Employee Experience with Early-Return-to-Work Programs

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Employee Experience with Early-Return-to-Work Programs

Stan Marshall sustained a crush injury of the foot while working in a steel mill. He was home for three weeks and received two-thirds pay through workers' compensation insurance while the swelling subsided and the bones started to heal. This wage was not enough to keep his family going. He was pleased when his physician released him for work in a modified job where no standing or walking was required. His employer assigned him to a job inspecting small metal castings. It was somewhat tedious, but Stan was glad to be back at work earning his full wage. He could work at a pace that was comfortable for him, and move around as needed to accommodate his injury. After three weeks on the modified job, his doctor felt he was ready to return to his regular job. As he had had a chance to gradually work back up to his full capacity, the transition was not difficult. Stan's participation in an early-return-to-work program prevented many of the potential problems found in those who are off work for long periods of time. In addition, it saved Stan's company many dollars in disability payments and retained a productive employee.

While Stan's case was resolved with all parties satisfied, not all workers respond positively to such an experience, raising questions about what factors contribute to such an outcome from the perspective of the worker. Are

factors intrinsic to the injury, the job in which the worker was injured, the program, or the transition back to regular work important to the over-all response of workers? While programs would seem to benefit workers as well as companies, are these benefits perceived by workers?

Early-return-to-work programs were created in an attempt to control the rising costs of work-related injuries. Crucial to their success is the response of workers who participate in the programs. What do workers think about the programs? Why do some workers respond positively and others negatively? What factors contribute to a worker's response? This report, describing participation in early-return-to-work programs from the worker's perspective, provides data on factors associated with positive/negative response and proposes program areas to which managers should pay particular attention.

Background

Early-return-to-work programs facilitate the placement of injured workers who are not fully recovered into modified jobs that are suited to their physical restrictions. A modified job involves change in the duties, hours or expectations of a regular job (Gice & Tompkins, 1988). The worker is customarily paid his regular wage while on the modified job.

Several authors have found that with these programs workers return to their regular jobs faster than they would

if they were at home recuperating with less encouragement to progress (Gice & Tompkins, 1988; Taylor, 1988). Further, there is less need for temporary workers to fill positions left open by injured workers (Taylor, 1988). Time-loss payments are decreased because these payments are only made for workers recuperating at home, unable to do any work (Centineo, 1986; Dent, 1985; Gice & Tompkins, 1988; Taylor, 1988). The programs convey a sense of concern for the worker, who receives the message that he is a valuable member of the workforce despite temporary restrictions, and he receives support and counseling for uncertainties and worries about his career (Dent, 1985). Programs may also decrease workers' compensation litigation (Taylor, 1988), as the worker realizes that efforts are being made to accommodate his physical and financial needs by providing a modified job.

Characteristics of early return-to-work programs vary. Some are formal, clearly delineating goals and policies and defining the responsibilities of the company and the injured worker (Centineo, 1986; Dent, 1985). Other programs are more informal with each case managed individually and few written policies. All programs, however, include early contact with the injured worker, who is informed of job expectations. Release is obtained from the medical provider for work with specific physical restrictions, and concurrently, a modified

job is designed that meets those restrictions. The worker's progress while on the modified job is monitored so that duties and job specifications can be gradually increased as progress is made. The goal is to return the worker to a regular job when the injury is medically stable. He may return to his old job or be assigned a new one commensurate with permanent physical limitations.

Several authors have examined delayed recovery of those on workers' compensation after a work injury (Burgel & Gliniecki, 1986; Derebery & Tullis, 1983; Tuck, 1983). Injured workers are at risk of prolonged recovery as a result of physical, psychological and social influences. Further, some studies suggest that the longer the worker is off work, the less successful is return to work (Catchlove & Cohen, 1982; Gice & Tompkins, 1988). Early-return-to-work programs provide a link between the injured worker and the workplace, helping to prevent the problems found among those coping with work-related injuries.

Dereberry & Tullis (1983) state that "early return to work (or no loss of work) is often the most essential part of treatment for a delayed recovery," for it removes sources of reinforcement for the disability. Work provides self-esteem, social contact and acceptance as a member of the community. Psychologically, the person who is at work perceives that his injury is only temporary.

While studies have shown substantial benefits to

employers from early-return-to-work programs (Gice & Tompkins, 1988; Taylor, 1988), there is little research on early-return-to-work programs from the worker's perspective. The impact of a prescribed return to work was studied by Catchlove & Cohen (1982), who retrospectively compared two groups of workers' compensation recipients with chronic pain. The 47 patients were divided into groups according to whether or not an instruction to return to work had been an integral part of their treatment program. Significantly more subjects (60%) who were directed to return to work during the treatment program did so than did those in the group (25%) who were similarly treated but for whom return to work was not a part of the treatment. The group directed to return to work also received less treatment for chronic pain than the comparison group.

Although benefits to workers are claimed and are essential to the long-term success of early-return-to-work programs, no studies have documented employees' perceptions of participation in such programs. Therefore, the purpose of this study was to obtain workers' reports of their experiences in early-return-to-work programs, focusing on aspects of program experience that could be changed and also examining factors that influenced program outcomes such as history of the injury, characteristics of the job in which

injury occurred, and transition back to regular work after recovery.

Methods

Sample and Procedures

In order to gain information about perceptions and outcomes for workers participating in early-return-to-work programs, 33 recent program participants were interviewed. The study participants were from three industrial settings: a steel foundry, a light precision castparts manufacturing plant, and a metropolitan transportation district headquarters. Only the transit company was unionized. Subjects had to meet the following criteria: 1) sustained injury at work, 2) employed in same company as that in which injury occurred, 3) completed an early-return-to-work program in the last six months, and 4) on program no longer than six months.

Forty-four eligible subjects identified by program administrators were sent a letter describing the study, soliciting participation and assuring confidentiality. A copy of the telephone questions was included. A week later the subjects were telephoned at home. Five subjects could not be reached; one did not meet study criteria, and three refused to participate. The response rate of those contacted was 92%.

Instrument

Structured interview questions developed by the

researcher guided the interview. They covered six areas: 1) over-all response to program (general attitude to program, loyalty to company after injury, whether subject had enough time on modified job, whether it was easy to return to regular job and whether injury was worse after return to regular job); 2) demographic factors; 3) characteristics of injury; 4) attitudes toward the job in which injury occurred; 5) response to elements of the program; and 6) response to transition back to a regular job.

Findings

Characteristics of Respondents

When injured, 18 of the 33 subjects (55%) were employed in manufacturing and 15 (45%) were mass transit operators; 90% were injured in their regular permanent job. Twenty-one (64%) were under 40 years old; 9 (27%) were women. Length of employment with company varied from less than a year to over 30 years. Half of the workers had been in the job in which injured for over five years.

Injuries sustained by subjects varied: 14 upper extremity; 6 lower extremity; 5 back; 3 internal; 3 chest; 1 facial; and 1 multiple injury. Twenty-five subjects (75%) had received workers' compensation, 40% for 6 or more weeks, 8% for 4-6 weeks, 28% for 2-4 weeks and 24% for 0-2 weeks. Thirteen (39%) were still receiving treatment when interviewed.

To describe total time away from a regular job, which may reflect severity of injury, time on workers' compensation and time in modified job were combined. Nine subjects (27%) had a total of 14 or more weeks of disability, fifteen (45%) spent at least 6-14 weeks disabled, and nine (27%) spent less than six weeks.

Over-All Positive or Negative Response to Program

Five indicator questions were used to determine over-all response to the early-return-to-work program: 1) general attitude to program, 2) loyalty to company after injury, 3) whether subject had enough time on modified job, 4) whether it was easy to return to regular job, and 5) whether injury became worse (aggravated) after return to regular job. If a subject answered three or more questions positively, the over-all response was scored positive. Fewer positive answers indicated an over-all negative response. Seventy percent (23) of the 33 subjects had an over-all positive response to the early-return-to-work program. Thirty percent (10) had an over-all negative score.

Qualitative data derived from each interview were examined, blind to the score which had been assigned, to determine whether the comments reflected the individual's over-all response score determined quantitatively. All of the positive responses and eight of the ten over-all negative response scores were confirmed; the other two subjects did

not elaborate on their responses sufficiently to provide qualitiative data upon which to base a judgment.

To assess differences in over-all response among companies, a Chi square statistic was calculated; differences were not statistically significant. To confirm this, frequency distributions of each of the five indicator questions were constructed by company. Responses were similiar and therefore the data were aggregated.

Interestingly, general attitude toward program and loyalty to company after injury corresponded to over-all response. Of the positive respondents, 74% had a good or excellent general attitude toward the program and 78% rated their loyalty toward the company after injury as good or excellent. In contrast, of those with an over-all negative response only 20% rated their general attitude toward the program as good or excellent and no one rated their loyalty after injury as good or excellent.

Since commitment or loyalty to company could be linked to worker satisfaction and many people believe satisfaction affects productivity, loyalty after injury was compared with loyalty before injury (see Table 1). Twenty-five subjects reported no change in loyalty, 7 rated their loyalty lower after the injury and 1 rated loyalty higher after the injury. Six of the seven subjects whose loyalty declined had negative responses to the program, suggesting that a program may be important in maintaining company loyalty and that the

experience of an injury can cause loyalty to erode.

A great majority (96%) of the positive respondents reported that they had enough time on the modified job and found it easy to return to their regular job. In contrast, only 50% of the negative respondents felt they had enough time and found it easy to return. Those in the negative group commented that they had been forced back to their regular jobs because of financial hardship caused by no over-time pay, that they were released for a regular job by their doctors before fully recovered, and that more therapy was needed. They reported emotional difficulties and fear of aggravation of injury when they returned to their regular job.

Substantially fewer positive respondents (26%) than negative respondents (80%) reported aggravation of their injury after return to their regular job. Similarly, only 26% positives reported some degree of aggravation in the modified job, compared with 60% of the negative group. Of those reporting aggravation, 2 (9%) of the positives and 6 (60%) of the negatives perceived aggravation of injury in both the modified job and upon return to the regular job.

Seven of the positives (30%) and 6 of the negatives (60%) were still on treatment when interviewed. Of these, 3 positives and 4 negatives reported aggravation of injury in either the modified job or upon return to the regular job.

The Positive Response Group

The group of positive respondents (n=23) was composed of 14 males and 9 females, with the median age between 31-40 years. The group included 10 manufacturing shop workers, 12 mass transit operators, and one office worker. Three-fourths of the group had been employed by the company for over 5 years and over half had been employed in the job in which they were injured over five years. In general, the positive respondents had been happy in their regular jobs. They found them interesting (22), satisfying (22), and not boring (18). Even though 7 were still receiving treatment for their injury at the time of interview, their response to the program was positive. All but one of the 14 upper extremity injuries (i.e. hand, wrist, shoulder) in the sample were sustained by positive respondents. Other injuries sustained by this group were: 3 back; 3 lower extremity; 2 internal; 1 chest; and 1 multiple injury.

While comparable numbers of both positive and negative respondents were on workers' compensation, the positive group had received it for less time (only 7 had four or more weeks). Some of the group acknowledged emotional responses to being on workers' compensation, particularly depression (11) and frustration (12); fewer expressed guilt (5) or family problems (1).

While the majority (13) of positive respondents were glad to have the opportunity to return to work before fully

recovered, they were less enthusiastic about the modified job. Only a small majority found the modified job interesting (13) and satisfying (12); more found it boring (16), or even degrading (4). Positive respondents elaborated on their views of the modified job, commenting that the jobs were boring, trivial, and designed to be meaningless so the worker would move more quickly back to the regular job. Many disliked being placed in office jobs and mentioned that instruction in the office jobs was inadequate (e.g. how to use the phone system or how and what to file). One subject, however, whose loyalty changed from negative to positive after the injury was not bored: he explained that the modified job provided exposure to the infrastructure of the company, which impressed him with its complexities. Others understood the need for "boring" jobs and appreciated the opportunity to earn their regular wage. Although all earned their regular wage on the modified job, several commented that they had depended on over-time pay which they did not receive while on the program. This posed a financial hardship which hastened return to the regular job, sometimes before recovery was complete.

Generally, the positive group felt they had a lot of support from co-workers and foremen while on the modified job. When asked whether their employer was concerned about their injury, 12 of the positive group answered yes. Those

who did not feel their employer was concerned stated that the main concern was for finances, not personnel well-being. Others felt that concern for the employee should be shown before the injury occurred by greater attention to safety factors.

Nearly all of the positive group (22) returned to their previous regular job after recovery from the injury. Relationships with the supervisor remained the same or improved for all 22 and all felt their relationship with their co-workers either did not change or got better.

Slightly over half stated they were more aware of safety after their injury. The other half felt they could not have prevented their accident so their attitude had not changed.

The typical positive respondent had a generally good attitude toward the regular job, had spent a relatively short time on workers' compensation, had an upper extremity injury which involved a relatively short time on medical treatment, perceived support from co-workers and foremen while on the program and reported minimal aggravation of injury in either the modified or regular job.

The Negative Response Group

The negative group was composed of 10 men with a median age between 31-40. Seven were manufacturing shop workers and three were mass transit operators. Half had been employed by the company for over five years. Half had been in the job in which injured for over five years; 4 had been in the job for

less than one year. The majority of the negative respondents were happy with their regular jobs but to a lesser degree than the positive group; fewer found them interesting (7 vs.22), satisfying (7 vs. 22) and not boring (5 vs. 18). A majority (6) were still under treatment for their injury at the time of interview. Injuries sustained by the negative response group varied: 3 lower extremity; 2 back; 2 chest; 1 hand; 1 internal; and 1 facial.

Half of the negative group was on compensation for longer than four weeks. This finding supports previous studies (Derebery & Tullis, 1983; Gice & Tompkins, 1988 & Tuck, 1983) which suggest that the longer a person is off work, the harder it is to return to work. Emotional effects of being on workers' compensation were more pronounced in the negative group. The majority of this group reported depression (7) and frustration (8), while 3 reported a high degree of family problems and 1 reported guilt.

Only 4 of the negative group said they were happy to have the opportunity to return to work on a modified job, and even those were not pleased with their modified jobs. Three found it interesting, 2 satisfying, 8 boring and 5 degrading. (Six of this group experienced aggravation of the injury on the modified job.) One subject said that if the jobs were more meaningful, the program would be more successful, that he was used to a lot of stress in his regular job and was not

happy emptying waste baskets. Another felt he was given work no one else wanted to do.

The negative respondents perceived less support from their co-workers and foremen in their modified jobs than the positive group did. Four reported that they were teased a lot. One stated he was ostracised; another was accused by co-workers of "milking out" the injury. This latter subject commmented that his co-workers didn't realize an injury limits outside life as well as work life. However, 6 people reported a lot of support from foremen on the modified job. When asked whether their employer was concerned about their injury, only 3 of the group answered yes. Instead of genuine concern for their welfare, several subjects reported pressure from their employer to get back to work to save the company money; one (not the same as those above) reported being accused of "faking" his injury.

The majority (7) returned to their previous regular job. However, only 4 subjects thought their relationship with their supervisor was the same or got better after return to their regular job. Four subjects said the relationship got worse (2 did not know); one explained that his supervisor was fearful of a lawsuit, another stated that he could not get over the feeling that he was not liked by his supervisor because of his workers' compensation claims. As reported previously, 8 of the negative group reported aggravation of their injury after return to a regular job.

Six of the negative group felt they were more aware of safety now; several expressed concern that future injuries would jeopardize job security. They felt they would be fired if ever injured again, or that the company would make it "rough" for them. Others felt they had not been able to progress in their career because of the injury.

The typical negative respondent was still on medical treatment at the time of the interview, had been on workers' compensation for a longer period and experienced more pronounced emotional difficulties than the positive group. The majority had been happy with their regular job but not to the degree of the positive group. They were generally less pleased with the modified job, perceived less support from co-workers and foremen and reported more aggravation of injury. Upon returning to the regular job, they found relationships with supervisors had deteriorated and they sustained more aggravation of injury during the transition.

Implications for Practice

Program Design

This study elicited workers' perspectives on early-return-to-work programs, in order to provide program planning information for occupational health nurses and health program administrators. Two-thirds of the respondents were judged to have positive responses. For some, however (one-third in this study), the programs did not seem to have worked so

well. Worker and program characteristics that may be markers for less favorable responses to early-return-to-work programs suggest elements of programs in need of particular attention.

Identification of workers at risk for poor outcome. The negative respondents' perceptions suggest worker characteristics that could be considered 'risk factors': 1) less satisfaction and interest in regular job, 2) more than four weeks on workers' compensation, 3) emotional stress caused by time off work, 4) a longer period of disability, and 5) aggravation of injury in the modified job. A number of these factors (2,3,4,5) may be related to severity of injury. These characteristics identify workers who should be given more attention.

Design of modified job. In general, the respondents did not rate the modified jobs high in interest or satisfaction. While a 'boring' job may be necessary to some extent as an incentive for the worker to move back to his regular job, the fact that so many subjects felt their modified job was boring suggests that attention should be given to this part of the program. More research might help determine how modified jobs should be designed to be more satisfying.

The most surprising finding among the negative group was the high perception of aggravation of injury in both the modified job and in transition to the regular job. This finding emphasizes the importance of careful job placement and consistent monitoring to ensure that the worker does not

put himself at risk of further injury. Further research could investigate incentives (such as financial bonuses) for those on modified jobs to encourage "prevention" of aggravation and to counteract the financial pressures to get back to a regular job where the worker receives over-time pay. Follow-up of workers for aggravation should be an integral part of a program. If aggravation of injury can be prevented, it may have a large impact on over-all response to the program.

Communicating concern for workers. Another notable finding was the small number of subjects who felt their employer was genuinely concerned about their injury. This finding would suggest that improved communication and support are needed during all phases of recovery, and may be even more important for those at risk of a negative response. As the data show, the experience of an injury can have an impact on general loyalty toward the company which, if negative, may have far-reaching and costly ramifications.

Program Evaluation

The recommendations above are based on the evaluation of three current early-return-to-work programs. The results of this study should be interpreted with caution due to the nature of the sample size, types of industries, injuries and programs studied. However, the study does provide a framework for further inquiry into the perceptions of

workers. This framework is composed of four aspects of the early-return-to-work experience: history of injury, factors relating to the job in which injury occurred, elements of the program itself and characteristics of transition back into regular job. This study identified factors in each of these areas which influence over-all program response (see Table 2).

This study suggests that those who administer early-return-to-work programs should be aware of the differing needs of workers who have suffered on-the-job injuries. It is apparent that some injured employees are able to move through a program and back to work with minimal problems. Others are at risk for poor outcomes due to relatively poor job satisfaction, nature of their injury, aggravation of injury while on program or perceptions of little support from within the company. These are the workers most in need of careful assistance, should an injury occur. A successful recovery and positive attitude for a worker generate psychological and financial rewards for all parties, long after resolution of injury is attained.

Table 1

Loyalty to Company Before and After Injury as Reported by Subjects

N=33

Loyalty before Injury	Loyalty After Injury			
	Poor	Fair	Good	Excellent
Poor	4	-	-	-
Fair	-	5	1	-
Good	1	2	11	-
Excellent	3	-	1	5

Table 2

Factors to Consider When Evaluating Programs

1. Nature and severity of injury.
2. Experience on workers' compensation insurance (time and emotional reaction).
3. Support for worker by co-workers and foremen.
4. Perceived aggravation of injury in modified job and in transition back to regular job.
5. Perceptions of company interest in worker welfare.

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Abstract

Employee Experience with Early-Return-to-Work Programs

Thirty-three employees from three industries in a city in the northwest United States were questioned using a structured telephone interview developed by the researcher regarding their experiences on early-return-to-work programs. The sample was selected from lists of subjects provided by program administrators. Data from this descriptive study were used to identify factors associated with positive and negative response and propose program areas to which managers should pay particular attention.

Positive and negative response to program experience was determined by scores on five indicator questions: 1) general attitude to program, 2) loyalty to company after injury, 3) whether subject had enough time on modified job, 4) whether it was easy to return to regular job, and 5) whether injury was worse after return to regular job. Other factors which influenced perceptions such as history of injury, characteristics of the job in which injury occurred, and transition back to regular work after recovery were also examined. Profiles of typical positive and negative respondents were developed.

The study suggests that those who administer early-return-to-work programs should be aware of the differing needs of workers who have suffered on-the-job injuries. On

the basis of questions about injury, the job in which injured, experience in program, and transition back to regular job it was apparent that many injured employees were able to move through a program and back to work with minimal problems. Others were at risk for poor outcomes due to relatively poor satisfaction in job in which injury occurred, a longer period of disability due to injury, aggravation of injury while on program or perceptions of little support from within the company. These are the workers most in need of assistance.

This study provides a conceptual framework for further inquiry into the perceptions of workers on early-return-to-work programs. By looking at four aspects of the work experience (nature of injury, job in which injury occurred, elements of program, and transition back to regular job) it is possible to examine factors that influence over-all response to a program.

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Appendix A

Proposal

Employee Reports of Experience with Early-Return-to-Work Programs

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Introduction

The purpose of this study is to describe outcomes from the workers' perspective of participation in early-return-to-work programs. Such programs, which are becoming more common, are developed by employers in an attempt to control the rising costs of on-the-job injuries. These programs facilitate the placement of injured workers who are not fully recovered into modified jobs which are suited to their physical restrictions. By development of such a program the company decreases time-loss claims and workers' compensation litigation, decreases the need for temporary workers, maximizes productivity and shows concern for employees.

Part of the cost to employers of injuries is their effect upon workers' compensation premiums. Rates are set individually by industry and company experience ratings. The workers' compensation system was originally intended to provide prompt and adequate compensation for employees who suffered on-the-job injuries. Due to escalating costs of health care, increased litigation and expanding liability, the system is strained to its limits (Milstein, 1988). The result is that costs for workers' compensation insurance continue to rise, with no commensurate increase in benefits to workers. These rising costs cut deeply into employers' profits and ability to provide other benefits for employees.

While efforts are being made by state legislatures to bring cost-containment into the system, many employers have

made efforts to control the number of injuries which occur on-the-job, and therefore, minimize the use of workers' compensation funds which results in lower insurance premiums. A look at the magnitude of the problem will clarify the reasons for these efforts.

Oregon ranks eighth in the nation in costs for workers' compensation and more than $500 million a year is paid in premiums. Employers will pay at least $38.4 million more in premiums in 1989 than in 1988. Even so, the rates were raised 5.2% as opposed to the recommended increase of 11.3%.

In 1987 Oregon private employers lost an estimated 935,285 worker days to injury, and public employers lost 114,500 days (Oregon Department of Insurance and Finance, 1988). Thus efforts to decrease injuries and their attendent costs (including worker time-loss) are clearly efforts which will save money for other areas of business.

Benefits of early-return-to-work programs. Employers have realized substantial benefits from instituting early-return-to-work programs. According to Taylor (1988), a consulting company which helps employers set up programs reports reductions of over 50 percent in lost worker days and 20 percent in total workers' compensation costs. To illustrate Taylor gives the example of an Oregon lumber mill which reported a decrease in lost worker days from 1,140 a

year to 140 a year. This saved the mill over $150,000 annually in workers' compensation costs. And, in a study by Gice and Tompkins (1988) of two hospitals with and without early-return-to-work programs, the one with the program had half the number of injuries each year during three years of study, while the other hospital gained in number of injuries. Injured workers were back on the job an average of five days earlier in the hospital with the early-return-to-work program. The hospital with the program also saw a 49 percent reduction in premiums, while the other hospital saw a 45 percent increase in premiums. The early-return-to-work program saved the hospital more than $100,000 in premiums over the 3 year period.

Although benefits to workers are claimed and such benefits are essential to the long-term success of the programs, few studies documenting employee benefits were found. It is clear that the worker benefits by receiving full wages instead of the two-thirds wages provided by workers' compensation funds. But for the most part the programs are based on the general assumption that workers recover quicker if returned to work promptly, and that they also avoid the loss of self-esteem that often accompanies being off work (Gice & Tompkins 1988). It is important to investigate perceptions of workers who have experienced such programs to confirm these assumptions. This information will help those responsible for setting up such programs to

enhance their chance of success.

Review of Literature

The literature reviewed includes reports about work-related injuries in general, problems after injury which may make it more difficult to return to work, development of early return-to-work programs and claimed benefits for workers, and the relationship between worker morale and productivity as it relates to early-return-to-work programs. Nursing, medical and business literature from 1980 to 1989 was examined. Information was also obtained by interviewing experts in the community.

Work Related Injuries. Nationally, there are an estimated 20 million work-related injuries each year (Levy & Wegman, 1983). The incidence of injury varies significantly with industry and they arise out of many situations. The etiology may relate to the job being performed incorrectly resulting in injury, the job description and correct way to perform it could be a cause of injury, there could be a mismatch of physical abilities for the job, or the incident could be simply a random accident unrelated to the specific ergonomics of the job itself.

Problems Related to Return to Work. One of the factors contributing to success of an early-return-to-work program is the worker's positive attitude toward the program. The communication which develops between the employer and

employee during recovery from the injury contributes significantly to that attitude. Before concern with cost-containment became prevalent among employers it was common for a worker to be injured, file the requisite forms for workers' compensation and go home. There would be no further contact between the worker and the employer until recovery. Weeks or months could go by until a release was received from the physician indicating that the worker could return to his regular job. Or, the worker may never return and the company would receive a claim for permanent disability.

The development of early return-to-work programs provide a link between the injured worker and the workplace and help to prevent problems found among those coping with work-related injuries. Those workers who may be at risk of physical, psychological and social influences which would prolong recovery receive benefit from the programs. Studies indicate that the success rate of return to work declines significantly the longer the time off work (Gice & Tompkins, 1988; SAIF Compnews, 1988).

Research indicates that there are many psychological and social factors which serve as reinforcers to delay return to work for those on workers' compensation (Derebery & Tullis, 1983; Tuck, 1983; Yelin, Meenan, Nevitt, & Epstein, 1980), and that these are often more influential in delaying recovery than the physiological factors. Such reinforcers as income, sympathy, attention from family, escape from

responsibility, and revenge against company serve as reasons to prolong recovery (Derebery & Tullis). Derebery & Tullis state that a worker who delays return to work is often thought to be a malingerer but that in "actuality this is usually an unconscious process, rather than a case of conscious fraud."

In addition to receiving secondary gain from the injury via reinforcers for staying off work the worker becomes less connected with the work world and is often subject to depression (Burgel & Gliniecki, 1986; Dereberry & Tullis, 1983; Rader & Haber, 1984) because he feels that his employer is not concerned about his welfare. He also misses his friends at work, suffers loss of self-esteem and experiences increasing tendencies toward addictive behaviors and increasing family discord (Taylor, 1988).

Dereberry & Tullis (1983) state that "early return to work (or no loss of work) is often the most essential part of treatment for a delayed recovery", as it removes sources of reinforcment. Work provides self-esteem, social contact and acceptance as a member of the community. Psychologically, the person who is at work perceives that his injury is only temporary.

The place that work holds in an individual's social framework was studied by Brewin, Robson & Shapiro (1983) when they looked at the rate of recovery among 93 British male

laborers. They found that those patients who were married, who did not receive income supplementation, who felt culpable for the accident, and who were more satisfied with their jobs returned to work sooner. Zal (1985), in a descriptive article discussing recognition of workers who will not return to work, states that those who have a positive attitude toward their job, their company and their fellow employees will return to work as soon as possible.

The impact of prescribed return to work was studied by Catchlove & Cohen (1982) who compared two groups of workers' compensation patients with chronic pain retrospectively. The 47 patients were divided into two groups according to whether or not an instruction to return to work had been an integral part of their treatment program. They found that significantly more patients who were directed to return to work during the treatment program did so (60%), than did those in the group who were similarly treated but for whom return to work was not a part of the treatment program (25%). At follow-up an average of 9.6 months later, 90% of the first group were working while 75% of the second group were still working when surveyed an average of 19.9 months later.

Physically, there is also evidence that indicates an earlier return to work is beneficial. Catchlove & Cohen (1982) found that the group who was directed to return to work received less treatment for their chronic pain than the

comparison group. A person who resists returning to work may change doctors frequently in an attempt to find a doctor who will confirm his perception of his injury as being serious. Doctors confirm workers' perceptions of injury severity by obtaining too many consultations, performing too many tests, and unnecessarily hospitalizing the worker (Derebery & Tullis, 1983). The result is the person is not motivated toward wellness but instead looks at himself as an ill person.

Medical practices which prescribe rest and inactivity for musculoskeletal complaints that do not seem to respond quickly serve to further delay return to work. Recommendations for treatment instead are for early activity (Derebery & Tullis, 1983; Tuck, 1983), treating it as a sports injury in which a program is immediately started to maintain muscle tone. An early-return-to-work program which can meet the worker's individual physical restrictions with a modified job is an ideal way to accomplish this.

Development of Early-Return-to-Work Programs. One of the driving forces behind early-return-to-work programs is rising costs of workers' compensation insurance. Several factors have contributed to these increased costs. While workers' compensation was originally intended to provide a prompt way for employers to assume the costs of occupational injury and disability and at the same time avoid civil

lawsuits, it has turned into a complex, bureaucratic process in which many claims are litigated. In California, every eighth claim is litigated (Steinberg, 1986). Since lawyers, insurance companies, physicians, and workers all want their "rightful" part of the workers' compensation pie, the expenses mount significantly.

Milstein (1988) described the origins of the rising workers' compensation costs as due to "cost shifting." In the early 1980's government and group health buyers began contracting directly with providers for lower fees, setting up systems of deductibles and co-payment provisions which served to discourage unnecessary treatment. However, workers' compensation insurers did not develop these cost-containment strategies so providers often charged higher rates to them to make up the difference for the discounts given to other consumers. Not only were medical costs for injured workers going up but there was no way to control for unnecessary use of those medical services. Milstein identifies ways which employers can respond to this situation to individually decrease those costs incurred for injuries. Specifically, these include: 1) auditing all medical bills to determine appropriate billing, 2) contracting with preferred provider organizations, 3) utilization review of health care before, during and after treatment.

Employers have also chosen to reduce the actual number of claims made to workers' compensation by increasing

emphasis on safety and establishing early-return-to-work programs. Characteristics of early return-to-work program vary. Some are formal, with goals and policies clearly delineated. The responsibilities of the company and the injured worker are defined. Other programs are more informal. Each case may be managed individually and decisions made on a case by case basis. There may be few written policies.

All programs have the goal of returning injured workers to the workplace as soon as possible. By attaining this goal, several objectives are met. Workers return to their regular jobs faster than they would if they were home recuperating with less encouragement to progress (Gice & Tompkins, 1988; Taylor, 1988). By facilitating return to work, there is less need for temporary workers to fill positions left open by injured workers (Taylor, 1988). Time-loss payments are decreased because these payments are only made for workers recuperating at home, unable to do any work (Centineo, 1986; Dent, 1985; Gice & Tompkins, 1988; Taylor, 1988). The programs convey a sense of concern for the worker, because he receives the message that he is a valuable member of the workforce despite temporary restrictions and he receives support and counseling regarding uncertainties and worries about his career (Dent, 1985). Programs may also decrease workers' compensation litigation

(SAIF Compnews, 1988; Taylor, 1988), as the worker realizes that efforts are being made to accommodate his physical and financial needs by providing a modified job.

Each program has policies and procedures that are used for on-the-job injuries (Centineo, 1986; Dent, 1985). Occasionally, these procedures are also used for non-occupational injuries. Program policies include early contact with the injured worker, who is informed of the program and expectations regarding participation. Release is obtained from the medical provider for work with specific physical restrictions. Concurrently, a modified job is designed which meets those physical restrictions. A modified job is any change in duties, hours and expectations of a regular job (Gice & Tompkins, 1988). The important thing to accomplish is design of a job that is "beneficial to the plant's productivity" (Taylor, 1988). This is necessary for success of the program from both the employer and employee's standpoint. Periodic monitoring of the worker's progress while on the modified job is important so that duties and job specifications can be gradually increased as progress is made. This also provides a chance for regular communication regarding the worker's concerns. If a worker perceives the monitoring as pressure to progress too rapidly or as "big brother" looking over his shoulder, this may affect his attitude toward the program. On the other hand, if it is regarded as an expression of concern and an effort to

accommodate his needs, the worker's attitude may be positively affected. The goal is to return the worker to a regular job when the injury is medically stable. The worker may return to his old job or be assigned a new one commensurate with permanent physical limitations.

Worker Morale and Productivity. Many factors influence whether the early return-to-work program is deemed successful by the company. If the goals as outlined above are met, the program gains credibility. Crucial to meeting those goals is a positive worker response. Satisfied workers influence workforce morale and good morale contributes to optimal productivity. A modified job assignment which is satisfying to the worker will help maintain the worker's general morale and enhance productivity. Modified jobs are designed by a variety of methods. Some are very well planned with a detailed job analysis specifying physical capacities required. Others are designed when needed, perhaps developing into" make work" jobs which may provide something for the worker to do but have no intrinsic value to the production or support functions of the company.

Herzberg's widely cited theory of motivation is a framework for thinking about the interrelationship between the nature of the early-return-to-work programs and worker response. Herzberg studied the relationship between motivation and one's total output capacity (Hersey &

Blanchard, 1982; Koontz, O'Connell & Weihrich, 1986) and developed a theory of motivation composed of two factors, hygiene factors and motivating factors. Hygiene factors include company policy and administration, supervision, working conditions, interpersonal relations, salary, status, job security and personal life. These factors, if present in the environment in high quantity and quality, were found to maintain satisfaction and maintain productivity, but not increase that productivity. If they are missing, productivity will decrease. Motivators are factors within the job itself such as achievement, recognition for accomplishment, challenging work, increased responsibility, and growth and development. These factors, if present in a job will motivate an individual to superior performance or increased capacity. Thus, according to this theory if hygiene factors, such as maintaining regular salary, maintaining regular contact with co-workers, and maintaining similiar working conditions, can be included in a modified job, the person will not become dissatisfied and productivity will be maintained. If the job can be designed so that some motivating factors are included, satisfaction or no satisfaction (not dissatisfaction) will result and productivity will increase. Thus, if a worker finds the program a positive experience this may influence general productivity because attitudes are contagious among a worker population.

In a study by Yelin et. al (1980) of 180 persons (78 males and 102 females) ages 21-65 years with rheumatoid arthritis, the ability to have control over the pace and flexibility in the activities of work was found to have an effect on continued employment. While this study deals with a specific diagnostic entity, it does suggest that for those who are disabled personal control of work is an important factor. This attribute may be an important consideration in the design of satisfying modified jobs.

In summary, research has shown that early return-to-work programs are valuable from both the employer and worker's perspective. For the employer, the programs provide a way of decreasing costs which arise from injuries to include workers' compensation, lost productivity, and temporary workers. For the worker it is a way to deal with the financial, social, psychological, and physical stresses which arise from an injury. But more research is needed to document the experiences of workers in early-return-to-work programs and to determine if benefits claimed for them are in fact outcomes as perceived by the injured workers.

Conceptual Framework

A framework to describe the factors influencing participation and outcomes of early-return-to-work programs was developed by the researcher. An injured worker enters a program when he is able to function in the workplace but not

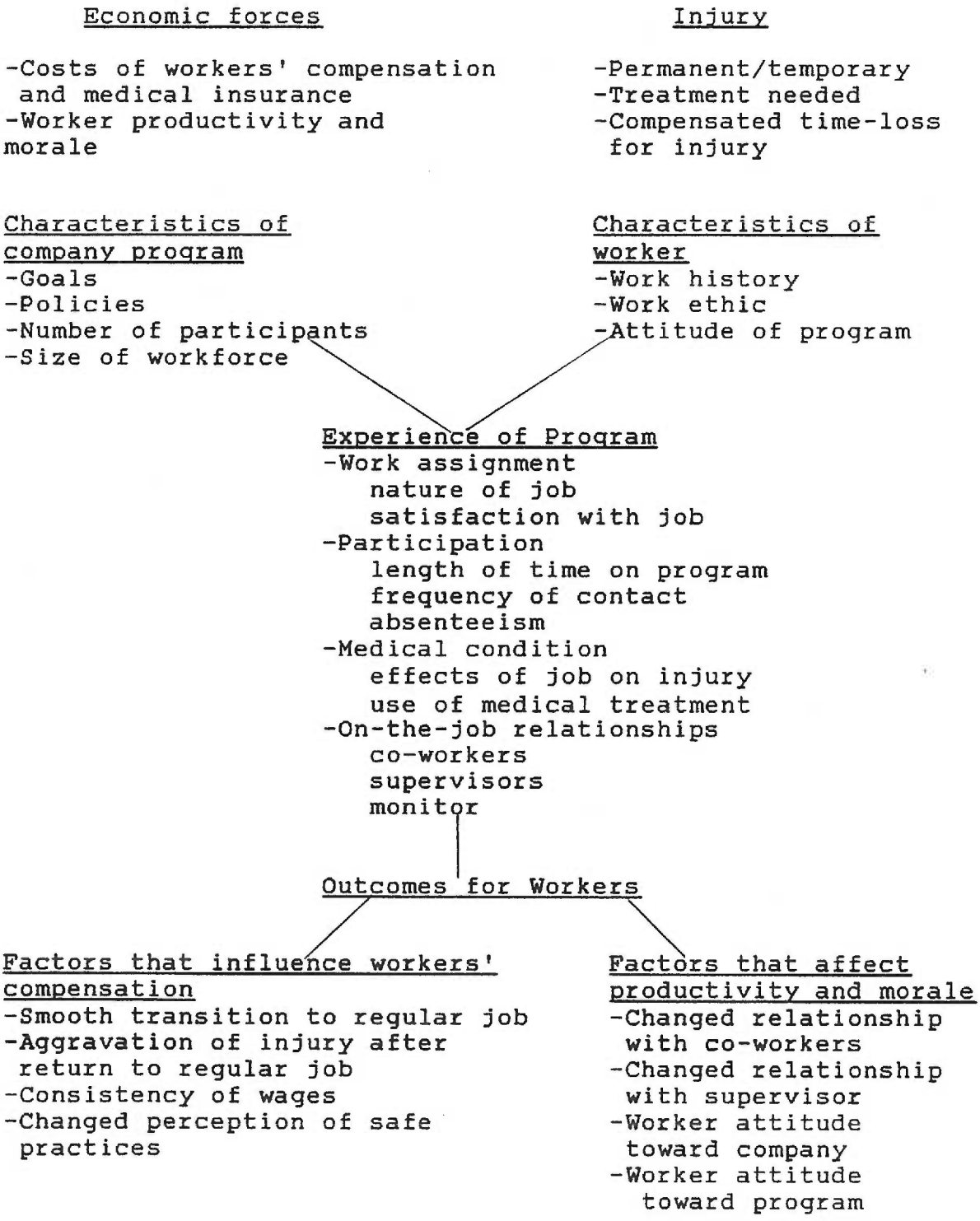
yet able to return to his regular job. He brings to the program the details of his injury including its severity: whether it is permanent or temporary, treatment needed, and compensated time-loss which may have occurred. He also brings personal characteristics which include his work history, work ethic and attitudes toward the program. These factors may affect the worker's attitudes toward the program.

The worker's experience in the program includes: 1) aspects of the modified work itself (whether it is satisfying and makes a contribution to the company, provides control over pace and flexibility in work activities); 2) worker involvement in the program (length of time on the program, frequency of contact with supervisors, absenteeism); 3) progress of medical condition (effects of modified job on injury, use of medical treatment); and, 4) on-the-job relationships with co-workers, supervisors, and the monitor assessing progress toward recovery. Each of these factors may be affected by attributes of the injury and worker characteristics and, in turn, affect outcomes of the program. For example, if the worker has sustained an injury resulting in over a month compensated time-loss and has an unsatisfying modified job, his perceptions of the program and company may be affected negatively. If a worker is harassed by co-workers while on the modified job, the experience may influence perception of program and relationship with co-workers, both of which are outcome factors.

Outcomes for individual workers are divided into two areas, those which influence the use of workers' compensation and those which affect worker morale and productivity. They are directly influenced by aspects of the injury, worker characteristics and experience a worker has on the program. Outcomes which influence workers' compensation costs include: 1) smooth transition back to regular job which is characterized by consistent progress toward recovery 2) presence or absence of aggravation of injury after completion of program, 3) consistency of wages through program and into regular job, 4) changed perception of safe practices due to the heightened awareness injury produces which may decrease the potential for future accidents. The second group of outcomes include those which may affect productivity and morale of the worker. These include: 1) changed relationship with co-workers due to harassment or support while on the program, 2) changed relationship with supervisor due to the attention required by the injury and the potential marking of worker as being prone to accidents, 3) changed attitude such as loyalty toward company and acknowledgement that the company is concerned about the workforce, and 4) changed attitude toward program.

Figure 1 shows a diagram of the elements of an early-return-to-work program and how these elements relate to each other.

Figure 1. Summary of Elements of an Early-Return-to-Work Program



Purpose of the Study

While there are many resources to assist companies in setting up early-return-to-work programs and research has documented their effectiveness in cutting workers' compensation costs, further research is needed to support the claims of benefit attributed to injured employees who participate in programs. It is important to investigate program experience from the perspective of the worker because ultimate program outcomes may depend upon workers' responses. This study will explore the experience of workers in early-return-to-work programs.

The data for this study will be workers' reports as they reflect upon their experiences in early-return-to-work programs. Experiences include both perceptions of the program and outcomes from participation. The central focus of the study will be those experiences of elements that can be changed. Other factors that may influence perceptions and outcomes such as history of the injury, characteristics of the job in which injury occurred, and the transition back to regular work after discharge from the program will also be examined. The analysis will identify those elements and factors, if any, that are associated with positive responses to the program.

In this study worker will refer to a person who sustained an on-the-job injury and was placed either immediately or after some compensated time off in a modified

job designed for his specific physical restrictions. An early-return-to-work program will include any formalized effort on the part of an employer to bring an injured worker back to work before that worker is medically stable and capable of performing his regular job. Time on such a program varies. Outcomes will refer to reactions which workers report, both those which influence the company's workers' compensation costs and those which influence worker productivity and morale.

Research Questions

The research questions, derived from review of the literature, the conceptual framework, clinical experience and interviews with experts in the area include:

(1) What elements of early-return-to-work programs are associated with positive responses to the programs?

(2) What characteristics of the injury are associated with positive responses to the program?

(3) What characteristics of the job in which the injury occurred are associated with positive responses to the program?

(4) What aspects of the transition back into a regular job are related to positive responses to the program?

Methods

Design

In order to gain information about perceptions and outcomes for workers of participation in early return-to-work programs, a sample of workers who have recently been in such programs will be interviewed about their experiences, using a structured telephone interview developed by the investigator. A descriptive design using quantitative methods will be utilized for this study. The independent variables are those listed in the research questions (see page 44): 1) elements of early-return-to-work program experience (e.g. job assignment, treatment received, support received), 2) characteristics of injury, 3) characteristics of job in which injury occurred, and 4) aspects of transition back into a regular job. The dependent variable in each question is positive response toward the program.

Setting

This study will be conducted in three industrial settings: a steel foundry, a light precision castparts manufacturing plant, and headquarters for a metropolitan transportation district (referred to hereafter as the "transit district"). Each setting has an early return-to-work program, which is administered by either an occupational health nurse or other designated person.

The steel foundry, located in a large metropolitan area, employs 900 workers in all areas of steel fabrication. Most

of the employees in the foundry are male and have been with the company for 15-20 years. The average age is 40 years. Many of the jobs are strenuous, requiring much lifting, pushing, twisting, bending and awkward movements. The workers are not unionized.

The precision castparts manufacturing plant employs 800 people in large metropolitan area. Two-thirds of the workforce is male, one-third female. They produce specialized steel alloy parts for medical, industrial and aeronautical uses. The workers are not unionized.

The transit district is located in a large metropolitan area and employs 1500 workers as bus or train operators, maintenance workers and administrative personnel. The composition of the workforce is 65% male and 35% female. The average worker is 45 years old and has been employed 10-15 years with the company. The employees are union members.

The structure of the three programs differs considerably. The transit district has detailed policies and procedures covering all aspects of participation in the program. Time on the program is limited to 90 days; after that time, if recovery is not anticipated in the next 30 days, the person is terminated from the program. The program will accommodate both occupational and non-occupational injuries, but occupational injuries have first priority. A list of light duty jobs has been formulated for each of three

categories of physical restrictions. Injured workers are closely monitored for progress and compliance with policies and procedures. There is an average of 28 workers on the program in a month. The program is administered by a light duty coordinator who works directly under the head of health services for the transit district.

The steel foundry has a less structured program which has been in place for eight years. It is designed to accommodate a wide range of injuries. There is no time limit for participation in the program and only occupational injuries are accepted. The first choice for placement in a modified job is in the department in which the worker regularly works. If the department has no suitable job, the worker can be placed in a modified work center which has special adjustable chairs and produces piece work which would normally be contracted out to other businesses. Desk jobs are also available. The program is manditory. There are usually 3-4 workers on the program at any one time.

The program at the castparts manufacturing plant has even less structure. Concentrated management of injured workers has only recently begun. Workers are placed in modified jobs as needed after consultation with supervisors. Placement in the worker's own department is preferable. There is no time-limit for participation in the program though developing more definite policies is planned in the near future. There are an average of 2-3 workers on modified

jobs at one time.

Procedure to Identify Subjects

The research proposal will first be submitted to The Oregon Health Sciences University Human Subjects Committee for approval. After approval is obtained, the proposal will then be submitted to the person administering the early return-to-work program in eachsetting. Meetings to answer questions about the proposal can be arranged as requested. Once approval is obtained from each location the subjects will be identified.

Each program administrator will be asked to provide a list of subjects. Criteria for inclusion in the study are as follows:

1. Worker completed an early return-to-work program in the last six months.
2. Worker sustained injury while at work.
3. Worker presently employed in same company as that in which injury occurred.
4. Worker on program no longer than 6 months.
5. Worker consents to participate.

Procedure to Secure Subjects

One week before the interviews, letters explaining the study and soliciting participation will be distributed by the program administrator to the potential subjects (see Appendix B). Approximately 5-7 days after receipt of the letter, the

worker will be called by telephone at home. The purpose of the interview will be explained and request to participate will be solicited (see Appendix C). If verbal consent is given, the interview will proceed. If the worker is not contacted, call-backs will be made up to six times. Subjects will continue to be recruited until 10 people from each setting have been entered into the study, for a total sample of 30 workers.

Information identifying the worker and setting will be excluded from the interview data. Each subject will be given an identification number. A log indicating the identification number and the identity of the subject will be kept separate from the interview data, and will be destroyed once the project is completed.

A decision to do a telephone interview was made after consideration of the benefits and limitations of this method. The main benefit for the subjects is that confidentiality can be better protected, as they will be answering questions in the privacy of their home and not on company property. Also, it will prevent interrupting work and the accompanying attention this can produce. Limitations include the difficulty of answering questions asked over the phone, the need to listen carefully, and the interruption of home activities. It was felt that the benefits for the subjects outweighed the limitations of the telephone survey method.

Instrument

The instrument used for data collection will be a structured interview guide developed by the researcher (refer to Appendix D). It consists of both open and closed-ended questions designed to elicit information about workers' experiences in early return-to-work programs. The questions will cover four areas: 1) history of injury, 2) experience in early-return-to-work program, 3) transition back into regular job, and 4) work history. The order of the questions was designed to obtain the information most pertinent to the study first because a subject would most likely concentrate more fully on the questions asked at the beginning of the interview. The interview will be conducted over the telephone by reading the questions in the order described. The interview is designed to last 15-20 minutes.

The first section, composed of nine questions, will elicit information about the injury and course of recovery experienced. The first (question 1) is open-ended and asks for description of injury. A few words will be sufficient to answer this question which will be recorded as a direct quotation or para-phrased by the interviewer. Seven closed-ended questions (2,3,4,5,7,8,9) ask for information about whether injury occurred in permanent job, medical treatment during recovery, whether any treatment continues to the present time, time off work on workers' compensation, perceptions about concern for injury on part of employer,

when the worker first learned about the early-return-to-work program, and whether the worker was happy to have the opportunity to return to work before completely recovered. Question 6, also closed-ended, asks for separate Likert-type ratings on perceptions about being off on workers' compensation such as whether the injured worker felt content, depressed, frustrated, guilty, or had more family problems. The ratings requested are 1-not at all, 2-low, 3-medium, 4-high. All closed-ended answers have been coded. Answers received will be recorded on the interview sheet.

The second section includes eleven questions about the worker's experience on the early-return-to-work program. There are two open-ended questions (10,18) which ask for a description of the modified job assignment and whether the worker was aware of being monitored in progress toward recovery. There are 8 closed-ended questions about department of modified job assignment, wage earned, whether it was easy to adjust to the job, harassment experienced, support from foreman, injury aggravation experienced, whether the time on the job was sufficient for recovery and attitude toward program (questions 11,12,13,15,16,17,19,20). Question 14 asks for separate Likert-type ratings on perceptions about the modified job such as whether the job was interesting, boring, demeaning, was an important job, gave the worker control over the pace of work and provided flexibility in

work activities.

The third section of the interview includes seven questions (21,22,23,24,25,26,27) on the transition back into the regular job. All questions are closed-ended and elicit information on whether the worker returned to previous job, aggravation of injury experienced, changes noted in relationships with supervisors and co-workers, ease of transition, perceptions of safe work practices and loyalty to company before and after injury.

The fourth section includes five closed-ended questions (28,29,30,32,33) regarding age, sex, length of employment, how long employed in job in which injury occurred and satisfaction with job. Question 31 is an open-ended question requesting information on the job in which the injury occurred. Question 34 requests any further information the worker would like to add.

The instrument for collecting data on the programs (see Appendix E) includes information on number in workforce, average number in program at one time, criteria for entry into program, schedule for monitoring worker's progress, time limits for participation in program, how modified jobs are assigned, how they are described, and description of contracts made with employees. This information will be summarized on the data sheet to enable comparison between company programs.

Two experts in the field will be asked to read the

questions and comment on their content. These will be persons who administer early return-to-work programs and have experience with injured workers. Also a pilot study will be performed using three workers to determine if the questions are clear and if the interview can be completed in the time planned. Adjustments will be made as necessary.

Measurement

Responses to the interview questions have been operationalized by precoding so that the information can be statistically analyzed. A consistent system has been used to specify negative reponses from positive responses. Lower numbers have been assigned to negative responses and higher numbers have been assigned to positive responses. When gradations of responses are requested, the most intensely negative category is assigned 1 and the highest number is assigned to the most intensely positive category. Special categories include "refused" which is coded 7 and "don't know" which is coded 8. Neither of these latter categories will be offered as an option for an answer but if elicited there will be a place to code them.

The dependent variable is positive response to program. This will be determined by answers to five interview questions: #19 sufficient time on program, #20 general attitude toward program, #22 aggravation of injury after return to regular job, #25 ease of return to regular job, and

#27b loyalty toward company after injury. All questions are answered with responses in four gradations. The initial plan is as follows: if the answers are "1" or "2" the response for that question will be judged negative. If the answers are "3" or "4" the response for that question will be judged positive. Over-all response will be determined by combining these responses. It is possible that the distribution of responses will make some other scoring method more appropriate.

Independent variables are items in the questions under general headings: a) program experience, b) characteristics of injury, c) characteristics of job in which injury occurred, and d) transition back into regular job.

Plan for Analysis

Data analysis will begin once all data has been collected. Data to be analyzed includes information about the three programs utilized in the study, information on the population surveyed, and information about the experience of being in the early-return-to-work programs.

Information about the three programs will include a characterization of their formality, description of number of participants, size of workforce, frequency of monitoring subjects for progress, and restrictions as to length of time workers can be on the program.

Description of the population surveyed will include frequency distributions on demographic variables such as sex,

age, job, length of time on program, numbers who had compensated time-loss, years of employment, years in job in which injured. This information will be obtained from the director of the program at each site and from the answers to the interview questions.

The population will also be described in terms of the program experience itself organized in terms of the independent and dependent variables.

To determine the response of workers in one company, the frequency of positive responses to questions used to construct the over-all positive response score will be examined (see Figure 2). If the differences between companies appear major, then the data will be analyzed separately by company; if not, data will be aggregated.

Figure 2. Grid mapping responses to questions determining dependent variable, positive responses to program, by company.

# of Positive Responses	Company A	Company B	Company C
Question 19			
Question 20			
Question 22			
Question 25			
Question 27b			

Data will be examined to describe the relationship among questions used to construct over-all positive response, (questions 19,20,22,25,27b). An appropriate measure of association will be used to determine these relationships, if any.

In addition, data from questions regarding the independent variables will be paired and examined for relationships using an appropriate measure of association.

Data to determine associations between independent and dependent variables will be examined in two ways. First, independent variables will be correlated, singly, with over-all positive response score. Second, a grid (see model in Figure 3) will be used to determine if there are patterns of responses characteristic of those with positive perceptions and outcomes in contrast to those with negative perceptions and outcomes. Initially, raw data from the interview questions will be entered in the grid. If more specific positive and negative responses are required, the data will be collapsed according to designated rules.

Figure 3. Mapping grid for workers by positive and negative responses to questions about early-return-to-work program experience.

	Positive Response							Negative Response						
	Workers							Workers						
	1	2	3	4	5	6	. . .	1	2	3	4	5	6	.
Program Experience														
Modified job satisfaction														
Regular department														
Regular wage														
Support from co-workers														
Support from foreman														
Injury aggravation														
Characteristics of Injury														
Permanent vs. temporary														
Time loss sustained														
Treatment required														
Concern by employer for injury														
Characteristics of job in which injury occurred														
Job satisfaction														
Time in job over 5 years														
Transition back into regular job														
Return to previous job														
Relationship with co-workers														
Relationship with supervisor														
Awareness of safe practices														
Loyalty to company before injury														

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Appendix B

Letter to Potential Subjects

THE OREGON
HEALTH SCIENCES UNIVERSITY
3181 S.W. Sam Jackson Park Road, L343, Portland, Oregon 97201 (503) 279-7709

School of Nursing
Community Health Care Systems

May , 1989

Dear

Within a week or so I will be calling you at home as part of a research study. This is a study to learn about workers' experience in early-return-to-work programs after on-the-job injuries.

When I call I will ask you about voluntarily participating in a survey by answering some questions over the telephone. I am writing to you in advance of my call because I feel that many people appreciate being advised that a research study is in process, and that they will be called.

Altogether the interview should only take 15-20 minutes. If by chance I should happen to call at an inconvenient time, please tell me and I will be happy to call back at a time that you suggest. I will ask you some questions about you past work injury, the modified job(s) which you had while you were recovering and your adjustment back into a regular job. Your identity and the company with which you work will remain completely confidential. Names will not be used for publication purposes.

Your help and that of the others being asked to participate in this study is greatly appreciated. It will help those who design programs to more fully understand the needs and concerns of workers who are injured on-the-job.

I enclose a copy of the questions you will be asked. It may be helpful to have it handy when I call. If you have any questions, please don't hesitate to ask me when I call. Or you may contact me by phone at 297-2978.

Sincerely,

Janet Williams, R.N., B.S.N.
Graduate Nursing Student
The Oregon Health Sciences University

Appendix C

Script for Introduction to Telephone Interview

My name is Janet Williams. I am a graduate nursing student at The Oregon Health Sciences University. Several days ago I sent a letter to you about a study I am doing on workers' experiences in early-return-to-work programs after on-the-job injuries. Did you receive that letter? (If yes, continue with script. If no, explain what letter said.) Is this a convenient time for you? (If yes, continue.) I would like to ask your voluntary participation in this study as it will help those who design programs better understand the needs and concerns of injured workers.

The interview will last about 20 minutes in which I will ask several questions about your injury and your impressions of the different parts of the program. Your identity and that of your company will remain completely confidential. You may refuse to participate or withdraw at any time during the interview process. You may not personally benefit from participating in this study, but you may contribute new information which may help injured workers in the future.

I apologize for interrupting you at home but I felt it the best way to assure confidentiality. I also thought you might feel more comfortable answering the questions in your home rather than on company property.

I would be happy to answer any questions you might have about the study, either now or later. Would you be willing to participate? If yes: interview will begin. (See Appendix D). If no: Could you tell me why you prefer not to participate? Thank you very much.

Appendix D

Interview Instrument

Appendix D
Interview Instrument

History of Injury

1. The first part of the survey is about your injury. Can you tell me how you were injured? _____

_____

2. Were you injured in your regular permanent job?

NO 1
YES 2

3. What medical treatment did you have for your injury?

MD OFFICE VISITS 6
HOSPITALIZATION. 5
THERAPY WITH PT, CHIROPRACTOR,etc. .4
COUNSELING 3
(Two of above) 2
(Three of above) 1
(Refuse) . . . . . -7

4. Are you still on medical treatment?

NONE 6
MD OFFICE VISITS 5
THERAPY WITH PT, CHIROPRACTOR,ETC. .4
COUNSELING 3
(Two of above) 2
(Three of above) 1
(Refuse) . . . . . -7

5. Were you off on workers' compensation for your injury?

YES 1
NO 2

5a. How long? (in weeks) _____

6. If your were off work on workers' compensation did you feel:

	NOT AT ALL	LOW	MEDIUM	HIGH	(Don't know)
6a. Content?	1	2	3	4	-8
6b. Depressed?	4	3	2	1	-8
6c. Frustrated?	4	3	2	1	-8
6d. Guilty?	4	3	2	1	-8
6e. Have more family problems?	4	3	2	1	-8

7. Did you feel your employer was concerned about your injury?

NO 1
SOMEWHAT 2
YES 3
(Don't know) . . . . . -8

8. When did you learn your company had an early-return-to-work program?

BEFORE INJURY. 1
IMMEDIATELY AFTER MY INJURY. 2
AFTER BEING OFF ON WORKERS' COMP FOR SOME TIME .3
(Don't know) . . . . . -8

9. Were you happy to have the opportunity to return to work before you were well enough to do your regular job?

NO 1
SOMEWHAT 2
YES, DEFINITELY. 3
(Don't know) . . . . . -8

Return-to-Work Program Experience

10. The next part is about your experience on a modified job. Can you tell me what your modified job or jobs were? (actual work done)_____

_____

10a. How long were you on a modified job?(weeks) _____

11. Was your modified job in your regular department?

NO 1
YES. 2

12. What wage did you earn on the modified job?

LOWER THAN REGULAR JOB. 1
SAME AS REGULAR JOB 2

13. Was it easy to adjust to a modified job?

NOT AT ALL. 1
SOMEWHAT EASY 2
VERY EASY 3

14. Did you find your modified job:

	NOT AT ALL	LOW	MEDIUM	HIGH	(Don't Know)
14a. Interesting?	1	2	3	4	-8
14b. Boring?	4	3	2	1	-8
14c. Satisfying?	1	2	3	4	-8
14d. Degrading or beneath you?	4	3	2	1	-8
14e. An important job which needed to be done?	1	2	3	4	-8
14f. Gave you control over pace of work?	1	2	3	4	-8
14g. Provided flexibility in work activities?	1	2	3	4	-8

15. Were you teased or harassed by co-workers while doing the modified job?

NOT AT ALL 1
SOME 2
A LOT 3
(Don't know) . . . . -8

16. Did you have support from the foreman of the department in which you were working while you were on the program?

NOT AT ALL 1
SOME 2
YES, A LOT 3
(Don't know) . . . . -8

17. Did your injury get worse or was the healing set back while on the modified job?

YES, A LOT 1
MODERATELY WORSE . . . 2
SLIGHTLY WORSE 3
NOT AT ALL 4
(Don't know) . . . . -8

18. Were you aware of your progress toward recovery being monitored? Was there a periodic check on your recovery to see when you would be able to return to work?

_____

_____

19. Before you were placed back into a regular job did you feel you had enough time on the modified job?

NO 1
SOMEWHAT ENOUGH 2
YES,. 3
(Don't know) . . . . . -8

20. Can you rate your general attitude toward the early-return-to-work program on a scale of 1 to 4?

POOR	FAIR	GOOD	EXCELLENT	(Don't know)
1	2	3	4	-8

Transition Back to Regular Job

Now, I want to ask some questions about the transition back into a regular job after recovery:

21. Were you able to return to your regular permanent job you had before you were injured?

NO 1
YES 2

22. Did your injury get worse or did you have any set-backs when you returned to a regular job?

YES, A LOT 1
MODERATELY WORSE 2
SLIGHTLY WORSE 3
NOT AT ALL 4
(Don't know) . . . . . -8

23. Did you note any change in your relationship with your supervisor when you returned to your regular job?

IT GOT WORSE 1
NO CHANGE NOTICED 2
IT GOT BETTER 3
(Don't know) . . . . . -8

24. Did you note any change in your relationships with your co-workers when you returned to your regular job?

THEY GOT WORSE 1
NO CHANGE NOTICED 2
THEY GOT BETTER 3
(Don't know) . . . . . -8

25. Generally speaking, was it easy to return to a regular job?

NOT AT ALL EASY. 1
SOMEWHAT EASY 2
MODERATELY EASY 3
VERY EASY 4
(Don't know) . . . . . -8

26. Are you more aware of the possibility of accidents now, do you take more effort to work more safely than you did before your injury?

NO. 1
SOMEWHAT. 2
YES 3
(Don't know) . . . . . -8

27. People often think that the experience of an injury can affect one's loyalty and attitude toward the company. Can you rate your loyalty and attitude toward the company:

	POOR	FAIR	GOOD	EXCELLENT	(Don't know)
27a. Before injury:	1	2	3	4	-8
27b. After injury:	1	2	3	4	-8

Work History

28. Age

18-30 years 1
30-40 years 2
40-50 years 3
50-60 years 4
60 + years 5

29. Sex

MALE 1
FEMALE 2

30. How long have you been employed by the company?

LESS THAN 1 YEAR	1
1-5 YEARS	2
6-10 YEARS	3
11-20 YEARS	4
20-30 YEARS	5
30 + YEARS	6

31. What was your job when you were injured?

_____

32. How long were you in the job in which you were injured?

0-6 MONTHS	1
6-12 MONTHS	2
1-5 YEARS	3
6-10 YEARS	4
10 + YEARS	5

33. Was your regular job:

	NOT AT ALL	LOW	MEDIUM	HIGH	(Don't know)
33a. Interesting?	1	2	3	4	8
33b. Boring?	4	3	2	1	8
33c. Satisfying?	1	2	3	4	8
33d. Degrading or beneath you?	4	3	2	1	8
33e. An important job which needed to be done?	1	2	3	4	8

34. Is there anything else you would like to tell me?

Thank you very much.
Length of time for interview _____
Date _____

Appendix E

Instrument for Collecting Data on Programs

1. Company Name _____
2. Director of Program _____
3. Number in workforce _____
4. Average number in program at one time _____
5. Criteria for entry into program:

   Occupational vs. Non-occupational _____

   Illness vs. Injury _____
6. How often monitored while on program:

   Walk-through _____

   Communication with foreman _____

   Communication with worker _____

   Communication with medical provider _____
7. Time limits for participation in program _____
8. Formal description of classes of modified jobs:

   _____

   _____
9. How assignment of modified job is made: _____

   _____
10. Formal contracts made with employees

    _____

Appendix F

Summary of Data Analysis

The first step for analysis was to validate the appropriateness of the measure for determining over-all response to the program, a critical component of worker perceptions. This was done by looking at questions which elicited over-all impressions of the program and specific outcome data such as aggravation of injury. A decision rule was created for the five indicator questions chosen to determine over-all response to the program.

The second step was to ascertain the appropriateness of considering the workers as one group. This process is described in the paper. Once the necessary decisions were made, frequency distributions and cross-tabulations were used to describe worker perceptions and to suggest possible inter-relationships among factors relevant to worker response.

Appendix G

Findings: Positive/Negative Responses Combined

Five different aspects of the early-return-to-work experience were examined in order to identify factors associated with the over-all positive and negative response. These factors are discussed in the following categories: demographic factors, descriptions of the workers' injuries, attitudes toward the job in which the injury occurred, elements of the program and transition back to the regular job.

When demographic factors were examined, it was found that only 12% of those in the positive response group had been in the job in which injured for less than a year compared with 40% of the negative group. On the other hand, half of both groups had been in the job for over 5 years. All women (n=9) were positive respondents.

When factors associated with injury were examined, it was found that of those who suffered upper extremity injuries, i.e., hand, wrist, shoulder, all but one (n=13) were positive respondents. Thirty percent of the positive group were still under treatment for their injury compared with 60% of the negative group.

Examination of experiences while on workers' compensation revealed several differences. Comparable numbers in both groups were on workers' compensation but the

positive respondents had received it for less time, (30% had four or more weeks compared to 50% of the negative respondents). This finding supports previous studies (Derebery & Tullis, 1983; Gice & Tompkins, 1988; Tuck, 1983) which suggest that the longer a person is off work the harder it is to return to work. Emotional response to being on workers' compensation varied as well. The positive respondents acknowledged less depression (47%) than the negative group (70%). They were less frustrated (52%) compared with the negative respondents (80%). More positive respondents (22%) felt guilty than negative respondents (10%). Thirty percent of both groups experienced family problems while on workers' compensation.

When asked whether their employer was concerned about their injury only 52% of the positive group and 30% of the negative group answered yes. Subjects felt pressure from their employer to get back to work and stated that concern expressed was for the company finances rather than for their well-being.

Attitudes toward the regular job in which the injury occurred varied across groups. Positive respondents found their regular job more interesting (96%) compared with 70% of the negative respondents, less boring (78%) compared with 50%, more satisfying (96%) compared with 70%, and less degrading (91%) compared with 70%. All respondents found their regular jobs to have either high or medium importance

in contributing to the function of the company.

Response to Program. This comprised the largest area of factors examined. It included general response toward the program itself, attitudes toward the modified job and perceptions of support from co-workers and foremen.

More than half (57%) of the positive response group, compared with 40% of the negative group, were happy to have the opportunity to return to work before completely recovered. This finding was examined with caution as the subjects knew when answering the question what their response to the program was and whether they had experienced injury aggravation on the modified job. It was assumed that a worker may have been less enthusiastic in retrospect about going back to work if aggravation was experienced, but no association was found between these two factors.

When attitudes toward the modified job were examined, more (56%) of the positive group found the modified job either medium or highly interesting whereas 30% of the negative group rated the modified job as having only medium interest. A high proportion in both groups rated the job as having medium or high degree of boredom: positives 70%, negatives 80%. Of the positive group 52% rated the job as medium or highly satisfying compared with only 20% of the negative group. Positive respondents were less likely to report that their modified job was degrading (76% compared

with 50%). More (87%) of the positive group found their modified job either medium or highly important to the function of the company than did the negative group (60%). All but one respondent reported that their modified jobs offered control over the pace of the job and flexibility in work activities.

Support by co-workers and foremen varied across groups. All of the positive group said they were teased either not at all or some by co-workers, whereas only 60% of the negative group reported this; the remaining 40% said they were teased a lot. Slightly more (78%) positives than negatives (60%) felt they had a lot of support from their foremen on the modified job.

When transition back into the regular job was examined, it was found that 96% of the positive respondents returned to their previous job, whereas only 70% of the negative respondents did so. Relationships with their supervisor remained the same or improved for 96% of the positive group, but this occurred for only 40% of the negative group, whereas 40% felt it got worse (20% didn't know or it did not apply). Most (100% positives, 90% negatives) felt their relationship with their co-workers did not change.

Concern for safety after experiencing a work injury was similiar across groups. Fifty-two percent of the positive group and 60% of the negative group felt they were more aware of safety now. The others felt that they could not have

prevented their accident so their attitudes had not changed. Several mentioned concern that future injuries would jeopardize job security. They felt they would be fired if ever injured again, or that the company would make it "rough" for them. Others felt they had not been able to progress in their career due to the injury.

Appendix H

Secondary Tables

H-1 Subjects by Sex and Age

H-2 Subjects by Length of Employment in Company and Time in Job of Injury

H-3 Distribution of Injuries

H-4 Response to Indicator Questions for Over-All Score

H-5 Response to Indicator Questions for Over-All Score Across Companies

H-6 Summary of Responses to Indicator Questions by Over-All Score

H-7 Summary of Responses to Indicator Questions by Company

H-8 Summary of Responses to Demographic Questions

H-9 Summary of Responses to Questions Associated with Injury

H-10 Summary of Responses to Questions Associated with Job in Which Injured

H-11 Summary of Responses to Questions Associated with Elements of Early-Return-to-Work Program

H-12 Summary of Responses to Questions Associated with Transition Back to Regular Job

Table H-1

Subjects by Sex and Age

Age	Male	Female
18-30	5	2
31-40	9	5
41-50	7	1
51-60	3	1
	24	9

Table H-2

Subjects by Length of Employment in Company and Time in Job of Injury

Length of Employment	Time on Job in Which Injured				
	0-6 mo.	7-12 mo.	1-5 yr.	6-10 yr.	10+ yr.
< 1 year	2	-	-	-	-
1-5 years	2	2	5	-	-
6-10 years	-	1	1	5	-
11-20 years	-	-	3	1	7
21-30 years	-	-	-	1	3

Table H-3

Distribution of Injuries

Injury	N	%
Hand	6	18
Wrist	5	15
Shoulder	3	9
Internal	3	9
Back	5	15
Lower Extremity	6	18
Multiple	1	3
Chest	3	9
Facial	1	3
	33	99

Table H-4

Response to Indicator Questions for Over-All Score

	Number of questions scored to have positive response	Total	
		23	(70%)
Rated as having over-all positive response	5	7	
	4	13	
	3	3	
		10	(30%)
Rated as having over-all negative response	2	4	
	1	6	
	Total	33	(100%)

Table H-5

Response to Indicator Questions for Over-All Score Across Companies

Number of questions Scored to have Positive Response	Company							
	1		2		3		Total	
Rated as having over-all positive response	6	(66%)	12	(80%)	5	(55%)	23	(70%)
5		3		2		2	7	
4		2		9		2	13	
3		1		1		1	3	
Rated as having over-all negative response	3	(33%)	3	(20%)	4	(44%)	10	(30%)
2		0		3		1	4	
1		3		0		3	6	
Total	9	(27%)	15	(45%)	9	(27%)	33	(100%)

Note. Chi-square for over-all positive and negative response is not significant at $p > .05$.

Table H-6

Summary of Responses to Indicator Questions by Over-All Score

		Over-all Positive Response N=23	Over-all Negative Response N=10
General attitude to program	Excellent/Good	17	2
	Fair/Poor	6	8
Loyalty after injury	Excellent/Good	18	-
	Fair/Poor	5	10
Enough time on modified job	Yes	22	5
	No/Somewhat	1	5
Easy to return to regular job	Very easy/ Mod. easy	22	5
	Somewhat easy/ Not at all	1	5
Injury worse after return to regular job	Not at all	17	2
	Slightly worse/ Mod. worse/ Yes, a lot	6	8

Table H-7

Summary of Responses to Indicator Questions by Company

Question		Company 1		2		3	
		N	%	N	%	N	%
General attitude to program	Excellent/Good	5	(55)	11	(73)	3	(33)
	Fair/Poor	4	(44)	4	(26)	6	(66)
Loyalty after injury	Excellent/Good	4	(44)	10	(66)	4	(44)
	Fair/Poor	5	(55)	5	(33)	5	(55)
Enough time on modified job	Yes	8	(88)	12	(80)	7	(77)
	Somewhat/No	1	(11)	3	(20)	2	(22)
Easy to return to regular job	Very easy/ Mod. easy	6	(66)	14	(93)	7	(77)
	Somewhat easy/ Not at all	3	(33)	1	(7)	2	(22)
Injury worse after return to regular job	Not at all	6	(66)	8	(53)	5	(55)
	Slightly worse/ Mod. worse/ Yes, a lot worse	3	(33)	7	(46)	4	(44)

Table H-8

Summary of Responses to Demographic Questions

		Positive Responses N=23	Negative Responses N=10
Age	18-30	4	3
	31-40	10	4
	41-50	6	2
	51-60	3	1
Sex	Male	14	10
	Female	9	-
Time employed by company	Less than 1 year	2	-
	1-5 years	4	5
	6-10 years	6	1
	11-20 years	8	3
	21-30 years	3	1
Injury	Hand	5	1
	Wrist	5	-
	Shoulder	3	-
	Back	3	2
	Lower extremity	3	3
	Internal	2	1
	Multiple	1	-
	Chest	1	2
	Facial	-	1

Table H-9

Summary of Responses to Questions Associated with Injury

		Positive Responses N=23	Negative Responses N=10
Injured in regular job	No	3	-
	Yes	20	10
Medical tx. after injury	Three types treatment	3	1
	Two types treament	12	7
	Counseling only	-	1
	Physical therapy or chiropractic care only	-	-
	Hospitalization only	-	-
	MD office visits only	7	1
	None	1	-
Present medical treatment	Three types treatment	-	-
	Two types treatment	1	1
	Counseling only	-	-
	Physical therapy or Chiropractic care only	2	2
	MD office visits only	4	3
	None	16	4
On workers' compensation	No	6	2
	Yes	17	8
Time on workers' compensation	6+ weeks	5	5
	4-6 weeks	2	-
	2-4 weeks	4	3
	0-2 weeks	6	-
	Does not apply	6	2
Content on workers' compensation	Not at all	4	2
	Low	3	2
	Medium	7	1
	High	2	2
	Don't know	1	1
	Does not apply	6	2

Table H-9 (cont.)

Summary of Responses to Questions Associated with Injury (cont.)

		Positive Responses N=23	Negative Responses N=10
Depressed on workers' compensation	High	3	2
	Medium	4	3
	Low	4	2
	Not at all	6	-
	Don't know	-	1
	Does not apply	6	2
Frustrated on workers' compensation	High	5	6
	Medium	5	1
	Low	2	1
	Not at all	5	-
	Does not apply	6	2
Guilty on workers' compensation	High	1	1
	Medium	2	-
	Low	2	-
	Not at all	12	7
	Does not apply	6	2
More family problems on workers' compensation	High	1	3
	Medium	2	-
	Low	4	-
	Not at all	10	4
	Don't know	-	1
	Does not apply	6	2
Employer concerned about injury	No	3	4
	Somewhat	8	3
	Yes	12	3

Table H-10

Summary of Responses to Questions Associated with Job in Which Injured

		Positive Responses N=23	Negative Responses N=10
Job when injured	Office	1	-
	Shop	10	7
	Bus operator	12	3
Time in job in which injured	0-6 months	2	2
	7-12 months	1	2
	1-5 years	8	1
	6-10 years	6	1
	10+ years	6	4
Regular job interesting	Not at all	-	-
	Low	1	3
	Medium	8	3
	High	14	4
Regular job boring	High	-	1
	Medium	5	4
	Low	5	1
	Not at all	13	4
Regular job satisfying	Not at all	-	2
	Low	1	1
	Medium	17	5
	High	5	2
Regular job degrading	High	-	1
	Medium	2	2
	Low	-	-
	Not at all	21	7
Regular job important	Not at all	-	-
	Low	-	-
	Medium	5	1
	High	18	9

Table H-11

Summary of Responses to Questions Associated with Elements of Early-Return-to-Work Program

		Positive Responses N=23	Negative Responses N=10
When learn of program	Before injury	18	9
	Immediately after injury	2	-
	After off on workers' compensation	3	1
Happy to have opportunity to return on modified job	No	4	3
	Somewhat	6	3
	Yes	13	4
Time on modified job	12+ weeks	5	2
	6-12 weeks	4	2
	2-6 weeks	11	4
	0-2 weeks	3	2
Modified job in regular department	No	16	8
	Yes	7	2
Wage on modified job	Lower	3	1
	Same	20	9
Easy to adjust to modified job	Not at all	3	2
	Somewhat easy	4	2
	Very easy	16	6
Modified job interesting	Not at all	7	5
	Low	3	2
	Medium	9	3
	High	4	-
Modified job boring	High	7	7
	Medium	9	1
	Low	3	2
	Not at all	4	-
Modified job satisfying	Not at all	7	6
	Low	4	2
	Medium	9	2
	High	3	-

Table H-11 (cont.)

Summary of Responses to Questions Associated with Elements of Early-Return-to-Work Program (cont.)

		Positive Responses N=23	Negative Responses N=10
Modified job degrading	High	2	4
	Medium	2	1
	Low	5	1
	Not at all	13	4
	Don't know	1	-
Modified job important	Not at all	3	3
	Low	-	1
	Medium	11	4
	High	9	2
Able to control pace of work in modified job	Not at all	1	-
	Low	-	-
	Medium	3	2
	High	19	8
Modified job provide flexibility in work activities	Not at all	-	-
	Low	1	-
	Medium	3	-
	High	19	10
Teased by co-workers on modified job	Not at all	15	4
	Some	8	2
	Yes, a lot	-	4
Support of foreman on modified job	Not at all	1	2
	Some	4	2
	Yes, a lot	18	6
Injury worse on modified job	Yes, a lot	1	-
	Moderately worse	1	1
	Slightly worse	4	5
	Not at all	17	4
Aware of progress being monitored by company	No	8	2
	Yes	15	8

Table H-12

Summary of Responses to Questions Associated with Transition Back to Regular Job

		Positive Responses N=23	Negative Responses N=10
Returned to regular job	Yes	22	7
	No	1	3
Relationship with supervisor	Got worse	-	4
	No change	19	3
	Got better	3	1
	Don't know	-	1
	Does not apply	1	1
Relationships with co-workers	Got worse	-	1
	No change	20	9
	Got better	3	-
More aware of safety after injury	No	6	2
	Somewhat	3	2
	Yes	12	6
	Don't know	1	-
	Does not apply	1	-
Loyalty to company before injury	Poor	1	3
	Fair	5	1
	Good	11	3
	Excellent	6	3