p. 463).	Academic literature is much less uniform in its findings (George, 1996, p. 462).	Chalykoff and Kochan (1989) also found that workers who are predisposed to oppose monitoring cannot be swayed by positive approaches to monitoring (George, 1996, p. 462).

According to the 1993 Macworld articles (Piller 1993a;1993b), of the 301 companies that took part in their survey, 22% had searched employee files (apparently without employee knowledge or permission), including computer files, e-mail, and voice mail (George, 1996, p. 460).	The pervasiveness of trading quality for quantity is not so certain in the academic literature (George, 1996, p. 463).		Some studies report that employees disliked monitoring and were afraid of its implementation (Clement and McDermott, 1991; Walton and Vittori, 1983 as cited by George, 1996, p. 462).	The advocacy literature routinely reports direct causal relationships between computer-based monitoring and increased stress and incidents of stress-related illnesses (George, 1996, p. 463).
	Irving et al., (1986) and Grant et al., (1988) found that monitored workers thought the quantitative aspects of their jobs were being emphasized more than the qualitative aspects (George, 1996, p. 463).		In other words, an employee's attitudes toward his or her job were better indicators of whether an employee will quit than were the employee's attitudes toward monitoring (George, 1996, p. 462).	The 9to5 report also associated health problems with monitoring: "Respondents [toa 9to5 survey] monitored by computers suffered significantly higher rates of headaches, nausea, exhaustion, and other stress related symptoms than less closely watched employees" (9to5, 1985, p. 38 as cited by George, 1996, p. 463).

Computer-based monitoring is the use of computerized systems to automatically collect information about how an employee is performing his or her job. Although theoretically anyone who uses a computer at work is subject to such monitoring, there is a specific range of jobs to which monitoring practices have historically been applied (George, 1996, p. 460).	In contrast, other studies have found that electronically monitored workers can perform well on both quantitative and qualitative aspects of their jobs (Grant and Higgins, 1991; Nebeker and Tatum, 1993; Tamuz, 1987 as cited by George, 1996, p. 463).		Others reported a lack of fear and dissatisfaction associated with monitoring George, 1996, p. 462).	These same health concerns were echoed by Clement (1984), Shaiken (1987) and Bravo (1991) as cited by (George, 1996, p. 463).
Computer-based monitoring is not a single practice. In fact, there are at least three different forms of computer-based monitoring: two different types of computerized work performance monitoring systems (CWPMS) and "service observation" (Lund, 1991 as cited by George, 1996, p. 460).	A popular image associated with computer-based monitoring is George Orwell's Big Brother, constantly watching everything that employees do (George, 1996, p. 463).		While still others (Griffith 1993b) report that particular monitoring systems were considered both helpful and satisfying by monitored workers (George, 1996, p. 462).	The conclusion that can be derived from reviewing the above empirical research is that, while it is apparent that monitoring is associated with high levels of stress or stress-related illness in some jobs, there seems to be no necessary relationship between computer-based monitoring and health (George, 1996, p. 463).

Either the computer system or the telephone system can function as a CWPMS. In the first instance, the worker may use the computer system to take customer orders, and it is used to record such information as the number of orders taken or the sales amount of each order. In the second instance, the telephone system used to take with customers can also be used to collect information on the number of calls taken, the average length of the calls, the time available to take calls and so on (George, 1996, p. 460).			Some found no differences in job satisfaction or satisfaction with their performance monitoring systems between workers who believed they were being monitored and those who did not (Griffith 1993a; Irving et al., 1986; Nebeker and Tatum 1993 as cited by George, 1996, p. 462).	Only one study specifically investigated the health and stress effects of electronic monitoring by looking at differences in the health-related perceptions of monitored and non-monitored workers in the field (Smith et al., 1992 as cited by George, 1996, p. 463).
Service observation refers to having someone, usually a supervisor or a trainer, listen to and/or record phone conversations between employees and			Grant and Higgins (1989) relate that workers who saw their jobs as primarily quantitative or routine had fewer complaints about monitoring than other monitored	Some found that stress levels were varying with differences in monitoring practices (Hawk, 1994 as cited by George, 1996, p. 463).

customers (George, 1996, p. 460-461).			employees (George, 1996, p. 462).	
			Hawk (1994) found that the more supervisors rely on monitoring data for employee evaluation and the greater the number of employee task monitored, the less satisfied employees are with the fairness of the evaluation process; the more employees have an opportunity to discuss monitoring output with their supervisor and the more often they received such output, the greater their satisfaction with evaluation (George, 1996, p. 462).	Hawk reports that both health problems and stress in monitored workers were positively associated with the number of employee tasks monitored and negatively associated with an employee's ability to discuss the output from monitoring (George, 1996, p. 463).
			Among their findings they state that monitored workers reported more boredom, more tension and anxiety, more depression and more anger and fatigue than	Hawk also found stress to be negatively related to the frequency of monitoring output going to the supervisor and positively related to the frequency of monitoring going to the employee (George, 1996, p. 463).

			non-monitored workers (George, 1996, p. 463).	
			Monitored workers also reported more problems with their wrists, arms, shoulders, necks, and backs; more high tension, severe fatigue or exhaustion; more extreme anxiety or depression and more headaches than non-monitored workers (3 as cited by George, 1996, p. 463).	
			The Smith et al., results are supported by findings by Walton and Vittori (1983) and Clement and McDermott (1991) who report that nearly all of their respondents "described their jobs as involving a high degree of stress" (p. 192), and believed the pressure from monitoring was responsible for their health problems. Irving et al., (1986) and Aieloo	

			==and Kolb (1995)== report similar findings (George, 1996, p. 463).	
			Other studies have either reported no apparent pressure or stress among monitored workers (==Attewell, 1987; Nebeker and Tatum, 1993== as cited by George, 1996, p. 463).	
			One worker called monitoring " …a form of rape They've taken everything off of me and they can see everything" (==Bravo, 1991 as== cited by George, 1996, p. 464).	
			Another worker cited by ==Bravo echoes Clement's (1994)== claim that monitoring is a violation of civil rights. Similar statements appear in ==Marx (1985) and Shaiken (1987)== as cited by George, 1996, p. 464).	

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