Return to Work: The Back Injured Nurse's Perspective

BY

Elizabeth Katy Ptasznik

A Thesis
Submitted to the Faculty of Graduate Studies
in Partial Fulfilment of the Requirements for the Degree of

MASTER OF NURSING

Faculty of Nursing
University of Manitoba
Winnipeg, Manitoba

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DEDICATION

In loving memory of my parents

Stefania Ptasznik (Kananowicz)

&

Wladyslaw Ptasznik

Who always valued and encouraged education.
I wish you were here to share this with me.

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ABSTRACT

The purpose of this study was to explore the experience of the back injured nurse. The qualitative method used was person-centered interviewing. In addition, a quantitative instrument, the Roland-Morris Disability Questionnaire was used to assess relative measure of disability. The quantitative data added an additional dimension to the interview data by numerically measuring the perceived level of disability of the participants. The questions answered included: what is the experience of the back injured nurse; what factors contribute to disability and; what would encourage the nurse to return to work.

Johnston's Model of Disability served as the conceptual framework used for this study. Johnston's Model of Disability allows the progression to disability to be mitigated by: attitudes towards the impairment, subjective norm, perceived control over the impairment, internal representations of the behaviour, external eliciting cues and finally behavioural intention. The participants were six back injured Registered Nurses who had been away from the workplace for 4 weeks or longer. Interview data were analysed using thematic content analysis and five themes were identified. The five themes were: I've fallen and I can't get up...really!; Playing the benefits game; I want my life back; Return to work for nurses is a special kind of hell; and It's not all bad.

Work is a fundamental aspect of people's lives and where many individuals gain their identity and self worth. The loss of the opportunity to pursue gainful employment is often traumatic and it is particularly tragic when return to the workplace is delayed or denied unnecessarily.

The findings of this study suggest that the return of back injured nurses to the workplace requires a concerted and coordinated effort on the behalf of the injured nurse, the health care system, nursing management and the insurance bodies involved. The return to work process is often fraught with complexity and requires guidance and support. An understanding of the experience of the back injured nurse is the first step in a successful return to the workplace and re-integration into societal roles.

CHAPTER ONE

Statement about Research Gains and Objectives

Introduction

This person-centered qualitative study explored the lived experience of the back injured Registered Nurse. Participants were back injured Registered Nurses who are away from the workplace for four weeks or longer. The goals of this person-centered study were to determine, from the perspective of the back injured nurses, their experience of the back injury; what factors contributed to their continued disability; and what factors would encourage their return to work. Person-centered interviews were conducted, tape recorded and transcribed verbatim. The conceptual framework used within this project was Johnston's Disability Model. The data was analysed and the following five themes were identified; I've fallen and I can't get up... really!; Playing the benefits game; I want my life back; Return to work for nurses is a special kind of hell; and It's not all bad. Recommendations for nursing management, nursing practice, nursing education and nursing research were made based upon the reviewed literature and the words of the back injured nurse participants.

Significance of the Problem

Disabling back injuries carry a social and economic cost to the afflicted individual and to society and pose significant difficulties for employers (Perez, 2000; Mital & Shrey, 1996). Low back injuries are the most common job related injury in the United States and the most frequent diagnosis in primary care/occupational health is lower back pain (Reavis, 1999). The costs associated with back injuries are the most expensive among

industrial injuries and a common cause of disability in adults younger than 45 years of age (Aronoff, Feldman, & Campion, 2000). Besides the frequency of lower back pain diagnosis, the complexities and extraneous variables that often accompany lower back pain diagnosis make effective treatment options difficult to implement (Reavis, 1999).

The Statistics Canada report entitled Work Injuries: 1992 - 1994 (1995) indicated that back injuries consistently made up 29% of the time loss claims for each year 1992 to 1994. When compared to other injuries, workers with back injuries appear to have a greater risk of not returning to work (Galluf Tate, 1992) and 5 to 25% of those injured have persisting symptoms (Deyo, 1993; Milhous, Haugh, Frymoyer, Ruess, Gallagher, Wilder & Callas, 1989; Waddell, 1987 a) which account for up to 85 to 95% of the compensation, productivity and health care costs of lower back pain (Spengler, Bigos, Martin, Zeh, Fisher & Nachemson, 1986; Waddell, 1987 a; Webster & Snook, 1990). The costs for low back pain appear to be escalating annually (DeRosa & Porterfield, 1992; Trief, 1983; Waddell, 1987 a) and rising at a faster rate than other types of compensable injuries (Webster & Snook, 1990). More than $200,000 (U.S.) per year, per person is spent on individuals with chronic low back pain and the costs of back injury in the United States in 1992 was $72 billion (DeLuca, 1992). DeLuca (1992) suggests that the significance of the costs associated with back injury have not been identified as a major problem because back injury is not considered life threatening.

While some back injured workers return to work quickly after a workplace accident or injury, others become chronically disabled and are away from the work place for an extended period of time. Most individuals will have back pain within their life time

and most workers can cope successfully with their back pain most of the time but may require accommodations until their back pain diminishes (Hadler, 1997 b). Between 1994/95 and 1996/97, more than one million (9%) Canadian workers aged 16 years of age or older developed chronic back problems (Perez, 2000). Much quantitative research has been completed in an attempt to predict the characteristics of back injured employees who will have successful outcomes and return to work and which back injured individuals will be off for longer periods of time (Brewin, Robson & Shapiro, 1983; Burton, Tillotson, Main, & Hollis, 1995; Foreman & Murphy, 1996; Frymoyer & Cats-Baril, 1987; Frymoyer, Pope, Constanza, Rosen, Goggin & Wilder, 1980; Harkapaa, Jarvikoski & Estlander, 1997; Hasenbring, Marienfeld, Kuhlendahl & Soyka, 1994; Hazard, Bendix & Fenwick, 1991; Hazard, Fenwick, Kalisch, Redmond, Reeves, Reid, & Frymoyer, 1989; Hazard, Haugh, Green & Jones, 1994; Lancourt & Kettelhut, 1992; Lloyd & Troup, 1983; Milhous et al., 1989; Sandstrom & Esbjornsson, 1986). However, the predictive variables related to successful return to work have been difficult to determine.

The following chart was compiled from Manitoba Workers Compensation Board annual report statistics from the years 1997 to the year 2000, inclusive. The categories included: the cause of the accident; the region of the body injured; the nature of the injury; and the time lost accident by source of injury. The specific categories that were analyzed relate to variables that are associated with the incidence of back injury. Registered Nurses have their own work category within the Workers Compensation Board statistics and their ranking of workplace related injuries is placed within this chart.

Table 1

Compilation of Injury Statistics from Manitoba Worker's Compensation Board Annual Reports (1998 - 2001)

WORKER'S COMPENSATION BOARD REPORTING CATEGORY	1997	1998	1999	2000
Cause of accident				
- over exertion in lifting	ranked #1 n=2740 16.89%	ranked #1 n=3166 18.44%	ranked # 1 n=3175 17.05%	ranked # 1 n=3286 17.33%
- bending, climbing, crawling, reaching, twisting	ranked #2 n=2141 13.19%	ranked #2 n=1528 8.9%	ranked #2 n=1884 10.12%	ranked # 2 n=2393 12.62%
- over exertion in pulling or pushing objects	ranked #3 n=801 4.94%	ranked #3 n=937 5.46%	ranked #4 n=957 5.14%	ranked #5 n=857 4.52%
Total (over exertion in lifting + bending, climbing, crawling, reaching, twisting + over exertion in pulling or pushing objects)	n=5682 35.02%	n=5631 32.8%	n=6016 32.3%	n=6536 34.47%
Region of body injured - lower spine	ranked #3 n=5172 13.88%	ranked #2 n=5694 14.52%	ranked #2 n=5777 14.84%	ranked # 2 n=6000 15.06%

Nature of injuries **- sprains, strains, tears** **- back pain, hurt back**	ranked #1 n= 6750 41.59% ranked #9 n=227 1.4%	ranked #1 n=7175 41.78% ranked #8 n=340 1.98%	ranked #1 n=7484 40.18% ranked # 5 n=688 3.69%	ranked #1 n=7783 41.05% ranked #6 n=632 3.33%
Total (sprains, strains, tears + back pain, hurt back)	n=6977 42.99%	n=7515 43.76%	n=8172 43.87%	n=8415 44.38%
Time loss accidents by source of injury **- bodily motion or position of injured, ill worker** **- health care patient or resident of health care facility**	ranked #1 19.67% ranked #2 5.16%	ranked #1 18.37% ranked #2 5.41%	ranked #1 20.37% ranked #2 4.72%	ranked #1 23.93% ranked #2 5.24%
Total (bodily motion or position of injured, ill worker + health care patient or resident of health care facility)	24.83%	23.78%	25.09%	29.17%
Time loss accidents by occupational group Registered Nurses	ranked #13 out of 100 occupational groups	ranked #9 out of 100 occupational groups	ranked #8 out of 100 occupational groups	ranked #10 out of 100 occupational groups

* ranking indicates the placement of the item within the Worker's Compensation Board reporting category

The cause of injury indicates the root cause of the reported accident. Over exertion in lifting; bending, climbing, crawling, reaching, twisting; and over exertion in pulling or pushing objects can all be causes of injury that fit within the job description of the Registered Nurse. The ranking of the cause of injury is indicated for each reporting year of annual reports.

The top two causes of accidents for the years 1997 to 2000 were over exertion in lifting ranked first as the cause of accident and bending, climbing, crawling, reaching and twisting the second most frequent cause of workplace accidents in Manitoba. Over exertion in pulling or pushing objects was ranked as the third most frequent cause of accidents in 1997 and 1998; it was the fourth cause of accidents in 1999 and the fifth cause of accidents in 2000.

The number of accidents caused by over exertion in lifting; bending, climbing, crawling, reaching, twisting; and over exertion in pulling or pushing objects ranges from 5631 to 6536 reported accidents and 32.31% to 35.02% of the total reported accidents.

The region of the body injured indicates what body part was involved in the accident. The lower spine was chosen as the category that most closely approximated back injury. The ranking within the statistics of the body region involved in the accident is indicated. The lower spine was consistently the second most common region of the body injured for the years 1998, 1999 and 2000. It was ranked third as the region of the body injured in 1997. There has been a steady increase in the percentage of individuals reporting injury to their lower spine every year; from 13.88% in 1997 to 15.06% in 2000. This statistic indicates the percentage of people reporting injury, while the Statistics

Canada Report (1995) indicates the percentage of time lost claims; therefore the statistics are not directly comparable.

The nature of the injury describes the type of injury experienced. The nature of injury chosen to display from the statistics was one which would likely relate to back injured nurses. The descriptions of sprains, strains, tears; and back pain, hurt back all clearly relate to the nature of a back injury.

The number one ranking for the nature of the injury is strains, strains and tears with a consistent percentage of 40 to 41%. Back pain and a hurt back is also a category within the nature of the injury. Back pain and a hurt back was ranked as ninth in 1997; eighth in 1998; fifth in 1999; and sixth in 2000. There has been an increase in the percentage of injuries of these types: from 1.4% in 1997; to a high of 3.69% in 1999 to 3.33% in 2000. In total, sprains, strains, tears and a hurt back range from 6977 to 8415 accidents and percentages of 42.99% to 44.38% of the nature of the injuries reported.

The time lost by source of injury was consistent with the same two sources of injury ranked as first and second for all the years 1997 to 2000. Bodily motion or position of the injured or ill worker was ranked as the number one source of the injury and this category has been consistently increasing from 19.67% in 1997 to 23.93% in 2000. The second source of injury is from a health care patient or resident health care facility for the years 1997 to 2000. The time lost accident from the causal criteria of health care patient or resident health care facility has remained relatively consistent with a range of 4.72 to 5.41%. The total number of time lost accidents with the source of the injury being: bodily motion or position of injured, ill worker; or health care patient or

resident of health care facility ranged from 23.78% to 29.17%.

Registered Nurses have their own reporting category within the Manitoba Workers Compensation Board statistics and their ranking out of 100 occupational groups has ranged from eighth to thirteenth place. Clearly, the number of accidents that Registered Nurses are involved in is significant, given their high-ranking within the occupational categories reporting accidents.

Nursing Perspective

Nurses are responsible for the physical care of their patients and this often entails that nurses push, lift, hold and transfer them as part of the normal work day. In addition, these activities are often performed while nurses are in ergonomically poor postures. This strenuous activity has been associated with nurses' increased risk of developing a back injury (Cato, Olson, & Studer, 1989; McAbee & Wilkinson, 1988; Mital & Shrey, 1996; Yassi, Khokhar, Tate, Cooper, Snow, & Vallentyne, 1995). As the Manitoba Workers Compensation Board statistics indicate, the physical activities that describe moving patients contribute significantly to accidents. Macfarlane, Thomas, Papageorgiou, Croft, Jayson and Silman (1997) confirmed that risks of low back pain increased in those jobs that involved lifting, pulling, or pushing objects of greater than 25 pounds and women were at particular risk.

The following tables were derived from raw data of the Manitoba Workers Compensation Board summary reports for occupational groups. The occupational group reported is Registered Nurses.

Table 2

Injury Information by Occupational Code - Registered Nurse Summary Report, January 1,1999 - December 31,1999

Reporting Category	1997	**Increase from 1997 to 1998**	1998	**Increase from1998 to 1999**	1999
Direct costs - all years' claims	$1,406,410.56	**$187,218.17**	$1,593,628.73	**$83,750.91**	$1,677,379.64
% change in direct costs - all years' claims		**increase of 13.3%**		**increase of 5.3%**	
Days lost - all years' claims	12,954	**5,248**	18,202	**1,913**	20,115
% change in days lost - all years' claims		**increase of 40.5% days lost**		**increase of 10.5% days lost**	
Direct costs	$813,200.05	**$141,952.69**	$955,152.74	**$18,002.33**	$973,155.07
% change in direct costs		**increase of 17.5% in direct costs**		**increase of 1.9% in direct costs**	
Average cost per claim	$1,579.03	**$226.55**	$1,805.58	**$431.56**	$2,237.14

% change in average cost per claim		**increase of 14.3% in average cost per claim**		**increase of 24% in average cost per claim**	
Total days lost	9,229	**2,024**	11,253	**147**	11,400
% change in total days lost		**increase of 22% in total days lost**		**increase of 1.3% in total days lost**	
Average days lost per time loss claim	20.6	**increase of 1.7 days lost per time lost claim**	22.3	**increase of 5.6 days lost per time lost claim**	27.9
% change of average days lost per time lost claim		**increase of 8.3% in average days lost per claim**		**increase of 25% in average days lost per claim**	

The cost and days lost associated with injuries within the occupational group Registered Nurse are indicated within this table. The direct costs include medical care, treatments, assistive devices, wage replacement, and any other monies related to direct care or treatment. The direct costs for all the years' claims includes claims carried over from previous years. The direct costs for all years' claims related to injuries for the occupational group Registered Nurse have been steadily increasing. There has been an increase of $270,969.98 in direct costs from 1997 to 1999 with an increase of 13.3% from 1997 to 1998 and another 5.3% increase from 1998 to 2000.

The days lost related to workplace injuries has also increased from 12,954 in 1997

to 20,115 in 1999; with an increase of 5,248 days or 40.5% from 1997 to 1998; and an increase of 1,913 days and 10.5% from 1998 to 1999.

The direct costs within each year have also increased from $813,200.05 in 1997 to $973,155.07. Predictably, costs associated with the increased number of claims has also increased from an average cost per claim of $1,579.03 in 1997 to $2,237.14 in 1999 with an increase of 38.3% in costs from 1997 to 1999.

The total days lost has also increased with the largest increase occurring from 1997 to 1998 with an increase of 2,024 days lost (22%) within that one year. The average days lost per claim has increased dramatically from 20.6 days lost on average claim in 1997 to 27.9 days lost per claim in 1999.

The Manitoba Workers Compensation Board statistics report the average duration of general non-occupation specific claims for 1997 to be 18.8 days; 1998 is reported as 19.2; 1999 is reported as 19.5 and the year 2000 as 21.0 days lost per claim on average. The Registered Nurse statistics are above all of the general average days lost per claim for all of the years reported and has increased during each of the reporting years. This increase in days lost per claim can speak to the severity of the injury or the lack of timely and appropriate accommodations within the workplace to allow the injured nurse to return to work.

Table 3

Cause of Accident by Occupation Code - Registered Nurse Summary Report, January 1,1999 to December 31, 1999

Cause of Accident	Time loss injuries	Direct costs - current year	Direct costs - all claims	Days lost - current year	Days lost - all claims
Over exertion in lifting ranked #1	125	$340,648.57	$674,137.15	4,161	8,116
Bending, crawling, climbing, reaching, twisting ranked #2	47	$110,213.44	$131,183.98	1,551	1,819
Over exertion in pulling or pushing objects ranked #3	46	$113,450.59	$164,291.95	1,332	2,105
Total #1,2 & 3 (a)	218	$564,312.60	$969,613.08	7,044	12,040
Total of all reported RN Accidents (b)	435	$973,155.07	$1,677,379.64	11,400	20,115
a x 100 b	50%	58%	58%	62%	60%

The percentage of accidents attributed to the cause of: over exertion in lifting; bending, crawling, climbing, reaching, twisting; and over exertion in pulling or pushing

within the occupational group of Registered Nurse is approximately 50% for the year 1999, with approximately 1/4 of the accidents being caused by over exertion in lifting. The general Workers Compensation Board statistics indicating cause of accident report those causes (over exertion in lifting; bending, crawling, climbing, reaching, twisting; and over exertion in pulling or pushing objects) as responsible for 35.02% of the accidents.

The days lost as a result of these types of accidents accounted for 62% of the days lost for the year 1999 and 60% of the days lost for all claims. These causes of the accidents suggest that nurses are injuring themselves during patient handling, and clearly, this activity contributes significantly to the overall number of claims, the days lost, and the costs associated with those claims. This suggests that the length of time before return to work for these types of accidents is higher than average.

Table 4

Region of Body Injured by Occupation Code - Registered Nurse Summary Report, January 1, 1999 to December 31,1999

Region of body injured	Time loss injuries	Direct costs - current year	Direct costs - all claims	Days lost - current year	Days lost - all claims
Upper back n=3	3	$1,742.90	$1,942.67	20	20
Lower back n=125	122	$284,114.64	$430,846.45	3,330	5,135
TOTAL	125	$285,857.54	$432,789.12	3,350	5,155
Total of reported RN accidents (b)	435	$973,155.07	$1,677,379.64	11,400	20,115
$\frac{a}{b} \times 100$	29%	29%	26%	29%	26%

Twenty nine percent of the time lost accidents involve the back. The number of days lost are relatively consistent, contributing between 26 - 29% of the direct cost for the current year.

The Manitoba Workers Compensation Board statistics indicate that the back is the region of body injured in 13.88% to 15.6% of the accident claims. The Registered Nurse occupational group reports double the Manitoba Workers Compensation Board general statistic, indicating that back injuries are more common within the Registered Nurse occupational group than among the general injured population.

Table 5

Nature of Injury Report by Occupational Code - Registered Nurse Summary Report, January 1,1999 to December 31,1999

Nature of Injury	Number reported	Direct costs-current year	Direct costs-all claims	Days lost-current year	Days lost-all claims
Sprains, strains, tears	219	$559,228.20	$918,895.51	6,738	10,911
Back pain, hurt back	33	$36,423.90	$57,360.73	406	639
Total (a)	252	$595,652.10	$976,256.24	7,144	11,550
Total reported RN accidents (b)	435	$973,155.07	$1,677,379.64	11,400	20,115
a x 100 / b	58%	61%	58%	63%	57%

In 1999, Registered Nurses reported sprains, strains, tears; and back pain, hurt back; as being responsible for 58% of the injuries they sustained. This is slightly higher than the rate reported within the general Manitoba Workers compensation Board statistics at 42.99% for 1997; 43.76% for 1998; 43.87% for 1999 and 44.38% for 2000. The nature of injury contributed 61% of the direct costs and 63% of the days lost for the year 1999, and 58% of the direct costs 57% of the days lost for all claims.

Table 6

Source of Injury Report by Occupation Code - Registered Nurse Summary Report, January 1,1999 to December 31,1999

Source of Injury	Number reported	Direct costs-current year	Direct costs-all claims	Days lost-current year	Days lost-all claims
Bodily motion or position of injured, ill worker	69	$163,342.13	$250,235.02	2,144	3,345
Health care patient or resident of health care facility	230	$544,608.84	$962,042.07	6,396	11,949
Total (a)	299	$707,950.97	$1,212,277.09	8,540	15,294
Total of reported RN accidents (b)	435	$973,155.07	$1,677,379.64	11,400	20,115
a x 100 / b	69%	73%	73%	75%	76%

Bodily motion or position of the injured/ill worker and health care patient or resident of health care facility contributed 69% to the source of the injury. The health care patient or resident of a health care facility was implicated in approximately 75% of the injuries, suggesting that the majority of accidents occur during patient handling. The direct costs and days lost related to these types of injuries contributed 75% of the overall

costs and days lost for 1999. All claims related to these types of injuries accounted for 73% of the direct costs and 76% of the days lost for all claims. These statistics suggest that the costs and days lost as a result of these types of accidents contribute disproportionately to the overall costs and days lost.

This source of injury is significantly higher than the general Workers Compensation Board reporting population which reported a range of 23.78% to 29.17% of these activities to be the source of injury. This suggests that Registered Nurses are involved in significant activities related to handling and moving patients. Mustard (2002) notes that workers compensation lost time claims within Ontario have decreased by approximately 50% over the past decade and most jurisdictions in North America have reported similar declines. The reported lost time claims for Registered Nurse within Manitoba have increased 33.3% from 1997 to 1999; clearly not mimicking the trend towards decrease in lost time claims generally. In fact, all the measurement parameters within the occupational group Registered Nurse increased from 1997 to 1999. Costs and days lost have clearly increased, highlighting a personnel issue requiring immediate attention.

High Risk Occupations

Xu, Bach and Orhede (1996) re-analyzed the data in a Danish study that evaluated occupations at risk of lower back pain and they found that health care workers were among the top three occupational groups out of nine job categories for the occurrence of lower back pain.

Leigh and Miller (1997) analysed the workmen's compensation supplementary

data system in 1985 and 1986 for eight states in United States of America. They ranked 100 job categories to determine which occupations have the highest compensable costs associated with them. Registered Nurses ranked twenty ninth with annual costs of $49,787,372 (U.S.) associated with work-related injuries. Within the Manitoba Workers Compensation Board statistics, Registered Nurses ranked between 8 to13 for the years 1990 to 2000, clearly higher than the American ranking. Other health care related occupations included nursing aides, orderlies and attendants which ranked sixth with annual costs of $205,145,880 (U.S.); licensed practical nurses which ranked sixty second with annual costs of $24,066,221 (U.S.); and health care aides which ranked seventy first with costs of $19,666,616 (U.S.). These health related fields cumulatively totaled annual costs of $258,666,090 (U.S.) which would place the health care related group as the fourth highest ranked for costs related to work injuries. It would not be unreasonable to assume that a large proportion of the injuries sustained in these health fields would be related to activities that involved patient handling that resulted in back injuries.

Rate of Back Injury

In general, back injuries account for one in five (20%) work related injuries (McAbee & Wilkinson, 1988) and within the Manitoba Workers Compensation statistics for Registered Nurses, the figure is 29%. Back pain and sprains are related categories and there may be some overlap between the categories or misreporting of back pain in the sprains and strains category, leading to a smaller total percentage of back injuries reported.

At the 1,100 bed Health Sciences Centre in Winnipeg, an average of 225 back

injuries were reported per year from 1983 to 1988 which accounted for 12.9% of the ward reported injuries and 42.5% of the total working hours lost (Yassi, Khokhar et al., 1995). Cato et al. (1989) conducted a survey of all the nurses on the orthopedic and rehabilitation units of a large Midwestern hospital in the United States. They found that 62% of the respondents experienced lower back pain related to their present occupations and 47% experienced lower back pain within the past six months prior to the study. Within a 280 bed medical center, the nursing department incurred 68% of the back strain or sprain injuries with the remaining four departments sharing the remainder of the back injuries (Nassau, 1999). Back injuries within the nursing profession are a significant problem with high costs to the individual and the organizations they work for.

High Risk Nursing Activities

"The majority of low back pain episodes occur during client handling" (Cato et al., 1989, p. 326). High risk wards for back injuries among nurses included orthopedic, medicine, neurology, spinal and surgery wards. Fifty one percent of orthopedic nurses sustained at least one back injury during a two-year period (Yassi, Khokhar et al.,1995). Within their two year prospective study, Yassi, Khokhar et al. (1995) found that lifting and transferring patients with assistance were the two most common mechanisms for back injury (22.6% and 23.3% respectively). Lifting and transferring patients unassisted accounted for 11.16% of the injuries and attempting to break someone's fall accounted for 7.2% of the back injuries. The majority of back injured nurses attributed their injury to inadequate training. Inadequate staffing was given as the reason for the back injury in 13.8% of the injured (Yassi, Khokhar et al., 1995). Faulty equipment accounted for 8.3%

of the back injuries, poor housekeeping another 5% and physical layout of the ward for 3.7%.

Cato et al. (1989) state that, "lost time and worker compensation data underestimate the scope of the problem" (p. 326). Of the nurses who identified themselves as having a recent history of work related low back pain, only 8% had lost work time and 78% of injured nurses failed to report the injury to management (Cato, et al., 1989).

Cheung (1999) found that the number of nurses who reported a back injury was only a small portion of the nurses who experienced a 'near miss' back injury. Within Cheung's (1999) study of home care nurses, only 54 out of 1,114 Alberta home care nurses experienced a back injury within the previous 12 months, with some of the nurses experiencing more than one back injury for total of 19 reports of low back injury. However, the nurses reported a total of 602 near accidents/close calls with regard to back injury and the number of near miss back injuries was 7.6 times greater than the actual number of back injuries (Cheung, 1999).

The risk of back injuries for nurses working in home care is significant and 90.4% of the home care nurses responding to the survey consider the risk of low back injuries to be a problem in this work place. The problem of injury and disability in the nursing and health care profession is significant and likely under reported. The impact of back injuries upon the nursing profession is appreciable and costly; both from a social and a financial perspective.

Conceptual Model

Conceptual Models of Disability

Conceptual models allow for the cognitive illustration of an idea and in this section I discuss the qualities of disability models and provide support for using Johnston's Disability Model as the framework for this study.

Phase Model of Disability

The majority of the literature suggests that reactions to disability follow a sequence of phases or stages. Phases are seen as overlapping or nonexclusive reactions while stages are seen as discrete, non-overlapping and exclusive reactions (Livneh & Antonak, 1994). Phase models suggest a linear process of adjustment to disability with common reactions being shared among all disabled individuals. When sudden or chronic disability strikes, individuals need to adjust to the changes in their body image, self concept and in their interactions with their environment (Livneh & Antonak, 1994). A phase model of disability maps out the process an individual follows on the way to becoming "disabled". "Disability is most realistically treated as a continuous dimension and not a dichotomous one" (Slater,Vukmanovic, Macukanovic, Prvulovic, & Cutler, 1974, p. 305) and there are many phases within the concept of disability.

Within the phase model of disability, the process towards disability may be reversed or elements within the process may not be experienced at all. All reactions may not be experienced universally by all people experiencing similar losses. In addition, not all people are psychologically and cognitively capable of accepting their disability and they may never achieve the ability to cope adequately with their disability (Livneh &

Antonak, 1994).

Measurement Models of Disability

Measurement models of disability typically identify a series of activities that are considered as the norm and they determine whether the individual can complete the assigned activities. Measurement models of disability assume that all the measured items are equivalent rather than being systematically related to each other and to the underlying precipitator of the disability (Johnston, 1996).

When measurement models assume the equivalence of items involved in measuring disability, they do not allow for individual variations in the value of each contributor to disability. Measurement models are also limited because they do not express the inter-relatedness of the contributors to disability.

World Health Organization Model of Disability

The World Health Organization Model (1980) defines disability in terms of deficits in the performance of activities as a result of physical impairment following disease or disorder. Disability is contrasted with physical impairment which describes deficits in the structure or function of some part of the body, and "social handicap", where the deficits are in social functioning (Johnston, 1996). Implicit in this model is that disability is a result of impairment. This model is incongruent with rehabilitation as therapists seek to minimize disability in the face of enduring impairment (Johnston, 1996). The World Health Organization Model of disability also does not account for the cumulative impact of multiple disabilities.

Cumulative Model of Disability

Conversely, a cumulative model of disability implies sequential dependence of items whereby one cannot achieve more difficult items without first achieving the easier items (Johnston, 1996). Within Johnston's (1996) work, there is evidence that a cumulative model of disability more closely approximates reality. An individual cannot achieve more complex physical tasks if they cannot first master simple tasks.

Other Models of Disability

Disability models which attempt to explain the emotional response to disability are frequently used in psychological studies (Johnston, 1996). The models used include: mental health models where rates of disorder are assessed; life event models where the emotional response to the life event precipitating the impairment/disability is examined; stress models where the disability is seen as a stressor which elicits the strain evident as high levels of distress (Johnston, 1996).

Disability as a Behaviour

When the definition of disability allows one to examine disability as a behaviour rather than simply as a result of medical impairment or as a life event or stressor, disability becomes subject to the same explanations as might be invoked for any other behaviour (Johnston, 1996). If variables which explain other behaviours can explain at least some of the variance in disability, then disability can theoretically be reduced by addressing these variables. This approach allows the possibility that patients may benefit from interventions which reduce their disabilities without necessarily reducing their impairment (Johnston, 1996). As an example, a patient with left sided paralysis,

(impairment) from a stroke, (medical diagnosis) can be taught new mobility techniques or taught to use assistive devices that increase their mobility. The impairment (left sided paralysis) has remained the same but the disability has decreased because of the mobility interventions.

Johnstons's Model of Disability

Within Johnston's (1996) proposed model, individuals have control over their behaviour and therefore their disability. Individuals can also identify and palliate the factors that are influencing their behaviour and their disability. Within this model, disability is seen as an outcome of multiple contributing factors.

Within Johnston's (1996) work, there was no support for a measurement model of disability which assesses whether individuals can perform specified activities and assumes that these activities are equivalent in importance. There was no evidence of different patterns of disability being associated with different impairments, as the World Health Organization Model (1980) might lead one to expect (Johnston, 1996).

Johnston's (1996) proposed model of disability incorporates a social cognition model of behaviour in which the World Health Organization Model of Disability (1980) and the Azjen's Theory of Planned Behaviour (as cited in Johnston, 1996) are integrated into one model of disability. The Theory of Planned Behaviour assumes that physical impairment influences mental representations, which in turn determine behavioural intentions and behaviour assessed as disability (Johnston, 1996). When behaviours are overt, they are subject to conditioning and learning influences. When overt behaviours are the result of back pain, they can be reinforced over months or years by the attention of

a concerned partner, attention from the medical community, financial compensation or the reinforcement of the abdication of social, family or occupational responsibilities (Keefe & Gil, 1986). Operant conditioning assumes that behaviour will increase if it is followed by positive consequences and behaviour will decrease if the positive consequences are eliminated and alternate behaviour is reinforced (Keefe & Gil, 1986).

The Theory of Planned Behaviour links intention with the motivation to adopt a behaviour, in this case, disability. The intention is constructed by attitude towards the behaviour; perceived social norm regarding the adoption of this behaviour; and perceived control over the adoption of this behaviour (Hounsa, Godin, Alihonou, Valois & Girard, 1993).

Azjen's Theory of Planned Behaviour identifies intention as the predictor of behaviour and intention is moderated by attitude, subjective norm and perceived behavioural control (Marttila & Nuponen, 2000). The intention would be to succumb to disability or not, with disability being defined as an inability to continue with normal workplace practice. The intention would be moderated by the attitude towards continuing with normal workplace practice. The subjective norm would include the individual's perceived influence of other people or the environment surrounding return to work. The perceived behavioural control would include the individual's perceptions about barriers, their ability to overcome these barriers and factors that facilitate removing the barriers (Marttila & Nupponen, 2000).

The behavioural intentions are moderated by the attitude towards the disability, the subjective norm towards disability and the perceived control over the disability. With

a back injury (impairment), the disability may be influenced by the attitude towards the injury (it happened at work, therefore work is responsible); the subjective norm (other people at work have been off with back injuries so now it is my turn); and the perceived control over the disability (I don't think my back will hold out for a full shift).

This model can also predict the improvement in disability. An individual with a back injury (impairment), can be influenced by their attitude (I won't let this injury interfere with my life), the subjective norm (back injured workers are returned to the workplace and found meaningful work) and the perceived control (I can recover from this).

The Theory of Planned Behaviour fails in predicting behaviour when people have both the intention to overcome their disability and the perception that they can control their disability, but they are nevertheless unable to succeed. An example may be an individual with a severe spinal cord injury who believes that he can overcome his disability and has every intention of fully recovering, but medical technology is unable to help him fulfill this goal. To respond to this critique, Johnston (1996) proposed that two additional variables which are: internal representations of the behaviour and external eliciting cues.

Internal representations of the behaviour refer to the control and ability of the individual to elicit the desired behaviour. It is not enough to believe you can complete a task and master it if you do not have the skills nor the ability to do so. In the example of the severe spinal cord injured individual, he would not have the control nor the ability to elicit the desired behaviour, which would be re-gaining the ability to walk.

External eliciting cues are environmental cues or triggers to action or inaction. In the same example of the spinal cord injured individual, external eliciting cues may be either reinforcing the abilities that still exist within the individual or they may be reinforcing the tasks that the individual can no longer accomplish, therefore reinforcing disability. They are akin to the antecedents of disability and they are necessary to explain why disability may occur in some situations but not in others. Within this model, disability is seen as a behaviour that can be moderated and influenced, and when present, disability can impact on total functioning.

Integration of the Theory of Planned Behaviour with the World Health Organization Model

The integration of the Theory of Planned Behaviour with the World Health Organization Model of Disability (1980) allows the ability to predict that impairment may influence attitudes, subjective norms and perceived control over the behaviours characterized as disability. In addition, the attitudes, subjective norms and perceived control may mold the individual's intention to perform the behaviour (Johnston, 1996). Morse & Johnson (as cited in Donnelly, 1993) believe that models that are attempting to

> heighten awareness of the illness experience should focus on the following characteristics: the patient's perspective; the totality of the illness experience from the patient's first perception of symptoms; behaviour patterns common to the illness experience rather than just to the disease; and the context of the illness (eg. family, work, community and other significant environments) (p.3 - 4).

Johnston's (1996) model responds to these guidelines and will be the conceptual framework of disability used for this paper (Appendix A). Johnston's (1996) proposed

model of disability integrates medical and rehabilitation models of disability along with psychological models, behavioural and social cognition models. Johnston's (1996) working model of disability has not been empirically tested, but it accommodates multiple contributors to the concept of disability. Within this study, disability will be defined as an inability to engage in usual or desired workplace activity.

Research Purpose

Research Questions

Determine from the back injured nurse's perspective:

1) what is the experience of the back injured nurse?

2) what is contributing to the disability of the back injured nurse?

3) what would encourage the back injured nurse's return to work?

Decreasing costs associated with an injury can only be accomplished by preventing the injury from occurring or by reducing the amount of time loss after the injury (Mital & Shrey, 1996). Prevention of back injury via the use of mechanical assists or ergonomic adaptations has not been an effective strategy thus far and the goal of "zero injury" is likely unrealistic (Mital & Shrey, 1996). Realistically, returning nurses to a productive role in the workplace as quickly as possible is the more effective way of reducing the financial, social and psychological costs associated with a back injury. If employees can be returned to the workplace in a timely manner, the benefits to the employee and employer increase and the costs to society decrease.

CHAPTER TWO

Definitions of Disability

Introduction

Within this chapter, I present definitions of impairment, functional limitation and handicap and various definitions of disability. The relationship between disability and back pain and disability within a work context are reviewed. The literature surrounding predictors of disability in the back injured population is presented and predictors of back pain disability are categorized as: demographic variables; medical variables; employment and compensation variables; and psychosocial variables. The literature reviewed is drawn from several areas including: nursing, medicine, physiotherapy, psychology, workers compensation, industry and labour relations.

Impairment, Functional Limitation, and Handicap

Terminology used within the discussion of disability includes impairments, functional limitations, and handicap. The concepts are interrelated but distinctive in their own ways. They are often used interchangeably but there are important distinctions among them and each of these concepts is discussed below.

An impairment is defined as a psychological or anatomical loss in structure or function (World Health Organization, 1980). An impairment may or may not cause a functional limitation and losses are at the level of the organ (World Health Organization, 1980). "An impairment need not lead to disability" (Singleton, 1982, p. 10) and an impairment is usually discussed in medical terms with medical diagnoses determining whether an impairment is present or not. The assessment of whether an individual is

experiencing an impairment can also be based on a physical restriction (Simmonds & Kumar, 1996).

A functional limitation is a restriction of sensory, mental or physical capacities (Butler, Johnson & Baldwin, 1995). Nagi (1991) defines a functional limitation as a restriction in performance at the level of the individual. A functional limitation identifies the individual as being unable to perform specific cognitive or physical tasks in a manner considered as normal by the population.

The World Health Organization (1980) defines a handicap as "any disadvantage for a given individual, resulting from an impairment or disability, that limits or prevents the fulfilment of a role that is normal ... for that individual" (p. 4). Handicap is often defined in socioeconomic terms and "the distinction between disability and handicap rests ultimately on implicit agreement about matters such as reasonable effort, status, and financial reward" (Singleton, 1982, p. 10). An individual can be disabled but not considered handicapped unless his or her social or financial status is affected by the disability. The English word "handicap" evolved from "cap in hand" which refers to the historical begging role of the handicapped. The classification of handicap deals with the relationship that evolves between society, culture and people who have impairments or disabilities, as reflected in people's life roles (World Health Organization, 1980).

Definitions of Disability

Within this section, various subjective and objective definitions of disability are reviewed and the cultural significance of disability is briefly addressed. Differences among impairment, functional limitation and disability are reviewed, and the factors

involved in determining a definition of this disability are examined.

A disability may be congenital or acquired because of the birth process; it may develop from an illness, a medical condition or from a gradual deterioration of functioning; or it may be caused by trauma (Hazard et al.,1989; Mooney, 1987; Singleton, 1982; Waddell, Somerville, Henderson, & Newton, 1992). When a disability is the result of a workplace injury or accident, the costs go beyond the personal and social costs to the individual and they extend to society as a whole. A work related disability imposes a financial and social cost upon the social structures that surround and protect the injured worker (Galluf Tate, 1992). Disabilities have many causes and can occur at any point in an individual's life and they can become particularly complex when a disability has a work related origin.

The meaning of disability to the individual varies according to the individual's culture, his or her previous life experiences, and overall ability to cope. Disability may have a significant or inconsequential impact on an individual's life, depending on a myriad of factors.

> Everyone knows that there are human beings who are afflicted with chronic diseases and disabilities and who are, from their own perspective, 'healthy' . They are able to lead normal, productive, and satisfying lives because of their compensatory abilities and because their disease etiologies are reasonably well controlled (Schlotfeldt, 1996, p. 101).

What differentiates the "healthy" disabled individual from the "unhealthy" disabled individual is of particular interest. If the determinants of the healthy disabled person can be discovered, perhaps these healthy characteristics can be used to improve

the state of the unhealthy disabled individual. In addition, individuals with a predisposition towards chronic disability can be identified an earlier stage with the hope of modifying their disability.

Disability is relational and a consequence of factors both internal and external to the individual (Jette, 1994). Internal factors include how an individual reacts on a personal level to an impairment. External factors include how the individual' s family, workplace and community respond to the disabled individual (Beattie & Maher, 1997). Disability is also defined in terms of vocational and social limitations which stem from impairment (Simmonds & Kumar, 1996).

Cultural Definition of Disability

The cultural context of disability is also important.

> In many cultures, one cannot be 'disabled' for the simple reason that 'disability' as a recognized category does not exist. There are blind people and lame people and 'slow' people, but the disabled as a general term does not translate easily into many languages. The Massai term used to translate the English word disabled actually refers to a lizard that walks in an awkward way. The emphasis is on physical movement, so conditions like mental retardation or chronic mental illnesses are not included (Ingstad & Reynolds White, 1995, p. 7).

Within the Kel Tamasheq culture, the "impairments" or faults that lead to disability include: old age and immaturity (because then an individual is physically dependent); illegitimate birth (because illegitimate birth is a social anomaly); ugliness (because it is then difficult to marry); excessive freckles, protruding navel, absentmindedness, and flabby or small buttocks (Ingstad & Reynolds White, 1995). It becomes clear that "disability is a term whose definition will vary according to its'

context" (Kopec, 1995, p. 650) and its cultural setting.

In Western society, the meaning given to disability arises mainly from the medical model where disabilities occur because of physical impairments that arise from underlying disease or disorders (Hazard et al., 1989; Mooney, 1987;Waddell, et al., 1992). The disability is historically thought of in a negative context and the disabled are typically seen as unable to perform to the physical, social, occupational or economic standards of the dominant culture. Health is considered as the converse of disability (McBride, 1987).

Subjective Definition of Disability

The determination of which individuals are viewed as disabled is often based upon the subjective opinion of the assessor of disability.

> The terms 'normal' and 'non-disabled' do not represent objective measures of ability but are value judgments imposed by the people who see themselves as the standard to be measured against . . . .Unrecognized prejudices frequently play a major role in the intuitive opinions and judgments of all those concerned with evaluation and determination of disability (McBride, 1987, p. 4).

It is because of these prejudices and opinions that individuals are labelled either as disabled or able bodied.

Krause (1976) noted that there are many types of definitions of disability and they are determined by the purpose of the definition. These include medical, social or legal reasons for the definition. Definitions of disability can also be working or operational definitions or they can be generic or global (Duckworth, 1982). Global definitions "delimit the subject under discussion" while working definitions determine by which criteria the phenomena of interest are deemed to be present or absent (Duckworth, 1982,

p. 19).

Ingstad and Reynolds White (1995) use a subjective or social definition of disability and they believe that individual are disabled when they cannot complete the activities of daily living in a manner consistent with their self image or sense of self. The individual is responsible for defining himself or herself as disabled or healthy.

Nagi's definition of disability is similar to that of Ingstad and Reynolds White (1995) because both definitions have a broad subjective focus. Nagi (1991) defines disability as an "inability or limitation in performing socially defined roles and tasks expected of an individual within a sociocultural and physical environment" (p. 315). With Ingstad and Reynolds White (1995) and Nagi's (1991) definitions, individuals may be labelled as disabled but society may see them as able bodied. This may include injured workers who continue to see themselves as disabled and are unable to return to work when the opinion of their compensation specialist, their employer, and the physician is that they can return to full duties and are fully recovered from their injury.

Physical Limitation Definition of Disability

Disability is typically defined as a limitation of activity and a work disability occurs when a functional limitation restricts the worker's ability to perform the tasks required in his or her usual job (Butler et al., 1995). "Disability implies a deprivation or loss of a needed competency or qualification, in contrast to inability, which suggests an inherent lack of power" (Ingstad & Reynolds White, 1995, p. 7 to 8). The physical limitation definition of disability refers to the limitation resulting from dysfunction in an individual 's body and mind (Ingstad & Reynolds White, 1995).

Conceptually, individuals may also be considered disabled because of their lack of social standing or financial means, but blindness, lameness, mental deficiency, and chronic incapacitating illness are considered as prototypical disabilities (Ingstad & Reynolds White, 1995). Two individuals with similar physical impairments and functional limitations may also have very different levels of disability (Beattie & Maher, 1997), depending upon their own personal strengths and limitations.

McBride (1987) submitted that the basic feature of a disabled individual is a physical defect or impairment and the defect implies a permanent restriction of activity. However, disabilities can impact upon more than the physical body and mental illness can cause temporary disability or serious impairment.

World Health Organization Definition of Disability

The World Health Organization's definition of disability includes the possibility of disability outside of the physical limitation model and defines disability as any restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being (World Health Organization, 1980). The World Health Organization's definition qualifies that the disability should result from an impairment of some type.

American Medical Association' s Definition of Disability

The American Medical Association' s (1993) Guide to the Evaluation of Permanent Impairment defines disability "as a decrease in, or the loss or absence of the capacity of an individual to meet personal, social or occupational demands, or to meet statutory or regulatory requirements" (p. 317). The inability to meet personal or social

demands implies a subjective measure of the presence or absence of disability. The inability to meet occupational demands for regulatory requirements appears to be a more objective measure of disability, however, it too, is open to subjective opinion.

Individuals with a mental illness may be able to meet all the personal, social, occupational and regulatory demands placed upon them when they are healthy, but their capacities to fulfill these responsibilities may lapse when they have a break with reality. The individual and the physician may declare the mentally ill individual fit to perform all the roles expected of him or her, yet society may label the individual as disabled because they believe that mentally ill individuals perform his or her societal roles inconsistently.

Definition of Disability as a Contrast to Ability

A common sense definition of disability is a lack or limitation of competence usually thought of in contrast to the idea of normal capacity (Ingstad & Reynolds White, 1995). Many temporary conditions can inhibit ability, but disability is only incurred when the condition becomes chronic (Ingstad & Reynolds White, 1995). We are all only temporarily abled and only one traumatic accident or chronic illness away from being disabled.

Canada Pension Plan Definition of Disability

The Canada Pension Plan is responsible for protecting the disabled citizens of Canada from poverty by providing them with a disability pension if they meet the criteria for being disabled. However, the Canada Pension Plan itself does not clearly define disability, but offers income replacement to contributors who are "suffering from a severe and prolonged mental or physical disability" (Section 42 [2] [8] of the Canada Pension

Plan Act as found in the Report of the Committee on Disability Issues, 1994). Both "severe" and "prolonged" are defined, but "disability" is not. Severe is defined as "incapable regularity of pursuing substantially gainful employment" and prolonged is defined as "likely to be long continued and of indefinite duration or is likely to result in death (Report of the Committee on Disability Issues, 1994, p. 1).

Measurement of Disability

The methodology to measure disability objectively can be involved and multidimensional. Slater et al.(1974) developed a methodology to assess the level of disability within a population, to determine the medical reasons for the disability, to identify the social and environmental factors associated with disabling conditions, and to estimate the social and economic costs of disability. Slater et al.'s (1974) working definition of disability is "an existing limitation in one or more activities which in accordance with the subject's age, sex and normative social role are generally accepted as essential, basic components of daily living" (p. 305).

Within their operational definition of disability, Slater et al. (1974) assessed basic components of daily living to measure their subjects level of disability. They required that the impairment last a minimum of four weeks and they selected age, gender, marital status, dependency status, employment status and impairment prognosis as moderators of the disability. Slater et al. (1974) also used several sources to assess the level of disability and they included the individual's own subjective opinion of his or her level of disability; the opinions of the significant others of the disabled individual; the opinion of the individual's physician; a legal definition as required to receive disability benefits; and a

community definition by which the committee determines the measure of disability.

The measures allowed disability to be assessed on many dimensions. Slater et al. (1974) believe that for measures of disability to be useful, they have to be able to locate individuals on a continuum of disability, they have to be culturally sensitive as to what is defined as "essential, basic components of daily living", and they have to control for variability between the individuals defining disability.

Various specialists use measures to determine the impact of the disability upon the individual and each specialist may have a different opinion of the level of disability of the individual. Factors that are used to measure the impact of disabilities upon the individual include: quality of life, medical diagnosis, motor capacity, functional abilities, and occupational employment (Singleton, 1982). It becomes clear that the definition of disability will vary by specialty area and "there is no universally agreed upon definition of disability" (Engelberg, 1994, p. 275).

Summary of Definitions of Disability

Haldeman (1990) found that the subjective self assessment of pain can be disassociated with observed objective physical impairment and disability. Once a pattern of pain behaviour and disability is established, it may become entrenched as a result of reinforcing factors within the environment, including the family and the social milieu (Haldeman, 1990) and once established, this pattern may be difficult to change. Williams, Johnston, Willis and Bennett (1976) have argued that disability is "a social choice rather than a mechanical necessity" (p. 78) and they do not believe that impairment necessarily leads to disability. Williams et al. (1976) believe that the road to disability

lies within the power and control of the individual.

Summary of Disability

Disability can be defined objectively or subjectively. Disability can also be defined by the disabled individuals themselves or by various professionals or lay people and can also be defined on various levels. The various definitions of disability reviewed point to a lack of consensus regarding the salient points that are required within the definition of disability. The definition of disabilities is dependent on the context; the meaning of disability to the individual; and the societal context.

Disability and Work

Work disability has been identified as one of the most costly and prevalent health problems in Canada and the United States (Butler et al., 1995) and the prevention of disability is a major challenge (Fiske & Owens, 1994). The intent of compensatory systems to assist individuals financially when they experience a disability has been estimated to cost the United States more than $170 billion per year (Fiske & Owens, 1994). Hart (as cited in Habeck, Williams, Dugan & Ewing, 1989) reports that the possibility of being disabled from a workplace injury is a reality for many people and at age 32, a long-term disability is 6.5 times more likely to occur than death. Between the ages 35 and 65, seven out of ten workers will be disabled for three months or more; and before retirement age, one out of seven workers will be disabled for two years or more (Hart, 1983). It is estimated that 15% of Americans will experience a functional limitation related to an acquired impairment, a chronic health problem or a congenital impairment (Fiske & Owens, 1994).

Many disabling injuries or illnesses occur at the work place because of the large amount of time most adults spend at work. "Most adults spend approximately one fourth to one third of their time at work and often perceive work as part of their self-identity" (Rogers, 1994, p. 1). When a disability precludes individuals from returning to the work place, alterations to their self image and self esteem can occur.

Frank, Kerr, Brooker, DeMaio, Maetzel, Shannon, Sullivan, Norman and Wells (1996 b) identified a three phase model of low back pain natural history with acute, subacute, and chronic stages of low back pain. The acute phase occurs from the time of injury up to three and four weeks after injury. The subacute phase occurs from four to twelve weeks after injury and the chronic phase of low back pain occurs twelve weeks after injury (Frank et al.,1996 b).

With the acute phase, there is a suggestion that over treatment in this phase may increase sickness behaviour. In the subacute phase, from four to twelve weeks after injury, most people with lower back pain have already returned to work (Frank et al., 1996 b). The smallest group, but the most troublesome is the chronic group of low back pain patients. It is in this group that treatment and return to work strategies need to be focused because it is this group that consumes the majority of the resources because of their long periods outside of the workforce (Frank et al., 1996 b).

When work disability is caused by a back injury it becomes particularly problematic because of the lack of objective measures of back injury assessment and the high cost of rehabilitating back injured workers and returning them to the work place. Back injuries constitute approximately 24% of all disabling injuries worldwide (Clark,

Haldeman, Johnson, Morris, Schulenberger, Trauner & White, 1988) and represent the greatest cost overall of all disabling injuries (Clark et al., 1988; Cleary, Thombs, Daniel & Zimmerli, 1995) economically in terms of direct medical costs, compensation costs, and indirectly in terms of productivity and social costs (Cleary et al.,1995).

Compensation and Disability

Throughout Canada, the United States and many other countries, workers are compensated for loss of earning capacity due to an injury arising from their employment (Clark et al., 1988). Given the financial and social costs associated with a work related accident, the primary prevention of injuries and the secondary prevention of chronicity and disability are imperative in the attempt to minimize the human and financial costs of work related injury. Work is generally considered an integral component of life in a productive society and "impacts all aspects of the physical, psychological, emotional and social aspects of an individual's life and influences their overall quality of life (Rogers, 1994).

Back injuries are a major cause of morbidity to workers and they consume large amounts of the financial resources of workers' compensation boards. Individuals with chronic back injuries "consume the vast majority of the billions of dollars in medical resources and compensation payments devoted annually to persons with back pain" (Spengler et al.,1986, p. 241). As health care and compensation costs increase without evident resolution of this disability 'epidemic', questions about quality of care become increasingly urgent (DeRosa & Porterfield, 1992; Deyo, Cherkin, Conrad & Volinn, 1991; Deyo, 1991 b; Trief, 1983; Waddell, 1987a). The costs associated with time lost

from the workplace, compensation for permanent injury, and the costs of the required treatments and rehabilitation are all becoming increasingly expensive (Hasenbring et al., 1994) and the resources associated with disability in the workplace are consumed by a minority of the injured workers. This phenomenon is an example of the Pareto 20-80 rule which suggests that a small group of injured workers (20%) will consume the majority (80%) of the resources (Fiske & Owens, 1994).

Fiske and Owens (1994) suggest that the benefit system used to protect the injured worker encourages the use of health care services and prolonged lost time. The issues of secondary gain and compensation for the effects of a work related injury are considered as important factors in determining the severity of a work related disability. The effects of compensation on chronic pain patients involves the interaction of biological, psychological, social, economic and legal factors (Dworkin, Handlin, Richlin, Brand, & Vannucci, 1985).

The trend of disability has been rising over the past 30 years (Frank, Kerr, Brooker, DeMaio, Maetzel, Shannon, Sullivan, Norman & Wells, 1996 a). Frank et al., (1996 b) suggest that the slow epidemic of occupational disability, particularly soft tissue strains and sprains is legitimate and not attributed to the wage replacement benefits of compensation systems.

In the economic model of disability, there is a suggestion that disability is a choice that employees consciously make. Individuals assess the income that they would receive both in and out of the labour force, the value they place on work and the difficulties they face while working with a chronic condition. This model suggests that workers are more

likely to resist returning to work if their replacement income is high relative to their working income and the value they place upon their work (Yelin, 1986).

Consequences of Disability

Sander & Meyers (1986) noted that . . .

> delayed recovery from work injuries has long been recognized as an important medical and economic problem. Most industrial injuries are minor and heal uneventfully, with little, if any, disability and days off work. However, a few of the industrially injured workers do not heal as expected, but have a delayed recovery and delayed return to work (p.141).

Incurring a disability may also have serious psychological, social, physical and economic consequences (Simmonds & Kumar, 1996; Galluf Tate, 1992). Psychological consequences may be expressed in the form of stress, fear, anger, depression, and feelings of hopelessness. The social consequences may be measured as the loss of friendships, loss of social status, and strained family relationships. Physical consequences can be described in terms of pain, heightened health risk factors and reduced or impaired functional capacity. Economic consequences may include loss of income, increased dependence on external financial benefits and general economic insecurity (Galluf Tate, 1992).

The consequences of a disability can be significant, therefore it is important to attempt to explain the determinants of disability and possibly palliate the effects. Some authors noted a disability syndrome which has been associated with increased time off from work that is disproportionate to the injury. The disability syndrome is a condition in which the subjective symptoms are not supported by objective findings, but the symptoms cause delayed recovery (Burgel, 1986; Fitzler, 1983; Hanson-Mayer, 1984). This disability syndrome may be particularly evident with back injured workers because there

is typically a lack of objective findings to support the subjective disability. A disabled individual's psychological reaction to injury and the effect of secondary gains as reinforcement can be as disabling as the original injury (Burgel, 1986; Fitzler, 1983; Hanson-Mayer, 1984).

Allodi and Montgomery (1979) found that there is a proportion of work place injured individuals who will experience a period of disability that is disproportionate to the objective measures of their disability. Absenteeism may become a medical problem despite the lack of any recognized organic reason for the disability (Allodi & Montgomery, 1979). A large proportion of disabled workers return to work uneventfully, but an increasing number of these disabled workers is becoming chronically disabled (Allodi & Montgomery, 1979). "A small group may become chronically disabled and they are labelled by physicians and consultants as suffering from 'functional overlay', 'neurosis', 'hysterical symptoms' and 'compensation or accident neurosis' " (Allodi & Montgomery, 1979, p.25).

The presence of emotional distress among individuals with back pain is an important factor that requires consideration. Leavitt (1990) has shown that patients with psychological disturbances are more likely to have a longer period of disability, irrespective of whether they are in receipt of compensation payments or not.

Workplace Accidents

In terms of why workers experience accidents and injuries at the workplace, importance has been given to the concepts of accident proneness, job dissatisfaction and psychosocial stress. Accident proneness is the tendency of an individual to be involved in

an accident far and above what could be expected of other individuals under the same circumstances. Psychoanalysts hypothesize that there are psychological forces that are triggered and released by the accident that will initiate the neurosis that follows the accident (Allodi & Montgomery, 1979). Examples of these initiating psychological forces may include death wishes, the wish to be punished, the need to be dependent or resentment against an authority figure (Allodi & Montgomery, 1979). This hypothesis assumes a strong emotional component to the origin of workplace accidents and is difficult to support or measure quantitatively.

These dynamic theories of accident proneness are difficult to test, but in statistical terms, the accident prone group would be expected to have a higher incidence of psychological trauma in childhood, a larger history of psychiatric illnesses, and a greater incidence of accidents (Allodi & Montgomery, 1979). Lipinsky, Winslow, Powles and Ross (as cited in Allodi & Montgomery, 1979) concluded that accident proneness is not a fixed personality trait but a multi-factorial predisposition that may be related to irresponsibility, individual maladjustment and abnormal physical environment. Lipinsky and colleagues (1974) suggested that minor accidents, minor illnesses and visits to the company health clinics are correlated.

Environmentalist theory also attempts to explain the relationship between health and work. Social stress in the form of job dissatisfaction, family stress and alienation as a result of repetitive tasks is hypothesized as a health risk (Allodi & Montgomery, 1979).

These theories support an individual psychological or emotional predisposition to accidents and injuries. The differences in the theories center around the etiology of the

psychological predisposition to accidents and injuries, and they all support a strong emotional causative effect. These theories suggest that for subconscious reasons, individuals are responsible for the accidents they are involved in. Modern accident theory suggests that workplace accidents are caused by problems in workplace processes, structures, tools, design or organization and not by subconscious psychological predisposition to cause oneself harm.

Compensable Back Injuries

Of the numerous types of work related injuries, low back injuries are probably the most important group from a social and an economic standpoint (Lehman & Brand, 1982; Andersson, 1981). Low back pain and disability continues to plague individuals, industries and health economies despite coordinated efforts to manage the problem medically. Because of the higher incidence of lower back pain, Hadler (1997 a) suggests that rather than placing back injuries under the auspices of "compensable injury", society should aspire to encourage workplaces that are "comfortable when we are well" and "accommodating when we are ill" (p. 935). Since a large proportion of society will experience back pain at some point in their life, Hadler (1997 a) proposes that workplaces should acknowledge that potential short term impairment and provide reasonable accommodations in the workplace until the back pain resolves.

MacDonald, Sorock, Volinn, Hashemi, Clancy and Webster (1997) analysed the differences between recurrent and non-recurrent low back pain claims using data from a large workers' compensation insurer. A recurrent claim was defined as a person with a lower back pain claim in 1990 with one or more additional lower back pain claims

between 1990 to 1996. A non-recurrent low back claim only reported one incident in 1990 with no subsequent claims in later years. Fourteen percent of all claims were recurrent with 77.2% of the recurrent claims being made by males and 22.8% of the recurrent claims being made by females.

The issues surrounding work disability are complex and lend support to the theory that the medical model is inadequate in explaining the complexity of work disability. The reviewed theories support a strong individual psychological or psychosocial component of work related injury and lend support to the need for further study.

Disability and Back Pain

Low back pain is a symptom and not a diagnosis (Deyo, 1991a) and "low back pain continues to be one of the most prevalent problems in health care today" (Kelsely as cited in DeRosa and Porterfield, 1992, p. 262) with low back pain affecting between 60% (Burton et al., 1995) and 80% of the human population (Deyo, 1991 a; Waddell, 1987 a). Low back pain disability has dramatically increased throughout Western society between the 1950's and 1970's (Waddell, 1987 a) and from 1971 to 1982, the number of people disabled from low back pain grew at a rate 14 times the population growth (Kelsely, 1982). Low back disability, as opposed to low back pain, appears to be a recent epidemic that is not explained by any demonstrable change in the physical disorder of back pain and it is increasing at an alarming rate (Cooper, Tate & Yassi, 1997; Goossens & Evers, 1997; Simmonds & Kumar, 1996; Waddell, 1987 a). Low back pain is one of the most common causes of disability among people of working age (Macfarlane, Thomas, Papageorgiou, Croft, Jayson & Silman, 1997) and therefore has an enormous impact in

the workplace (Deyo et al., 1991 a).

Back Pain and Objective Measurements

Few objective clinical measures to quantify back injury are available to health care practitioners. There are often no anatomical signs to indicate injury nor are there any irrefutable tools to quantify the extent of back injury or disability. As Dr. Haldeman noted in his 1990 Presidential Address to the North American Spine Society,

> the classic pathology model in its simplest form cannot explain back pain or disability. It is not possible to look at pathology and determine with any confidence the symptoms a patient may be suffering (p. 722).

The vast majority of individuals have a mechanical cause of lower back pain and there is no infectious, neoplastic or inflammatory process underlying the pain (Deyo, 1991 b). The lack of clear measures for quantifying the extent of back injury often leaves back injured individuals as the sole informant in expressing the symptoms they are experiencing and the impact of these symptoms on their life.

Back pain and disability are not normally associated with any demonstrable pathology (Main & Watson, 1995) and "it is generally accepted that the vast majority of instances will resolve uneventfully within a matter of weeks" (Burton et al., 1995, p.722) with approximately 5% of patients developing chronic pain syndromes which may persist beyond three months (Deyo, 1991 a). The pathology of low back pain and the anatomical structures that are responsible for low back pain remain undefined (Waddell, 1987b; Weber & Burton, 1986). The natural history of low back pain dignifies it as a universal, benign and self-limiting condition and because of the almost inevitability of back pain at some point in an individual's life, back pain can be regarded as normal (Frymoyer &

Cats-Baril, 1987; Waddell, 1987a). In spite of this knowledge, back pain continues to be medicalized, managed and treated by health professionals.

"It is widely accepted that chronic back pain can result in disability; however the relationship between the two is not straightforward" (Cooper, Tate, Yassi & Khokhar, 1996, p. 2329). Chronic low back disability is particularly frustrating, because it commonly evades accurate diagnosis and solution by the medical model of illness and symptom management (Waddell, 1987 b). In addition, once a chronic pain syndrome has been established, a variety of factors may complicate recovery, including psychological dysfunction, financial disincentives to recovery, hostile work environment and dysfunctional family interactions (Deyo, 1991 b). As health care and compensation costs increase without evident resolution of this disability epidemic, questions about quality of care become increasingly urgent (DeRosa & Porterfield, 1992; Trief, 1983; Waddell, 1987a).

Back Pain Treatment

Back injuries are typically resistant to rehabilitation, (Behan & Hirschfeld, 1983) and they frequently result in a long period of recovery (Andersson, 1981).

> It has been shown that the disorder has a propensity to recur particularly in the first year, whereas for some the problem seems to persist even in the absence of demonstrable pathology (Lloyd and Troup, 1983, p. 66).

Symptom reduction has been the traditional goal in treating acute back pain. At times, the pain can defy diagnosis and it becomes chronic and disabling. It is at this point some authorities recommend shifting the therapeutic focus toward functional gains rather than reducing the symptoms (DeRosa & Porterfield, 1992; Shutty, DeGood & Tuttle,

1990) as symptom reduction does not necessarily decrease the disability. This process focuses on reducing disability by targeting the physical limitations imposed by the disability.

"Chronic patients have been shown to display a variety of psychological features, but the factors leading to chronicity are ill understood" (Burton et al., 1995, p.723). The road to chronicity and disability with back injuries is complex and there are often multiple contributors to back pain disability. Evidence is mounting that back pain is a combined physical and psychological disorder, yet it continues to be treated as a physical impairment (Milhous et al., 1989). However, the biopsychosocial complexity of low back pain and disability defies simple measurement and many authors have attempted to determine the significant factors which contribute to low back pain disability (Trief, 1983; Waddell et al., 1992) with at times conflicting results.

Back Pain and Mobility

Back injured workers often self report their level of disability based as restriction of their activities of daily living (Beattie & Maher, 1997; Fairbank, Davies, Couper & O'Brien, 1980; Kopec, Esdaile, Abrahamowicz, Abenhaim & Wood-Dauphinee, 1995; Luborsky, 1995; Waddell, Newton, Henderson, Somerville & Main, 1993). This restriction of activities of daily living may or may not be self imposed and it may also be regarded as avoidance learning behaviour. This avoidance may be based not only on past experience of pain, but also on the patient's individual interpretation of the meaning of that pain; the assumption that pain means occurring damage and the medical advice they have received about how to manage, cope and react to their pain (Fordyce, 1982).

Therefore, the intentional or subconscious avoidance of activity and de-conditioning and subsequent pain may lead to chronic disability.

These perceptions of disability are congruent with the internal and external eliciting cues within Johnston's Model of Disability (1996). The patient's individual interpretation of pain would be the internal eliciting cue and the medical advice he or she receives would be the external eliciting cue with an outcome of ability or disability. Pain, combined with advice to rest or risk re-injury or greater injury, may contribute to disability.

Back Pain Diagnosis

Hasenbring et al. (1994) believe that "(E)mphasis has been placed on refining clinical diagnostic techniques, but because of relative neglect of the psychosocial component of back pain this has not led to a concomitant reduction in low back trouble" (p.2763). It is clear that "conventional medical treatment for low-back pain has failed, and the role of medicine in the present epidemic must be critically examined" (Waddell, 1987 a, p. 636). Despite increasing technology, diagnostic ability and rehabilitation techniques, "(C)urrent methods of management are not preventing an epidemic of low back pain" (Deyo, 1993, p.2153). With studies that have utilized self report from back injured workers as a data source, "(C)ross-sectional studies in the United Kingdom have clearly demonstrated the important contribution of distress and illness behaviour to functional disability" (Waddell, Main, Morris, Dipaola & Gray, 1984). It becomes clear that the current medical model of back care management is inadequate.

Summary - Disability and Back Pain

Diagnosis of back pain is enormously ambiguous (Deyo, 1993; Waddell, 1987 b) and this contributes to the lack of clear, consistent and effective treatment modalities for back pain. In addition, symptoms can follow a fluctuating course, which may lead to the erroneous assumption that a patient has recovered if he or she is assessed too early (Deyo, 1993). One of the problems in the assessment of the effect of a treatment lies in the measurement of the outcome of the patient's back pain. "Back pain tends to improve spontaneously with time and, therefore the difference in improvement between a treatment group and a control group may be relatively small" (Roland & Morris, 1983, p. 141).

The historical treatment of back pain appears to be a "a succession of fads" (Deyo, 1991 b, p. 1039) and these fads have included coccygectomy and sacroiliac fusion and laser stimulation of trigger points (Deyo, 1993). Apparently justifiable treatments have fallen into disrespect because their use can no longer be medically justified or the treatments were never clinically appropriate. Given the enormous impact that back injuries can have on an individual's life, the ambiguity of the etiology of back pain, and the role that an individual's psychological make-up can contribute to the disorder, the need for clarity in this area becomes increasingly important. Treatments need to be substantiated and the determinants of back injury disability need to be identified.

Back pain appears to be a natural phenomenon that most individuals will experience at one time in their lifetime. The clinical diagnosis of back pain is often based upon the self report of the back injured individual because of the limitations in objective

tests for back pain. Back pain itself can lead to disability, yet the relationship between pain and disability is not clearly understood. There is growing evidence of a strong psychosocial component to the etiology of back pain and it is becoming increasingly important to determine the predictors and determinants of back pain disability and perhaps more importantly, develop effective strategies to return employees to work in a timely and humane manner.

Predictive Variables for Successful Back Pain Outcome

Within this section, the importance of the back injury phenomenon is discussed and a literature review identifies the major findings in the area of determinants of back pain disability. The literature reviewed includes publications in the areas of nursing, medicine, psychology, physiotherapy, disability and workers compensation insurance and focuses on the predictors or determinants of back pain disability. I will categorize the determinants of back pain disability under the headings of demographic variables, medical variables, employment and compensation variables, and psychosocial variables.

As previously noted, many studies have attempted to determine which factors have value in predicting which back injured employees will have successful outcomes and which employees will not have successful outcomes. Within the literature, the benchmark of a successful back injury outcome can include any combination of the following criteria: client can complete his or her activities of daily living or his or her subjective or objective level of functioning has improved compared to a previous level; the clients is satisfied with his or her back injury treatment or outcome; the client's level of disability has improved relative to a tested disability measure; or the client has returned

to the workplace.

The rationale behind determining a reliable prediction of chronic disability in patients with acute back pain is to focus early rehabilitation efforts on this high-risk group and ultimately to encourage more successful back injury outcomes (Milhous et al., 1989). However, within this strategy, there has been no qualitative research to determine from the back injured workers' perspective what specific barriers exist for the back injured individual who is attempting to recover from the disability of back injury and what factors would encourage a successful recovery from his or her back injury.

The following table illustrates the determinants considered within the literature review to determine which variables are predictive of successful or unsuccessful outcomes from back pain or back injury. The determinants have been categorized as demographic variables; medical variables; employment variables and compensation variables; and psychosocial variables.

Table 7

Variables Predictive of Successful or Unsuccessful Outcome from Back Injury

Demographic Variables	Medical Variables	Employment and Compensation Variables	Psychosocial Variables
- age - education - gender - marital status	- physical findings - previous back pain - back surgery - back injury - muscle atrophy - obesity - health professional involvement	- time away from the workplace - employment status - length of employment - physical demands - job accommodations - employer support - job satisfaction - cause of back injury - compensable injury - attorney involvement	- perception of disability - perception of pain - overt pain behaviour - locus of control - psychosocial functioning - stressful life events - emotions - coping skills - smoking

Demographic Variables

Significant demographic variables identified in the back injury literature include age, education, gender and marital status. The variables of age and length of employment tend to be related and as age increases, so does length of employment.

Age

Several researchers have found that the probability of a successful outcome after back injury decreases as the age of the back injured individual increases (Althoff & Andruss, 1996; Burton et al., 1995; Butler et al., 1995; Hazard et al., 1989; Hazard, et al., 1991; Milhous et al., 1989). The studies varied from one group descriptive pre-test, post-test studies (Burton et al., 1995; Hazard et al., 1991; Milhous et al., 1989), to a prospective descriptive study with a non-equivalent control group (Hazard et al, 1989), to a retrospective survey (Althoff & Andrus, 1996). The study designs were varied and the designs did not lend themselves to explaining causal relationships. However, the results they generated were consistent and therefore, although not experimentally established within these studies, there does seem to be a strong association between the tendency for older back injured workers to have less successful outcomes.

Within their two-year prospective study, Yassi, Tate, Cooper, Snow, Vallentyne and Khokhar (1995) generated opposite results in their study of the rate of back injury among nurses and found that younger nurses were at slightly increased risk of back injury. Younger nurses were at increased risk of back injury, perhaps because of lack of experience.

Weighted analysis was used to represent the Canadian population in 1994/95 and

unadjusted cross tabulations and multiple logistic regression techniques were used to examine the associations between respondents characteristics in 1994/95 and newly diagnosed chronic back problems in 1996/97. Respondents between the ages of 40 to 49 years of age were at significantly higher risk of developing chronic back problems (Perez, 2000).

Education

There also is a strong association between education level and successful back injury outcome. The probability of a successful outcome increases as the education level of the back injured client increases (Butler et al., 1995; Damkot, Pope, Lord & Frymoyer, 1984; Frymoyer & Cats-Baril, 1987; Lancourt & Kettelhut, 1992; Waddell, 1987 a). Butler et al. (1995) completed a descriptive review from 1974 to 1987 of 11,000 Canadian workers with permanent partial impairments resulting from workplace injuries. They found that the interactions among higher education, less physically demanding jobs, greater incentives for employers to provide accommodations, and increased job mobility appear to combine to increase the probability of return to work for better educated workers (Butler et al., 1995).

Conversely, within Hazard et al.'s (1991) descriptive pre-test, post-test study, there was no difference between educational level and the probability of returning to work after a back injury at the one and two year follow up point. However, within the study, the attrition rate was very high, therefore, the data may not be representative of the population. The original sample contained 258 subjects, with 195 or 75% of the subjects available at the one year follow up and only 69 or 27% of the subjects available for

follow up at the two year mark. Hazard et al. (1991) found that return to work was poorly correlated with all the demographic variables and the large attrition rate may have led to invalid conclusions.

Gender

Women are more likely to return to the work place after a back injury than men (Althoff & Andruss, 1996; Caruso, Chan & Ghan, 1987). When Beissner, Saunders and McManis (1996) completed a retrospective chart audit of 159 back injured clients, they found that female workers were more likely than men to return to work 3 months following the completion of a work hardening program, but no more likely at 12 months. A work hardening program allows the worker to slowly build up his or her strength and their ability to fulfill the requirements of a full day of work. Hazard et al. (1991) found no difference between women's success rate after back injury compared to men's but their study had difficulties with the large attrition rate from the original sample to the final analysis. The varying research designs may have also contributed to the differing results between the studies.

Marital Status

Single employees (Althoff & Andruss, 1996; Lancourt & Kettelhut, 1992) and those who were widowed or divorced were more likely to return to work after an injury (Althoff & Andruss, 1996). Within Lancourt and Kettelhut's (1992) non-experimental descriptive methodology, there was no indication as to what proportion of the subjects were male and female. Hazard et al. (1991) found that marital status did not differ between back injured individuals who returned to the workplace and those that did not. In

addition, Lancourt and Kettelhut (1992) found that patients who had been in the same living arrangements for less than 7 years, or who had not relocated their residence unless for a better job, were more likely to return to work. Within Hazard et al. (1991), 70% of the subjects were male and within Lancourt and Kettelhut's (1992) non-experimental descriptive study, there was no breakdown as to the gender of the participants. Perhaps the marital status of the subjects was significant for one gender but not significant for the other. This is difficult to determine given the descriptive limitations of the demographic data.

Summary - Demographic Variables

None of the reported demographic variables were clearly associated with successful recovery from back injury.

Medical Variables

Physical findings, previous back pain, back surgery, back injury, muscle atrophy, obesity and health professional involvement are characterized as medical variables that have been tested to determine their predictive value in determining the outcome after back injury. Each of the these predictive variables will be presented and discussed within this section.

Physical Findings

Physical examination findings and biomechanic testing results were not predictive of return to work (Milhous et al., 1989) and when comparing myelograms, computed topographic (CT) scans or roentgenographs (X-rays) there was no difference between groups who had successful outcomes and those who did not (Lancourt & Kettelhut,

1992). Both Lancourt and Kettelhut (1992) and Milhous et al. (1989) used descriptive designs that attempted to determine a relationship between objective measures and low back pain. Neither study specified the type of treatment that was provided to the subjects nor were the treatments controlled.

Objective factors such as trunk strength, lumbar and lateral flexion, straight leg raise, sit up test, range of motion and ability to lift did not correlate significantly with return to work or back pain outcome (Burton et al., 1995; Hazard et al., 1994; Milhous et al., 1989). All these studies were descriptive and used a similar pre-test, post-test design. The subjects in Burton et al.'s (1995) study received chiropractic treatments, in Hazard et al. (1994) they received medical rehabilitation treatment and in Milhous et al. (1989) they received an unspecified treatment. Despite the varying treatment modalities and philosophies, the three studies consistently found that objective measures were not predictors for return to work (Milhous et al., 1989); treatment satisfaction (Hazard et al., 1994); or an improved disability score (Burton et al., 1995).

Previous Back Pain

Previous history of back pain and the number of previous incidents of low back pain (Burton et al., 1995; Lancourt & Kettelhut, 1992) were associated with no improvement in disability (Burton et al., 1995) and a reduced probability of return to work (Lancourt & Kettelhut, 1992). Individuals with prior injuries (Lancourt & Kettlehut, 1992) or those who had fallen on their buttock or back as the cause of the back pain (Lloyd & Troup, 1983) were also less likely to return to work (Lancourt & Kettelhut, 1992) and more likely to require additional time off work related to their back injury

(Lloyd & Troup, 1983).

Within Lloyd and Troup's (1983) prospective epidemiological survey of back injured workers, they confirmed that several factors were associated with a greater risk of additional time off work after the first incident of back pain. They determined that if back injured workers returned to the workplace with residual pain in the lower limb, they were more likely to require additional time away from the workplace at a later date. Back injured workers who had a history of leg pain (Lancourt & Kettelhut, 1992) were also less likely to return to the work place. The lack of radiating leg pain associated with back pain increased the probability of successful outcome within Milhous and colleague's (1989) study, yet Burton et al. (1995) found that leg pain had no impact on the ultimate outcome of back pain. Both Milhous et al. (1989) and Burton et al. (1995) utilized a one group pre-test, post-test design with uncontrolled treatments. Both these studies had different outcomes of successful treatment with Milhous et al. (1989) using return to work as the definition of success and Burton et al. (1995) using a decreased disability score on the Roland and Morris Disability Questionnaire as the measure of a successful outcome. The variability in the treatments provided and the varying measures of a successful outcome may have contributed to the disparate results.

Back Surgery

Studies have indicated that subjects with back pain who had back surgery or who were referred for back surgery had inconclusive results related to their rate of return to work. Studies have found that back injured individuals who were referred for back surgery were less likely to return to work (Beissner et al., 1996; Lancourt & Kettelhut,

1992) while other studies have suggested that there was no difference between the return to work rate and the number of spinal surgeries (Milhous et al., 1989) or medical treatment satisfaction and the number of surgeries (Hazard et al., 1991). Both Beissner et al. (1996) and Lancourt and Kettelhut (1992) used different designs but yielded similar results. Milhous et al. (1989) utilized a similar design to Lancourt and Kettelhut's (1992) descriptive study, but in contrast found that there were no differences between back injured workers who returned to work and those that did not and the number of spinal surgeries they had experienced.

Beissner et al. (1996) used a retrospective chart audit of two associated work hardening clinics for their data source, while Lancourt and Kettelhut (1992) used a prospective descriptive one group pre-test post-test design. Treatments were not controlled or specified in the Lancourt & Kettelhut (1992) study and Beissner et al. (1996) described the treatment as an individualized work hardening program with specific standards for developing the program. Beissner et al. (1996) was the only study of the three that described the treatment the subjects received and identified clear guidelines for the treatment. Neither Milhous et al. (1989) nor Lancourt and Kettelhut (1992) specified the treatments the subjects received nor was there any obvious control of the treatments.

Back Injury

In the Statistics Canada (Perez, 2000) longitudinal household National Population Health Survey, chronic back problems were significantly associated with back injury. The sample contained 3,234 male and 3,129 female subjects who were 16 or older in 1994/95. The Statistics Canada (Perez, 2000) survey defined a chronic back problem as one that

lasted or was expected to last more than six months.

Muscle Atrophy

In their review, Lancourt and Kettelhut (1992) found that muscle atrophy was the only significant organic difference between the employees who returned to work and those who did not, with the non-returners having objective measurements of muscle wasting. Prolonged time off work allows for de-conditioning, especially when the work performed prior to injury was physically demanding. If injured workers continued to perform light duty work or were off work for a relatively brief period of time, they were less likely to become de-conditioned than subjects who were off work due to injury for prolonged periods (Beissner et al., 1996).

Obesity

Obesity was not an important objective indicator in distinguishing between positive and negative outcomes of worker rehabilitation in Beissner et al.'s (1996) retrospective review. Obesity is sometimes linked with back pain as people who are not physically fit are commonly thought at risk of developing back pain.

Health Professional Involvement

Niemeyer, Jacobs, Reynolds-Lynch, Bettencourt and Lang (1994) completed a survey of 36 work hardening programs that were treating patients for a variety of injuries. They evaluated the differences between clients who returned to work and those who did not and found that the best return to work rate was with subjects who had seen the fewest number of practitioners. They hypothesized that clients with more serious injuries may require and receive more medical treatment than clients with less serious injuries

(Niemeyer et al., 1994) and this leads to increased time away from the work place.

In contrast, Beissner et al.'s (1996) study of back injured workers found that the more practitioners seen prior to program participation in a work hardening program predicted case closure status but did not predict return to work rate. Case closure status was defined as individuals who no longer required further medical treatment. Niemeyer et al.'s (1994) study encompassed not only back injuries but all types of work related injuries and this may explain the variability in the results between Niemeyer et al. (1994) and Beissner et al. (1996).

The Statistics Canada (Perez, 2000) longitudinal survey confirmed that people with chronic back problems tended to be relatively frequent users of health care services compared to those who did not have chronic back pain. The health professionals utilized included: physicians, physiotherapists, chiropractors, massage therapists, mental health professionals, and alternative care providers.

Within Main and Watson's (1995) study, back injured individuals attended an active rehabilitation program that included psychological intervention; education on back anatomy and ergonomics; interviewing, job seeking skills and employment; and benefit and financial advice. Twenty-two of 27 subjects completed the program and Main and Watson's (1995) study confirmed that the back injured individuals who had lower scores on somatic anxiety, those who had fewer depressive symptoms, and those that had more confidence in controlling their pain had more positive outcomes. Positive outcomes were defined as re-employment, enrollment in a re-training program, actively job seeking or enrollment in an education program.

Within Main and Watson's pilot study, the subjects who had completed a rehabilitation program showed "significant decreases in self-reported disability depressive symptoms, and negative or inappropriate cognitive coping strategies" (p. 213). The researchers acknowledged the limitations of the small sample size in the generalizability of the results yet they believed that psychological factors such as distress and beliefs about pain may influence return to work after a back injury.

Summary - Medical Variables

The reviewed studies utilized varying methodologies, sample characteristics and sizes, varying treatment methodologies and they often yielded conflicting results. The identified variables that were consistently associated with a decrease in desirable outcomes were previous back pain, muscle atrophy and health professional involvement.

Subjects who had back surgery or who were referred for back surgery were less likely to return to work (Beissner et al., 1996; Lancourt & Kettelhut, 1992). Both Beissner et al. (1996) and Lancourt and Kettelhut (1992) used different research designs yet yielded similar results. In contrast, Milhous et al. (1989) found that there were no differences between back injured workers who returned to work and those that did not and the number of spinal surgeries they had experienced. Milhous et al. (1989) used a descriptive research design similar to Lancourt and Kettelhut (1992). Beissner et al. (1996) was the only study of the three that described the treatment subjects received and identified guidelines for the treatment. Hazard et al. (1991) used medical treatment satisfaction as their measure of success and they found no difference in the medical treatment satisfaction for subjects and the number of surgeries they received. Health

professional involvement seemed to be an indicator of the severity of the back pain but not a predictor of positive outcome.

Employment and Compensation Variables

The employment and compensation variables identified in the literature included: time away from the workplace, employment status, length of employment, physical demands, job accommodations, employer support, job satisfaction, cause of back injury, compensable injury, and attorney involvement. Each of these variables is reviewed to determine their implications in successful outcomes after back pain.

Time Away From the Workplace

As the length of time away from the workplace due to a back injury increases, recovery and return to work is progressively less likely (Dworkin et al.,1985; Hazard et al., 1991; Lancourt & Kettelhut, 1992; Lloyd & Troup, 1983; Milhous et al., 1989). Lancourt and Kettelhut (1992) could not determine whether the length of time off work is a primary stressor in itself perpetuating greater time away from the workplace or whether the length of time away from the workplace indicates the severity of the back injury.

In Martin, Eisenberg, McDonald and Shortridge's (1994) retrospective, descriptive study, they examined various injuries among 42 workers and attempted to determine the validity of the Menninger Return to Work Scale in predicting return to work rate after work place injury. They discovered a positive relationship between the severity of the injury and the amount of lost time from the work place.

It is well known that the greater the duration of disabling lower back pain, the greater the probability of permanent disability. Fewer than one half of all patients

disabled by back pain for more than 6 months ever return to work, and their chances of re-employment are practically non-existent after 2 years (Waddell, 1987 a). Milhous et al. (1989) found that none of their subjects who had been out of work more than one year returned to work. A long period of sick leave does not appear to influence the result of rehabilitation in the short term, but it increases the risk of prolonged sick leave later on (Sandstrom & Esbjornsson, 1986). Perhaps the increased time away from the work place suggests a higher level of disability and back injury.

Employment Status

Back injured workers who were employed less than 6 months had an increased rate of not returning to the work place (Beals & Hickman, 1972; Lancourt & Kettelhut, 1992). Employees who were fired, terminated or laid off after their injury also had an increased likelihood of not returning into the active work force (Beals & Hickman, 1972; Lancourt & Kettelhut, 1992). Beals & Hickman (1972) compared the psychological characteristics of 40 non-injured men to 180 male subjects who had experienced a compensable injury, 60% of which were back injuries while Lancourt & Kettelhut (1992) used a prospective study of 134 patients with lower back pain to look at 92 factors to determine which were significant in predicting return to work.

When studying the epidemiology of back injuries among 1645 nurses, Yassi, Khokhar, et al. (1995) found that back injuries among nurses were slightly more common in nurses with less seniority and almost 61% of back injuries which occurred in nurses working eight hour shifts occurred during the first 2 hours of a shift.

There is a growing body of research which supports employment status as an

important indicator of outcome following injury and illness and "only employment significantly predicted long-term outcome, whereas compensation and litigation did not" (Dworkin et al., 1985).

Employment status is often intimately linked with job satisfaction, employer support and length of employment. Therefore, isolating the salient determining variables related to return to work issues would be difficult.

Length of Employment

In their descriptive study of back pain in nurses, Cato et al. (1989) found that back injured nurses tended to have more work experience compared to non-back injured nurses. Back injured nurses were employed an average of 6.3 years compared to 2.5 years in the non-injured group. This was in direct contrast to Yassi, Tate, et al., (1995) where younger nurses were at increased risk of injury. With Cooper et al.'s (1996) pre-test, post-test study, they found that the tendency towards perception of disability among back injured nurses decreased with experience while Cato et al. (1989) found that the risk of injury increased with experience.

Physical Demands

Niemeyer et al. (1994) found no association between the physical demands of the work and the ultimate success of returning to it. Niemeyer et al. (1994) collected their data by surveying 36 work hardening programs in the United States of America to assess data related to work hardening program outcomes. They investigated: rates of program nonacceptance or non-completion, basic client characteristics and outcome, length of disability and outcome, client return rates to vocational rehabilitation or modified work,

and program characteristics and return to work rates.

The Statistics Canada longitudinal survey (Perez, 2000) and Wickstrom and Pentti (1998) found that the greater the physical demands of the workplace, the higher the risk of chronic back pain (Perez, 2000) and back injury (Wickstrom & Pentti, 1998). The Statistics Canada longitudinal household survey (Perez, 2000) found that blue-collar workers and workers with high or neutral physical exertion (compared to low physical exertion) had a statistically significant risk of chronic back pain. It was hypothesized that blue collar occupations entail relatively high physical exertion and this may result in injury. Wickstrom and Pentii (1998) found that male workers with jobs with high bio-mechanical stress had a higher risk of back injury.

Job Accommodations

Employees who received job accommodations after a work related injury experienced fewer repeat injuries. Job accommodations include modified work tasks or modified hours of work in order to accommodate the limitations of the injured worker. Employer accommodations after injury reinforced employee attachment (Butler et al., 1995) and overall job satisfaction (Hazard et al., 1991; Allodi & Montgomery, 1979; Brewin et al., 1983) and Butler et al. (1995) believe that "(T)he exact nature of the attachment between firms and these employees warrants additional investigation" (p.13). Beissner et al. (1996) believe that "(T)he extent of work disability caused by a permanent impairment is, in fact, partly determined by workers' capacities to compensate for functional limitations and by employers' willingness to cooperate in that process" (p. 10).

Employer Support

Related to willingness to provide job accommodations, is employer support. Non-supportive workplaces do not tend to provide workplace accommodations for injured or otherwise compromised workers. After a work related injury, perceptions of employer support were associated with successful returns to the work place (Allodi & Montgomery, 1979; Brewin et al., 1983). Althoff and Andruss (1996) believe that employees who do not feel valued by their employer may return to work more slowly than expected. Within Hazard et al.'s (1991) study, the researchers were specifically examining back injured workers who exaggerated their disability and their success in a treatment program while Althoff and Adruss (1996), Allodi and Montgomery (1979), Brewin et al. (1983) and Butler et al. (1995) were examining a variety of work related injuries. All four studies suggested the importance of the relationship between the workplace and the injured individual.

Among workers, lack of recognition and respect at work contributed to sick leave attributed to back disorders but not other musculoskeletal disorders (Wickstrom & Pentti, 1998). Lack of recognition and respect at work may be due to a variety of factors such as below standard performance, deficient social aptitude or other factors not directly related to task performance (Wickstrom & Pentti, 1998).

Job Satisfaction

Within Williams, Pruitt, Doctor, Epping-Jordan, Wahlgren, Grant, Patterson, Webster, Slater and Atkinson's (1998) longitudinal study following 82 men with lower back pain, they measured the extent which job satisfaction predicted pain, psychological

distress and disability six months after an initial episode of low back pain. Williams et al. (1998) found that job satisfaction was identified as one of the potentially most significant predictors of back pain and disability. The researchers hypothesized that interventions directed towards job satisfaction instead of pain relief may hold promise for decreasing the likelihood of transition to chronic pain and disability after an initial back pain episode (Williams et al., 1998).

Cause of Back Injury

Brewin at al. (1983) studied white male manual workers who were referred to an accident clinic with suspected injuries of the back and they found the probability of a successful outcome decreased if the work related accident was due to some environmental fault or failure. Workers were more likely to return to work if they blamed themselves for the cause of their accident (Brewin et al., 1983). If the worker's disability was work related, there was a 46% chance of them returning to the workplace while there was a 60% chance of them returning to the workplace if the disability was not work related (Althoff & Andruss, 1996). When studying nurses with back injuries, Tate, Yassi and Cooper (1999) found that if the back injury occurred while lifting patients, it resulted in greater time lost from the workplace. When Milhous et al. (1989) specifically looked at back injuries, they found no effect between whether the injury was work related and the success of returning to the work place after an injury.

Compensable Injury

Those back injured individuals who had experienced a prior worker's compensation injury were also more likely to have an unsuccessful return to the

workplace (Lancourt & Kettelhut, 1992). In addition, return to work was less likely when a person's salary replacement exceeded 75% of their pre-injury wage (Galluf Tate, 1992). As the number of weeks of workers' compensation increased, the probability of returning to the workplace decreased (Brewin et al., 1983; Catchlove & Cohen, 1982; Guck, Meilman, Skultety & Dowd, 1986; Milhous et al., 1989; Sander & Meyers, 1986; Galluf Tate, 1992) and those employees who returned to the work place were less likely to receive income supplement from their employers (Brewin et al., 1983).

> While some literature supports the fact that patient's receiving workmen's compensation did not benefit from treatment as much as those not receiving compensation, research completed on compensation and treatment response in pain programs offering multiple treatment modalities is less consistent (Dworkin et al., 1985, p. 50).

Simmonds and Kumar (1996) hypothesized that compensation benefits influenced rehabilitation in a negative manner and tested whether a back injured patient's compensation status influenced physical therapist's clinical judgment of their prognosis. Within their study, Simmonds and Kumar (1996) replicated a back injured patient's history and physical examination and they found that the physical therapist's physical assessment did not change if therapists knew the compensation status of patients but the physical therapist's prognosis of the patient's outcome did change. Physical therapists were not as optimistic with the prognosis of back injured patients who were receiving worker's compensation benefits as they were with patients who were not receiving worker's compensation benefits.

Mendelson (1992) found that when the pain experience of compensation beneficiaries was compared to non-litigants, the individuals receiving compensation

benefits did not describe their pain experience as more severe than a comparable group not in receipt of pain-related benefits.

Attorney Involvement

Beissner et al. (1996) found that back injured subjects who were working with an attorney were less likely to achieve case closure compared to those who were not working with an attorney, while Milhous et al. (1989) found no such association between attorney involvement and return to work. Both of these studies had different designs, different client characteristics and different treatments for the subjects and these study variations may account for the variability in the results.

Summary - Employment and Compensation Variables

As the length of time away from the workplace increased, return to work success decreased. Success related to back pain disability also decreased with the length of time that individuals experienced back pain, if they were employed for less than six months, if they had been fired, laid off or if their position had been terminated. If individuals had job accommodations, their success rate increased and these accommodations appeared to reinforce employee attachment and overall job satisfaction. Perceptions of employer support were also associated with a successful return to work. There was also conflicting literature as to whether the receipt of compensation by the injured worker influenced successful back pain outcome. The employment and compensation variables offer some measure of predictability as to the outcome of clients with back pain although, due to the inter-relatedness of the variables, it is difficult to distinguish which are the most important. It is reasonable to assume that the importance of each of these employment

and compensation variables will vary by the individuals involved and the individuals' own needs, priorities and values at the time of their back pain.

Psychosocial Variables

The psychosocial variables identified within the literature included: perception of disability, perception of pain, overt pain behaviour, locus of control, psychosocial functioning, stressful life events, emotions, coping skills, and smoking. Much like the employment and compensation variables, the psychosocial variables are closely related to one another and to the employment and compensation variables. There are many instances where there are clear linkages and relationships between the variables with the variables influencing each other to varying degrees.

Perception of Disability

Perceived disability measured by the Oswestry Low Back Pain Disability Questionnaire indicated that the perception of disability at the time of injury was positively related to the duration of time loss (Cooper et al., 1996; Tate et al., 1999). Cooper et al. (1996) examined the relationship between the perceptions of pain and disability in back injured nurses over a six month period. When the control group of back injured nurses reported high disability at the time of injury, they continued to report high disability at six months.

However, Cooper et al. (1996) did not find that the Oswestry Low Back Pain Disability Questionnaire was predictive of disability in their treatment group of nurses and they hypothesized that the prompt rehabilitation program provided to their study group of back injured nurses decreased their perception of disability at the six month re-

test.

In their pre-test, post-test study design examining the relationship between pain and disability in back injured nurses, Cooper et al. (1996) found that "(N)urses who were aged 30 years or more had higher levels of disability than younger nurses, initially and at 6 months; however, nurses with greater ward experience and nursing experience had lower levels of disability than nurses with less experience" (p. 2335). Cooper et al. (1996) suggest that although age may increase the perception of disability, experience in performing the work may decrease the risk of becoming entrenched in the disabled role.

Perception of Pain

Lancourt and Kettelhut (1992) used the Oswestry Low Back Pain Disability Questionnaire as a measure of disability and they found that when individuals reported higher self reports of pain associated with lifting objects and discomfort during sex, they also had more negative outcomes.

Within the literature, various components of the pain experience were measured and they had varying degrees of predictability of successful recovery of the back injured worker. The lower back pain experience was measured by the McGill Pain questionnaire (Burton et al., 1995) and the worker's pain locus of control beliefs (Burton et al., 1995; Harkapaa et al., 1997). Both pain components had some measure of predictability with the injured worker's level of disability (Burton et al., 1995) and their own subjective measures of functioning (Harkapaa et al., 1997). As the pain increased, so did the back injured worker's level of disability and their subjective assessment of functioning decreased.

With Cooper et al., (1996) and Tate et al. (1999), back injured nurses were immediately offered a rehabilitation program that included individualized physiotherapy treatment; occupational therapy if the nurse was off work for greater than 4 working days and ergonomic evaluation. A non-equivalent control group design was used. Pain was measured by a Visual Analogue Scale and the Oswestry Low Back Pain Disability Questionnaire and both the control group and the study group completed the assessment tools at the time of injury and 6 months after injury. There was a strong positive correlation between pain and disability for both experimental and control groups and as pain decreased, so did perceived disability. However, the relationship of pain to disability was not as strong for nurses experiencing lower levels of pain and the early intervention lowered the perception of disability for nurses in the study group (Cooper et al, 1996; Tate et al., 1999).

Conversely, in Waddell et al. (1993) descriptive correlational study design, they looked at the role of pain avoidance behaviour in contributing to low back pain disability and they found "little direct relationship between pain and disability" (p. 163). Waddell et al. (1993) developed a Fear-Avoidance Beliefs Questionnaire (FABQ) to determine the role of fear of pain and evidence of pain in contributing to disability in people with lower back pain and their beliefs about physical activity and work. Waddell et al. (1993) determined that there is little relationship between pain and disability. Fear-avoidance beliefs did not increase with pathological severity but they did increase as the uncertainty of the diagnosis increased (Waddell et al., 1993) lending credibility to control as an important factor in lower back pain. "(I)t is the patient's beliefs rather than the

underlying physical reality which govern behaviour. Fear of pain and what we do about pain may be more disabling than pain itself" (Waddell et al., 1993, p. 164).

Overt Pain Behaviour

Overt pain behaviour with back pain was not a reliable predictor of outcome as patients with increased pain on presentation did not have increased disability at the end of the study (Burton et al., 1995). Hazard et al. (1991) also found there were no differences between workers who eventually returned to the work force and those that did not return between their initial pain assessments or the duration of their disability. The tendency for some back injured workers to exaggerate their disability had no predictability as to their eventual return to work rate. Within Hazard et al.'s study (1991), they hypothesized that disability exaggeration did not predict poor outcomes because of the efficacy of the counselling provided during the rehabilitation treatment program. Hazard et al. (1991) believed that the rehabilitation program provided to the back injured individuals was successful in treating the underlying problems of disability exaggeration. Factors that contributed to disability exaggeration included fears of re-injury, overly protective spouses, physician warnings against painful activity, sick-role familiarity, anxiety, depression, and other personality features (Hazard et al., 1991).

Locus of Control

The patient's own cognitions, especially their beliefs in the controllability of their back pain may affect treatment outcome (Harkapaa et al., 1997) and work absence related to back pain (Symonds, Burton, Tillotson & Main, 1996). Symonds et al. (1996) found a substantial and significant relationship between pain locus of control and work absence

related to back pain but because of the retrospective design of their study, it is possible that the longer absences from the workplace may have influenced locus of control or attitudes.

Psychosocial Functioning

Milhous et al. (1989) used the Minnesota Multiphasic Personality Inventory and a personal interview to assess illness behaviour, health locus of control, perceived stress, social support, adequacy of coping mechanisms, psychiatric symptoms and the subject's perception of capacity to return to work. Scores indicating better psychosocial functioning correlated significantly with return to work (Milhous et al., 1989). Elevated Minnesota Multiphasic Personality Inventory scores indicated poorer psychological functioning and were associated with decreased probability of return to work (Hazard et al., 1991; Milhous et al., 1989). Lower Minnesota Multiphasic Personality Inventory scales for hypochondriasis and hysteria were associated with better return to work outcomes (Milhous et al., 1989).

Toomingas, Theorell, Michelsen and Nordemar (1997) used a cross-sectional study design where they looked at the association between psychosocial work conditions and musculoskeletal tenderness. Men and women in various occupations completed a questionnaire which evaluated psychosocial work conditions and muscular tenderness in various body regions. Perceived poor psychosocial work conditions are associated with signs of muscular tenderness in central body regions.

Main and Watson (1995) reviewed several clinical studies that identified the predictors of outcome of treatment and rehabilitation of back injured workers and "(I)n

general, psychological factors seem to be much more important determinants of outcome than physical or demographic factors" (p. 212).

Stressful Life Events

Stressful life events have a negative impact on the back injured employee's return to the work place (Hasenbring et al., 1994) and workers who are less resilient in dealing with their problems are less likely to return to work quickly. In a descriptive review of the characteristics of workers receiving disability insurance, 76% of quick returners say they refused to feel victimized by their condition, compared with 43% of slow returners (Althoff & Andruss, 1996). This suggests that those individuals who can adequately cope with and control their environment return to work more quickly.

Factors associated with increased stress, such as relocation because of problems, difficulty coping and financial hardship were correlated with a decreased tendency towards return to work (Lancourt & Kettelhut, 1992). Back injured workers who eventually returned to the work place had fewer problems in coping with their family or personal situation and they did not report financial difficulty (Lancourt & Kettelhut, 1992). Patients with two or more of these stress related problems were less likely to return to work (Lancourt & Kettelhut, 1992). The Statistics Canada longitudinal household survey (Perez, 2000) also confirmed that chronic stress was significantly associated with chronic back problems.

Emotions

Negative emotional reactions such as psychological distress, anxiety and depression predicted a poorer treatment response in patients with low back pain

(Harkapaa et al., 1997). If the injured worker was depressed, his or her probability of decreased pain (Hasenbring et al., 1994), increased functioning (Burton et al., 1995; Harkapaa et al., 1997) or return to work decreased significantly (Hasenbring et al., 1994). The predictive value of the Beck Depression Index for back pain outcome was replicated within Hasenbring et al. (1994). All three studies (Burton et al., 1995; Harkapaa et al, 1997; Hasenbring et al., 1994) used a prospective, longitudinal design and yielded similar results. Treatments varied from osteopathic, (Burton et al., 1995) rehabilitation (Harkapaa et al., 1997) to surgical (Hasenbring et al., 1994) yet all three studies yielded similar results.

The Statistics Canada longitudinal household survey (Perez, 2000) confirmed that depression was associated with chronic back problems. Fourteen percent of workers who reported depression in 1994/95 had developed a chronic back problem two years later. This was a significant statistical relationship compared to workers who did not experience depression.

Coping Skills

Turner & Clancy (1986) looked at coping strategies for chronic low back pain and they found that if subjects could be taught appropriate coping strategies for their back pain, their pain level decreased in conjunction with their level of disability. Turner & Clancy (1986) used a strong study design by using random assignment to one of two experimental groups: cognitive behavioural therapy or operant behavioural therapy with a non-equivalent control group. Turner & Clancy (1986) used a prospective descriptive pre-test, post-test design and they described the treatments the subjects were receiving. They

discovered that if individuals with back pain used strategies that decreased catastrophizing and increased their use of praying and hoping, their pain intensity decreased.

Back injured workers with adequate and appropriate coping strategies are more likely to return to the workplace (Burton et al., 1995) and the motivation and cooperation of the back injured worker has an impact on their success with returning to work (Roessler, 1989).

Smoking

Smoking was the only characteristic that distinguished successful from non-successful participants in Hazard et al.'s (1991) return to work program. Subjects who were cigarette smokers at the onset of the program were less likely to be working at one year after program completion than nonsmokers (Hazard et al., 1991). Other studies have confirmed that smoking has an impact on the ultimate successful return to the work place (Frymoyer et al., 1980; Lancourt & Kettelhut, 1992; Perez, 2000). Within the Statistics Canada longitudinal study (Perez, 2000) smoking was the only significant lifestyle factor associated with chronic back pain. The percentage of daily smokers who developed a chronic back problem was a 11%, compared to 8% for non–smokers.

Lancourt and Kettelhut (1992) did not explain why smokers had more difficulty with the return to work process but Frymoyer et al. (1980) had two hypotheses to explain why smokers had more difficulty with return to work. Initially, they hypothesized that smokers were emotionally selected in a biassed fashion for the low back complaint and smoking may be related to anxiety and depression, however, they found no difference in

anxiety and depression measurements between two study populations, one with and the other without back pain. Smoking may also produce significant hormonal alterations that increase low back pain and it may also produce other problems that may increase the probability of low back pain, such as chronic cough (Frymoyer et al., 1980).

Summary - Psychosocial Variables

It appears that perception of disability can be decreased if prompt rehabilitation returns injured nurses to the workplace in a timely manner (Cooper et al., 1996). The linkages between pain and disability were not clear and increased pain did not necessarily result in increased disability (Cooper et al., 1996; Waddell et al., 1993), although in some cases there did appear to be a link between pain and poor outcome (Burton et al., 1995; Harkapaa et al., 1997). Overt pain behaviour was also not reliable predictor of return to work outcome (Burton et al. 1995; Hazard et al. 1991). Generally, better psychosocial functioning contributed to better outcomes (Milhous et al., 1989; Hazard et al. 1991; Main & Watson, 1995; Toomingas et al. 1997).

Stressful life events negatively impacted upon positive outcomes (Althoff & Andruss, 1996; Hasenbring et al., 1994; Lancourt & Kettelhut, 1992; Perez, 2000) as did negative emotions (Burton et al., 1995; Harkapaa et al.,1997; Hasenbring et al.,1994; Perez 2000). Adequate coping skills appear to have positive relationship with good outcomes (Burton et al., 1995; Roessler, 1989; Turner & Clancy, 1986) and smoking appears to have a negative impact upon successful outcome (Frymoyer et al.,1980; Lancourt & Kettelhut, 1992; Hazard et al. 1991; Perez, 2000).

Summary of the literature

The literature reviewed utilized a variety of quantitative methodologies including experimental, quasi-experimental and non-experimental formats with both retrospective, prospective and descriptive designs. The studies varied in their design, the demographic characteristics of the subjects, sample size, treatments, measurement and outcome variables. Deyo (1993) competed a literature review of the research surrounding back care treatment and noted that,

> (M)ost would agree that factors such as previous surgery, compensation status, neurological deficits, duration of pain complaints, and psychologic traits have a profound influence on the outcomes of most treatments for low back pain . . . surely these prognostic factors should be reported in any study of low back pain to permit valid generalization of the results and valid comparisons with other populations or treatments.. . Thus, inadequate patient description is a pervasive problem (p. 2155 - 2156).

Despite work related back problems being extensively studied, the factors contributing to back injury are inconsistent (Perez, 2000). This inconsistency stems from differences in the outcome: new versus old injuries; acute and chronic problems; and upper back, lower back and general musculoskeletal disorders; pain; and disability. The etiology of nonspecific back pain is considered multi-factorial and no one factor seems to be sufficient to cause low back pain nor does any factor seem to be necessary to develop low back pain (Wickstrom & Pentti, 1998).

The studies reviewed had varying levels of patient description and some articles did not note the gender of the subjects (Burton et al., 1995; Dworkin et al., 1985; Lancourt & Kettelhut, 1992; Milhous et al., 1989; Main & Watson, 1995; Tate et al., 1999; Xu et al., 1996)

Some studies did not indicate average age (Cheung, 1999; Hazard et al., 1989; Milhous et al., 1989; Symonds et al., 1996; Xu et al., 1996) while other studies did not indicate the age range (Burton et al, 1995; Catchlove & Cohen, 1982; Cheung, 1999; Dworkin et al., 1985; Foreman & Murphy, 1996; Hazard et al., 1991; Hazard et al., 1989; Toomingas et al.,1997; Symonds et al., 1996; Waddell et al., 1984) and only three studies noted the ethnicity of the subjects (Brewin et al., 1983; Waddell et al., 1993; Williams et al., 1998). The lack of consistency in the reporting of demographic variables makes it difficult to compare between studies.

Some of the studies had small sample sizes, (Catchlove & Cohen, 1982; Foreman & Murphy, 1996; Martin et al., 1994; Main & Watson, 1995) large attrition rates, (Beissner et al., 1996; Brewin et al. 1983; Hazard et al., 1991) and many of the designs themselves did not allow for causal relationships to be drawn (Dworkin et al., 1985; Frymoyer et al., 1980; Martin et al., 1994).

In many studies, it was unclear if the individuals who were administering the treatment were also collecting the data from the subjects and the data may be biassed if the data collectors were the same individuals who were providing the treatment to the subjects. Participants in the research may not have felt confident in expressing their true responses if they had a relationship with the data collectors. Deyo (1993) believes that "it is easy to underestimate the importance of attention and concern from a research staff, or the enthusiasm and conviction of an investigator" (p. 2157).

Although there have been many studies that have incorporated a treatment with back injured individuals, there is no clarity as to what specific components of the

treatment were effective. Is it the physical rehabilitation, the psychological counselling or the unique characteristics of the individual that determines the successfulness of the treatment program? The research studies reviewed lend no insight into what the actual determinants of a successful outcome are and given the inter-relatedness of many of the variables, it is questionable whether this is an achievable goal. Main and Watson (1995) acknowledge that with back injuries "much effort has been directed at the identification of risk in the work environment" (p. 208) with the focus on environmental or ergonomic characteristics of the work environment with "(R)elatively little attention paid to psychosocial risk factors" (p. 208).

Deyo (1993) has noted that patients may improve "even in the face of ineffective treatment"(p. 2157). Improvements may be attributed to placebo effect, but the natural history of back pain is typically to improve regardless of therapy (Deyo, 1993).

"There has been increasing recognition that an adequate understanding of illness, and particularly incapacity requires a broader perspective than the traditional disease model" (Main & Watson, 1995, p. 208) and it becomes evident that back pain has a strong psychosocial component associated with it.

Despite the varying designs and methodologies, none of the reviewed articles involved the back injured individuals in determining which variables were significant in contributing to their continued back pain and which variables were significant in palliating their disability. The employment and psychosocial predictors of continued back pain disability were the only variables that consistently indicated some measure of predictability as to which individuals would proceed to back injury disability and which

would recover from their back pain uneventfully. Given the strong psychosocial component to back pain disability, it appears prudent to involve back injured workers in their recovery process and question them as to what would be effective strategies to palliate their disability and encourage their return to work.

Frank et al. (1996 b) summarizes the futility of searching for predictive variables related to poor low back injury outcome.

> Early identification of patients 'destined for chronicity,' to offer them more intensive treatments before chronicity sets in, represents a kind of Holy Grail for back pain researchers. However, despite many valiant efforts to find it, the Grail's whereabouts are pretty much unknown. It is humbling to admit, after decades of research on the subject, how little we know about the early identification of who does and does not get better quickly, and why recovery time varies so greatly (Frank et al., 1996 b, p. 2919).

Therefore, research should focus on ways of limiting disability by helping people to cope with lower back pain once it has developed (Frank et al., 1996 a; Hazard, 1994).

CHAPTER THREE

Research Design

Introduction

Research design methodology; population and sample collection; recruitment strategy; and data analysis are discussed in this chapter. The challenges associated with data collection are addressed, as is a description of the setting in which the interviews and data collection occurred. The process used to obtain consent from participants is also presented. Included is a section on how the data were analysed.

Qualitative Approach

I used person-centered interviewing for this exploratory study to determine, from the back injured Registered Nurse's perspective, her experience with back injury and return to work issues. Person-centered interviewing arises from the tradition of ethnography. Person-centered interviewing and observation techniques clarify the individual's relationship to a sociocultural context, in this case the experience of the back injured nurse (Levy & Hollan, 1998). I wanted to determine from the back injured Registered Nurse's perspective her experiences as a back injured nurse and also refine knowledge surrounding return to work issues. I also wanted to identify significant issues and variables related to return to work.

Kleinman (1992) supports the use of qualitative methodology in medical research and qualitative research is appropriate when interpretation is required to provide insight that will change behaviour, refine knowledge, identify problems or to provide verification about assumptions. Peshkin (1993) states that,

> (T)he ethnographic approach to illness and care clarifies the social course of illness and the social construction of clinical work, and it opens for study a range of novel if vexed questions concerning the interplay between social, psychological, and physiological factors in health and sickness. It also gives access to aspects of suffering that are obscured and distorted by standard biomedical and epidemiological studies (p. 131 - 132).

Data collected through qualitative approaches can help clarify issues that may lead to identified outcomes, and in this case it would be the outcome of back pain recovery or disability. From her nursing experiences with people with chronic illness, Donnelly (1993) found that patients:

> 1) understand the illness experience better than any expert
> 2) often develop strikingly creative strategies to deal with the burden of chronic illness
> 3) show incredible growth in the face of chronic illness
> 4) can teach and guide care givers to adjust their practices to patient's perspectives (p. 1 - 2).

It is for all of these reasons that the voice of the back injured nurse should be heard. "Current methods of management are not preventing an epidemic of low back pain" (Deyo, 1993, p. 2154) and perhaps it is time that the perspective of the back injured individual is heard. The person-centered interviewing approach requires the input of the individual in the research process. The interviewee is both informant and respondent. As an informant, the participant is an expert witness and as a respondent, he or she explores and describes what he or she understands about his or her situation. There is a seamless transition between informant and respondent roles (Levy & Hollan, 1998).

Magrega, Spencer and McDaniel (1993) support the beginning of qualitative work in the area of back injuries by stating that

> prior to a more lengthy statistical analyses of demographic variables, there is a

> need here for some qualitative research which will help develop a model of the rehabilitation process and thus narrow down the range of possible variables to be considered as influencing factors (p.16).

This belief is supported by Frank, Pulcins, Kerr, Shannon and Stansfeld (1995) who believe that,

> without the insights provided by preliminary qualitative work, there is little hope of appropriately modelling the development of ill health when large numbers of social and psychological variables are used that are frequently collinear, as in the case of occupational back pain (p. 10).

Assumptions that guided data collection included the following: people understand their own experiences, they can communicate their own experiences, and they have knowledge related to the experience that can be used for improving outcomes. Given these assumptions, qualitative methodology is warranted, as is an appropriate research strategy: person-centered interviewing.

Quantitative Approach

Participants completed a demographic questionnaire and the Roland-Morris Disability Questionnaire. The Roland-Morris Disability Questionnaire is a quantitative instrument that is used to determine the level of perceived disability as a result of back pain. The Roland-Morris Disability Questionnaire is a self-report measure that describes the effects of an individual's back problem on various dimensions of daily living (Beattie & Maher, 1997) and it takes approximately five minutes to complete (Roland & Morris, 1983).

The Roland-Morris Disability Questionnaire was used as an objective measure of the back pain Registered Nurses were experiencing and how the back pain impacted upon

their level of functioning. It allowed the participants an opportunity to quantify their disability and resulted in a numerical score of disability. The numerical score was then used for comparative purposes to determine if reported limitations in activities of daily living corresponded with poor outcomes related to return to work. The Roland-Morris Disability Questionnaire provided a relative measure of disability that could be generally compared among the participants and among other studies. The small sample size ($n = 6$) would not allow for rigorous quantitative statistical analysis of the numerical data, but would allow for general impressions of the level of functioning of the participants.

The approach of combining both of qualitative and a quantitative research methodology allowed for data triangulation. Data triangulation allows for the opportunity to combine multiple measurement techniques and add strength to the quality of the data (Williamson, Karp, Dalphin & Gray, 1982). Rich descriptive narrative as well as numerical measurable data were generated. The quantitative instrument was added in order to measure the level of functioning for respondents and determine a relative level of functioning of the group of participants.

Combining both quantitative and qualitative data within one study can provide insights from different levels that might be unattainable without such integration (Polit & Hungler, 1991). Blending quantitative and qualitative data was desirable because the quantitative data complemented the descriptive, narrative data by providing numerical data which aided the measurement and reporting of the level of disability of the back injured Registered Nurse.

Sample

Within person-centered interviewing, the interviewer selects participants who are living the phenomenon under investigation and in this case it is the experiences of compensable back injured Registered Nurses.

Criteria for Selection

The sample consisted of female back injured Registered Nurses who were away from work as a result of their back injury for 4 weeks or longer and currently away from their substantive position. Originally, the desired sample was back injured Registered Nurses who were receiving workers compensation benefits and away from the workplace for 12 weeks or longer. Back injured individuals who have been receiving workers compensation benefits for greater than 12 weeks are considered chronically disabled and this group is the most difficult one to return to the workplace (Frank et al.,1996 a). However, finding nurses who had been away from the workplace because of a back injury for greater than 12 weeks proved to be difficult. Occupational health nurses working with back injured Registered Nurses indicated that few back injured nurses are away from work because of a back injury for longer than 12 weeks at a time and this specific sample would be difficult to generate. The inclusion criteria were therefore changed to include back injured Registered Nurses who were away from their substantive position for four weeks or longer as a result of a back injury and the back injury did not have to be because of a work related accident.

There were no specific exclusion criteria regarding age or ethnicity and final inclusion criteria included: back injured Registered Nurses who were away from their

substantive position for four weeks or longer, individuals who spoke English, and lived in Winnipeg or within a short commute to Winnipeg.

The sample was collected by purposive sampling in order to select according to the informational needs of the study (Morse, 1991). Data collection was originally targeted for approximately twenty participants and was to cease when data saturation occurred. However, finding an adequate number of back injured Registered Nurses who met the inclusion criteria and who would agree to participate in the study proved difficult. The inclusion criteria were relaxed as mentioned previously in order to not screen out any potential candidates and to maximize the potential for accruing participants. After initial difficulties with garnering the target sample size of 20 participants, the target sample size was decreased to 10 participants. Data collection continued for one and half years and a variety of methodologies were attempted to recruit the appropriate number of participants. A final sample size of six was realized.

Sample Recruitment Methods

In order to generate the sample, an advertisement was placed in the publication Nurscene calling for female Registered Nurses who had experienced a work related back injury and who had been away from the workplace for four weeks or longer. Nurscene is a publication of the College of Registered Nurses of Manitoba (formerly the Manitoba Association of Registered Nurses) and it is delivered to all Registered Nurses within Manitoba. The advertisement was repeated for three publications and it contained an invitation for interested nurses to participate in the study. My home phone number was included to obtain more information regarding the study (Appendix B). Information

regarding the study was transmitted via a script and questions from the participants were answered and explained (Appendix C).

Concurrently, occupational health nurses from several major hospitals within the City of Winnipeg were asked to act as intermediaries in order to generate the sample. The participant sample was solicited in cooperation with the following health care centres: the Health Sciences Centre, the St. Boniface Hospital, the Grace Hospital, the Seven Oaks Hospital, the Seven Oaks Wellness Center, the Riverview Health Centre and the Victoria Hospital. The occupational health nurses at these institutions were asked to contact back injured Registered Nurses and request their participation. At the Seven Oaks Wellness Center, contact was made with the Director of the facility, and physiotherapists within the Seven Oaks Wellness Center who were treating back injured Registered Nurses were encouraged to explain the study to the potential participants and to recruit participants. Posters explaining the study were placed on bulletin boards around the facility requesting the participation of Registered Nurses.

Occupational health nurses of the various facilities were aware of which of their injured employees met my inclusion criteria. Occupational health nurses contacted potential participants by telephone or in person, and explained the study via a provided script (Appendix D) in an attempt to recruit participants. At their request, some occupational health nurses were provided with a standard letter explaining the study which was printed on brightly coloured paper. The occupational health nurses then either telephoned the back injured nurse or mailed this invitation letter to potential participants (Appendix E). In some instances, both recruitment techniques were used by the

occupational health nurse.

Once contact was made between myself and the potential participants, the study was explained via a script and the nature of the back injured nurse's participation was discussed. One occupational health nurse provided names and phone numbers of interested back injured Registered nurses to myself, while other occupational health nurses asked back injured nurses to contact me directly. Providing me with the name and phone number of interested back injured Registered Nurses greatly facilitated the recruitment process as three of the six participants were recruited in this fashion. Two participants were recruited through the advertisement in the Nurscene while the other participant was directed to contact me at the request of her facility occupational health nurse.

Participant Recruitment Difficulties

Because of the difficulty with participant recruitment, a research assistant was hired to facilitate the participant recruitment process. The research assistant was a Registered Nurse and her role was to go to the various health care facilities, establish a relationship with the key personnel within these facilities, and develop strategies to encourage recruitment. Her contract stated that she would work a total of 20 hours for this recruitment process. However, she logged far greater than the 20 hours originally contracted for and met with me several times to discuss the recruitment process. Only one additional participant was recruited through this recruitment strategy. The research assistant did speak to one potential participant who had decided not to participate in the study, and this potential participant had stated that she did not have the time nor the

energy to participate in the study at this time. The potential participant stated that her day was filled with medical and physiotherapy appointments and her energy was limited because of her back pain.

Upon reflection regarding the difficulties with participant recruitment, and after speaking to back injured Registered Nurses, it is easy to understand that back injured nurses do not have the time nor the energy to commit to the additional task of a personal interview. Back injured Registered Nurses are in pain, their personal resources are often strained, and they have limited ability to give of themselves at this difficult time. One of back injured nurse who I had interviewed, stated that if she had been asked to participate in the study the previous week, she would have refused to participate. Her back pain at that time was so intense that she could not have coped with sitting or standing through an interview. When I spoke to her within the interview, her pain was well controlled and she was able to manage her back pain throughout the interview without too much difficulty. Other back injured nurses either sat in a special chair or with a special pillow; changed position frequently throughout the interview; or alternated between standing and sitting positions.

Protection of the Participants

Prior to participation, the study was explained and if participants agreed to participate, they were asked to sign a consent form indicating their understanding of the study and their role within the study (Appendix F). Participants were advised that they could refuse to answer questions if they wished and they could withdraw from the study at any time. Ethical approval was sought and received from the Ethics Committee of the

University of Manitoba Faculty of Nursing (Appendix G) and access approval was gained to all of the health care facilities used within the sample collection. Each of the facilities vetted the study through their own Facility Access Committees and granted permission for access to the back injured Registered Nurses within their facility.

Setting

The interviews and the completion of the demographic and Roland-Morris Disability Questionnaire were achieved at a location of the participant's choice. Two of the interviews were conducted in neutral locations (the College of Registered Nurses boardroom and a classroom within a local hospital); and the other four interviews were conducted in the participants' homes. The participants were made to the feel comfortable and their participation in the study was positively reinforced. Where possible, coffee and dainties were shared in order to facilitate a relaxed atmosphere.

Data Collection

Demographic Questionnaire

After the study was explained and the consent form was signed, the participants were asked to complete some basic data using a demographic information collection form (Appendix H). The demographic information was used to gather descriptive data regarding the participants. The descriptive data collected allowed for an opportunity to understand the participants in terms of their ages, work environments, home environments, time away from the workplace and financial means.

The Roland-Morris Disability Questionnaire

The Roland-Morris Disability Questionnaire gathers data from the perspective of

the participants to determine their level of functioning as a result of their back pain (Appendix I). The Roland-Morris Disability Questionnaire is a relational nominal scale and participants indicate whether their activities of daily living are limited by their back pain or not. This scale is scored by giving one point for each positive risk result with zero points indicating no disability and maximum score of 24 indicating severe disability (Roland & Morris, 1983). The more limitations they indicate, the greater their level of impairment related to back pain. Participant's pain either interferes with their activities of daily living or it does not and participants were asked to check off the statements on the questionnaire that described their mobility on that day.

The Roland-Morris Disability Questionnaire was developed as part of a study designed to describe the natural history of back pain and it was constructed by choosing statements from the Sickness Impact Profile (Roland & Morris, 1983). Kopec and Esdaile (1995) reviewed five functional disability scales for back pain published between 1980 and 1984 and they found the Roland-Morris Disability Questionnaire the most frequently cited back pain scale in the medical literature. There were no difficulties associated with the acceptability of the scale among patients (Kopec & Esdaile, 1995).

The short term repeatability of the Roland-Morris Disability Questionnaire was determined to have a correlation coefficient of 0.91 between a questionnaire administered during the day and the same questionnaire administered later at home on the evening of the same day (Roland & Morris, 1983). Testing the extent to which the same individual items were picked on two occasions was determined by an agreement percent coefficient which was calculated as the number of agreements with the same response and a

numerical value of 0.83 for the Roland-Morris Disability Questionnaire agreement was calculated (Roland & Morris, 1983).

When Roland and Morris (1983) compared the Roland-Morris Disability Questionnaire to a six point rating scale, they found good agreement between the two instruments. The validity of the questionnaire was determined by comparing the responses to a six point pain rating scale with the Roland-Morris Disability questionnaire. This generated a relative measure of pain and mean score on the Roland-Morris Disability Questionnaire (Roland & Morris, 1983). Construct validity measures the agreement between scales in order to measure their validity as instruments and the Roland-Morris Disability Questionnaire had a correlation of 0.74 with the Sickness Impact Profile and a range of correlation of 0.59, 0.78 and 0.89 with the Oswestry Low Back Pain Disability Questionnaire (Kopec & Esdaile, 1995). Cronbach's alpha coefficients were measured at 0.89 and 0.92 (Kopec & Esdaile, 1995).

When comparing the responses on the six point pain rating scale to the Roland-Morris Disability Questionnaire, the following results were generated.

Table 8

Roland-Morris Disability Questionnaire Comparison With Pain Scale

	Roland-Morris Disability Questionnaire Score	
Grade ticked on pain rating scale	**Mean score**	**95% confidence limits**
The pain is almost unbearable	14.4	9.5 - 19.3
Very bad pain	15.6	14.2 - 17.0
Quite bad pain	12.1	10.9 - 13.3
Moderate pain	9.4	8.3 - 10.5
Little pain	8.3	6.1 - 10.4
No pain at all	3.0	1.0 - 5.0

(Roland & Morris, 1983, p. 142).

Roland and Morris (1983) found that the Roland-Morris Disability Questionnaire was more discriminating of outcome than the Pain Rating scale and they hypothesized that the outcome perceived by the patient is less influenced by the pain experienced than by the disability that results from the pain. Interestingly, "very bad pain" scored 15.6 on the 24 point Roland-Morris Disability Questionnaire while the statement "the pain is almost unbearable" scored lower on the Roland-Morris Disability Questionnaire with a result of 14.4. Roland and Morris(1983) do not address this discrepancy within the development and testing of their measurement tool.

The Roland-Morris Disability Questionnaire was chosen for this study because of its ability to measure back pain and the resultant impact upon activities of daily living, the representativeness of the activities of daily living listed, and the ease of administration and measurement. The small sample size within this person-centered interview study (n =

6) does not allow for the results of the questionnaire to be generalized to other populations. However, it is used as a relative measure of disability and a means to allow the participants to objectively self-report their level of functioning.

Semi-structured Interviews

Data collection was completed by semi-structured interviews of approximately two hours in duration. The interviews were tape recorded, transcribed verbatim and the interview followed a semi-structured format. There were general areas that were typically addressed, but the flow of the conversation was largely guided by the participants. The interview questions centered around the back injured Registered Nurse's injury and experience with her workplace, family and friends as a result of the injury (Appendix J).

Person-centered interviews require a mixture of informant and respondent type questions with probes to elicit more information. An informant question may be "tell me how you hurt your back" while the respondent type question may be "how did you feel when you hurt your back?". Inquiries into specific topics generate stories (Levy & Hollan, 1998) and it was the stories of back injured nurses that I was interested in hearing. Both informant and respondent type questions were asked as well as appropriate probe questions as indicated by the responses.

Semi-structured interviews with open ended questions were used in order to encourage participants to expand upon their experiences (Appleton, 1995) and I adopted the stance of a learner. A sympathetic and non-judgmental attitude was presented in order to facilitate communication and understand what the participant was trying to relate (Levy & Hollan, 1998). Field notes were written at the end of each interview and they included:

personal insights; details of the environment surrounding the interview; the physical mannerisms of the participant or significant insights gleaned during the interview.

An error in recording occurred during the final interview with the disappointing result that the interview was not recorded. The discovery that the interview was not recorded was made within a few hours of the interview so there was an opportunity to manually record some of the more memorable comments made by the participant. The sixth interview also occurred while I was in the middle of analysing the other five interviews and identifying categories and themes in the data. During interview six, I found myself listening to the story of the back injured nurse and silently organizing her responses under the identified themes and categories. I noted that her story was remarkably similar to the previous participants and many of the same issues were identified. So, although it is truly disappointing that the sixth interview was not tape recorded, the data that was salvaged is still valuable to the overall study. The exact words of the sixth interviewee will not be used but where her comments add a new dimension to the data, they will be paraphrased and presented in the data findings.

Data Analysis

Data collection and data analysis occur simultaneously with a "spiral of increasing complexity rather than along a linear continuum" (Rizzo Parse, Coyne, & Smith, 1985, p. 75). Within the ethnographic tradition - including person-centered interviewing, content analysis is the primary form of data analysis (Germain, 1993). The analysis begins with the search for categories. Language is analysed for relationships and data are expanded upon and verified (Liehr & Taft Marcus, 1994).

The tapes of the interviews were transcribed verbatim by a transcriptionist. I then listened to the tapes and the typed words were matched and corrected against the spoken words on tape. The tone of the conversation was noted as well as any inflection in the voices; and the transcription was re-read again in its entirety. The data analysis process involved immersion into the data and ongoing reflection. The words of the participants were re-read many more times during the data analysis.

The first level of analysis involved re-reading the entire interview and coding phrases and topics within the raw data. The interview was coded by providing a descriptive heading for each portion of raw data and each descriptive heading was placed on a separate piece of paper. Each piece of paper with its descriptive heading was then physically sorted into categories with relative similarities of content. This process was repeated with each of the six interviews.

It was at this point, transcribed data was discarded that did not lead to a deeper understanding of the back injured Registered Nurse's experience. Data that was discarded at this point included demographic data that was captured in another location or data that was unrelated to the experience of the back injury.

Patterns within the coded data were identified and the patterns were grouped. The outcome of this grouping was the formation of categories. Initially, the categories were broad but became more refined and organized as a deeper understanding of the data evolved. Categories that initially evolved were broad and inclusive categories that contained similar information or content.

The data within the broader categories was reviewed to ensure that it had been

appropriately categorized and data was physically moved among the categories as required. The next level of analysis involved the uncovering of relationships among the larger categories. The data within the larger categories was reviewed to determine the relationships between the categories. From these larger categories evolved sub-categories of data with similar meaning and content. These sub-categories of content were then placed with other sub-categories of similar content. The final level involved theme analysis which identified the conceptualizations that connected the sub-categories (Rizzo Parse et al., 1985). What resulted were the identified themes and categories that supported the themes.

Once the categories and themes were identified, participant statements that clearly depicted the category were selected. These participant statements were further culled to reduce redundancy and to select a statement that clearly illustrated the character of the category. The data analysis process involved the distillation of data so that meaning and understanding could result from the stories of the participants.

The original corrected and uncoded transcripts were kept in a secure location and referred to as required to check against the recorded transcripts for context and location within the raw data. Field notes were referred to throughout the data analysis process which helped apply another dimension of understanding to the data. The field notes recorded the general tone of the interview, my own thoughts and reflections after the interview and my general impression of the interview. In concert, the patterns in the data and the field notes helped me to gain a deeper understanding of the data. The field notes allowed me an opportunity to reflect upon the words of the participants and begin the

analysis process.

The quantitative data of both the demographic and the Roland-Morris Disability Questionnaire helped to support and interpret the qualitative data by providing objective descriptive data regarding the demographic, work environment, home life, and financial means of the participants. Demographic data were analysed and organized. Scores from the Roland-Morris Disability Questionnaire were tabulated and the number of positive responses was averaged and the range of responses was noted.

Ethical Considerations

Ethical approval was obtained from the Ethical Review Committee, Faculty of Nursing, University of Manitoba in order to ensure that a neutral body reviewed the study to protect the interests of the informants. The facilities where the participants worked also provided an ethical review of the study and granted access.

A neutral individual (the occupational health nurse of the facility) initially approached the participants to explain the study and determine their possible interest. Two of the participants self presented for the study; one of the participants was asked to contact me by the occupational health nurse at their facility; while the other three had their name and telephone number given directly to me by the occupational health nurse of the facility. The occupational health nurses were given a script to read in order to explain the study and I explained the study again upon initial telephone contact with the potential participant.

At the face-to-face meeting with the participant, I explained the study again, received the participant's verbal consent to continue with the interview, and the consent

form was explained and signed by the participant. I reinforced that the participant could choose to not answer any question at any time and that she was also free to withdraw from the study at any time. Levy and Hollan (1998) note that all interviews provide some kind of immediate psychological reward for interviewees because the interviewees perceive themselves to be taken seriously. As per Levy and Hollan's (1998) observations, back injured Registered Nurses participating in the study generally felt pleased that someone was listening to their story and their hope was that their words would help make the return to work process easier for other nurses.

Methodological Rigour

Reliability and validity are measures of the trustworthiness of quantitative data, but they are not appropriate measures of the trustworthiness of qualitative data. The trustworthiness of qualitative data can be established by truth value, applicability, consistency and neutrality (Lincoln & Guba, 1985).

Truth Value

Within a qualitative study, truth value is evaluated by its credibility (Appleton, 1995). A qualitative study is deemed credible if it reveals accurate descriptions of the individual's experiences so that people living that experience immediately recognize it. The truth value within this study was reinforced when repeated participants related the same issues and lived experiences. The truth value will also be reinforced if other studies support the data disclosed by the participants.

Applicability

The applicability of the data may be challenged by elite bias and this results when

the participants who participate are the most accessible or articulate members of the sample group (Sandelowski, 1986). This bias was addressed by gaining a thick description of the lived experience of the back injured nurse so that no one participant dominated the data set. The richness of the data permits it to be transferred to other situations (Guba & Lincoln, 1989). The extent to which the results can be transferred to other populations is the fittingness of the data (Tatano Beck, 1993) and this was facilitated by the rich description and the use of multiple data sources where possible. Field notes were kept regarding specific observations made during the interviews and aided in the interpretation of the data. The observations made included statements that described the tenor of the discussion or my personal thoughts regarding the interview. When the data were transcribed, the tone and emotions behind the words were also recorded.

The demographic data and the Roland-Morris Disability Questionnaire allowed for a triangulation of data sources to reinforce the trustworthiness and credibility of the data. The qualitative and quantitative data complement each other by filling in information gaps in the data and allowing for a more complete representation of the participant's experience as an injured worker. The various data sources allowed for comparison between the data to reinforce it or provide an added dimension to the participants' experiences.

Consistency

Consistency is met when the results are auditable (Lincoln & Guba, 1985) and auditability was facilitated by the recording measures used. Auditability refers to the

ability for another researcher to approximate the results given the same data set (Tatano Beck, 1993). To facilitate auditability, the interviews were tape recorded, transcribed verbatim and the transcription verified for accuracy. The tapes were listened to and checked against the transcribed data for accuracy. As mentioned previously, the sixth interview is not auditable because of the failure of the recording device during the interview. However, notes were made within a few hours of the interview being completed and those notes are available for review. Excerpts from the transcripts were included within the presentation of the data to provide justification of the themes and categories. The justification for the emerging categories and themes was documented and confirmed with my thesis chair.

Neutrality

Neutrality is the freedom from bias (Sandelowski, 1986) and bias was identified through the use of personal reflection and de-briefing. Once identified and acknowledged, bias can be guarded against. Personal reflection allowed me to identify my own biases and ensure that I did not transmit that bias by asking leading questions or allowing my demeanor or body language to influence the participants. A balance between objective detachment and intense empathy was struck during the interview. Objective detachment would not have provided an environment conducive to information sharing. Conversely, intense empathy may have only revealed a portion of the participant's story or directed the story. Therefore, an understanding, yet balanced tone was maintained throughout the interview.

De-briefing with a neutral peer also aided in the identification of bias and aided in

maintaining objectivity. Levy and Hollan (1998) warn against "cognitive distortion" which is a misunderstanding of the words and the experience that is being described based upon the interviewer's prior experiences. This was checked and corrected by re-phrasing the statements of the participants and asking for clarification as required. Self awareness and self monitoring were maintained throughout the interviews to avoid injecting bias into the words of the participants. The currently identified personal bias of the researcher is that the perspective of the back injured individual within the recovery process has not been heard.

Summary of the Research Design

Back injuries can create significant disability in the injured worker and numerous studies have attempted to determine the significant factors that contribute to recovery or disability in the back injured individual. The proposed person-centered ethnographic study will attempt to determine from the back injured worker's perspective which factors are contributing to their disability and which factors are significant in their recovery. Butler et al. (1995) maintain that returning workers with permanent impairments to the workplace cannot be accomplished by focusing only on the medical treatment of injuries, so perhaps it is time that the perspective of the back injured worker was heard.

CHAPTER FOUR

Findings

Introduction

Chapter four presents the quantitative and qualitative findings of the participants. Quantitative data includes the demographic information and the results of the Roland-Morris Disability Questionnaire. The qualitative data includes the five themes that were identified within the stories of the back injured nurses.

Quantitative Data

Demographic Data

The six female Registered Nurses who participated in the study had an average age of 44.6 years, median age of 46 years and age range of 31 to 52 years. Four of the nurses worked on an adult medical unit, one on a medical rehabilitation unit and one in an intensive care/critical care unit. Four nurses worked full-time hours on one unit within one facility; one nurse had a substantive position of 0.7 equivalent full-time hours but augmented her hours in order to be considered full-time; and another nurse worked part-time hours within three facilities in order to work enough hours to fill a full-time position. Two nurses were married, three were single and one was divorced. One of the married nurses was single at the time of her injury. Five of the nurses were diploma educated. One nurse received her Bachelor of Nursing degree after her back injury but had a diploma at the time of her injury. One nurse was a Registered Psychiatric Nurse in addition to being a Registered Nurse.

One nurse had three children who were clearly dependents and another nurse had

an adult child who moved back home and was living with her. The other four nurses had no dependents. Four of the six nurses worked eight-hour shifts while the other two worked 12 hour shifts. The average time away from the workplace was 48.5 weeks with a median of 45.5 weeks and a range of 6 to104 weeks.

One nurse was a smoker, and she smoked half a pack of cigarettes per day for the past 30 years. One nurse chose not to reveal her yearly income but among the other five nurses the average income was $48,000, median income of $45,000 and income range of $20,000 to greater than $100,000 for one of the married nurses. The average and median income was calculated using the middle value within each income range i.e. $20,000 to $29,999 = $25,000; $40,000 to $49,000 = $45,000. Four of the six nurses were single wage earners in the family at the time of the interview, although five of the six nurses were single wage earners at the time of initial injury. Three of the six nurses were collecting Workers Compensation Benefits at the time of the interview, while two of the six were collecting Long Term Disability Benefits.

The remaining nurse was not receiving any income supplement at the time of the interview but she had received Workers Compensation Benefits at the time of her injury. She received Workers Compensation Benefits for one month after injury, before the Workers Compensation Board determined her fit to return to work. After her Workers Compensation Board benefits expired, she received Long Term Disability Benefits. Only one nurse indicated an income supplement in addition to Workers Compensation Benefits or Long Term Disability benefits and that income supplement was the Child Tax Credit Benefit.

The average result on the Roland-Morris Disability Questionnaire was 13.5, median number of responses was 14 with a range of 6 to 20 out of a total of score of 24. Two nurses were on a return to work program at the time of the interviews and these same two nurses had relatively low scores on the Roland-Morris Disability Questionnaire. Return to work programs ease nurses into the workplace with modified duties and shortened hours and these nurses were in the process of returning to the workplace.

The six participants represented three different health care facilities. One of the self referred participants and two of the participants who were referred by an occupational health nurse were all from one facility. One of the self referred participants and another participant referred by occupational health nurse were from the second facility. The third facility was represented by one participant and she had been referred by the facility occupational health nurse. Despite having a potential pool of seven health care facilities, only three were represented within the participant sample. One participant had suffered five back injuries since 1996 with none of her injuries causing her to be away from work for longer than 2 months.

The demographic data, the employment status, date of injury, length of time away from the workplace, smoking status, family income and the results on the Roland-Morris Disability Questionnaire are presented in the following table. The participants are identified by pseudonyms.

Table 9

Demographic, Injury and Financial Data

	INTERVIEW 1 ABIGAIL	INTERVIEW 2 BEATRICE	INTERVIEW 3 COLETTE	INTERVIEW 4 DEIRDRE	INTERVIEW 5 EILEEN	INTERVIEW 6 ERICA	
Age	51	43	52	31	49	42	**average age = 44.6 years median age = 46 years age range = 31 - 52 years**
Position	medical ward	medical ward	medical ward	medical rehab	ICU/CCU	medical ward	
Normal hrs of shift	8 hr nights	8 hr days/nights - 7 on 2 off	12 hr day/night	8 hr evenings	12 hr day/night	8 hr shifts	
Normal hours of work	Almost 40 hrs works 3 jobs, 9.9 or 9.5-not by choice	FT	FT	FT	FT	0.7 but works FT	
Marital status	divorced	single at the time of injury, married at the time of interview	married	single	single	single	
Education	RPN/diploma	diploma at time of injury -BN after injury	LPN-diploma	diploma	diploma	diploma	
Dependents	3 children	none	1 adult child	none	none	none	

Season of injury	Summer 1998	Winter 1986	Autumn 2000	1st injury - Winter 1996 2nd injury- Winter 1998 3rd injury - Autumn1999 4th injury - Winter 1999 5th injury- Winter 2000	Winter 2000	Summer 2001	
Length of time off work	off work > 2yrs off work at the time of the interview	off work x18 months never returned to substantive position. Currently working as a nurse with another employer.	1yr off work at the time of the interview	1st injury - 2 months 2nd injury - 2 months 3rd injury - 1 week 4th injury -no lost time 5th injury- off work x 6 weeks. Currently on return to work program.	off work x 9 months, off work at the time of the interview	off work x 12 weeks. Currently on a return to work program.	**average number of weeks off work = 48.5** **median number of weeks off work = 45.5** **range of number of weeks off work = 6 - 104**
Smoker	no	no	no	no	no	yes, 1/2ppd for 30 years	
Smoked in the past?	no	no	no	no	no	yes	
Total family income/year	$20,000 - $29,999	no answer	> $100,000	$40,000 - $49,000	$20,000 - $29,000	$40,000 - $49,000	**average income= $48,000** **median income = $45,000** **income range = $20,000- > $100,000**
Only wage earner in the family?	yes	yes	no	yes	no	yes	
Type of benefits	WCB	none at the time of interview, WCB x1month at the time of injury, LTD after that	LTD	WCB	LTD	WCB	
Any other income?	Child Tax Credit	no	no	no	no answer	no	

Result on the Roland-Morris Disability Questionnaire	**19/24** **1x(+++)** **1x(++)**	**20/24**	**8/24** **answered** **I walk more** **"carefully"**	**6/24**	**15/24**	**13/24**	**average response =13.5** **median response = 14** **result range = 6 - 20**

The participants were asked to complete the Roland-Morris Disability Questionnaire and asked to declare the statements that described their abilities on the day of the interview. All participants found the questionnaire easy to complete and some noted that in the acute phase of their injury, or on another day, they may have checked more positive responses. The results are presented in their entirety in Appendix K and the most frequent responses are summarized within the following tables.

Figure 1.

Summary of the Data from the Roland-Morris Disability Questionnaire: Three statements on the Roland-Morris Disability Questionnaire where all six participants responded positively

2. I change positions frequently to try and get my back comfortable.
6. Because of my back, I lie down to rest more often.
21. I avoid heavy jobs around the house because of my back.

This suggests that these three statements resonated strongly with all six participants Six out of six participants indicated that these statements described their mobility on that day.

Figure 2.

Summary of the Data from the Roland-Morris Disability Questionnaire: Three statements on the Roland-Morris Disability Questionnaire where five participants responded positively

3. I walk more slowly than usual because of my back. (*1 individual indicated I walk more carefully*)
5. Because of my back, I use a handrail to get upstairs. *(1 individual indicated +++)*
11. Because of my back, I try not to bend or kneel down.

Five out of six participants indicated that these statements described their mobility on that day. One participant identified strongly with statement number 5.

Figure 3.

Summary of the Data from the Roland-Morris Disability Questionnaire: Five statements on the Roland-Morris Disability Questionnaire where four participants responded positively

16. I have trouble putting on my socks (or stockings) because of the pain in my back.
17. I only walk short distances because of my back.
18. I sleep less well because of my back. *(1 individual indicated++)*
22. Because of my back pain, I am more irritable and bad tempered with people than usual.
23. Because of my back, I go up stairs more slowly than usual.

Four out of six participants indicated that these statements described their mobility on that day. One participant identified strongly with statement number 18.

Figure 4.

Summary of the Data from the Roland-Morris Disability Questionnaire: Three statements on the Roland-Morris Disability Questionnaire where no participant responded positively

19. Because of my back pain, I get dressed with help from someone else.
20. I sit down for most of the day because of my back.
24. I stay in bed most of the time because of my back.

These three statements did not describe any of the participants on the day of the interview.

All six participants identified difficulties with personal comfort related to their back pain. They needed to change positions frequently to manage their back pain, they needed to rest and they avoided heavy jobs around house. Five of the six participants recorded difficulties with walking, using stairs and bending or kneeling. Colette indicated that she walks more "carefully" rather than more slowly. Abigail indicated with three pluses (+++) that she uses a handrail to get upstairs.

Four of the six participants responded positively to five statements on the Roland-Morris Disability Questionnaire. Four participants indicated difficulties with putting on their socks or stockings, walking only short distances, sleep disturbance, irritability and needing to walk upstairs more slowly than usual.

Four of the statements have a relatively similar partner. Five participants responded positively to the statement, "I walk more slowly than usual because of my back" while four participants indicated "I only walk short distances because of my back". These two statements are relatively similar with subtle differences. One statement implies a curtailing of activities (only walk short distances) while the other statement suggests limiting the energy with which the activity is undertaken (walk more slowly).

The statements "because of my back, I use a handrail to get upstairs" and "because of my back, I go upstairs more slowly than usual" are also relatively similar statements. Again, these two responses are similar but with subtle differences. Using a handrail to get upstairs suggests that the handrail is required for the physical leverage in order to drag the body up the stairs. Going upstairs "more carefully than usual" suggests that the stairs are surmountable, but care must be taken when ascending the stairs.

There were three statements where not one of the participants indicated a positive response. Those three statements spoke to abject disability and none of the participants could relate to that reality. The statements included needing help from someone else to get dressed; sitting for most of the day; and staying in bed most of the day because of their back.

Qualitative Data

> It all started with a patient and split-second changed my whole life. Not much different than a car crash or something else.
> Interview 2, Beatrice (lines 1789 -1791)

This is how one nurse summed up the outcome of her injury. The effect was sudden, immediate and the event was nothing she could have prevented nor anticipated. The injury irreversibly changed her life in ways she could not have envisioned. The themes and categories that follow stem from the words and stories of six back injured Registered Nurses who graciously and selflessly chose to share their stories.

Themes and Categories

I I've fallen and I can't get up...really!
- The invisibility of the agony: Physicians don't believe; Insurers don't believe; Managers and co-workers don't believe; The back injured don't believe
- Pain, isolation and depression: The triad of trauma
- I told you I was hurt! Vindication

II Playing the benefits game
- The players
- The game
- I want to take my ball and go home

III I want my life back
- I can't do anything
- I'm broke
- I have no control over my life
- A nurse is who I am

IV Return to work for nurses is a special kind of hell
- It's my back that's broken, not my brain
- The fear factor
- And the wolves begin to circle
- You are the weakest link - good bye

V It's not all bad
- Family and friends
- Health care professionals
- Co-workers
- Blessings

Each theme is presented and supported by the words of the back injured nurses.

Theme I - I've Fallen and I Can't Get Up...Really!

The categories within the theme of "I've fallen and I can't get up...really!"speak to the dichotomous reality of the back injured nurse. On one hand, the invisibility of the injury leads to the uninformed doubting the validity of the injury while the real-life of the back injured nurse is steeped in pain, isolation and depression. The injustice of the dichotomy lies in the fact that while suffering from the real effects of traumatic injury, the back injured are surrounded by doubters. Vindication, when it comes, is sweet.

The Invisibility of the Agony

All of the back injured nurses had instances where the veracity of their injury was doubted by either their manager, their co-workers, their insurer, their health care provider or even by themselves. Well functioning, supportive workplaces were generally less doubting of the back injured nurse then dysfunctional workplaces. However, in this difficult period within the health care system, where nursing shortages and increased workload are the norm, well functioning, supportive workplaces are more difficult to find.

Maintaining their integrity and having people believe in the legitimacy of their injury is important to back injured nurses. Having people believe that they are not

malingering is critical.

> And every time I went to physio – we always joked about it that I'd have a story each day. You know, I'd say, "My pain's **here** this time!" And you know, it is frustrating because, you know, I don't want anyone not to believe me that I have pain. Because it is so --- it is not in one place. One day it would be the right leg, the other day the left leg. And --- frustrating!
> Interview 4, Deirdre (lines 862 - 869)

The integrity and honesty of the back injured nurse was doubted primarily because of the invisibility of the injury. There is no obvious wound or lesion that needs to be repaired or excised. The comments that ensued from physicians, co-workers and managers were largely derived from the lack of objective data delineating the cause of the pain and subsequent disability.

The injury does not obviously present itself to the uninformed, the disinterested, or the preoccupied bystander. The body looks intact and the back injured individual can often control her outward facial expressions to suppress a wince or a grimace.

> I mean, nobody **sees** your disability. And I mean, like, there's lots of times that you wish it were a gushing wound that everybody could see and they would **know** where you were at. But then there's the other part of you that says, "Well, you want your life to be normal. So if they can't see it. . . ." And for the most part, I can **fake** it for the most part. Like I can pretend that I'm having a good day, you know. I mean, there's lots of people who just don't know. And that's fine with me, too.
> Interview 5, Eileen (lines 438 - 448)

Outside observers who do not have the vision to see the pain and the controlled movements of the back injured nurse can actually be fooled into believing that the back injured nurse is not limited in her physical abilities or is in acute pain. The irony is that uninformed observers often believe that they are being deceived. However, their belief is

that they are being duped into accepting a manufactured and illegitimate injury, when they are actually being concealed from knowing the true nature of the suffering of the back injured.

> Like my good friends have accepted the fact; but a couple of people that live here -- like I don't think they can -- they can't **grasp** what I'm going through. They haven't got a clue. Like they just think, 'Oh you're so lucky to be off!' And, if I was in their boots, I'd probably think the same thing.'
> Interview 5, Eileen (lines 1123 - 1130)

Eileen had been off work for over one year and did not feel "lucky to be off". She was desperate to return to work.

> This is definitely real; but how could I prove it was real before? I mean, I couldn't prove my back injury and I still could not prove it. . . . So it looks like you are just fine. Like I walk fine on a flat plane. Put me near a step where I had a hard time getting up or down because I look like a baby going up or down stairs
> Interview 1, Abigail (lines 1240 - 1242, lines 692 - 695)

For some, walking can present few difficulties, while for others, the walk comes with an obvious limp or list. Interestingly, even the obvious limp is not always convincing enough to observers to verify the integrity of the back injury. For others, it is specific physical tasks, such as stairs that illustrate the extent of the pain and injury.

Pain does not show up on a X-ray, nor is it necessarily obviously written over the face and the body, but it can be seen, if anyone cares to look. It may take longer than a cursory examination to know the pain of the back injured, but if one cares enough to examine carefully and thoughtfully, it will be seen either through the actions or words of the back injured.

The invisibility of the agony leads to comments questioning the validity of the

back injury with resultant accusations that the back injured nurse is malingering. The accusations of malingering come from health care professionals, insurers, managers, co-workers, and acquaintances. The following excerpts illustrate only some of the misperceptions of the uninformed.

Physicians Don't Believe

For work related injuries or back disability to be financially supported by a third party insurer, both the individual's personal physician and the insurer's physician need to believe and support the reality of the injury. Physicians do not always believe.

> So I did make an appointment and went to see my doctor. The doctor was very unsupportive. Basically said to me, 'You're just are having problems with your supervisor. You don't want to go back to work.' (disdain creeps into her tone of voice) Comments like that started to come through.
> Interview 2, Beatrice (lines 437 - 441)

Inappropriate tests are ordered in an attempt to either prove or disapprove the injury. A small number of back injuries will be illuminated on X-ray, but the majority of back pain is related to a soft tissue injury and will not appear on X-ray. Without objective medical data, the pain does not exist. If it can not be seen, palpated, or elucidated by physician or medical technology, the assumption is that the back injured are fabricating their symptoms in an attempt to relieve themselves of their workplace or societal duties.

> They tell me the X-rays are O.K. Pain doesn't show on X-rays, HELLO! And they tell me that they don't know what's wrong with me. I should be able to go back to work. They tell me I'm having problems with my supervisor, I just don't want to go back to work. Well I just finished taking a ICU course! Why would I take an ICU course and spend seven months of my time, if I want to sit at home!?
> Interview 2, Beatrice (lines 459 - 466)

Even when apparently motivated individuals are injured, the absence of an immediate objective reason for the back pain leads to questions about the legitimacy of the pain. Other reasons are suggested for the symptoms in question. "Problems with my supervisor" surfaces as the cause of the illegitimate back pain.

Insurers Don't Believe

Questions about the legitimacy of the injury abound. Insurers are trying to catch the malingerers and the fraudulent, while the legitimately injured have to pay the price for the deceit of a few.

> I think after a while Workman's Compensation people begin to get a thickened hardened skin. And everybody is covered with the same kind of coating. That we're all trying to beat the system. But umm, we're not. A good chunk of us are really very ill....Why do I have to prove that I'm **really** injured here?
> Interview 1, Abigail (lines 1912 - 1916, line 1920)

The legitimately back injured are tarred with the brush of apparent deceit. Justify your injury! The stress of a legitimate injury is compounded by the stress of proving the injury and ultimately the integrity and honesty of the injured is open to question.

Managers and Co- workers Don't Believe

The back injured are questioned as to how their outside activities are contributing to their continued absence from the workplace. The assumption is that the intentional overuse of the body on non-work related personal activities is having a negative impact upon the return to work process. One back injured nurse relates a conversation she had with her manager.

> But, ah, you know, she **was** talking to me and analyzing -- like what are you doing on your own time. She made a comment like, 'You're just doing too much when

> you are away from work and that's why you can't work.' I said, "I'm not doing **anything** away from work. I go home in tears. I'm not doing anything at work or after hours of work." So that was really an unfair accusation, I thought. And I know the director phoned me off and on during that year and a half, too. And it was almost to the point of harassment: 'So when are you coming back to work? We don't know whether to replace you or not.' So I found that very distressing. I'm dealing with all of this and then whenever I did go in to touch base with them, uh, it would take me a good twenty minutes to walk from the parking lot to the Intensive Care Unit. I'd come strolling in the doors and I heard this time and time again -- a nurse would say, "Well how's **your** vacation going? You're sure not back to work, dah-dah-dah. You look fit! Why don't you come back to work?" Meanwhile -- I'm limping. I've got sciatica so bad. And -- Hel -lo! -- you know. It's heavy work.
> Interview 2, Beatrice (lines 736 - 756)

Not only is Beatrice blamed for her continued disability, it is suggested that she is enjoying and revelling in her time away from the workplace "vacationing". Beatrice's reality, however, is pain and impaired mobility.

The Back Injured Don't Believe

The doubt that emanates from physicians, insurers, and co-workers can contribute to the individual doubting herself. The participants observed that if you keep being told that there is no reason for you to be away from the workplace, that your pain does not exist, that you are fit to return to work, you start to believe the detractors and doubt your own pain and disability.

> I, was – I felt I was not believed by Worker's Compensation. I was not **believed** by the medical doctor that examined me. I was **not** believed. . . . I don't how I managed . . . (when) **I** even doubted for awhile.....! Am I really injured? Am I making this up?
> Interview 1, Abigail (lines 1541 - 1543, lines 1547 - 1547, lines 1549 - 1550)

The doubts enshrouding the authenticity of the injury permeated through to Abigail herself, to the point where she too, begin to doubt whether she was truly injured.

The assumption is that the participants were trying to absolve themselves of their roles and responsibilities. In reality, the participants were just trying to survive.

Pain, Depression and Isolation: The Triad of Trauma

The categories of pain, and depression and isolation were universal among all the back injured informants. The pain that comes with a back injury can be debilitating, agonizing and as previously mentioned, invisible. The words of the participants illustrate their agony.

Pain

> Well the pain started....burning.... My girlfriend came over on Saturday. She couldn't tell and I lay on the floor, writhing in pain. I said, 'It's burning so bad! Feels like someone has poured gas on my back and set me on fire!" That's all I could describe it! Meanwhile it's winter-time. It was January! Shouldn't be that hot. But that was the only way I could describe it! And it just got **worse**. So the Sunday I was in agony.
> Interview 2, Beatrice (lines 419 - 424)

> I just felt **lousy**. And I put up with it. Now, like we're getting on, must have been well into February by now. And I phoned and said, "I can't **stand** it." I said, "I could stand the pain if I didn't spasm." And I was finding if I put my hands above my head, I was just get: "Ahh!" I would just **stop**. You know. The closest to describe the pain was if the dentist put his drill on a nerve in your tooth. Like, it was just! It didn't last long -- but it would just **grab** me. Like, I could be having -- everything I did -- I could have them. So I phoned and I said, (lowers voice) "I *can't* handle this. This isn't working."
> Interview 5, Eileen (lines 169 - 182)

> I said, I have **horrible**, like I have constant pain here; but I have -- it's like a knife pain here. As if someone has taken and just **shoved** and sometimes I can't even catch my breath.
> Interview 5, Eileen (lines 898 - 902)

The pain, which does not appear on X-ray, is nevertheless very real to the back injured. It is described as "burning", "like the dentist put his drill on a nerve on your

tooth" and like " knife pain". It is "agony", "horrible", "constant" and beyond what can be handled.

The participants often continued to work with pain, until they could stand the pain no longer.

> And then, ahhh, with physio the pain was getting worse. And I kept going to work, and the last -- I only made it through the last of my six shifts and I came home and it took me five hours to fall asleep that night, I was in so much pain. Just like in a fetal position and crying. I thought, "This is ridiculous! I can't go to work." And usually it takes me a lot not to go to work.
> Interview 4, Deirdre (lines 219 - 226)

> I thought this was the first time I've gone through the whole five (shifts) and not felt like I was going to die! Come back and do the next two (shifts) and I thought (laughs) **I am** going to die! I am going to die! laughs. I was wrong.
> Interview 5, Eileen (lines 1211 - 1217)

> I did **try** to go back to work, but I just ended up in tears. I was in so much pain I couldn't function.
> Interview 2, Beatrice (lines 104 -105)

Attempts to work with the pain ultimately met with failure. Heroic attempts to keep working with the injury were defeated by the pain. Pain wins - back injured nurse loses.

Basic functions like walking, thinking, sleeping and ambulating to the washroom were also disrupted by the pain.

> Then at times, you know, my pain -- with this injury what had happened is -- with the swelling it seemed to pinch the nerves. So within a few minutes I could have pain going down one leg and then it would go to the other. So I would be limping, and walking and .....
> Interview 4, Deirdre (lines 837 - 843)

> But you know, when you are in so much pain, you don't think straight. You can't

> make decisions. It was just kind of like a ten out of ten pain. I had no idea what was supposed to happen. What I was supposed to do.
> Interview 2, Beatrice (lines 433 - 436)

> ...and I was so bad that I couldn't even walk. Like, my husband had to get me to the washroom. I couldn't get there myself.
> Interview 3, Colette (lines 261 - 263)

> My back aches so badly I can't stand it -- I have to get up..... I mean, I was so bad, I was only having three hours sleep.
> Interview 1, Abigail (line 1045, lines 1049 - 1050)

The pain is overwhelming and not only is work impacted by the pain, basic functions like walking, thinking, sleeping and elimination are also impaired.

And for Colette, to add insult to injury, additional pain relief was only offered with specific criteria: incontinence of stool or urine.

> And I had been taking different things and nothing was helping, and the pain was really bad and this other doctor who was taking his (personal physician) calls at the time -- she had told me that the only way I could get anything more was if I was incontinent of stool or urine. Then I could come to the emergency and get something for pain. Which, I didn't really think was really fair at that time (rueful, quiet laugh).
> Interview 3, Colette (lines 270 - 277)

Erica only agreed to be interviewed when her pain was under control. A palliative care nurse and well aware of pain management techniques, she needed to go repeatedly to her physician to request adequate pain relief. A reluctant physician, wary of this drug seeking behaviour finally relented and prescribed the requested drugs. Erica had told me that if she had been asked to participate in this project the week prior, when her pain was not well controlled, she would have refused to participate. Her pain at that time was overwhelming it would not have allowed her to sit, think and speak for the duration of the interview.

Isolation

The isolation of the injured was also universal. Home alone, in pain, and cut off from their normal workplace relationships left the participants feeling isolated. To add to the misery of isolation, at the time of the injury, four out of six of the back injured nurses were single. Beatrice met her husband as a result of her injury and ultimately married him.

Nurses are physically isolated because they are trapped at home. In pain, away from regular contact with the workplace and managed by their medical appointments.

> But I'm trapped. I'm sitting doing nothing. Watching TV.
> Interview 5, Eileen (lines 1596 - 1596)

> Just because you don't see anyone. You are isolated with your injury.
> Interview 4, Deirdre (lines 781 - 784)

The participants did not have opportunities to re-connect with people. They were "trapped" at home, "doing nothing". The time at home being isolated is not seen as a "vacation" but as a penance. Just you and your injury. The physical isolation is a result of diminished financial resources, diminished energy and diminished physical ability to go out and interact.

The isolation continues when back injured nurses return to the work place to attempt to re-connect with their colleagues. Colleagues are busy at work and have gone on with their own lives. The back injured person is no longer part of the work place culture and is no longer an insider. The insider is transformed into an outsider because of the back injury.

> I guess you lose a little bit of contact with co-workers who were close friends. Because they are busy.
> Interview 5, Eileen (lines 1299 - 1302)

> And I mean, NOT that they're not nice now, **but** I feel -- like I feel that I don't belong there. Because I've been gone so long. But.... Like, I find if I go to any functions that they have -- like I feel that I shouldn't be there. Because, you know. I guess it's the same as when you go and retire. And you don't belong anymore. (quiet laughter) That's what I do feel.
> Interview 3, Colette (lines 477 - 484)

> Like, you know: they are nice to me when I see them. But I mean, they talk about work. And I know they probably shouldn't; but they do talk about work. And, like, hey! You know? I don't **belong**.
> Interview 3, Colette (lines 494 - 496)

Being physically removed from the workplace as a result of a back injury is compared with retirement. Co-workers are courteous but there is no longer a feeling of connectedness or attachment. No sense of belonging.

Being isolated at home not only creates havoc with workplace relationships, it also has a negative impact upon friendships outside the workplace. The isolation makes it difficult to maintain normal friendships and relationships. Relationships require regular contact, occasions to get together and mutual support. Participants voiced that they often did not have the emotional energy to be a good friend.

> You know, I can't think of any friends that I have in the world. Some days I have a hard time thinking of my friends. ....Because after a while when you're here by yourself -- and you're in this situation.
> Interview 1, Abigail (lines 1178 - 1181)

> If I'm **really** feeling sorry for myself, I tend to shut myself away.... Like, then I found it harder to be around people because I couldn't **fit**.
> Interview 5, Eileen (lines 1550 - 1552, lines 1564 - 1565)

> Other than that...no, I'm very isolated. And guess why? The only person who called me from **work** (pause) was my girlfriend of twenty-seven years. No one

> else called. So talk about feeling isolated!
> Interview 1, Abigail (lines 1276 - 1280)

The occasions for contact with friends diminish and as a result, the number of contacts diminish. The triad of trauma continues. The back injured nurse is physically and emotionally isolated. Left alone to feel sorry for herself and continue to further shut herself away. The isolation contributes to feelings of not fitting in.

Depression

Pain and isolation can set the stage for depression.

> And I was already upset, I think I seen him (the physician) on Thursday and the Tuesday prior too I had thought to my self, quote-unquote: "The kids can get along without me. They are doing pretty good. I really don't need to be here. They are doing fine." And he asked me if I ever thought of doing myself in...or hurting myself...committing suicide or whatever. I burst into tears because I thought of that, that they don't need me and they're fine. You know, I'm not needed. Burst into tears.
> Interview 1, Abigail (lines 23 - 31)

Feelings of despair and not being needed raise thoughts of personal harm. The depression is revealed when an astute physician asks the right question.

> And I mean, he knows (physician), like I said, (voice gets very quiet again) I do struggle. I mean I've had trouble with depression for many, many years. And I keep it pretty good. But I'm a people person. And if you get me trapped in four walls, financially struggling: you are adding stress to an already stressed person. And, I mean, he's (personal physician) not responsible for my depression and if he can control my serotonin levels then he's got more power than I give him credit for. (bark of laughter). I mean, I'm not blaming him for that. And I haven't felt **really** depressed when I'm off. I haven't. I feel -- I don't --- I feel claustro – like I feel like (voice drops again)
> Interview 5, Eileen (lines 1066 - 1074)

A history of depression contributes to the present state of low serotonin levels. The isolation and the financial struggle provide justification for the depression

and the thoughts of "adding stress to an already stressed person".

> Oh, I went through depression, big-time. Yeah. I was ....I wouldn't say... Well, I would say, some suicidal *thoughts*, perhaps. But **no intent**. But I went through deep depression where I cried night and day. I cried and cried. .. . your whole decision making process, everything, is basically out the window. And you are in so much pain. And you can't envision.....even buying groceries, even making meals.
> Interview 2, Beatrice (lines 1694 - 1698, 1710 - 1713)

Depression, suicidal thoughts and impaired decision making are all part of the triad of trauma. Simple tasks like buying groceries become insurmountable.

> And, yeah, I can remember one day, swimming, and my eyes were filled with tears. And my goggles were full of water. It wasn't a case that they were leaking, it wasn't pool water.... And yeah – so, big time depression: BIG time depression. And all of these comments and things. You go through grief and loss. It's not just a career, it's your life!
> Interview 2, Beatrice (lines 1728 -1731, 1742 - 1743)

Grief and tears are how the losses are expressed. The losses that total your life as you know it.

> In the midst of all this. At one point in time, things just looked (pause - clipped): **black**. The tunnel down there was – black.
> Interview 1, Abigail (lines 1520 - 1522)

Life is described as "black". No colour, no future, no hope. Depression can lead to suicidal thoughts, uncontrolled crying and a view of life as "black". All the participants expressed feelings of depression, to varying degrees. Their descriptions and their words speak to their desperation and their emptiness. Their detachment from the workplace is complete and their spirits broken. Devalued, degraded, disconnected, and alone with their pain.

I Told You I Was Hurt! Vindication

If the participant received an objective finding of injury, the justification of her injury was complete. Abigail considered having surgery in order to provide objective evidence of her injury.

> So. Do I have to have a laminectomy? To prove that something's wrong with my back? (pauses) Maybe I do.
> Interview 1, Abigail (lines 2076 - 2078)

Having a specialist verify the extent of the injury also provided a sense of satisfaction for the back injured nurse. If words of support for decreasing activity were provided, it buoyed the spirits of the back injured and supported the integrity of their claim.

> Then finally when I did get to see the surgeon, he told me there was no way I could go to work with the numbness. Like, he told me, you know, (quiet laugh): I just couldn't go to work.
> Interview 3, Colette (lines 307 - 309)

The numbness is seen as an objective measure of impairment and returning to work with diminished sensation is not seen as an option.

> And the physiotherapist said right away, 'I have no idea why they sent you back to work.' Because just from her assessment, my whole back, my whole pelvis was twisted. This side was twisted anteriorly, pulling the whole back.
> Interview 2, Beatrice (lines 499 - 503)

The body "twisted" and "pulling" and definitely not capable of fulfilling the physical rigours of a nursing job. The physiotherapist is incredulous that Beatrice was told to return to work. The physiotherapists's opinion and words supported the back injury claim. Words that stated return to work was not possible or queries regarding why the nurse was sent back to work, were considered as tokens of support and

encouragement.

Objective technical data also helped to vindicate the back injury.

> And when they did the CT scan they said there was a central herniated disc. So it was affecting like both sides. And then they also -- like they told me that all my Ls (I think L1, 2, 3, 4 and 5) I think all of them were sort of bulging. And he had to do, like a window in my L4, L5 -- laminectomy and then they did scraping to my L5, S1.
> Interview 3, Colette (lines 214 - 219)

A CT scan is a sophisticated and reliable indication of "impairment". The health care professional and the insurance bodies now have an objective test to justify the disability.

> I mean, I guess because I have a CT scan that shows that I've nerve conduction problems. That show my limitation.
> Interview 5, Eileen (lines 412 - 415)

The limitation is explained by "nerve conduction problems". Objective findings of the pain and disability help the back injured nurse justify her disability and her pain to herself and to others. The final vindication of the injury. The pain, isolation and depression were now the result of an objective finding, not simply the voice of a malingerer.

Theme II - Playing the Benefits Game

The benefits game involves interactions between claimants and insurance bodies such as Workers Compensation, Long-Term Disability or Employment Insurance. Involvement with any of these bodies follows a game of sometimes unknown or changing rules. Involvement with an insurance body is almost always stressful and it is an inevitability if you are disabled and requiring financial support. Within this theme,

"Playing the benefits game", the players and the game are revealed. When frustration ensues, the cry is "I want to take my ball and go home".

The Players

The players involved in the benefits game include the insurers, the health care professionals, and lastly, the back injured nurse. The speed and efficiency at which the game is played depends largely upon the players.

The insurer has its own parallel assessment system with its own physicians who assess the medical astuteness and accuracy of the claimant's physician. The insurer's physician is often called upon to provide an "independent" medical assessment. The insurer's physician is rarely found wrong. The insurer's physician is the referee and you do not argue with the referee.

> And so the option was to go with Worker's Comp and I got treated absolutely **horridly** by Worker's Comp. It was a horrible nightmare. And my girlfriend actually worked with the second physician (Workers Compensation Board physician) who assessed me and said, "Oh I know that he's going to send you back to work. I used to work for him and anybody that had back pain would automatically get a psychiatry referral. He didn't believe in back pain. So, those are the kinds of people they have at Worker's Comp.
> Interview 2, Beatrice (lines 248 - 256)

The back injured nurse has her team of health care professionals cheering on her recovery. There are times when the team is playing its best, but that still may not be good enough.

> Yeah! And like, just this last time, I had phoned them (Worker's Compensation Board) and I said, "You know, what's happening?" And they said, "Oh from what we have here, you've only been off work one day." And I said, "I've been off work a whole month and I know that (occupational health nurse) sent in papers. And I know the doctor and my physiotherapist.....so it is kind of frustrating. It's kind of like, "Ohh! Do we have to start from scratch again!?"

Interview 4, Deirdre (lines 1171 - 1180)

Misplaced papers lead to misinformation, mistakes and mistrust. The back injured nurse's team can include her physician, physiotherapist, mental health counsellor, occupational health nurse and sometimes the union representative. Some know better than others how the game is played and although initially there are some choices of who is drafted onto the nurse's team, substitutions are rarely allowed.

> I specifically requested that physician (Workers Compensation Board physician) and was turned down **flat**. (bitter tone): 'You can't **request** physicians!'
> Interview 2, Beatrice (lines 274 - 276)

A request for specific Workers Compensation Board physician to review the file is refused. The back injured nurse will be assigned to whoever comes up next on the roster and she can not call in a "ringer".

The insurer's team can also be difficult to roundup to play.

> You phone there if you want to get someone right away. You get their bloody answering -- voice mail! Very often the person won't get back to you that day. They'll get back to you that week! I've had physiotherapy that I've had to go to; so I've had to leave the house! Then they say they called me; they called back and no answer. (frustration shows in voice): Ohh! I'd try and leave dates and times when I'd be home and they wouldn't call then!
> Interview 1, Abigail (lines 1571 - 1578)

The insurers team are at times reluctant to play the game. Their players are dressed but not always ready and willing to play. Getting the team to return the ball after it is tossed to them is not always easy.

Not all the team members have equal status. Some of the team members have more influence and power within the team and also within the game.

> Like I think there should be a better system for – And like, they only want to hear from your doctor. They don't want to hear from your physio; they don't want to hear what you have to say. They only want to hear from the doctors.
> Interview 3, Colette (lines 448 - 456)

Even though the game is played for the participant, her opinion is not always important. The physician on the nurse's team is assigned as Captain without a team vote.

The Game

Rule # 1: The referee is always right.

> The pain clinic doctor felt I should have work hardening. That was denied by Workman's Compensation because you can get all the work hardening you need at work. (wry laughter).
> Interview 1, Abigail (lines 428 - 431)

Opinions from experts indicating their preferences for how the game should be played are not always heeded. Requests for some remedial training on how to play the game is denied with the rationale that the participant can learn to play the game as she goes.

Rule # 2: Don't question the referee or the game.

> What set me off when he was....they tell you you can't take anybody with you. But if they, ummn. No. You can't go with a the tape recorder or anything. You can go with company, they have to sign papers that they won't copy any notes down or anything. It's really kind of paranoid.
> Interview 1, Abigail (lines 14 - 18)

Insurers do not like their players being interviewed on the record. All media requests are censored. You can bring spectators to the game but they cannot speak to the other team's players or ask for autographs or pictures.

It is the insurance body's game and their rules. The rules of the game involve

frequent progress checks to determine how much improvement the participant and her team is making. This involves physician visits to verify that the nurse is still in the game. Those physician visits are documented and progress is charted.

> Because you have to see both physicians when you're on disability. You have to see a physician every month. And, because it's (the personal physician) that fills out my forms -- I have to see both (personal physician and specialist) of them. And I mean, half the time I go in there, I don't feel any different than I did the time before. I feel like I'm totally wasting my time. . . I'm just getting a form filled out. I'm going to appease people, you know?
> Interview 5, Eileen (lines 1266 - 1273)

Insurance bodies require regular updates on the progress of the back injured nurse and they get that progress update from the form the physician signs. Insurers want to ensure that the back injured nurse is progressing in her skills and abilities.

Regular practices and meetings with team members are required to improve the skills and abilities of the participant. These practices consume a large portion of the life of the back injured nurse and expend much valuable energy.

> Like, when you are going to physiotherapy -- I was going to physiotherapy two days a week -- lumber-sacro – three days a week: that's five days a week. But I had my pain clinic doctor's appointment the same time. And I had my own physician's things. That is how many appointments in one week?!
> And I'm just a-frazzle! I'm running back and forth and meantime, I'm trying to look after my kids at the same time. Ummm. (pause) That wears you down.
> Interview 1, Abigail (lines 1580 - 1589)

The frequent practices can take a toll on the back injured nurse and contribute to burnout. The practices consume her life and cause other responsibilities to be relegated to a lower importance.

"Skipping" a practice is not allowed. There are no good reasons to skip a practice.

> And there's all these appointments where always **you show up** no matter if you

> are having a really bad day. You know, can't get out of bed: (resentfully) you still show up for your appointments. (angry): Well I didn't have anybody to drive me! And it affected my hip so much that a lot of time I had numbness continuing down my entire leg. I couldn't **feel** if I stepped on the brake or the accelerator. Plus I was taking Meths 282 every four hours. You try driving with that!
> Interview 2, Beatrice (lines 304 - 312)

Being in pain and on drugs is no excuse to miss a practice. Attending the practices is of primary importance and being impaired by drugs is no excuse not to attend. Even a death in the family can be interpreted as an illegitimate reason to miss a practice.

> And yet, if you don't do this....if you don't do **something**...they (Workers Compensation Board) **question** it! Umm, I had on my health sciences physio thing, they can give you a complete computer print-out. So I got one. And it said (pauses) I was absent twice. ...And I said, "I thought if I didn't come, I'd be in trouble." He (physiotherapist) said, "No, you just phone and tell them you are sick." Any ways, the girl (receptionist) put it down as an absentee not as **sick**. And the same week, if you can believe it, I had a phone call and my father passed away. ....My biological father. Who's, well, whatever. But he passed away. (voice is quiet and tone carefully casual). . .
> And then I went to his funeral (fathers's), I missed one day and I called and told them why. I'd been marked absent again! This came up in one of the meetings they (Workers Compensation Board) had. That -- 'well, why was she absent?' 'Not attending her appointments.'And for that chronic pain lady, I'd missed in the afternoon. It had totally, totally went out of my head – it left my mind. But then I'd had so many other things on my mind! I did get to the lumbar-sacral thing. And I told the girl (receptionist) that my father had passed away today. She said, "What are you doing here?" And I went, "Yes. But I had to come because....." You know, that kind of thing. (Pause) But I missed the afternoon one. That came up at a meeting that (hard, incredulous tone): I had **quit** my chronic pain doctor visits. Ummm. (assumes pompous tone): No one really knows **why** I did that! But, it just puts suspicion of my behaviour! . . .
> **But** I said, you know, it has been misconstrued. So it makes me look as though – (voice more intense): You're guilty until you prove yourself innocent.
> Interview 1, Abigail (lines 1643 - 1686)

Even if Abigail phones and says that she will not come out to play today, she may still be marked for an unexcused absence. Missing a practice is never a good idea because there is suspicion cast on whether the participant still wants to play the game.

There can be an assumption made that the participant does not want to play the game, when in fact she still does want to play.

The back injured nurse is not allowed any substitutions, but the insurer's team has unlimited substitutions.

> And then, my physiotherapist, she was trying to get a hold of my adjudicator and I have a name of my -- a different adjudicator and when you go to Worker's Comp, you're under a different adjudicator. And (the occupational health nurse) was giving me a name (of an adjudicator). So in the period, I have five different names of adjudicators. It's just like --- ahhhh — no wonder no one knows what is going on!
> Interview 4, Deirdre (lines 1226 - 1234)

You need a program to know the players and sometimes the insurer's roster continues to change even after the program is printed. It makes the game more difficult to play if the players keep changing.

Not all of the participants put in the same amount of effort in the goal of your recovery and return to work.

> I had already been to a, ummmm, (pauses) an orthopedic surgeon, who had seen me. The time I was there in his office was ten minutes. He saw me from the doorway. He didn't touch me. Come near me. Put me through a range of motion. He just said, "Tell me what you can do. Put your arm this way. Try and do that." Whatever. O.K. Fine. "Well if it doesn't get better in 4 - 6 months, we'll do surgery. Oh and by the way, I think maybe you should lose 50 pounds.
> Interview 1, Abigail (lines 450 - 459)

Not all team members are willing to put their full effort into the game. An incomplete assessment and a side comment about Abigail's weight does not improve the play of the game nor does it help reach the goal of return to work.

Not all team members even like the back injured nurse.

Except when I'm there (at the physicians office), I'm mad and..... I speak to him

> (the physician) angrily at times; but he still controls my whole life. That's what I said to the lady from long term disability. I said, "He tells me two different things. What does he write on the letter that you get?!" And she just laughed. laughter
> I said because he tells me one thing one time and .....I tell him, this is totally contradicting...
> Oh, yeah. Oh, he doesn't like nurses....he told me that already too.
> Interview 5, Eileen (lines 957 - 963)

The back injured nurse's team members can have conflicting goals in the game and make continued play more difficult. The physician often controls the team and the control the physician has upon the team cannot be underestimated. The team members do not always agree with each other nor do they even agree on the goal of the game.

> If you were a football player, I could see you doing this" but she (physiotherapist) says, "You weren't doing any kind of this stuff **before**. Look, you're nearly fifty years old," she says, "You are not going to start doing it **now**." She says, "Your back won't take it for one thing. It's not going to **strengthen** it." Like, she says, "I don't know **where** he's (the physician) coming from." And some of the things she has been doing with me. So they totally are on two different.....(lowers voice, very intense) I don't know which one is right! So there. I am sort of the person in the middle.
> Interview 5, Eileen (lines 754 - 766)

Conflicting goals from team members leave the back injured nurse "in the middle". Two different opinions from two different team members. Sometimes one of the team members changes the goal in the middle of the game.

> First time I saw him when I went off in May and I went to see him, I was, I thought I was just in terrible shape that day. I mean, I was in **agony**. I walked in and he's "Eileen, I'll have you back to work in four to six weeks" he says. "We'll get you into physio and you going to be back to work in four to six weeks. Come see me in a week." And I can get you into physio, blah, blah, blah. So I did. I went back in a week and walked into the office and he's "Eileen, you know, your back is **shot**." And I looked at him and I said, "**Last** week you told me that I'd be back to work in four to six weeks. And you gave me the idea that this was just a little set-back and I'm going to be back to work. Now you are telling me my back

> is **shot**?" I said, "What happened in this last week? I felt worse then than I do now.
> Interview 5, Eileen (lines 777 - 796)

Eileen arrives for a practice and is reassured that the goal is still in hand. An appointment the following week leads to comments from the physician that the goal will not be easily attained. These conflicting messages only lead to frustration.

The goals of the game can be changed by the team members without any input or consultation with the back injured nurse. Changing the goal often only leads to discouragement. It is like trying to hit a moving target.

I Want to Take My Ball and Go Home

The game is difficult to play: players change, the rules change, and the back inured nurse cannot predict nor plan for these changes. Sometimes she wants to take her ball and go home. She just gets tired of playing.

> Because Worker's Compensation had a way of making you feel -- like, pushing you to the limit emotionally -- I was beginning to think at times: "Like, **why** do **I** have to try and find the paperwork? on my chart? To see if they can make me a cheque, to see if the numbers got in. I had to phone back on the workplace stuff. Why do I have to do that? Why can't they just find the file and look it up? Ummmm. I felt I was being (pause) **played** with. And they drive you -- the expend your emotional energy until you have nothing left.
> I'm not the least bit surprised that people have walked up there and **shot** somebody. Or walked up there and shot themselves because who cares anyway? You guys don't give a damn! And I've got that feeling from day one, square one!
> Interview 1, Abigail (lines 1552 - 1566)

The game can be extremely frustrating and some people understandably just quit playing - permanently.

The game can have a bad outcome, and for Abigail it could mean losing her nursing license. It she loses her license, she loses the game.

> Much longer...and I will not have a licence.
> Interviewer: Does Worker's Comp know that?
> Response: Do they care? short laugh. Why bother? I mean, I've had my 7th adjudicator. They aren't there when you ring the phone. You get this cotton-pickin' voice mail. And then when they get back to you, you may not be home. You may be at physio. It just goes on and on.
> Interview 1, Abigail (lines 2134 - 2140)

The game is difficult to play. Changing players, changing rules and changing goals are difficult to cope with. The game is a struggle to play and sometimes a player can lose.

Theme III - I Want My Life Back

> That's what I, that's one of the things, ...actually the thing I've craved for and cried about the most: I want my life back!
> Interview 1, Abigail (lines 1534 - 1536)

The changes and losses that a back injured nurse experiences are severe. Craving and crying for life to be as it was before the injury is the prayer of the back injured nurse. The life losses are categorized by an inability to continue with normal activities of daily living; not having the financial means to continue normally with her life; losing control over life choices and not being able to work to continue to work as a nurse.

I Can't Do Anything

Basic activities that able bodied people take for granted cannot be accomplished easily by the back injured nurse. Life is changed dramatically by the injury and apparently simple physical tasks can become difficult to complete.

> So -- it was **quite** a change. And, uh, just in the way you find parking, and all the rest of it. It is quite an adaptation and you can't do the things....Well, I can no longer do the running and the twisting. I can't play tennis, I can't play golf. And people don't understand that -- that it is the whole twisting. How you are, you know, driving the ball. (forcefully) **You can't do the things that you'd like to**

do and want to do.
Interview 2, Beatrice (lines 632 - 634, 640 - 645)

Life is changed and "you can't do the things that you'd like to do and want to do". The back injured nurse is being thrust into the identity of the disabled and it is a reluctant and unwelcome identity.

> And I could not walk without a limp. I tried and I just couldn't because the leg was giving way. . . .Because I want very hard to be a functioning independent person again. Looking after my kids and family and doing all the stuff I want to.
> Interview 1, Abigail (lines 734 - 741)

Walking is sabotaged by a delinquent leg that gives way and refuses to support the body's weight. It is Abigail's wish to be a "functioning independent person again" but she is betrayed by her injury.

> And I **just can't do some things**. And I'm **just frustrated**, because I **want** to and I **can't.**
> Interview 1, Abigail (lines 1183 - 1184)

There is the intellectual acceptance of not being able to accomplish some duties, but emotionally the desire to function normally and independently is strong.

Normal activities like vacuuming and sweeping cannot be accomplished. It then begs the question, if easy physical tasks like vacuuming and sweeping cannot be done, how can a patient lift or transfer be accomplished? Patients are generally heavier than a broom.

> But because I can't vacuum, and I can't sweep the floor at home and I can't do, like, any lifting and stuff -- my husband has to carry stuff for me and that. Like I worry about that part of it. Like, because I'm not able to do that. You know? Like I worry. Like, I know vacuuming is hard; but so is lifting patients: you know? (rueful laugh).
> Interview 3, Colette (lines 669 - 675)

The simple banal responsibilities can not be accomplished easily so the difficult nursing related duties seem out of reach. Laundry requires lifting and carrying a basket of clothes and there is also the impossible flight of stairs to traverse. Help is required of a landlord to complete the simple task of carrying some clothes up a flight of stairs; a simple task taken for granted.

> And, ahhhh, you know, things like laundry -- it's on the second floor here. I can't do laundry. You know when I first injured my back -- so I've had my landlord take my stuff to my car.....(wry laugh) and (laughs again) pile pillows on my car seat and drive home so Mom can take care of me because, ahhhh. Like, with my injury, I had trouble sitting, even laying and, ahhh, you know. I can't see my friends here or work.
> Interview 4, Deirdre (lines 597 - 607)

The household task of laundry is only accomplished with the assistance of a willing and helpful landlord. Even driving in a car to seek help from Mom requires special accommodations. Trouble sitting and lying interferes with the capability to maintain friendships or work activities.

The mundane and mindless task of putting on socks and shoes can become a pain filled nightmare. Getting in out of a car, a simple task on the road to transportation mecca, cannot be done without thoughts of pain inspired death.

> I was to the point where I didn't want to put shoes on, I didn't want to put socks on, (short laugh) because it was too....now I can do those things and normally basically.....I might have one or two days when it's hard. Getting in and out of cars -- I didn't even **want** to get in and out of cars because I knew that one way it was going to kill me.
> Interview 5, Eileen (lines 985 - 992)

The pain and impairment results in drastic lifestyle changes for the back injured nurse. The simple becomes the impossible. Being unable to fulfill the tasks associated

with daily living reinforces the frustration and lack of ability.

I'm Broke

The loss of financial resources contributes to the isolation of the participants. No money means no ability to pay for social excursions.

> Like before, I was always running everywhere. I **love** football. This year I didn't get season tickets because I couldn't afford it. Last year I had season tickets but I couldn't sit that long. Now I can sit -- I couldn't sit hardly at all before.
> Interview 5, Eileen (lines 1248 - 1255)

> --Not having any money to go out or to entertain ...and **even to go out for coffee**. It's been almost something I couldn't do at times...because I didn't have any money. I mean, I got my cheque and then take it to the bank and I, then in the next few **hours** don't have any money. It's all gone to bills or something.
> Interview 1, Abigail (lines 1153 - 1159)

A love of football is left unrequited. Last year the pain interfered with being able to enjoy the game. This year it is the lack of financial resources that contributes to the inability to continue to attend football games. Too much pain and too little money lead to unrequited desires.

Not having enough disposable income to attend sporting events or even buy a cup of coffee contribute to the isolation and depression of the back injured nurse participants. Regular routines are disrupted and gatherings must be declined.

Insurance plans only replace a portion of the back injured nurse's salary. These same insurers are sometimes tardy in their payments, and as a result, the back injured nurse can easily get financially overburdened. Both because the insurance payments are less than the working salary and because the insurance payments can be irregular.

> Yeah. It was inconsistent. The money wasn't -- oftentimes I was -- I had my mortgage and my car loan on automatic debit. And very often I would only have enough for the debit of those two things. So I would hold back on the other bills. So they started to pile up. I could only pay them when the money came. After awhile I didn't know if or when it was coming. One of the cheques, I remember, the first Christmas I had my November the 21st cheque, because I was in the return to work program. It was dated November 21st -- that cheque came December 24. I had no money for Christmas. I mean, I was a sobbing wreck. I had no gifts, I had no groceries. I had a church hamper and I refused to put my name in for Cheer Board, or whatever. I had that, I've had a very hard time doing that.
> Interview 1, Abigail (lines 332 - 345)

Only having enough money for a few of the regular bills is a difficult position to be in. The financial burden of receiving an insurance cheque that numbers less than a regular pay cheque, coupled with the irregularity of the payments can cause severe financial distress. Late and incomplete payments spell a bleak and depressing Christmas.

A nice home and late insurance payments can contribute to the loss of a home. The late insurance cheques caused enough disruption in the regular financial flow that Eileen's home had to be placed on the market for sale. She could no longer afford it.

> If I had owned my own home and if it (the cheque) had come right away, I'd probably be okay. But is just that you **wait**. . . . So I mean, you're.....I mean, they did pay me back to where I went off but when you don't get it until after, you are always catching up! They pay you at the end of the month instead of.....so you are always a month behind. And, I just thought.....I can't really .....I can't say that they've been bad. It's just financially -- it is hard!
> Interview 5, Eileen (lines 599 - 612)

The losses back injured nurses suffered because of financial insufficiency were catastrophic. Bankruptcy, loss of a home and material possessions were the accepted losses of the back injured participants.

> I'm doing this bankruptcy thing. (voice is strained): You know, I could be declaring bankruptcy by the end of the week. So on top of everything else. . . .

> And in the process, yes, I'll probably lose the car. They say that I **may** not lose the house because I have children. But I may, as well. I mean, life as I know it may not exist anymore. That's extremely, it's horribly frightening. And I have **no one**. **No one** to turn to. And I come from a poor family. There's no one, no way, nobody to bail me out.
> Interview 1, Abigail (lines 2008 - 2011, 2281 - 2287)

Three children in the home may be the only saviour from the bank repossessing Abigail's home. The car is gone and the terror of not knowing what the end of the week may bring is ominous. Life as she knows it does not exist anymore. It is "extremely" and "horribly frightening". All alone with no one to turn to. No one to bail Abigail out financially. What started as a workplace injury has resulted in the destruction of a life.

> I was down to my last thousand dollars at the bank. (deliberately, measured): I had no money. And my family are not well to do, so I knew I couldn't fall back on my parents. I wasn't sure if I'd have to sell the house, or what I would have to do. Because I had no money. So that was really scary! **Very scary**.
> Interview 2, Beatrice (lines 188 -194)

Money is one of the requirements of daily living. Without money, a home may be lost. Nowhere to turn and no one to help. Loss of financial means is "really scary", "very scary". Nurses in a single income household are particularly vulnerable to the relentless stalking of bills and financial commitments. Three out of six of the back injured nurses in this person-centered study were in danger of losing their home. Five out of six of the back injured nurses were the sole wage earner for their household at the time of their injury.

<u>I Have No Control Over My Life</u>

> I have no control. I **just** don't have any control anymore.
> Interview 1, Abigail (lines 2016 - 2017)

Loss of control in their life was a big issue for back injured nurse participants.

The insurer calls the plays with the benefits game and taken for granted physical activities are no longer possible to achieve. The financial losses contribute to the stress of the situation and there are obvious losses from financial insufficiency. A back injury can even interfere with arguably the most important life decision one can make - the decision to have children.

> And the gynecologist said, "Don't even think about it (having children)." So consequently, I didn't have any children because of the back injury. Big time implications.
> Interview 2, Beatrice (lines 71 - 74)

A back injury can contribute enough trauma to an area that the additional stress of pregnancy, carrying and raising a child can be too physically stressful upon an already damaged body. The choice of becoming a parent taken from a back injured nurse. A choice that most people take for granted - stolen as a result of a split-second action. Not much different than a car crash.

The back injured nurse's destiny is largely controlled by outside forces. Insurance bodies, health care professionals and managers largely control the life path of the back injured nurse.

> So I don't know where I'm going to end up yet. I don't know what decisions are going to be made toward me (by the Workers Compensation Board). And I'm left kind of in the lurch. . . . I'm supposed to have 6-month goal-goals, whatever. And 2 year goals. I already did that last two weeks ago. And got them all wrong! (goes on bitterly): Imagine that?! Writing **my** goals down and got them all wrong!
> Interview 1, Abigail (lines 1964 - 1973)

Abigail does not know where she is going to end up because she does not know what decisions will be made "toward" her by the Workers Compensation Board. Abigail is not a participant in these decisions, the decisions are made for her and about her.

Abigail was asked to write goals for her rehabilitation and was stunned to hear that her goals were incorrect. The irony of being asked to set goals for yourself, then being told that you have set the wrong goals.

> Loss of control again has been a big issue. I've gone tearful: I want my life back! That was, that was my prayer. And that's all I could pray for at times. Because I really felt that God didn't hear me. Just didn't hear me. Very, very frustrating.
> Interview 1, Abigail (lines 1879 - 1883)

Outside bodies controlling Abigail's life leads to thoughts that God is not listening to her prayers. She just wants her life back.

A Nurse is Who I Am

Being a nurse is more than a job, it is an identity. Nursing is how one is identified and defined as an individual.

> But because I feel that I've been (pause) hurt emotionally. You know – not just physical hurt but I just got – (voice is intense): I didn't want to take my nursing away from me. ...
> And part of my life and part of my identify, which has been my big struggle here, a big part of my identity is my nursing career and who I am. .. Giving up....my nurse's licence. This has been a tough issue.
> Interview 1, Abigail (lines 1787 - 1790, 2112 - 2115, 2127 - 2128)

Being a nurse defines one's role within society. Becoming a Registered Nurse requires specialized education and the ability to pass national exams. Maintaining their registration requires that nurses maintain their competency and continue to practice nursing. A back injury can interfere with a continuation of the required practice hours and ultimately with the ability to remain a Registered Nurse.

Predictions of not being able to continue to practice nursing are not uncommon. The physical injury is seen as an impediment to the physical demands of the job.

> I was told right off the bat (by the physiotherapist), 'You might never nurse again.' But I was determined to keep nursing.
> Interview 2, Beatrice (lines1179 - 1180)

The honesty of a dire prediction, "you might never nurse again". The determination of the back injured nurse rises above the predictions of career demise.

> Getting back to work and being able to **do** my work is of primary importance to me.
> Interview 5, Eileen (lines 730 - 731)

Return to work and being able to continue nursing is of "primary importance" to Eileen. Just let me "do my work". Just let me be a nurse.

Life is dramatically altered with a back injury. Normal activities of daily living become unattainable nightmares; financial ruin reinforces social isolation and leads to devastating material losses; loss of involvement in decision-making leads to loss of control in one's own destiny; and ultimately, the ability to identify oneself as a nurse is threatened.

Theme IV - Return to Work for Nurses is a Special Kind of Hell

> So my story, isn't unique. Really. There are a lot of injured nurses. There are back injured nurses or they just work themselves to death. So...it's really tough.
> Interview 2, Beatrice (lines 881 - 884)

The injured nurse's story is universal and not remarkable. The choices are either working injured at the risk of working "themselves to death" or leaving the workplace. The categories identified within the theme "Return to Work for Nurses is a Special Kind of Hell" speak to the special circumstances that the back injured participants experience. Lack of workplace accommodations, fears related to return to work, the lack of support of

co-workers and the loss of their ability to continue nursing.

It's My Back That's Broken, Not My Brain

The back injured nurse participants were ready and willing to return to work while injured but given their impairment, they often could not return to their substantive position. They have the experience and knowledge to work within a variety of environments and perform a cornucopia of tasks. But there are some specific duties that they cannot perform.

> I could work **anywhere**, as long as I'm not doing **long** shifts, and as long as I would have the appropriate restrictions from the physician: whatever.... You know, no lifting, no heavy, twisting or doing anything that would.....
> Interviewer: And they can't accommodate that.
> Response: (hurt, intense tone) No! They've said, "No, we can't do that." I was told by management.
> Interview 2, Beatrice (lines 1234 - 1240)

The length of the shifts and the lifting and twisting involved make return to work difficult. Back injured nurses within this person-centered study were universally willing to work if there were appropriate restrictions or accommodations made to the workplace.

> Well, there's things I could -- well, even right now -- I could be working if I didn't have such a heavy job. Because in **my** opinion, I'll never get my back back to normal. So why don't they move me to an area which I can work at. ...
> And I would be willing to go elsewhere. . . . Like, I want to go back into nursing. There's no reason I can't **nurse**. It's just -- and ICU is a **very heavy area**.
> Interview 5, Eileen (lines 659 - 665, 706 - 707, 712 - 713)

Eileen's opinion is that she could return to work while still injured but she cannot return to the workplace she originated from. She stated that she will "never get her back back to normal" but she could be working "right now" if she did not to return to such a heavy job. But there are no accommodations and there are no light duties.

Beatrice has some specific ideas of how a back injured nurse could be accommodated and returned to the workplace.

> I think it should be tolerated that I could work in an area, but with restrictions. I think that there should enough -- I mean this is realistically thinking -- I think there should be enough staff on, or enough technology put in place. I think nurses lift far too much. Yes, they've got the sliders and they've got this and that and the other things. But I think there's much more sophisticated equipment out there to help the patients.
> Interview 2, Beatrice (lines 890 - 897)

Working in an area with restrictions, increasing staffing levels and using assistive technology are suggestions to improve the working conditions for back injured nurses and nurses wanting to avoid a back injury. But there also has to be some tolerance exercised because the job will be done differently if it is performed by a back injured nurse.

Back injured nurses can find themselves returning to work with no restrictions or accommodations made to the workplace.

> There are no light duties.. .. My load was supposed to be "light duties". There is no light duties in that place (quiet bitter laughter). Sorry. (few words muffled.) So I ended up getting a little **heavier** duties.
> Interview 1, Abigail (lines 73 - 75)

Abigail found herself returning to work and experiencing work conditions that were "a little heavier" then she had expected. No light duties were available and Abigail was given a heavier load.

Erica had been off work for three months before she returned to work on modified duties and decreased hours. On her return to work plan, she was given "easy" nursing tasks which involved removing sutures and starting IVs. Although these tasks do not involve lifting, she found the tasks difficult to perform because of the awkward postures

that are required in order to gain access to the required sites. Erica also found herself performing many "non-nursing" tasks in she found that demoralizing. Her entreaty was, "I'm a nurse, let me nurse".

Few accommodations were made for the back injured nurses within this study. Back injured nurses have the expertise and the knowledge to continue working: just not with their backs. There appears to be a reluctance on the part of the employers to use back injured nurse's skills and abilities in modified or unconventional ways.

> 'Your backs gone; your brains are gone too!' .. .
> Interview 2, Beatrice (lines 995 - 996)

A back injury can provide an opportunity to work in a manner that involves more brain power than back power, if given the opportunity.

> They can use my **BRAIN**! . . .
> 'How can we utilize you?' You know? The brain is still there. You've gone through nursing. You've all this job expertise.
> Interview 2, Beatrice (lines 1508, 1833 - 1835)

The expertise and knowledge of the back injured nurse is still available for use. However, according to the participants, there seems to be a mind set that nurses must return to the duties they were doing when they were first injured. Creative use of the abilities of the back injured nurse is not an option.

<u>The Fear Factor</u>

Return to work can be terrifying for a back injured nurse. Fear of re-injury is a real and significant fear among the participants.

> And I didn't want to aggravate my condition any more. (intense but yearning): I want to heal. (pause) I don't **want** to be **re-injured**. You know?
> Interview 1, Abigail (lines 1255 - 1257)

Participants understood the ramifications of a back injury and were wary of putting themselves in situations where re-injury could occur. Aggravating their existing injury or re-injuring the area are significant concerns.

Eileen is afraid of being in a situation where a patient might require more physical support then can be offered.

> I can't handle it. Or, if they grab me. Even if they are weight-bearing and they just grab me to get up. That kills me. Even the thought of it sends goose-pimples down my spine. Lifting them when you are boosting them up -- at least you **control** movement. And that's not as bad. And then there's fear. You get to the stage where: "Is this going to hurt **me** again?" "Am I going to stop lifting and hurt somebody else because they are lifting with me?" "Am I going to drop somebody?" You know, you just: "Ahhhhhh."
> Interview 5, Eileen (lines 471 - 482)

The pain that can be generated if a patient unexpectedly grabs on for support is the type of pain that "sends goose pimples down" the spine. There is the need to control the situation and the ever present fear that something will go wrong and either the nurse will be hurt again or the patient will get hurt. Neither situation is desirable. The need to be able to control the lift and not be caught unaware is important.

The length of the shifts may also generate fear and worry. Participants voiced that twelve hour shifts just may be too long for an injured back to cope.

> Yeah. Yeah. And like, I don't know if twelve hours is going to be too long for me to work. That's another thing I worry about.
> Interview 3, Colette (lines 590 - 592)

The type of work that is required of a back injured nurse is also a worry. The work is "heavy" and perhaps too much for a susceptible back.

This is what I'm scared of, you know.

> Like, I'm worried about that. And, then I worry, like, a lot of people that have been telling me, like, you can't go back and do that job. Like, I know, it is awfully heavy; and like, you know, I worry about that.
> Interview 3, Colette (lines 521 - 526)

The injured nurse knows better than anyone that the job is "heavy" but that fear is reinforced by others: "you can't go back and do that job".

Nursing is a job that requires technical expertise and expert knowledge. The decisions made by a nurse sometimes require quick action with little room for error. Being away from the intensity of the job can cause lapses in the memory. The fear of having forgotten how to nurse was real for Colette.

> Because being off a year, like I feel that I probably need -- like maybe not a **whole lot**; but there's going to -- I'm going to feel like I'm really rusty in some things because I haven't done it for awhile. . .
> And then I met with some of these girls (colleagues) and I found that, "Oh my God, like they are talking about all these things!" I found it really stressed me out. Because you start worrying about when you've got to go back, yourself. Like, how are you going to cope? And you know, like, are you going to be able to do everything that is expected of you?
> Interview 3, Colette (lines 570 - 574, 505 - 511)

Feeling "rusty in some things" adds to the fear of returning to work. Colleagues talking about work reinforces the forgotten skills and knowledge. The question, "are you going to be able to do everything that is expected of you?" is a valid question. For some of the participants, fear of returning to work involved fear of re-injury and pain; fear of hurting a patient or colleague; and fear of not being able to do the physical or intellectual components of the job.

<u>And the Wolves Begin to Circle</u>

> (hesitates, thinks): It's almost like a pack of wolves, just waiting.... for someone to go down.

Interview 2, Beatrice (lines 1607- 1609)

The weakest and a most vulnerable are circled and set in the sights of the strong. Someone is down and in this case, it is the back injured nurse.

Criticism and judgments made towards the participants were often cruel and uncalled for. The insinuation is that the back injured nurse is not a "good" nurse because she has fallen short of her duty.

> But any ways, when I did come back to work, somehow "back" came up in the conversation. And the Manager said to me, "Well, I have back trouble too. I can hardly get out of bed some mornings and **I** come to work." That is how she said it. . . (hurt and scornful): I mean **she** can come in hurt and in pain, so because **you're** not as good a nurse as **she** is....you..... Real value judgement.
> Interview 2, Beatrice (lines 1543 - 1548, 1572 - 1574)

The participant was not coming to work while injured, yet her more reliable and superior colleagues continue to work incapacitated. The implication is that the injured nurse who removes herself from the workplace has abdicated her duties. She is a failed nurse. She is only worthy of being circled and devoured.

Participants not only had to deal with their own pain, depression, isolation and identity crisis, but they also with the loathing bestowed by colleagues.

> That was another comment that somebody said: "I've got a sore back all the time, too. **I** never filled out that thing." And I went, "Hello!" You know, so -- all that made me do was just feel worse. You know.
> Interview 1, Abigail (lines 918 - 921)

Abigail felt that other nurses believed that the injured nurse who completes an incident report to document her injury is in some ways weaker and not as worthy as other nurses. Other nurses have "a sore back all the time" and because they do not report the

injury and continue to work in pain, they are better nurses.

Within Eileen's experience, her manager helped fuel the resentment towards her. Eileen was told by her manager that she had failed her colleagues become she could no longer pull her load and pick up extra shifts.

> But she (the manager) said something about (pauses) I can't remember, but it was something to the effect of would I be working extra shifts or something. Because we're really short. Like, **we are really short**. And I says, "You know, I really don't think that's wise at this point. I'm struggling enough to do **my** shifts." Let alone picking up extras. And she says, " Well, you know, your co-workers resent the fact that they're expected to pick up all these extra shifts and you're not picking up any."
> Interview 5, Eileen (lines 1370 - 1383)

The manager's clear lack of understanding and lack of sensitivity regarding injury and return to work was captured in this scenario. Eileen was struggling to return to work and was chastised by her manager because her colleagues were expected to pick up extra shifts and Eileen was not. According to her manager, Eileen had abandoned her responsibilities and was essentially shirking her duties.

The words exchanged in private between colleagues and the participants illustrate the lack of understanding of the life of the back injured nurse.

> When I **did** go back to work, one nurse said to me, "Well, you've been off for a long time now, you've had a rest. You'd better do **your** share of lifting, because I don't want to injure my back. I don't want to end up being off on Worker's Comp." So these were the kinds of comments that people made that were very hurtful. Very, very hurtful.
> Interview 2, Beatrice (lines 759 - 766)

Participants voiced that the time away from the workplace was seen as a "rest" and the challenge was then to catch up on the lifting that the participant had evaded.

When Beatrice attempted to explain her life as a back injured nurse, her explanation was met with incredulity. "Oh! REALLY?".

> Well I said to one of those nurses. I said, "I haven't been out to (small town Manitoba) for six months because I can't drive my car for that distance. I can't sit for that long and I'm just in **far** too much pain, far too sedated to drive that distance and I'm definitely NOT having a vacation. And she looked at me like: "Oh! REALLY?" (pauses, quiet resigned tone): No. No understanding. No understanding.
> Interview 2, Beatrice (lines 1822 - 1828)

Little attempt was made to understand the plight of the participant.

The challenges to the integrity of the back injured nurse are spoken in private and also in public. Abigail found herself challenged during report in front of co-workers, student nurses and instructors. Abigail was cornered and humiliated.

> Because again, as I told you before, I had flack by one of the nurses who should never have been a nurse. (Rueful, regretful laugh) There is no other word for it, but she -- she should never have been a nurse. She didn't even have a heart. And she ridiculed my, the fact that I was on physio and the fact that I was on a return to work program and on a report, in A.M. report with all the students there. The university ... and the instructor....and the aides. And I thought, you know.
> Interviewer: While you were there ?
> Response: Yeah. And I was there. And she said, "When are you going to get off this. I'm sick and tired of you being off."
> And I said, "You think I'm not? You **think** I'm not sick of this?"
> Interview 1, Abigail (lines 201 - 215)

The public chastising involved ridiculing the treatment and accommodations that Abigail was receiving and ended with the statement, "I'm sick and tired of you being off". Abigail responded in the only way she could, given the pain, isolation, depression, financial distress and identity crisis she faced daily. "You think I'm not? You **think** I'm not sick of this?"

You Are the Weakest Link - Good bye

Once it had been determined that the participant was not returning to her substantive position with any speed, the decision was often made to fill her position, which essentially leaves the back injured nurse without a job. In the words of a contemporary television show, "You are the weakest link - goodbye".

For some of the participants, being removed from the workplace was sudden and unexpected. A meeting was held. The participant was invited in and left at the end of the shift, never to return.

> And actually, what happened was I was basically – walk into that meeting, ummm. And had that – caught them at it – talking about me and (pause) the Manager called me into the office. Stopped the conversation and called me into the office. And we talked and he basically called up the staff nurse on the phone – got her up – and this is after 2:00....probably 10 after 2:00, 2:30, we were having a meeting and I walked out of there at 3:30 never to go back. Now that's how fast it happened! I mean you don't really have time to adjust or anything!
> Interview 1, Abigail (lines 1815 - 1824)

For other participants, they were aware that their position may be filled because they received veiled threats of job loss if they did not return to work.

> And then, she (the manager) kept telling me, you know if I wasn't coming back, she'd have to give my job away. And she was very adamant this year. And then (I guess it must have been in February) (more assured voice): As soon as my sick time -- and I went on long-term disability; then she wrote a letter saying that she was having to give my job away .....
> Interview 3, Colette (lines 358 - 364)

For other participants, the loss of their job involved a Union generated option-bumping. Bumping allows a nurse with more seniority to displace the nurse already filling the position. The bumping is often calculated and strategic.

> Another nurse was told to bump me out of Oncology. Who knew I had no other place to go. And I said, "I can work on the ward with restrictions." And one of the managerial people said, right away: she said, "You cannot work in any area involving any lifting; because other nurses will be putting their backs (and she was **very, very** inflammatory). Another nurse would be putting her back at risk if she's doing your job. So you can't be in any of those areas."
> Interview 2, Beatrice (lines 1374 - 1382)

The lack of options for this participant was legitimized by the manager who reinforced that accommodations would not be tolerated because other nurse's backs may be put at increased risk.

Not only was Beatrice actively removed from her job, but other opportunities were also denied.

> The program manager came to me last summer and she said, "I need staff for the summer. I could give you full-time, I could give you .6, I could give you .7. You can work whatever you **want** because I can use you in the area. You know the area. You're there with the students. And I said, "Would the fact that I have a back injury affect it?" And she said, "Well, I guess I can't hire you." And she turned around and went out. . . .
> So hospitals see you as a liability. You are not an asset. You're no good to the hospitals, you can't lift.
> Interview 2, Beatrice (lines 936 - 944, 947 - 948)

When the back injury is revealed, the response is "Well, I guess I can't hire you". The back injured nurse is "liability" and "not an asset". There is no attempt to discuss accommodations or alternate work placement. The participant is damaged goods; the weakest link - good bye.

Theme V - It's Not All Bad

Although the journey of the participants is often fraught with strife, there are moments of hope. These moments come in the form of family and friends, health care

professionals, and co-workers displaying moments of caring and concern. Other moments of hope come in the form of personal enlightenment.

Family and Friends

Family and friends were in a unique position to provide support and guidance because they had a relationship with the nurse prior to the back injury. Being there, understanding the back injured nurse, and knowing how far to push were all components of friendship and being part of a family.

> Actually when the kids' Dad comes in and we go and he invites us for lunch, or whatever, I can go as long as I pay for my own. Which had been prohibitive sometimes because I don't have the money. And the kids know. And the kids have actually coughed up, ummm. Whether it's their babysitting money from my youngest, or whatever. But it's, 'Come on Mom! You're coming too.' That's really (hesitates) -- humbling. But I know the kids' hearts are in the right place.
> Interview 1, Abigail (lines 1192 - 1200)

Children paying for their financially destitute mother to join them for lunch is an example of support and caring. Support comes in unexpected and humbling ways.

Being available and willing to do the physical chores of the back injured nurse is definitely "terribly" supportive.

> My husband has been **terribly** supportive. I could never look after a house, I'd have to have somebody come in to do the cleaning, etc. etc. It's all I can do – to look after my activities of daily living: to look after myself. Do some of the dusting. And some of the dishes and that sort of thing. I'm never going to be back to the way I was. I just have to accept it and that's it.
> Interview 2, Beatrice (lines 1781 - 1788)

When all a back injured nurse can manage is taking care of herself, help around the house is appreciated. Life as she knew it will never be the same and help with the

chores involved in running a household is supportive.

> Friends keep in touch and keep you in mind.
>
> You know, like.....I mean, there's days when I wonder why hasn't someone phoned to see how I'm doing..... You know, or..... But then, they do!
> Interview 5, Eileen (lines 1449 - 1453)

Support is remembering the participant is home alone and may enjoy a phone call. The emotional isolation can be broken by a phone call.

> Parents can bring in soup and neighbours can be a "God-send".
>
> My parents brought me in soup. My **neighbours – God bless them !** They were a God-send. I lived in a side-by-side. Jamaican neighbours. And they had gone through a lot of racial problems and it was normal for them to get eggs thrown at their car, get their tires slashed, etc. But boy, they would give their shirts off their back to help. So they used to come over and bring me some really nice Jamaican **food**. He'd mow my lawn for me. They'd always check on me and they were a **God-send**.
> Interview 2, Beatrice (lines 1714 - 1723)

Support can be making food, mowing the lawn or just "checking on" the back injured nurse. Neighbours who have experienced discrimination because of their ethnicity helped the participant who experienced her own form of discrimination.

> And I've got a sister that I don't know what I would do if I didn't have her. Because literally, she's helped me out financially. She's helped me out physically. I've got a very close friend that lives in the complex here. We've been friends since -- well she was my big sister in training.. . .
> And we've been just very, very close friends. Like, I mean, she .....like I can't flip my mattress, there's things that I can't do. And I.....I've **got** to flip my mattress, it's been such a long time (laughs). She'll say, "Don't do it." Because I did it and really hurt myself. And she'll do things for me like that, that I wouldn't want to phone somebody else to do.
> Interview 5, Eileen (lines 1330 - 1335, 1337 - 1345)

Having family to help you out either financially or physically was supportive for

the participants. Having someone to call that does not mind doing the common tasks that are difficult for the back injured was also supportive. The humility of receiving and asking for help was a requisite. Help that is given freely and willingly was cherished and appreciated.

Health Care Professionals

Support from health care professionals comes in the form of protecting the back injured nurse, listening to the back injured nurse, and encouraging the back injured nurse to find her voice.

> She (occupational health nurse) constantly kept at me about 'when you are tired and you are hurting, speak up.'
> Interview 1, Abigail (lines 680 - 681)

Eileen was encouraged to speak up when being inadvertently pressured into returning to work before she was capable of returning to work.

> I deal completely with (the occupational health nurse). And she (the occupational health nurse) deals with them (management). Because (the occupational health nurse) says, "You pushed yourself back to work early last time, I'm not letting you deal with it." short laugh. "Because," she says, "You'll listen to them. They're short staffed. And you'll go." She says, "I won't listen to them." So she doesn't let me talk to them anymore. short laugh again. I mean, I can talk to them, but..... She says, "If they ask you questions about when you are coming back, tell them to talk to me. Because you will say 'yes' and I'll say 'no'." So I'm letting her do it.
> Interview 5, Eileen (lines 644 - 657)

Eileen allowed the occupational health nurse to protect her from premature return to work. She needed an intermediary to help protect her interests. The occupational health nurse suspected that Eileen would allow herself to be coerced into a premature

return to work, so the occupational health nurse supervised all the return to work discussions between Eileen and her manager.

Listening to the back injured is considered helpful and supportive.

> I really, really think that physio department gets not near enough credit, for what they have to put up with. And they should be doing a psychiatric.... They should be getting paid by the psychiatry as well, because they **listen** to us!
> Interview 5, Eileen (lines 1278 - 1283)

Having someone truly listen to how the back injured nurse is feeling is helpful. Someone who really **listens**.

Support From Co-Workers

Co-workers who have experienced a back injury themselves were often more sympathetic to the participants. Back injuries were prevalent among Deirdre's colleagues and this contributed to their understanding and acceptance of her plight.

> But, they are all supportive. And I was thinking of the (pause) just the evening staff ---- of the six nurses, four of them have injured their backs. And, of the Health Care Aides, five out of six have injured their backs. So.....
> Interview 4, Deirdre (lines 269 - 274)

Having experienced a back injury themselves contributed to a greater understanding of Deirdre's circumstances. Eileen was experiencing problems coping with her pain on the ward and it was her co-workers who encouraged her to seek medical attention in the Emergency Unit.

> And they (the co-workers) said, "You've **got** to go to emerg." So I went down to emerg and literally they snowed me. They gave me morphine and something else....Valium I guess. And told me that I shouldn't work until I could get the pain under control. So I was off for ten months.
> Interview 5, Eileen (lines 254 - 260)

Taking "charge" of Eileen and strongly and encouraging she get medical treatment was necessary. Being "snowed" with analgesic to control the pain and being advised to not work until the pain is "under control" resulted in her being off from work for nine months.

An observant supervisor who noticed that Abigail was not as "chatty" as normal provided the encouragement that Abigail needed to file an incident report to justify her injury claim. Difficulty with walking and reinforcement from the supervisor provided the impetus for filing the incident and Workers Compensation report.

> In fact, I wasn't even going to fill out the incident report. If it hadn't have been for the nurse, the supervisor who knew me and said to me, "Why are you do quiet? What's wrong with you?" Not that I'm really chatty. But I may be. laughs. But I wouldn't have bothered. Except I could barely walk. But she said, "No. No. You fill that out. I don't care if you stay late. You fill that out." And so I went, 'Oh all right.'
> If I hadn't of, I'd be in really jackpot trouble.
> Interview 1, Abigail (lines 633 - 641)

Without the support and encouragement of the supervisor, Abigail may not have filed the incident and the compensation report and would have been in "jackpot trouble". She would have been left without the documentation necessary to support the cause of her injury.

> I was handing out meal trays and one of my co-workers: "Gail, what are you doing?! You are not supposed to be lifting!" I said, (amusement creeps into her voice) "It's a meal tray. It's O.K. I can lift a meal tray. Just not a person." So they are very protective.
> Interview 4, Deirdre (lines 311 - 317)

Supportive co-workers can sometimes be a little over protective.

Blessings

There were not many positive aspects associated with a back injury. From the participants's perspective, time was one tangible blessing of the back injury. Time to spend with family that would not normally be available.

> When I was injured I wouldn't have thought there was anything positive but when I got your package and reading through the questions, you know I am thinking about the different ones and, ummmmm, I would just have to say, spending time with my family. More time than I usually do. I went to a few things that normally, if I was at work here I wouldn't be able to see. Just, like my nieces -- they had their 4-H speeches, so I was able to see that. I wasn't able to stay the whole time and of course, fidgeting, but.... And of course I saw a couple of basketball games. Again, this was near the end of my injury.
> Yeah. But those things, if I wasn't off, I would be working and miss-out.
> Interview 4, Deirdre (lines 1052 - 1065, 1073 - 1074)

Being available to see "4-H speeches" and "basketball games" provided the participant with an opportunity to re-connect with family. Not missing out on family activities was a tangible benefit of being injured and away from the workplace.

Learning to accept support sometimes has to be learnt and learning to accept help was also a blessing.

> I'm getting better about receiving.
> Interview 1, Abigail (line 346)

Learning to accept the gifts of help graciously and willingly was also a blessing.

One of Abigail's blessings was learning that she was more than "just a nurse" and that she had an identity beyond her occupation.

So I'm not just a nurse anymore. I'm also a useful person in other ways. So,

> umm, I'm feeling better about that. So maybe it's just another door opening to a different way of life for me. I have had a lot of adjustments and a lot of, you know, things that I have had to do this past while.
> Interview 1, Abigail (lines 2122 - 2127)

Learning that she is a "useful person in other ways" was one of Abigail's blessings.

Watching her children grow and flourish as individuals under difficult times was another blessing for Abigail.

> So, yes, I've had surprising blessings. I have watched my children grow up under this kind of duress at times. Me not having money and been able to do stuff like go out and have a (pause) **holiday**. Even for me to go home to (small town Manitoba)....gas money! So I haven't been able to do that. But my kids are very mature. They have learned what is important in life. And I think that is what a parent wants. To teach their kids what is the essence of life here. It is not material possessions. It is, you know, what you make of yourself and your life. And what you can do to help others.
> Interview 1, Abigail (lines 1433 - 1444)

Having children learn "what is important in life" is an admirable lesson and truly a blessing.

Learning tolerance for others was also a blessing.

> (briskly): So, just being more tolerant of people with handicaps, I would say is certainly a positive that has come out of this. And you know, just dealing with life-style changes.
> Interview 2, Beatrice (lines 651 - 654)

Although the journey is difficult, there are lessons learned and blessings along the way.

Summary

Abigail summed up the experience of the back injury succinctly.

> Yeah. Just please, give me a life. I want my life back! That is really what I really feel so strongly. Just, (sincere emphasis) I want my life back! I want off Worker's Comp. I want my life back! However, I do realize now that my life is going to be different from here on in. I know I am not capable of doing that anymore. I realize what I can do and what I can't do. I know myself a heck of a lot better. You know? A heck of a lot better.
> Interview 1, Abigail (lines 713 - 720)

The life of the participants was changed irreversibly with their back injury and there was no return to a pre-injury state. Although the journey is treacherous, some participants had glimpses of enlightenment along the way.

CHAPTER FIVE

Discussion of the Findings

Introduction

Both the quantitative and the qualitative data are discussed within this chapter. The categories and themes identified within the stories of the back injured nurses are situated within the context of the published literature. Johnston's Disability model is examined to determine its appropriateness and suitability within this research study along with implications regarding its future use. Part of this chapter is dedicated to my personal reflection and reflexivity on the topic of back injuries and the insight I have gained from being allowed the privilege of sharing in the personal journeys of the back injured nurses who participated in this study. Recommendations for nursing management, nursing practice, nursing education and recommendations for further research are also presented in this chapter.

Methodological Issues

This section includes a discussion on the strengths and limitations of the study design and the resultant data. The qualitative design of the study involved six back injured nurses who had been away from their substantive workplace for 4 weeks or longer. Two of the nurses were currently beginning a return to work program so they were actively re-connecting with their workplace. Another of the nurses had injured her back five years prior to the interview and had returned to the profession of nursing, but she had never returned to work with the same employer of injury, despite still maintaining a position with that employer. The remaining three back injured nurses had been away from

the workplace for at least 9 months.

The nurses varied in the length of time that they had been away from the workplace and also in the income replacement they were receiving. Two of the nurses were receiving Worker's Compensation Benefits, three were receiving Long Term Disability Benefits and one nurse was receiving no income replacement. This variability in the length of injury and type of income replacement contributed to a lack of homogeneity within the participant group. However, this lack of homogeneity within the participant sample can also contribute to a greater range of experiences being discussed and presented. There was some homogeneity in the group in that all the participants were female nurses working in a tertiary setting, albeit in different environments and all of the nurses worked full time hours.

A larger sample would have also accorded more strength to the data and led to a richer and thicker description. The difficulty with subject recruitment led to the smaller sample size of six participants. By the time the sixth participant was being interviewed, the data had been reviewed several times and the identified categories and themes were emerging repeatedly throughout the interviews. During the sixth interview, I found myself listening to the story of the back injured nurse and categorizing her responses as she spoke. The categories were similar to the previous patterns and the themes were becoming more obvious, lending more confidence to the categories and the themes that were being created. A greater number of interviews would certainly have added strength and credibility to the work but the description provided by the participants was rich and dynamic and the themes and categories that emerged were well substantiated by the data.

The interviews were conducted in a location of the participant's choice and in four of the six interviews, the location of choice was the participant's home. One of the two remaining interviews was held in a boardroom at the College of Registered Nurses of Manitoba (formerly the Manitoba Association of Registered Nurses) and the other interview was held in a empty room at a hospital within the city. All of the interviews were afforded privacy and this enhanced the ability of the participants to tell their story. Participant recruitment was difficult and as was previously discussed, a variety of measures were used in an attempt to garner an adequate sample.

Despite some obvious challenges because of the small sample size, the data generated with the six participants was adequate to discover patterns. The data presented provide a base from which to plan further studies involving back injured nurses and the themes provide a framework within which to identify further research questions.

Quantitative data

Demographic Data

The average age of the participants within this person-centered study was 44.7 years of age and according to the injury information by occupation code, the average age of injured nurses submitting Manitoba Workers Compensation Benefit claims in 1999 was 42 years of age (Manitoba Workers Compensation Board of Manitoba, 2000). The injured female registered nurses within the study of Yassi, Khokhar, et al., (1995) had an average age of 33.7 years. The age of the participants within this person-centered interview study is consistent with the Manitoba Workers Compensation statistics but it is over 10 years higher then the average age reported by Yassi, Khokhar, et al. (1995).

The participants were all working full-time hours with five out of six of them working on a medical ward. Yassi, Khokhar, et al. (1995) had previously noted that medical wards were high-risk wards for back injuries. Five out of six of the participants were single at the time their injury with four of the six participants living alone at the time of their injury. Only Abigail and Colette had children and Colette had a 32 year old adult child who had moved back home at the time of the injury.

Of the single wage earners in the household, Deirdre and Erica had the highest income range at $40,000 to $49,000 and these were the two participants who were currently on return to work programs. Abigail and Eileen were in danger of having their homes re-possessed at the time of the interview and they had an average income in the $20,000 to 29,000 range. Beatrice was also in danger of having her home re-possessed at the time of her injury, but she did not report her income at the time of the injury nor at the time of the interview. At the time of the interview, Colette had not expressed any financial difficulties, understandably, because there was another wage earner in her family and she reported an average household income of greater than $100,000 for the year.

According to Frank et al.'s (1996 b) model of the natural history of lower back pain, two of the nurses in this patient centered study were in the acute phase of lower back pain: Deirdre had been off work for six weeks and Erica had been off work for 12 weeks. The remainder of the nurses were in the chronic phase of low back pain.
Of all the participants, Colette focussed the least on financial difficulties, understandably, because there was another wage earner in her family. Colette spoke more about her fear

of returning to work related to her nursing abilities and ability to perform the work.

Colette, Deirdre and Erica had the three lowest marks on the Roland-Morris Disability Questionnaire and Deirdre and Erica were on a return to work program at the time of the interview. Colette's score on the Roland-Morris Disability Questionnaire was relatively low with a score of 8, yet she had not yet returned to work. Colette had been laid off from her job and she did not know when she would return to work or to what job she would return. This contributed to her uncertainty and fear regarding return to work. There was no help from her workplace related to her return to work process and she also had fears related to her ability to return to work. However, Colette was still committed to return to nursing, despite her fears.

Abigail and Beatrice reported the highest scores on the Roland-Morris Disability Questionnaire and they also expressed the most displeasure at the way they had been treated by the compensation system, their workplace and their colleagues. They had difficulty convincing these bodies that their injuries were legitimate and in general, they most strongly expressed the negative attitude that had been directed towards them.

There did not appear to be any association between the age of the participants and their experiences as back injured nurses. Smoking had been identified as a significant variable related to negative back injury outcomes (Frymoyer et al., 1980; Lancourt & Kettelhut, 1992; Hazard et al., 1991; Perez, 2000) and Erica was the only smoker within the group of participants. Although she had been off work for 3 months and had been having difficulties with pain control, she was currently on a return to work program.

Roland-Morris Disability Questionnaire

The range of responses on the 24 question Roland-Morris Disability Questionnaire was 6 to 20 with an average response of 13.5 and median response of 14. In Aronoff et al.'s (2000) clinic at the Mid-Atlantic Center for Pain Management in North Carolina, they found that the mean score among patients presenting with chronic pain syndrome to be 18 out of the 24 on the Roland-Morris Disability Questionnaire. Therefore, the participants within this study, on average did not attain the same level of disability as Aronoff et al.'s (2000) chronic pain patients. However, two participants, Abigail and Beatrice, with respective scores of 19 and 20 on the Roland-Morris Disability Questionnaire, would have met Aronoff et al.'s (2000) average score for diagnosis with chronic pain syndrome.

While developing their disability questionnaire, Roland and Morris (1983) identified the average scores on their disability questionnaire and related them to qualitative statements on a 6 point pain rating scale. The scores of Colette and Deirdre with respective scores of 8 and 6 on the Roland-Morris Disability Questionnaire translate into a qualitative statement of "little pain". A score of 12.1 on the Roland-Morris Disability Questionnaire would translate into a statement of "quite bad pain". Interestingly, a score of 15.6 on the Roland-Morris Disability Questionnaire translates into the statement "very bad pain" while a score of 14.4 equals the comment "the pain is almost unbearable". Erica (Roland-Morris score = 13), Eileen (Roland-Morris score = 15), Abigail (Roland-Morris score = 19) and Beatrice (Roland-Morris score = 20) all had scores that translated into statements of "very bad pain" to " the pain is almost

unbearable". These scores indicated a high level of back pain disability.

Both Deirdre and Erica were on a return to work program and their scores were 6 and 13 on the Roland-Morris Disability Questionnaire. Beatrice was working full time as a Registered Nurse with a score of 20 on the Roland-Morris Disability Questionnaire. Beatrice however, had not returned to her substantive position, but she was working as a full time Registered Nurse with another employer.

Presentation of the Themes

Five themes emerged from the stories of the back injured nurses and each theme consisted of categories that justified and supported the prevailing theme.

I've fallen and can't get up...really! was the first theme presented. It consisted of the categories: a) The invisibility of the agony: Physicians don't believe; Insurers don't believe; Managers and co-workers don't believe; The back injured don't believe; b) Pain, isolation and depression: The triad of trauma; and c) I told you I was hurt! Vindication.

The second theme identified was **Playing the benefits game** with the following categories: a) The players; b) The game; and c) I want to take my ball and go home.

I want my life back was a cry sounded by the back injured nurse and it was the third theme specified with the following categories to justify the theme: a) I can't do anything; b) I'm broke; c) I have no control over my life; and d) A nurse is who I am.

Return to work for nurses is a special kind of hell speaks to the unique considerations that participants experienced while attempting to return to work. The supporting categories included: a) It's my back that's broken, not my brain; b) The fear factor; c) And the wolves begin to circle; and d)You are the weakest link - good bye.

The final theme identified was **It's not all bad**. This theme spoke to the moments of support, friendship and learning experienced by the participants. This theme was comprised of four categories: a) Family and friends; b) Health care professionals; c) Co-workers and d) Blessings.

Analysis of the Themes

Theme I - I've Fallen and Can't Get Up...Really!

I've fallen and can't get up...really! is the theme that illustrates that a back injury cannot be seen and therefore cannot be readily visibly justified. This theme also identifies the despair that stems from the lack of acknowledgement of the back injury; and the fact that in some cases, the final vindication comes when the injury is objectively justified.

The Invisibility of the Agony

The participants had an "invisible" injury that was not visually obvious upon cursory inspection. This lack of tangible evidence led people to doubt the authenticity of the injury.

Physicians Don't Believe

A back injury often cannot be objectively measured and the source of the pain frequently cannot be identified. This leads health professionals, managers, and co-workers to not believe in the legitimacy of the injury and the pain. A publication designed to guide physician's practices with regard to treating individuals with back injuries reinforces that there are factors that go beyond simply physical problems that impede the back injured from recovering (Gillette, 1996). Gillette (1996) states that although most persons with acute back problems recover promptly, those that are not

significantly improved within two weeks will often reveal significant behavioural factors that may be impeding recovery. The factors noted include interpersonal, economic or occupational stress; psychological disorders, including anxiety, depression or somatization; and counterproductive beliefs about back disorders.

Recommended treatment of the back injured includes building a constructive physician patient relationship, addressing life stress issues, keeping patients physically active and prescribing psychotropic and/or analgesic medication when appropriate (Gillette, 1996). None of the recommended treatments includes acknowledging the pain and distress of the back injured. Physician guidelines reinforce the suggestion that anyone who has a back injury that persists beyond two weeks is experiencing negative contributory variables that are marshalling the pain and impeding recovery.

These physician guidelines mirror Beatrice's experience with her physician. She had been told by her physician that she was having problems within her workplace and that was why she was not returning to work. Certainly interpersonal, economic and occupational stress in addition to depression were identified categories within the stories of the back injured nurses and they are addressed by Gillette (1996) as factors that may be interfering with a successful recovery.

Gillette (1996) goes on further to identify that factors in the workplace, such as excessive noise, unreasonable work demands, physical danger, exposure to toxic agents and personal harassment may play an important role in initiating or perpetuating back pain (Gillette, 1996). Again, the potential for a serious physical injury or for repetitive lifting to be the cause of the back pain is not acknowledged.

Gillette (1996) continues with his physician guidelines by asking the physician to consider "the frequently encountered situation" in which the psychologically distressed worker attempts to convert a minor workplace injury into a permanent medical disability that results in financial reward. This situation is "frequently encountered" and some suggestions for managing the malingerer are to order the employee back to work immediately after determining that the physical problem is trivial or allowing the patient to exhaust the Workers Compensation system (Gillette, 1996). Determining that the physical problem is trivial, however, may be more difficult then it appears when a majority of back injuries present without clear clinical physical findings. The legitimately back injured nurse needs to rail against the entrenched and documented physician guidelines that outline the path of a malingerer.

Gillette (1996) concludes that depression, anxiety disorders, somatization and personality disorders are important factors that should be considered when assessing any patient with delayed recovery from back pain. The invisibility of the agony coupled with negative reinforcement from the medical hierarchy contributes to the indoctrinated disbelief of the story of the back injured nurse.

Ensalada (2000) writes for over 15 pages describing various types of deceptive behaviour that a physician may encounter in his or her practice when dealing with illness behaviour related to injury, illness, impairment or disability. Within the article, there are five response styles noted for deceptive behaviour; five gradations of response styles for deceptive behaviour; a category for syndromes characterized by abnormal illness behaviour; and a section on detecting deception. The article prepares the physician to be

aware of planned or subconscious deception on the part of the patient so that this deception can be judiciously guarded against. The physician must be ever aware of this potential for deceit.

The invisibility of the agony is not necessarily legitimized by the physician group, nor is this lack of acknowledgement limited to North American physicians. Interestingly, a British back injured nurse states that he felt patronized, his situation trivialized and his credibility questioned while being off work because of a work related back injury (Cowell, 1995). Hadler (1997 b) chastises physicians for this behaviour and scolds, "(A)ny physician who sits in judgment of a worker with a back injury is no longer behaving as a physician" (p. 939).

In contrast to Gillette (1996) and Ensalada (2000), Hadler (1997 a) believes that when

> workers find their musculoskeletal discomfort intolerable or incapacitating, we should not impugn their veracity. Rather, we should question just what in the workplace is compromising their ability to cope (p. 342).

Hadler (1997 a) states that consideration must be given to styles of management, job security and interpersonal dynamics as contributors to unsuccessful recovery from disabling back pain and return to work, but that the honesty of the back injured should not be questioned.

Turk and Okifugi (1997) note that pain behaviour should not be considered a lack of motivation for getting well or malingering because there is no conscious deception on the patient's part, but rather unintended performance of pain behaviours resulting from reinforcement of the pain behaviours. According to Turk and Okifugi (1997), the pain

behaviour is now learned behaviour of which the patient is unaware. Aronoff et al. (2000) warn that physicians who negatively react to patients pain behaviour only serve to amplify it as the patient now needs to reinforce even more strongly that they are in pain in order to convince others that something is wrong.

Insurers Don't Believe

Hadler (1996 a) maintains that the insurance process ensnares litigants into maintaining that their symptoms and dysfunction meet the insurance standard for disability out of the need to justify their claim and maintain their credibility in the eyes of the insurer. Therefore, their symptoms become entrenched and "the vortex of disability" is created (Hadler, 1996 b). The injured are drawn into a "Kafkaesque" world where the claimants "have to convince some bureaucracy, paid to disbelieve, that they are too ill to perform in the workplace" (Hadler, 1996 a, p. 248).

Insurers require fiscal responsibility and to that end, they need to ensure that all receivers of their beneficence are actually legitimately injured and deserving of financial support. Abigail found that Workers Compensation was suspicious of the truth of her injury claim and Beatrice found herself "cut off" from Workers Compensation because they deemed her fit to return to work. Abigail's suspicions that Workers Compensation may be negatively skewing their opinion of the back injured workers' motivation to return to work was confirmed by Brines, Salazar, Graham and Pergola (1999). Brines et al. (1999) conducted focus groups with claims managers and nurse case managers and found that these managers believed that injured workers may feel entitled to disability benefits and may be disinclined to restart work.

The American Office of Vocational Rehabilitation was also of the opinion that the injured or disabled were disinclined to return to work. The Office of Vocational Rehabilitation was instituted after World War I to provide basic services to the returning disabled veterans. The Office of Vocational Rehabilitation did not believe that disabled veterans would be willing to return to work, but they were pleasantly surprised to find they were wrong. The disabled veterans were indeed ready and willing to return to work (Goeke, 1986).

There is no evidence that disabled workers dislike their jobs or grow to dislike their jobs after injury (Brines et al., 1999). The idea that disabled and injured employees are not motivated to return to work appears to be an entrenched belief held by claims managers and nurse case managers. Without question, all of the six back injured nurses interviewed were ready and willing to return to work, if appropriate accommodations could be made for them to be involved in meaningful work. They were legitimately injured and it was the injury and circumstances beyond their control that were causing them to remain dependent on the financial assistance of the insurer. The worker's injury and motivation to return to work is challenged by the insurer whenever there is no obvious violent cause of injury and if the illness persists beyond a predetermined length of time (Hadler, 1996 a).

Managers and Co-Workers Don't Believe

When managers and co-workers expressed doubt in the authenticity of the back injury, back injured nurses found justifying their pain and injury to their managers and co-workers stressful. Deyo et al. (1991) support the finding that there are managers and co-

workers who do not believe in the authenticity of the back injury. Deyo et al. (1991) and Shaughnessy (1996) recommend that managers, supervisors, and foremen be trained in the positive acceptance of back pain, without questioning worker's veracity and establishing adversarial situations with workers.

In addition to displaying positive acceptance of the back pain, Shaughnessy (1996) indicates that the best way for a supervisor to respond to a work related injury is to: take the injury seriously; encourage the employee to seek prompt treatment for the injury; and immediately consider adapting the workplace (or modifying the work) so that the worker can continue on the job. Managers play a vital role in determining the length of disability by the way they interact with, and treat, the injured worker (Shaughnessy, 1996). Managers can either shorten the time a worker is away from the workplace by accepting the injury and instituting appropriate accommodations or they can lengthen the time away from the workplace by displaying an adversarial relationship.

The Back Injured Don't Believe

Although the back injured nurses obviously were aware of the legitimacy of their injury and their pain, when repeatedly questioned regarding the honesty of their claim, they may have unintended and subconscious moments of self doubt. Depressed chronic pain patients also tend to get involved in self-blaming behaviour (Proctor, Gatchel & Robinson, 2000) which can contribute to the back injured believing that their injury is illegitimate and somehow their own fault.

Gillette (1996) outlines that patients may also believe that they are either powerless to solve some stressful life problem or that their back pain itself is not

amenable to successful treatment. Once a back injured individual is experiencing chronic pain behaviour, their actions may be thought of as a special case of sick role behaviour in which persons become convinced that their pain is disabling and unable to be cured, leading them to adopt the social role of victim (Gillette, 1996).

Physicians are warned that a balance should be maintained between accepting the validity of the patient symptoms and encouraging the patient to think in positive, health oriented terms, neither dismissing the pain is meaningless nor suggesting that catastrophic outcome is likely (Gillette, 1996). Given the lack of legitimate acknowledgement of the back pain and impact this pain has upon their lives, it is not unreasonable that back injured nurses would begin to doubt themselves.

Pain, Isolation and Depression: The Triad of Trauma

Pain, isolation and depression were common categories among the back injured nurse participants. All of the back injured nurse participants universally identified the categories of pain, isolation and depression as significant.

Pain

Mitchelmore's (1996) qualitative survey of back injured nurses identified that the pain from a back injury contributed to bitterness, irritability and affected family relationships. Mitchelmore (1996) described the effects of pain as "de-humanizing." Pain may be inherent with a back injury and the pain experienced by the back injured nurses within this study caused them significant distress. Chronic pain patients often report that pain interferes with their ability to remain active and functional (Keefe & Gil, 1986). Back injured nurses within this person-centered study certainly found that back pain

interfered with their ability to maintain the normal activities of daily living. The words used by the back injured nurse to describe the pain included "burning," "agony," "horrible," "constant," and leaving them feeling like they were "going to die".

Contrast the words used to describe the pain with the skepticism of individuals assessing the veracity of the injury. The prejudice with which back injured nurses are treated, given their excruciating pain, is remarkable. We do not necessarily suggest that other injuries or illnesses have a "malingering" component to them, but even peer reviewed literature suggests that there is a segment of the back injured population who are malingerers.

People with chronic pain often express that their pain is "extreme, intolerable, and excruciating" and emotional responses to the pain frequently include anger, depression, guilt, fear and anxiety (Keefe & Gil, 1986). These emotional responses to pain were all reported by the back injured nurses within this person-centered study.

Isolation

The loneliness of the isolation of a back injury was reinforced by British nurse Roger Cowell. Cowell (1995) had been away from the work force for 16 months because of a work related back injury and he felt, "isolated, abandoned and blamed" (p. 53). He lamented that "men and women live most fully as social beings, and in isolation, our spirit may be diminished" (p. 53).

The back injured nurses within this person-centered study also felt the physical and emotional isolation of being home alone, in pain and detached from their workplace. Isolation contributes to the loss of connectedness with the workplace and also the loss of

friendships and social status (Tate, 1992; Wright & Caston, 1997). The back injured nurses within this person-centered study felt like they no longer belonged to their workplace and they had been transformed into the role of an outsider.

Depression

Perez (2000) revealed in his longitudinal survey that individuals who had a history of depression were more likely to experience chronic back pain within 2 years of the initial back pain. Indeed, with the six participants, one back injured nurse revealed that she had suffered from depression prior to her back injury. She also acknowledged that she was keeping her depression under control since her injury. Abigail observed that she felt at times that she could have inflicted personal harm upon herself and life was described as "black".

Proctor et al. (2000) identify a clear relationship between depression and chronic pain with the degree of depression related to the presence, frequency, duration, and severity of pain. Mitchelmore (1996) obtained written responses from back injured nurses indicating the effects of the injury upon their life and one individual grieved that 'After the accident I felt despair and suicidal as I was no longer any use to my wife and family' (p. 37).

Keefe and Gil (1986) describe the stress-pain hypothesis whereby severe stress induces autonomic arousal and heightened muscle activity, leading to pain. Emotional responses to pain in the form of depression or anxiety in turn increase stress which induces more muscular activity and therefore more pain. The link between pain and depression is strong and it is a difficult cycle to break. Frank et al. (1995) question

whether depression contributes to the onset of pain or is the depression a by product of the slower than expected resolution of pain and disability.

Aronoff et al. (2000) found that reports of depression were actually positive indicators of predicting successful recovery from back injury. They found, of greater concern than a report of mild to moderate depression, was a lack of emotional distress expressed by the back injured individual. Individuals acknowledging depression usually are stating that they are unhappy with their current life situation, and therefore have motivation for change. The people expressing depression over their life situation had a stronger motivation to recover and improve their life compared to individuals who were not distressed over their life circumstances. Aronoff et al. (2000) suggest that individuals who are not depressed over their life circumstances are content being disabled.

I Told You I Was Hurt! Vindication

When, or if, the back injured nurses within this person-centered study received objective evidence of their injury, their vindication was complete. If an objective physical finding of impairment was found, the insurer did not apply the "malingerer" label quite so vigorously. Hadler (1996 b) writes passionately in his treatise, "If you have to prove you are ill, you can't get well" of the false economy in designing systems that are willing to go to great lengths to disallow the claim of disability. Rather than deny or disallow the claim of "disability", he recommends that workplaces accommodate individuals when they require accommodation and support them into wellness.

By acknowledging that individuals require some modifications to the workplace, the disenfranchised can then spend their energy recovering within a workplace

environment rather than needing to repeatedly assert that they are too ill to proceed with their regular duties. Acknowledging the need for modifications circumvents the need for entrenchment and reinforcement of the disability.

Theme II - Playing the Benefits Game

This theme speaks to the compensation system within which injured workers find themselves. It outlines the individuals who are involved in the compensation program; the rules and guidelines that must be followed; and the frustrations that inevitably ensue.

The Players

The players of the benefits game include the insurers, the health care professionals and the back injured nurse. Within an insurance environment, the traditional role of the case manager is to coordinate and facilitate the injured workers medical care to ensure the worker receives the best medical services available in a cost-efficient manner, to maximize medical improvement, and to facilitate an appropriate return to work (Wright & Caston, 1997). The case manager is the person responsible for the treatment team's communication and goal setting. Case managers need to have a strong understanding of the occupational rehabilitation process to guide the transitional employment process (Wright & Caston, 1997).

The participants in this study would undoubtedly agree that the above description of the case manager's role is laudable. However, this description is not necessarily in keeping with the experience of the back injured nurses within this patient centered study. Workers Compensation case managers within this study were difficult to reach by telephone and their role was more of monitoring the recovery progress of the back injured

nurse rather than playing a coordination role with the treatment and recovery.

The authorized treating physician is the authoritative voice on the rehabilitation team and the therapeutic relationship that exists between the physician and patient sets the tone of the rehabilitation process (Wright & Caston, 1997). The physician's role within the return to work team is to establish the standard that return to work is the natural culmination of treatment and that return to work is the established goal (Wright & Caston, 1997). The physician is the overseer of the entire return to work process (Wright & Caston, 1997).

The back injured nurse participants within this person-centered study had varying experiences with their physicians. One of Eileen's physicians changed the outcome goals from visit to visit and his general tone was that he did not like nurses. Abigail, Beatrice, Colette and Eileen all had personal physicians who were supportive of their pain and injury but had varying experiences with specialist physicians.

Wright and Caston (1997) maintain that the responsibility for executing quality care rests on a team approach and the rehabilitation team can never be successful without a full commitment from each team member (Wright & Caston, 1997). The back injured nurses within this study had varying degrees of commitment and support from their health care "team". Some participants had physicians who were supportive and committed to the back injured nurse while other physicians were hostile or indifferent. Varying degrees of support were also extended from insurers. Some were more supportive and committed to the return to work goal while others were poor team members.

The Game

The compensation game pits the insurer against the litigants. The goal of the insurance company is to remove the injured worker from the insurance roll, either by finding a reason to deny the claim or by returning the individual to the workplace. The injured worker's goal is to maintain an income until they feel they can return to gainful employment. These two divergent goals can lead to entrenchment of both parties in their vested interests. The injured worker must "... demonstrate the magnitude of illness to whoever sits in judgment of the validity of the demonstration" (Hadler, 1996 b, p. 2398).

The insurance benefit system promotes extra use of health care by requiring that workers have medical documentation of the condition responsible for their inability to work. This requirement leads to extra use of health care benefits as the worker needs to continually justify the work disability (Fiske & Owens, 1994). Clearly, all the participants felt this condition expressed their reality as they needed to repeatedly return to their physicians to have the appropriate documentation completed.

The reimbursement structure for injury claims may provide third party administrators with an incentive to rush clients through the recovery process (Brines et al., 1999). Beatrice found this to be true as she was "cut off" from Workers Compensation Benefits within one month of her injury because she was deemed fit to return to work. Beatrice was ultimately away from her substantive workplace for 18 months as a result of her injury and she has still not been able to return to the same position she was working at when injured.

The insurance system requires that individuals produce symptoms which in turn

are placed into an impairment category. This impairment category is measured with "scientific reductionism" and "validated by the presence of important pathoanatomy" (Hadler, 1996 a, p. 249). Woe be to the injured worker whose symptoms are not validated by a significant identifiable pathological problem. This injured worker must then spend their time and energy reinforcing their symptoms at the risk of being denied benefits if they are not convincing enough.

I Want to Take My Ball and Go Home

Some of the back injured nurses experienced frustration when dealing with insurance companies. Abigail noted that after dealing with the Workers Compensation Board herself, she could empathize with injured workers who appeared at the Workers Compensation office wanting to do themselves or others harm. Mitchell, Brodwin and Benoit (1990) label the failure of the workers compensation system to medically and vocationally rehabilitate injured workers as the "workers compensation syndrome" (p. 22). They explain this tendency for the workers compensation system to "unmotivate" clients with Bandura's self-efficacy theory. Self-efficacy is the ability for individuals to display assured, purposeful and persistent behaviour. Self-efficacy theory is concerned with what motivates people to persevere in the face of obstacles and difficulties. The workers compensation system has a negative effect on injured workers' self-efficacy because injured workers are no longer in control of their destiny. The workers compensation rehabilitation system "... often systematically undermines self-efficacy, thus dooming the rehabilitation plan to failure" (Mitchell et al.,1990, p. 25).

Injured workers are repeatedly required to justify their injury, their progress and

continued disability. People begin their journey with an injury and end up in a nightmarish maze of ever-changing rules, players and goals. This parade of peril can be burdensome for the healthy and it can be ruinous for the injured and vulnerable.

Theme III - I Want My Life Back

"I want my life back" describes the series of losses that challenge the back injured nurse's life. The loss of ability, financial stability, control and career are all identified losses as a result of the back injury.

I Can't Do Anything

Mitchelmore (1996) received 76 questionnaires from back injured nurses detailing 30 questions related to their experience as an injured nurse. The questionnaires required mostly qualitative answers and were analysed by content analysis. Within the responses, Mitchelmore (1996) noted that it was clear that nurses were describing a process of trying to adapt to loss and this was described in terms of loss of career and professional status and also in a loss of ability to enjoy their life outside of work.

The back injured nurses within this person-centered study supported Mitchelmore's (1996) findings and they experienced many losses in their ability to carry out their activities of daily living. Simple tasks such as putting on socks, carrying a load of laundry up a flight of stairs or sitting in a car became impossible. The results of the Roland-Morris Disability Questionnaire clearly identified the losses related to daily activities. Activities such as golf or vacuuming were long forgotten ventures. Daily activities became terrifying impossibilities. The back injured nurse's life had been altered from one of competent professional to incapable and incapacitated malingerer.

I'm Broke

Salary derived from work provides the most basic of positive reinforcements (Goeke, 1986) and back injured nurses often find themselves depending upon an insurance body to maintain their financial solvency. At the time of the interview, three of the six nurses were receiving Workers Compensation Benefits, two were receiving Long Term Disability benefits and one was receiving no additional financial support. Beatrice, who was not receiving any financial support at the time of the interview, but did receive Workers Compensation Benefits at the time of her injury. She was then "cut off" from Workers Compensation Benefits, and went onto Long Term Disability Benefits until she was re-employed as a nurse.

Back injured nurses who are required to accept financial assistance from either Workers Compensation or a Long Term Disability plan find themselves receiving between 70 to 90% of their regular salary, dependent upon their insurer and the length of time they had been away from the workplace. Not only do they not have the positive reinforcement of earning their own salary, but the salary they receive is dictated according to the rules and guidelines of the insurer. This replacement salary is always less than their regular salary and can be withdrawn at the discretion of the insurer.

Some of the nurses within this person-centered study were potentially experiencing catastrophic losses because of financial insufficiency. Threats of losing possession of a vehicle, loss of a home and the need to declare bankruptcy were the realities of the back injured nurses within this study. Mitchelmore (1996) also found that back injured nurses experienced financial loss. Mitchelmore (1996) categorized the

financial losses as career contraction, support dependence and disability amelioration. Career contraction described nurses who had either lost career status or had been for other reasons unable to earn their previous salary, such as only being able to work part-time. Support dependence described nurses who had fared much worse than the previous group and were now unable to work at all and had to rely upon benefits. Disability amelioration consisted of nurses who had spent money in order to make the disability more tolerable (Mitchelmore, 1996).

Although none of the nurses with back injuries who were interviewed for this person-centered study expressed any financial losses as a result of career contraction, Beatrice certainly noted that there was a distinct lack of willingness to hire her when she revealed that she had a back injury. The other participants of this study may not have noticed any career contraction because they were not fully returned to work and their career limitations were not yet known. None of the six participants identified any financial losses as a result of disability amelioration but certainly all of them experienced the need for support dependence. Five of the six nurses were currently receiving financial assistance from an insurance agency and in four of the six interviews, the back injured nurse was the sole wage earner in the household.

Three of the six nurses either had been or were currently facing the danger of losing their house as a result of the financial deficiency brought about because of their injury. The changes in material status as a result of the back injury were dramatic and significant.

I Have No Control Over My Life

The back injured nurses within this person-centered study found that their lives were altered dramatically because of the back injury and the participants were not in control of their own destiny. Normal activities of daily living were dramatically altered and simple tasks became impossible to complete. All aspects of their life were changed.

The cry of "no control" was heard repeatedly from the back injured nurses within this person-centered study and the same finding was previously substantiated by Fiske and Owens (1994). Fiske and Owens (1994) noted that the inherent lack of control within the compensation process reinforces the sick role and treats the injured worker as a passive recipient within the return to work process. The medical framework also operates in a paternalistic manner with the individual as a passive recipient in the treatment process (Fiske & Owens, 1994).

Goeke (1986) had informally noticed that the back injured individual's ability to manage pain and disability improved after they returned to work. He had hypothesized that the ability to be active, responsible and in control of their own lives again proved to be the ultimate cure for the back injured individual (Goeke, 1986).

A Nurse is Who I Am

Within Mitchelmore's (1996) qualitative survey, it was clear that all of the respondents were distressed about the loss of their role in the profession of nursing. The same feelings of despondency over the loss of their workplace role were substantiated in this person-centered study. The back injured nurse participants were anxious to return to their social position of nurse and caregiver. The loss of an established work role leads to

reduced self-esteem (Fiske & Owens, 1994) as work provides a major support to self concept (Goeke, 1986; Rogers 1994). Positive interactions with peers provides the core of many people's self-image (Goeke, 1986) and the loss of regular contact weakens the psychological bonds between employees and employers (Shrey, 1996).

Mitchelmore (1996) found that the vast majority of back injured nurses still considered themselves to be nurses and did not want to consider other occupations, despite the lack of rehabilitation opportunities available for them within the health service (Mitchelmore, 1996). The nurses within this person-centered study had a number of issues related to their role as a nurse. Abigail was in danger of losing her nursing registration because of her inability to continue her practice of nursing. Beatrice had been denied many opportunities to work as a nurse within her original work environment. Colette was terrified she would not have the knowledge and capability to perform the functions of the job confidently and Eileen was afraid she would re-injure herself or injure someone else if she returned to the same workplace. Erica was adamant that as a nurse returning to work she should be performing nursing duties and Deirdre persistently returned to the practice of nursing despite suffering five back injuries within the last four years. All of the six participants identified strongly with being a Registered Nurse despite the obstacles that prevented them from participating fully in the profession.

Theme IV - Return to Work for Nurses is a Special Kind of Hell

The fourth theme presents the frustrations of returning to work as a back injured nurse. It presents the lack of accommodations for a safe return to work, the inherent fear that surrounds returning to work, the negative reception of the co-workers to the back

injured nurse and the loss of a nursing position to return to.

It's My Back That's Broken, Not My Brain

Without exception, back injured nurses within this person-centered study were prepared to return to work and two of them were actively involved in a return to work program. Eileen, who had been off work for 9 months and was still in acute pain had indicated that there was still nursing work that she was capable of accomplishing. Beatrice was adamant that her brain was intact and she had many skills to offer her employer without lifting patients.

Mitchelmore (1996) questioned nurses as to whether they could have returned to their nursing role if adaptations had been made to their position. A typical response was, 'if I could have returned to work part-time, I definitely could have managed' (Mitchelmore, 1996, p. 36). Resistance to providing work for injured employees is a historical practice (Howe, 1996; Wright & Caston, 1997) and not unique to the health care environment. Injured workers are often seen as a liability in the workplace because they are perceived as being in ever present danger of re-injuring themselves (Howe, 1996) and then continuing on the never-ending disability road.

There is also the fear that if non-injured workers observe the injured worker within the workplace performing light duties, non-injured workers will succumb to the same injury because of the lure of light duties (Howe, 1996). Another fear of providing adaptations to injured workers is the belief that injured workers would prefer the light duties and remain on them permanently (Howe, 1996). To counteract the potential problems with employees returning to work and lingering on return to work

accommodations, some employers deliberately assign mediocre or boring tasks to employees returning to work. This practice provides the dual purpose of acting as a deterrent to other employees reporting injury while still maintaining the injured individual within the workplace (Howe, 1996).

Other strategies used by employers include isolating injured employees from co-workers or leaving injured workers unsupervised (Howe, 1996). Some employers allow injured workers to take advantage of their injury by allowing injured employees to take time off without documentation or allowing them to come in late or leave early because of pain (Howe, 1996). These practices tend to only reinforce resentment among the non-injured colleagues.

Within Mitchelmore's (1996) qualitative survey, the majority of nurses thought themselves able to continue to nurse if adaptations were made to their jobs. However, 69.7 percent of nurses were not offered any re-deployment despite the fact that only 18.4 percent of nurses felt themselves to be completely unemployable. This shows a marked contrast between the view of the employer and the employee. Back injured nurses were asked whether their management's appraisal of their capabilities matched their own and the responses fell into two categories and were labelled as either shared view or divergent view. In cases where there was a difference in the perception of the nurse and the employer, there were comments such as, 'I was told that I was a liability and nurses needed to lift. The manager never once read the consultants notes' (Mitchelmore, 1996, P. 36). For the other nurses who considered themselves too disabled to work, there was agreement by the employer in all cases (Mitchelmore, 1996).

The back injured nurses interviewed within this person-centered study were all willing to return to work and two were presently on a return to work program. On Erica's return to work program, she found herself performing non-nursing tasks which she found "demoralizing". Erica felt adamant that she was a nurse and on a return to work program but she needed to be performing nursing tasks. Mital and Shrey (1996) reinforced that within a successful return to work program the worker must be offered meaningful work for fair pay and anything less is degrading to the worker and will likely promote labour relations problems (Mital & Shrey, 1996).

A successful fit between worker capabilities and the requirements of the job is necessary for a successful return to work program. However, modified job accommodations are rarely available to nursing staff as injured nurses are often required to be a 100 percent fit for duty upon returning to work (Mital & Shrey, 1996).

Two of the six nurses within this person-centered qualitative study were actively involved in return to work programs. This meant that they returned to work on modified duties or for shortened periods of time. The duties they performed ranged from clerical paperwork, answering telephones, checking IV's, and handing out meal trays and in one case, full duties.

Cooper et al. (1997) found that returning nurses to meaningful work was a successful return to work strategy. Back injured workers were offered a graded work hardening program appropriate to the physical demands of their job while being maintained within their workplace. The results of this program supported the concept of maintaining individuals with back injury in the workplace by providing early

intervention, onsite work hardening and the opportunity for modified work (Cooper et al., 1997).

Unmanaged treatment and rehabilitation programs often lead to extended periods of lost time for injured workers (Shrey, 1996) and a managed return to work plan is a success from both the employee's and the employer's perspective. Masengarb (1994) maintains that, "... the interests of the injured worker (quick recovery, less pain, compensation for time off) and those of the employer (a return to work, a contented employee, fewer compensation costs) are not very far apart" (p. 313).

The Fear Factor

Some of the nurses interviewed within this person-centered study indicated fears of returning to work. Fear of pain and re-injury were the most prevalent fears. Fear of placing a co-worker at increased risk, fear of hurting a patient and fear of not being competent in the work environment were also expressed fears. The literature supports the fear factor and Brines et al. (1999) identified barriers to return to work as fear of re-injury and/or concerns about one's ability to perform the job. Other fears identified in the literature included decreased self-confidence, fear of loss of skills and knowledge and fear of not being able to physically perform the job because of de-conditioning (Fiske & Owens, 1994).

Fears are based on previous knowledge and an acute acknowledgement of the limitations of the physical abilities of the back injured nurse. Masengarb (1994) warns against assuming that the fearful injured employee is a "malingerer". An individual who is not physically improving in their physical abilities has a myriad of emotional issues to

contend with and all of these emotional issues are real and valid.

And the Wolves Begin to Circle

Cruel and unsupportive comments expressed towards back injured nurses by co-workers and managers characterized this category. The comments expressed frustration on the part of co-workers and managers towards the lack of timely recovery of the back injured nurse. The invisibility of the back injury led to co-workers and managers doubting the authenticity of the injury which in turn led to their insensitive and brazen comments towards the back injured nurse.

Back injured nurses typically return to modified duties and return to work for a few hours per day, increasing their activity as tolerated or as previously planned. The back injured nurses who returned to the workplace on modified duties were usually an "extra" nurse on the unit and not counted as part of the staffing complement. Despite being "extra" staff on the unit, the back injured nurses were still treated with disdain and disrespect. The comments made to the back injured nurses insinuated deceit on the part of the back injured nurse along with comments suggesting that the back injured nurse was enjoying her time away from the workplace.

Shrey (1996) maintains that unless return to work programs are clearly defined and education related to the return to work process communicated, labour relations problems and resentment among co-workers and managers can ensue. Return to work programs require clear entrance and exit criteria and incentives and accountability criteria need to be pre-established (Shrey, 1996).

Mitchelmore (1996) found that 15.7 percent of back injured nurse's colleagues

displayed a mixed attitude towards the back injured nurse because she needed to be "carried". One of the back injured nurses indicated, 'my colleagues seemed upset for me, but later did not want to know me' (Mitchelmore, 1996, P. 35). This attitude was experienced by some of the back injured nurses interviewed within this person-centered study despite the fact that they were on the unit in addition to the regular staffing complement. They were an additional set of hands yet they were treated with disrespect. Perhaps this disrespect is directed towards the back injured nurse, but is a result of frustration and anger towards the workplace environment.

Goeke (1986) found that the attitude towards the back injured changed over time.

> After a few weeks, people with back injuries are seen more and more skeptically by the families. Neighbors (sic) and friends who initially were sympathetic may begin to see the back injured person in a different light. They may decide that the person's pain is not real because the person is not always wincing or moaning. There's no indicator on the person's forehead to show what level of pain he's experiencing at any time (p. 427).

Mitchelmore (1996) confirmed that suffering an injury and then being disregarded by colleagues and employers were significant factors causing psychological stress. As with the participants interviewed within this person-centered study, Mitchelmore (1996) found that supportive employers were in the minority. The majority of employers were considered unsupportive, while some displayed inconsistent attitudes (Mitchelmore, 1996).

<u>You Are the Weakest Link - Good bye</u>

Back injured nurses who did not return to the workplace in the timely manner or who could not be restored to full lifting duties were discharged, displaced or disavowed.

Three out of six back injured nurses interviewed no longer had positions with their employer of injury. The three nurses who were discharged were essentially on "lay off" status. They were still on record as being employed with the employer, but there were no positions for them to return to. If the nurses were to return to their place of employment, they would have to seek out a new position, apply for it and be the successful candidate in the competition process. Given the enormous number of roadblocks placed on the path to recovery and return to work, it is unlikely that the back injured nurse would be successful in returning to work for the same employer.

Indeed, Beatrice had injured herself in 1986, and at the time of being enlisted as a participant in this person-centered interview in 2001, she still had not returned to work for her original employer. There were no positions that her employer deemed her capable of performing. She was still however, working as a nurse, but for a different employer. Beatrice was obviously capable of working as a nurse, just not in the manner that her employer required her to work.

Within her qualitative survey, Mitchelmore (1996) found that of the back injured nurses who were injured within the past two years, 34 out of 76 or 44 percent of the back injured nurses were no longer employed since their back injury. Even in the group of nurses who were employed, 22 out of 42 described periods of unemployment for varying amounts of time as a consequence of their injury. Prolonged absence from the workplace as a result of a back injury has a "disastrous effect upon employment" (Mitchelmore, 1996, p. 35). One of the respondents within Mitchelmore's (1996) study noted that she waited 18 months for a diagnosis to be made following her injury and she was asked to

retire from her job before she had even seen a physician.

Within Mitchelmore's (1996) qualitative survey, 22 of the 42 back injured nurses were employed as nurses. Mitchelmore (1996) mused, "it would have been interesting, given that the periods of unemployment were directly due to back injury, to know how those nurses managed to persuade new employers to consider them for posts" (p. 36). Given the undeniable prejudice against hiring a back injured nurse, Mitchelmore's question is valid. Beatrice's skills as a nurse were unquestioned and she was offered her pick of shifts and hours because of her nursing skills. However, when she revealed her back injury, the offer of a job was revoked and she was left standing alone.

Mitchelmore (1996) noted that there were many more strategies limiting return to work mentioned by back injured nurses than enabling return to work strategies. Nurses within Mitchelmore's (1996) study, described being re-deployed for as little as two weeks before being asked to retire or being re-deployed to areas as physically demanding as the previous area of work (Mitchelmore, 1996). Abigail found herself returning to heavier work duties then prior to her accident and Beatrice found herself being placed in work environments where she knew she could not physically cope.

Cowell (1995) noted the irony of his own situation.

> It seems ridiculous that a qualified nurse with 16 years clinical experience, being paid a salary in excess of £16,000 can be set adrift in sick leave, without an audited plan of rehabilitation and future deployment. For that is how I feel-set adrift. ... As a result I feel that my emotional, personal and professional concerns have been undervalued and devalued (p. 53).

It is interesting that the experience of the back injured nurse in Britain is remarkably similar to the experience of the back injured nurse in Winnipeg, Manitoba.

On both continents, back injured nurses are seen as the weakest link and provided with little direct assistance in returning to work. It is striking that nurses can be so clearly denied an opportunity to pursue gainful employment because of workplace injury and subsequent limitation in physical ability. The Canadian Human Rights Act declares that, "a person cannot be denied a job because of a disability that does not affect job performance or that can be accommodated" (Canadian Human Rights Commission, 1998, p. 2).

It can be argued that a back injury does not affect job performance because the cognitive abilities of the back injured nurse remain intact and therefore the nurse can essentially maintain perform the salient aspects of his or her job. It can also be argued that the "disabled" employee can be accommodated because there are nursing positions available where direct patient care and ergo, lifting, are not requirements of the job. The employer may argue that lifting is a bone fide occupational requirement and as such, a job may be refused to a person who cannot perform the job safely, efficiently and reliably (Canadian Human Rights Commission, 1998). However, the onus is on the employer to prove that lifting is an essential component of being a nurse. Certainly it is an essential component of some nursing positions, but not all.

The injustice perpetrated against the back injured nurse is troublesome. Injured within the workplace while performing her job conscientiously and as directed, she is left unable to return to her nursing position because of a host of obstacles, the most obviously correctable one being accommodation to the workplace. Rather than being accommodated, the back injured nurse is terminated. Hadler (1997 a) eloquently speaks

for the back injured.

> All of us must cry out for empathy whenever another human being is having difficulty maintaining self respect in a work setting that values the worker so little that even a back ache is not accommodated (Hadler, 1997 a, p. 939).

Theme V - It's Not All Bad

There are positive moments within the back injured nurses experience and those positive moments are generated by the kind and selfless acts of the people in the back injured nurse's lives. In addition, sometimes hardship can bring enlightenment and learning and that is occasionally the case with a back injured nurse.

Family and Friends

The back injured nurses within this interview study found moments of support with family and friends. The people who cared about the back injured nurse extended themselves and helped her perform some of the basic functions of daily living. Help came in the form of preparing meals, assistance with physical tasks such as flipping a bedding mattress or financial support. The back injured nurses within this study viewed this type of support as helpful.

Aronoff et al. (2000) viewed family support as negative when the family members took on the patient's responsibilities. They believed that this abdication of the patient's household responsibilities provided a great deal of attention to the person in pain, and that the family members may in fact be reinforcing the disability. Conversely, the back injured nurses within this study saw the help with physical tasks as necessary and a kindness.

Health Care Professionals

Back injured nurses found that support from health care professionals came in the form of: acting as an intermediary, being an advocate, acting as an emotional coach, and being an active listener. The literature defines an occupational health nurse role within a return to work scenario as one where that occupational health nurse provides health information and supportive counselling to the injured worker as well as promoting independence (Martin, 1995). A respectful relationship based upon honesty and dignity is all that is required of health care professionals.

Support from Co-workers

Mitchelmore (1996) noted that supportive colleagues showed their concern in a number of ways. One of the ways support was demonstrated was by providing encouragement to fill in an accident report at the time of injury. Abigail found identical support from her supervisor who noted that Abigail was in pain and encouraged her to fill in a report indicating her injury.

Other support identified within this person-centered study came in the form of monitoring how much the back injured nurse was lifting and ensuring that she was not over extending herself. Support also came in the form of encouraging the back injured nurse to obtain the pain relief and treatment she required.

Blessings

The back injured nurses within this person-centered study found moments of enrichment within their injury experience. One tangible benefit of the injury was time. Time to spend with family that would not normally be available. Several nurses noted

time to be an unexpected benefit. Another blessing was watching children grow into fine human beings with a strong sense of where value in life is found. Abigail clearly saw her children's growth to adulthood to be a blessing and believed that some of the hardships they had experienced as a result of her back injury helped guide their maturity.

Several nurses noted that the injury provided them new insight and understanding of the illness experience that they could transfer to the patient care perspective. Erica commented that her back injury gave her new understanding of the pain experience. She stated that in the future, when a patient asks her for pain medication, she will get the medication immediately rather than letting the patient wait five or ten minutes.

The same results were noted within Mitchelmore's (1996) study as all of the nurses concerned had gained valuable insights into the problem of meeting patients needs (Mitchelmore, 1996). Within Mitchelmore's (1996) qualitative survey, nurses were asked about their own experience of injury and whether it had altered their perception of patient's needs. Increased empathy was evident and all of the participants gained valuable insights into the problems of meeting patient's needs (Mitchelmore, 1996).

Summary

Research Questions

The purpose of this person-centered study was to answer the following questions:

1) what is the experience of the back injured nurse?

2) what is contributing to the disability of the back injured nurse?

3) what would encourage the back injured nurse's return to work?

What is the Experience of the Back Injured Nurse?

The experience of the back injured nurse is clearly one of enormous struggle to recover, to heal and to be validated. The themes and categories highlight the strife of the back injured nurse's journey to recovery. It begins with the back injured nurse's descent into doubt. She becomes surrounded with individuals who question the veracity of her injury. In sharp contrast to having to justify the injury, is the pain, isolation and depression that now dominate her life. For a lucky few back injured nurses, their injury and its' veracity is not doubted because an objective pathoanatomical finding is revealed.

Having an injury and not being able to work requires an intervention in the form of financial support. This financial support is provided by way of a third party insurer. Ensuring continued financial support requires strategy, patience, skill and compliance on the part of the back injured nurse. The financial support is not provided freely and it is not uncommon for a "pound of flesh" to be required. The compensation game that is played is entirely at the discretion of the insurer and medical community.

At this point, the back injured nurse's life can be described as a series of failures. Loss of function, loss of financial solvency, loss of control and loss of identity as a nurse. Life as she once knew it, is over.

Attempts to return to work are often met with disappointment. Lifting patients is often a compulsory requirement for nurses and if the back injured nurse cannot lift, she is not welcomed back to work. Return to work brings with it a host of fears for the back injured nurse, not the least of which is fear of re-injury. The back injured nurse may find her co-workers unsupportive of her injury. If the back injured nurse does not return to

work in a timely manner, she may also find herself without a job.

Life is not all bad for the back injured nurse and she may find herself blessed with the gifts of time and insight. Family, friends, health care professionals and co-workers can rally around a back injured nurse and provide her with the support she requires.

This is the life of the back injured nurse.

What is Contributing to the Disability of the Back Injured Nurse?

The factors contributing to the continued disability of the back injured nurse involve the systems she is required to interact with while injured. These systems include the compensation system, the health care system and the workplace system.

In order to maintain the financial support she requires, the back injured nurse is required to repeatedly interact with the compensation system and continue to reinforce her disability and inability to work. Within the health care system, she is often a passive recipient of advice and treatment. The health care professionals are charting her path to recovery and she relies upon them for guidance and for continued validation of her injury in order to ensure continued financial support.

The workplace system is rarely interested in having a nurse return to the workplace who is not capable of "carrying her weight". This attitude is evident from management as well as from co-workers. There are attempts made to re-integrate the back injured nurse into the workplace and some of these attempts are even moderately successful.

The contributors to continued disability of the back injured nurse include the compensation system, the health care system and workplace system with which she is

required to interact. These systems generally reinforce the disabled role as opposed to encouraging a wellness role.

What Would Encourage the Back Injured Nurse's Return to Work?

To facilitate a timely and humane return to work outcome, a paradigm shift is required with the systems surrounding the back injured nurse. Creative workplace accommodations are required to encourage and allow the back injured nurse to be a functioning, capable Registered Nurse within the workplace.

The health care system needs to spend less time dismissing injuries and pain that do not have a clear identifiable organic component to them and spend more time supporting and acknowledging the injured on the road to recovery.

The compensation system needs to be as actively involved in the support and rehabilitation of the injured worker as they are in the adjudication process.

Johnston's Model of Disability

Johnston's Model of Disability modifies the World Health Organization model of disability and incorporates the Theory of Planned Behaviour into the model. Internal representations of the behaviour and external eliciting cues are also incorporated into the model.

Johnston's Model of Disability appears to fit well with the experience of the back injured nurses within this person-centered study. All of the participants began with back injury as the identified impairment. The behavioural intention to proceed to disability is moderated by the attitudes, subjective norm and perceived control over the behaviour of disability. The attitude displayed involves the individual's attitude towards disability. The

subjective norm involves the usual way that back injuries are treated within the workplace. The perceived control involves the control that the injured believe they have over their pain and their physical abilities. These conditions are all clearly evidenced within the back injured nurses interviewed within this person-centered study.

The attitude, subjective norm and perceived control the individual has regarding his or her injury all contribute to his or her display of disability or ability. These intentions are moderated by the control and ability the individual possesses over the resultant back pain behaviour. In addition, the external eliciting cues are the impetus for action or inaction on the path to disability.

Johnston's model of disability fit well with the outcomes that were experienced by the participants. Disability is defined as an inability to return to work and participate in the societal workplace. Colette who had a relatively low score of 8 on the Roland-Morris Disability Questionnaire had not returned to work while Beatrice, who had the highest score of 20 on the Roland-Morris Disability Questionnaire had returned to work as a nurse.

The attitude that Colette held was one of fear of returning to work. She was afraid of re-injury and afraid that she had forgotten important aspects of how to be a nurse. The subjective norm was reinforcement from her friends and family that she could not return to the heavy work of being a nurse. She had no perceived control over the situation because Colette's manager had given Colette's job away and essentially Colette had no workplace to return to. The internal representations of the behaviour refer to the availability of the individual to elicit the desired behaviour – in this case return to work.

Colette did not have a strong internal representation of returning to work. Although she wanted to return to work, she was also afraid of what return to work would mean for her in regards to her ability to perform the job both physically and mentally. She also had no job to return to and she could not see how she could overcome that obstacle at this time. The external eliciting cues are the environmental cues or triggers to action or return to work. Colette had very few identified positive external eliciting cues. Her workplace provided no reinforcement of return to work and her friends were reinforcing that she could not return to the heavy work of nursing. Other environmental cues were that Colette could not perform household chores so how could she perform the heavy work of nursing.

In contrast, Beatrice had a Roland-Morris Disability Questionnaire result of 20 indicating severe disability was working as a nurse, albeit not in her substantive position and not within her health care facility of injury. She did not succumb to disability and the mitigating factors within Johnstons' disability model help to explain the apparent inconsistency between her score on the Roland-Morris Disability Questionnaire and her return to work as a nurse.

Her attitude was that she was going to return to nursing and no one was going to stop her. The subjective norm for her was that she had worked hard to educate herself and complete her specialized nursing course work and her degree and she was going to apply that education. She completed her degree while injured and off work. Her perceived control over her situation was very strong and she was not going to let her circumstances defeat her.

The internal representations of the behaviour refer to the availability of the

individual to return to work. Beatrice had both the intention and the ability to return to work. The external eliciting cues from the workplace did not encourage Beatrice's return to work but she met and ultimately married a man that appeared to inspire and motivate Beatrice to meet her challenges. Johnston's conceptual framework clearly helps explain how impairment does not necessarily lead to disability.

Johnston's Model of Disability appears to be an adequate framework upon which moderators of disability can be referenced. An extensive literature search did not reveal any further literature written by Johnston on this topic. There was also no further mention of her model found among any later journal articles. Further testing of her framework would be valuable.

Reflection and Reflexivity

Reflection and reflexivity allows an opportunity for the researcher to critically examine their previous experiences and determine how these experiences may be influencing the interaction between the researcher and the participants (Paterson, 1994). The researcher's subjectivity may influence the collection and interpretation of research data, therefore the researcher must reflect upon his or her values, attitudes, behaviour and past experience to determine how their history may influence the data collection and data analysis (Peshkin, 1988). Reflection aids in gaining a greater awareness of the meaning of the experience and can lead to a deeper awareness of oneself. Reflexivity is defined as the active analysis and critical examination of earlier experiences. Reflexivity charges the researcher to become part of the data and use their own self awareness as a source of insight (Aamodt, 1982). This portion of the thesis allows me an opportunity to reflect

upon the experience as researcher and student and incorporate that learning within my own life history.

Back injuries. Why back injuries? Honestly, there was more than one occasion when I did ask myself that same question. Given the enormous amount of literature written on the topic of back injuries and the apparent never ending citations, I did have moments when I had wished that I had picked a less researched topic. However, my own bias is that the voice of the back injured has not been well represented within the scientific literature and has not necessarily been acknowledged by nursing management, therefore, I chose to study it further.

The challenges with acquiring an adequate sample were disappointing and somewhat surprising. There is a population of back injured nurses in the community, but they are difficult to reach. The isolation of this group requires extraordinary measures to reach them. As I reflect upon the interactions I had with the back injured nurses who participated in this study, I feel honoured and privileged that they allowed me the opportunity to speak to them and get a glimpse of their life as a back injured nurse.

The tone of the interviews was generally warm and positive with only a minor amount of anticipated awkwardness upon first meeting and introductions. The interviews began with an explanation of my goal as a researcher and an explanation of the study. The interviews always started with nonthreatening demographic questions, completion of the Roland-Morris Disability Questionnaire, and an opening question requesting that the back injured nurse describe the circumstances that led up to her injury.

Once the back injured nurse began to tell her story, my role was minimized. The

questions that I asked were simply to clarify, probe, or highlight the discussion. The story belonged to the back injured nurse and I was simply a participant in the process, nodding occasionally and breathing almost non-audible acknowledgement as the story progressed.

Paterson (1994) teaches that within the ethnographic tradition, the researcher is the research instrument and assumes the perspective of the participants in an attempt to recognize and appreciate their experience as a complex human reality. Upon completion of the interview, I inevitably thanked the back injured nurse for her time and for her story. It appeared to me that the back injured nurse was also appreciative of the opportunity to share this portion of her life. Some of the back injured nurses commented that they hoped the interview would help me achieve my goal of completing my master's thesis and they also wished that their words may help other back injured nurses. At the risk of wishing for too much, I also hope that the words of the back injured nurses that I spoke with can help other injured nurses on the road to recovery.

I have had occasions in my life where I had temporary periods of physical incapacity and there were occasions within the interviews when I clearly identified with the back injured nurses. I had been working on a pediatric medical unit when I was suddenly confined to bed rest as a result of an unforeseen diagnosis of multiple birth. The pain I experienced from the continual Braxton-Hicks contractions rivalled labour pains and severely limited my activity level. The restricted mobility was obviously temporary and resolved with the birth of my two girls. I found that people were generally supportive as the cause of my temporary disability was obvious!

My next period of incapacity was related to a severe knee injury that I experienced

from overuse. Too many years of basketball. A piece of cartiledge had broken and lodged in my knee joint, making normal knee movement impossible. The pain in my right knee was exquisite and my ability to walk was severely hampered. I also developed a patellar tendonitis on the opposite knee because of the change to my gait. It was difficult to know which injury caused me more pain and impaired my mobility more - the tendonitis in my left knee or the cartiledge damage in my right knee.

I had surgery to repair the cartilage damage, remove a bone chip from within my knee and I returned to work within one week of my knee surgery. Within three weeks of the surgery, I travelled out of town to facilitate three days of presentations. It was while I was out of town and while I was loading a 75 pound suitcase full paper and manuals into the back of my vehicle, that the hard sided suitcase slipped of my grasp and fell onto my newly operated knee. I felt a tug in my back as the suitcase came crashing upon the top of my knee cap. I was off work for three weeks because of the re-injury to my knee and my newly injured back.

After the knee surgery, the surgeon's words indicating the condition of my knee and my prognosis were bleak. I was also informed that the damage within my knee made me a candidate for an immediate knee replacement but my young age (at the time of the surgery) would not allow the surgery to be done. I was told that I needed to immediately stop all weight bearing activities - running, basketball, volleyball and any other activity that involved weight bearing. I was advised that if I "babied" my knee I might be able to have my limited mobility last until the day that I was old enough to qualify for a knee replacement. I had essentially been told to stop living in an attempt to maintain the

limited mobility that I had.

The permanent alteration to my life plans and the melancholia that ensued contributed to me cocooning into my desolation. My family regularly noted my persistent and un-resolving limp and there were many occasions when I had a child dart under my arm in an attempt to bolster their mother and help to guide her steps. While I walked in front of them, my family would note my limp and provide suggestions as to how I should adjust my stride so that the limp was not so obvious. I limped for over a 11/2 years after the surgery. Several clients, also, noted my limp and were helpful with their suggestions and comments of encouragement.

There were times during the interviews with the back injured nurses when I felt myself silently agreeing with the frustrations they were describing. The isolation, the pain, the depression, the fear, and the lack of support were themes that I could identify with. My personal experiences caused me to identify with the stories of the back injured nurses and helped me to search for an understanding of their experience. As a nurse, I hope that my deeper understanding will guide my practice and my actions.

While I was in the midst of data analysis, I had occasion to meet with a client within my role as an occupational health nurse. This client was well known to me and she is an intelligent and articulate woman. She had been away from the workplace for well over a year because of a unconventional and difficult to diagnose illness. The illness does not have any clear and objective tests in order to help define it and for some medical practitioners, this lack of objective data puts this illness in the category of nonexistent, hysteria related illness. The symptoms and the subsequent impact the symptoms had

upon this individual's life were significant and difficult to manage. When telling me her story, this woman broke down in tears several times and the tears fell when recounting how individual after individual, professional after professional, did not believe the legitimacy of her symptoms and her illness. This articulate and intelligent woman was essentially being called a liar, and for her, that was difficult to accept and cope with. For the back injured nurse, not being believed is also difficult to accept (From personal journal).

Recommendations

Recommendations in the areas of implications for nursing management, implications for nursing practice, implications for nursing education and implications for nursing research are included in this section. The recommendations are based on a literature review and the words of the back injured nurses within this person-centered study.

Nursing Management

Nursing management needs to recognize the limitations of current return to work strategies for back injured nurses and develop creative and meaningful transitional work placements for back injured nurses. Formalized disability management programs need to be instituted with support from all levels within the workplace hierarchy. Clear policies and strategies need to be established regarding humane treatment and return to work of injured workers. Maintaining healthy management employee relationships that promote job satisfaction and value the employee's contribution to the workplace is a recognized wellness strategy.

Management should seriously consider instituting a job bank that injured nurses could access when performing transitional return to work. This job bank could house a variety of nursing jobs that are not critical in that they need to being performed regularly, but these jobs would add value to the organization and relevant work experience for the back injured nurse. There would need to be clear guidelines for who could access the job bank and a defined transition program from working on job bank positions and returning to the nursing unit. If return to work on the original unit is not possible, alternate placements within the organization or re-training is required. The organization has time, training and money invested in the injured nurse, and should not lose a valuable resource for lack of adequate accommodations.

Management needs to promote resources, programs and policies that reduce the risk of worker injury. However, there must also be a recognition that injuries may still occur and there needs to be a plan for the timely and respectful return of the injured worker to the workplace. There also needs to be understanding of the culture of the life of the injured worker and the workplace needs to maintain a supportive and non-judgmental attitude towards the injured.

The culture of the workplace to which the injured nurse is returning needs to be assessed regarding its willingness to welcome an injured nurse. The return of the injured to the workplace should not place her colleagues an increased risk by assuming that they will augment her physical limitations related to patient care.

Maintaining a healthy workplace is not only good for employees but it ultimately benefits management in the form of happy, productive and loyal employees.

> Companies that have achieved effective programs related to prevention and disability management are usually described in terms such as 'enlightened' or 'healthy.' They understand the dynamic interrelationship of employee satisfaction, customer satisfaction, and economic profitability and are committed to maintaining equity among these interests. These companies respect their employees, see them as valuable members of the organization and as resources to be cultivated, challenged, disciplined, maintained, and rewarded (Habeck, Williams, Dugan, & Ewing, 1989, p. 18 -19).

Nursing Practice

Nurses need to understand how to work in a safe and efficient manner, with reduction of risk of injury as the goal. Nurses also need to be sensitive, supportive and aware of the implications of an injury from the perspective of the injured individual. Return to work programs have to be clearly defined and understood by all people involved. Education of the injury and return to work experience needs to be communicated to all levels of staff; from manager to ward nurse.

Inservices are required on lifting, ergonomics, use of the assistive devices available, as well as education on what to do if you believe the workplace practices are causing you personal injury. There needs to be support within the culture of the nursing unit to employ the available ergonomic knowledge and assistive devices available. At this time, the clear commitment to the injured employee needs to be communicated and all staff need to understand their role in supporting the injured employee. This support of the back injured worker returning to the workplace should also not place the non-injured employee at any increased risk of injury nor should there be an expectation that the non-injured workers will now do the lifting of the injured worker. A scenario of this type will only perpetuate resentment and lack of acceptance of the injured employee back into the

workplace.

Occupational health nurses need to play a larger role in the return to work process. Occupational health nurses need to have more power within the return to work process and be able to access positions within a job bank so that nurses returning to work have access to alternate meaningful work. Occupational health nurses need to be involved in an organizational disability management program and be an integral component of the return to work process. The role of the occupational health nurse needs to be clearly defined within the return to work process. All staff members need to be aware of the clear directives within the return to work process, and the role of the occupational health nurse to be clearly defined within the process.

Nursing Education

Nursing education needs to present the unique role of the injured or disabled individual in a realistic and compassionate manner with the understanding that patient, clients and co-workers can all fall victim to this role. Nursing education rightfully focuses on the care of the patient but perhaps some attention needs to be paid to the role of the nurse as a colleague and co-worker.

The culture of nursing demands exacting standards and practice from Registered Nurses. There is little room for error in the role of the Registered Nurse and perhaps this contributes to the unforgiving culture. Perhaps when student nurses are being indoctrinated to the role of the Registered nurse, they can also be introduced to the concept that the Registered Nurse is also a friend and colleague, deserving of support and understanding. Further education may not necessarily produce a shift in culture and

further examination of this phenomenon is required.

Nursing education should consider spending some time discussing roles and responsibilities of the nurse as an employee. Employees are required to make management aware of unsafe working conditions. An understanding of the nurses' role as a employee may help nurses recognize their role in maintaining adequate health and safety conditions for all employees.

Nursing Research

Further research in the area of back injuries in nurses is recommended as there is not much representation of the voice of the back injured nurse within the literature. A deeper understanding of the experience of the injured can lead to more specific recommendations for treatment and recovery of the injured. Further research is required to identify the impact of injury upon the career of the injured nurse. Further work to identify what happens to the injured nurse after integration into the workforce is also needed. Questions such as how is this integration achieved and is the integration successful are important questions to be answered. What return to work strategies are effective and which are ineffective?

It is recommended that a larger sample of participants be accessed that can be followed longitudinally within the return to work process. This larger sample would aid in identifying successful return to work strategies. A longitudinal study would also help to identify if issues change throughout the injury and recovery process.

It would also be interesting to know if they also shared experiences with other types of injuries and groups of injured workers. Are injured nurses different than injured

labourers? Are back injured nurses different then other injured nurses? Does gender or ethnicity change the injury experience? Is there a difference between specialty groups within nursing vis-a vis return to work strategies? Does the workplace setting make a difference in return to work rates or injury rates? Are orthopaedic nurses different than operating room nurses or public health nurses? It would also be interesting to note whether there are any differences in the return to work process dependent upon whether the individual has sustained a work related injury or is ill. The themes and categories identified within this person-centered study can form the framework for further research.

Within this study, attaining an adequate number of participants was difficult. I hypothesize that this population was difficult to reach because of the physical and emotional isolation that surrounds them and the pain and depression they deal with daily. This population is in an emotionally vulnerable state and they are constantly challenged with maintaining a busy schedule of medical, rehabilitation and compensation related appointments. Their energy level is low and they are not in an emotional state to necessarily extend themselves to the altruistic goal of research.

Access to this difficult to reach population may perhaps be facilitated by way of offering an honorarium in exchange for a personal interview or for the completion of a survey. However, the ethical and scientific implications of "buying" information need to be carefully considered. Hiring the occupational nurse of the injured nurse's health care facility as a research assistant to collect the data may facilitate the recruitment process. The occupational health nurse is often an individual that the injured worker trusts and with who they have a relationship. Therefore, the occupational health nurse as a research

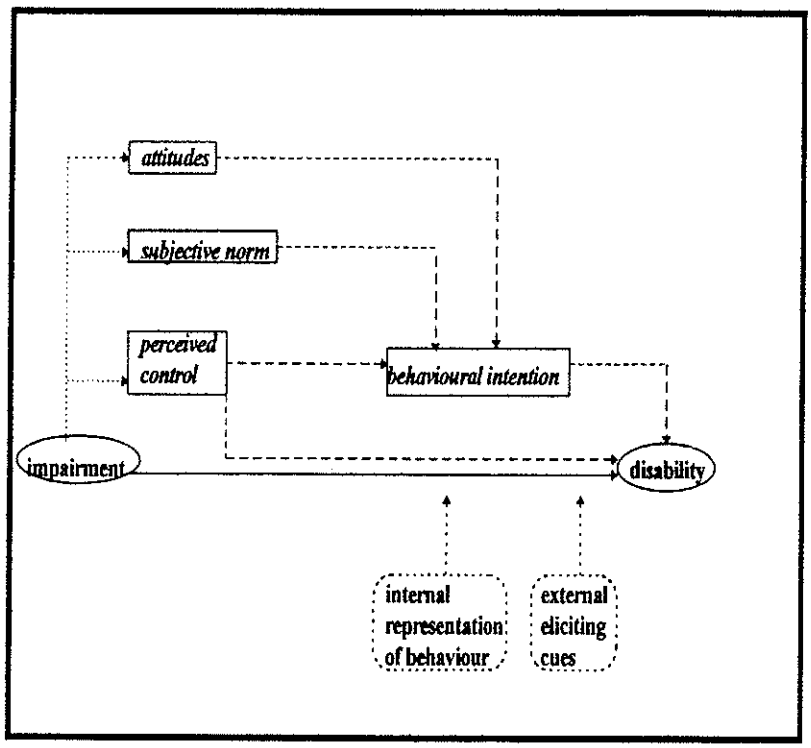
assistant and data collector may facilitate the recruitment process. The ethical implications of the occupational health nurse being a service provider and a research assistant will, however, need to be addressed.

Further research regarding the identified themes and categories would either add depth and credibility to the data or open up new avenues for further study. A longitudinal qualitative study could generate a rich data base upon which to make further recommendations. The story of the back injured nurse is not complete: it is only beginning.

APPENDIX A

CONCEPTUAL MODEL

Conceptual Model



italics ----→ Theory of Planned Behaviour

non-italics ——→ WHO model

non-italics ·····→ proposed new relationships

APPENDIX B

SAMPLE ADVERTISEMENT IN THE NURSCENE

Sample Advertisement in the Nurse Scene

Back Injured Nurses Required

If you have been away form the workplace because of a back injury for 4 weeks or more and if you are willing to discuss your back injury experience, you may be eligible to participate in this study. If you would like to participate in a project entitled Return to Work: The Back Injured Nurse's Perspective, please call Elizabeth Ptasznik at xxx-xxxx. Thank you for your interest.

APPENDIX C

SCRIPT FOR TELEPHONE CONTACT WITH THE POTENTIAL SUBJECT IN ORDER TO EXPLAIN THE STUDY

Script for telephone contact with the potential subject in order to explain the study

Hello. My name is Elizabeth Ptasznik and I am a Masters student in the Faculty of Nursing. I am doing a study called Return to Work: The Back Injured Nurse's Perspective. I am asking back injured nurses about their recovery process and what they have found has been helpful or not helpful in the recovery process. You may be an eligible candidate for the study. Would you like to hear more about the study?
If **no,** the subject will be thanked for their time.
If **yes**, the following script will be read.

The study I am doing is looking at what variables help back injured nurses return to the work place and which variables get in the way of successfully returning to work. If you agree to participate, I will be asking you some general questions about your work place, how you were injured, how you are coping with your injury and what factors have been significant in your recovery or your lack of recovery. I will also ask you to answer some demographic questions like age, family income and education and I will ask you to complete an questionnaire that assesses your level of disability. In order to participate, you must have been away from the workplace because of a back injury for 4 weeks or longer.

For the interview, I will be asking you about the issues surrounding your injury, how you are feeling about your injury and what factors you feel have been helpful in your recovery from your back injury and which factors have not been helpful. The interview will take place in a location of your choice and preferably in your home. The interview will take approximately 1 ½ - 2 hours and it will tape recorded. The interview will be kept as confidential and the audio tape transcriber will hear the interview but will not know who you are. My thesis committee will have access to the tapes and the transcribed interview if they request them. No one else will have any access to the tapes or the specific data you have provided me with. The tapes and the transcribed interviews will be kept in a locked cabinet for approximately seven years.

You are free to not answer any question you want to and you can also choose to withdraw from the study at any time. You will not be identified in any way within the audio tapes or within the study and the information provided with not be directly linked to your workplace. You will not gain any direct benefit from participating, but your responses may make it easier for future back injured workers to return to work. If you agree, I may contact you again after the interview in order to confirm some of the information I have received from you. The study may be written up and published but your name and the facility you work for will not be attached as a data source.

Do you have any questions about the study? Would you like to participate?

If **no,** the subject will be thanked.

If **yes**, a time, location and date will be arranged to meet, explain the study again, answer any questions, sign the consent form and conduct the interview.

APPENDIX D

SCRIPT FOR THE OCCUPATIONAL HEALTH NURSE TO CONTACT BACK INJURED NURSES

Script for the Occupational Health Nurse to contact back injured nurses

A Masters student in the Faculty of Nursing is doing a research project to look at the experience of the back injured nurse. Her name is Elizabeth Ptasznik. If you agree to participate in the study, she will be asking you general questions about your back injury, your workplace and what things you have found have been helpful in your recovery from your back injury and what things have not been helpful surrounding your back injury and your recovery.

The interview is completely confidential and you can choose to withdraw from the study at any time. If you are interested in participating, you may call the researcher and she will explain the study in more detail. Your treatment will not be affected in any way whether you choose to participate in this study or not to participate.

If the potential subject agrees to contact have contact with the researcher, she will telephone the researcher and APPENDIX C will be read.

If the potential subject is not interested in participating in the study, she will be thanked for her time.

APPENDIX E

INVITATION LETTER TO POTENTIAL SUBJECTS

Invitation letter to potential subjects

Dear Back Injured Nurse,

Hello. My name is Elizabeth Ptasznik and I am a Masters student in the Faculty of Nursing. I am doing a study called Return to Work: The Back Injured Nurse's Perspective. I am asking back injured nurses about their recovery process and what they have found has been helpful or not helpful in the recovery process. You may be an eligible candidate for the study.

The study I am doing looks at what variables help back injured nurses return to the work place and what variables get in the way of successfully returning to work. If you agree to participate, I will be asking you some general questions about your work place, how you were injured, how you are coping with your injury and what factors have been significant in your recovery or your lack of recovery. I will also ask you to answer some demographic questions like age, family income and education and I will ask you to complete an questionnaire that assesses your level of disability. In order to participate, you must be back injured have been away from the workplace because of a back injury for 4 weeks or longer.

The interview will take place in a location of your choice and preferably in your home. The interview will take approximately 1 ½ - 2 hours and it will tape recorded. The interview will be kept as confidential and the audio tape transcriber will hear the interview but will not know who you are. My thesis committee will have assess to the tapes and the transcribed interview if they request them. No one else will have any access to the tapes or the specific data you have provided me with. The tapes and the transcribed interviews will be kept in a locked cabinet for approximately seven years.

You are free to not answer any question you want and you can also choose to withdraw from the study at any time. You will not be identified in any way within the audio tapes or within the study and the information provided with not be directly linked to your workplace. You will not gain any direct benefit from participating, but your responses may make it easier for future back injured workers to return to work. If you agree, I may contact you again after the interview in order to confirm some of the information I have received from you. The study may be written up and published but your name and the facility you work for will not be attached as a data source.

If you would like to participate, please call me at xxx-xxxx. Thank you for your interest.

Elizabeth Ptasznik

APPENDIX F

CONSENT FORM

CONSENT FORM

I agree to participate in this project, Return to Work: The Back Injured Nurse's Perspective. I understand that this project will be attempting to determine from the back injured nurses' perspective what factors are significant in encouraging return to work/recovery and which factors are significant in deterring return to work. I understand that the results of this interview will be completely confidential and no one other than the researcher, her thesis committee members and the transcriber will have access to the data. Neither the Worker's Compensation Board nor my employer will know that this interview has taken place nor would they ever have access to the interview.

I understand that to participate means that:

** I will be interviewed by the researcher and the interview will last for approximately 1 ½ - 2 hours.*
** The interview will be held at a location chosen by me and it will be held at a mutually convenient time and date.*
** The interview will be tape recorded and transcribed. I will not be identified on the tape nor within any published articles. Only the researcher, the transcriber and her thesis committee will have access to the tapes.*
** All data from this study will be stored in a locked cabinet for seven years and then destroyed. The tape recorded interviews and the transcribed data will only be identified by code and the codes will be stored separately from the data*
** I will be asked some demographic information: I will be asked to complete a questionnaire that will assess my level of back pain disability during my back pain experience: and I will be asked to discuss the experience of my back injury.*
** I am free to not answer any question at any time and I am free to withdraw at any time.*
** The questions I will be asked are not likely to cause me any long term psychological distress.*
** I will receive no direct benefit from participating in this study.*
** I will be provided with a copy of this signed consent form.*
** I will receive a summary of the results if I request them.*
** I may contact the researcher or any of the thesis committee members if I have any questions after the interview date.*
** I may be contacted by telephone or mail after the interview in order to confirm the data that has been gathered. I can choose to not participate at the follow up contact.*

I understand that this study has been approved by the Ethical Review Committee of the Faculty of Nursing, University of Manitoba, the facility that I work for and the study may be published.

Print name _____ Signature _____

Date _____

Elizabeth Ptasznik	Dr. David Gregory	Dr. J.E. Cooper	Ms. Maureen Thomson
Researcher	Thesis Chair	External Advisor	Internal Advisor
xxx-xxxx	xxx-xxxx	xxx-xxxx	xxx-xxxx

_____ YES, I would like to receive a summary of the research results.

_____ NO, I would not like to receive a summary of the research results.

IF **YES,** please indicate your mailing address below:

Name _____

Address _____ Postal code _____

APPENDIX G

ETHICAL REVIEW APPROVAL

Ethical Review Approval

THE UNIVERSITY OF MANITOBA

FACULTY OF NURSING

Helen Glass Centre for Nursing
Winnipeg, Manitoba
Canada R3T 2N2

Tel: (204) 474-7452
Fax: (204) 474-7682

January 10, 2000

Ms. Elizabeth Ptasznik
30 Lonsdale Drive
Winnipeg, MB
R2Y 0N2

Dear Ms Ptasznik:

Re: Proposal #99/01: Back Injury:The Injured Nurse's Perspective

Thank you for your letter of January 2, 2000. The final outstanding issue regarding documentation of permission to access occupational health data for back-injured nurses at the various health facilities has been addressed. The above proposal is now **approved.**

I would like to take this opportunity to wish you every success with this project.

Sincerely,

Barbara Naimark

Barbara Naimark, RN PhD
Chair, Ethical Review Committee

APPENDIX H

DEMOGRAPHIC DATA COLLECTION TOOL

Demographic Data Collection Tool

Identification Number_____Date of birth _____
Age _____
Occupation/position _____ Normal hours of work_____
Full time/part time/ casual (number of hours/week) _____
Marital status_____
Education _____
Dependants & ages

_____

Date of injury _____
How long have you been off work?_____
Do you smoke?_____ How much do you smoke?_____
For how long have you smoked? _____
Have you smoked in the past? _____
How much did you smoke and for how long?_____

Total family income for the last year
____ below $10, 000
____ $10, 000 to $19,999
____ $ 20, 000 to $29, 999
____ $ 30, 000 to $39, 999
____ $ 40, 000 to $49, 9999
____ $ 50, 000 to $59, 999
____ $ 60, 000 to $69, 999
____ $ 70, 000 to $79, 999
____ $ 80, 000 to $89, 999
____ $ 90, 000 to $99, 999
____ over $100, 000

Are you the only wage earner in your family? Yes _____ No_____
Are you receiving worker's compensation benefits? Yes_____ No ____
Are you receiving any other disability benefits? Yes_____ No ____
Do you have any other sources of family income?

_____

APPENDIX I

ROLAND-MORRIS DISABILITY QUESTIONNAIRE

Roland-Morris Disability Questionnaire (Roland and Morris, 1983)

When your back hurts, you may find it difficult to do some of the things you normally do.
This list contains some sentences that people have used to describe themselves when they have back pain. When you read them, you may find that some stand out because they describe you today. As you read the list think of yourself today. When you read a sentence that describes you today, check the line to the left of the sentence. If the sentence does not describe you, then leave the box blank and go on to the next one. Remember, only mark the sentence if you are sure it describes you today.

_____ 1. I stay at home most of the time because of my back.

_____ 2. I change positions frequently to try and get my back comfortable.

_____ 3. I walk more slowly than usual because of my back.

_____ 4. Because of my back, I am not doing any of the jobs that I usually do around the house.

_____ 5. Because of my back, I use a handrail to get upstairs.

_____ 6. Because of my back, I lie down to rest more often.

_____ 7. Because of my back, I have to hold on to something to get out of an easy chair.

_____ 8. Because of my back, I try to get other people to do things for me.

_____ 9. Because of my back, I get dressed more slowly than usual.

_____ 10. I only stand up for short periods of time because of my back.

_____ 11. Because of my back, I try not to bend or kneel down.

_____ 12. I find it difficult to get out of a chair because of my back.

_____ 13. My back is painful almost all the time.

_____ 14. I find it difficult to turn over in bed because of my back.

_____ 15. My appetite is not very good because of my back pain.

_____ 16. I have trouble putting on my socks (or stockings) because of the pain in my back.

_____ 17. I only walk short distances because of my back.

_____ 18. I sleep less well because of my back.

_____ 19. Because of my back pain, I get dressed with help from someone else.

_____ 20. I sit down for most of the day because of my back.

_____ 21. I avoid heavy jobs around the house because of my back.

_____ 22. Because of my back pain, I am more irritable and bad tempered with people than usual.

_____ 23. Because of my back, I go up stairs more slowly than usual.

_____ 24. I stay in bed most of the time because of my back.

APPENDIX J

SAMPLE INTERVIEW QUESTIONS

Sample Interview Questions

The interview questions will be guided by the responses of the subject and the responses of the previous subjects. Below are some potential interview questions.

Please describe your back injury - how did it occur, what were the circumstances that led to your injury?
What type of job were you doing at your work place before you were injured?
How did you feel about your job and the work you did?
Have you had problems with your back before?
Can you tell me about your other back injuries?
Did you lose any time from work? Did you receive Worker's Compensation?
Have you injured other parts of your body at work? Can you tell me about your other injuries?
Can you tell me about the environment of the unit where you were working where you were injured i.e. welcoming, happy, angry, supportive
Can you tell me what it is like being away from your work place?
How do your co-workers feel about your injury? i.e. supportive, disbelieving, frustrated, accepting
How has your injury impacted upon your work?
How has your injury impacted upon your personal life?
Can you tell me about the experience of being an injured worker?
Did you receive any treatment or advice to help you recover from the back injury?
What type of treatment or advice did you receive?
What was helpful about the treatment or advice you received from your physician; your physiotherapist; your occupational health nurse; your friends and family?
What was not helpful about the treatment or advice?
Do you have any family members or friends that you care for inside or outside of the home? i.e. children, parents, friends. How has your injury impacted upon these relationships?
Are there any friends or family members that are caring for you during your injury? What are they doing for you and how are they supporting you?
Who or what has been the most helpful during your recovery? Why?
Who or what has not been helpful during your recovery? Why?
When people are injured, they sometimes feel like other people are controlling their lives. Have you felt this way? Can you tell me about your experience? Who do you feel has been in control of your injury?
Do you generally feel in control of your own life and the things that happen to you or are things beyond your control? Can you give me some examples?
Have you had much pain with your back injury? Can you tell me about your back pain?
How have you been able to manage your pain?
Being injured is often stressful for people. How have you been coping with your injury?
Have you had any contact with your workplace since your injury? Who initiated the contact, you or your workplace? How have you felt about this contact?
Have you had any contact with your co-workers? Have they generally been supportive or unsupportive of your injury? What have they done? What you have liked them to do?
What has prevented/impeded you from returning to work?
What do you think it would be like to return to your workplace?
What is keeping you away from your workplace ?
Would you like to return to the workplace?

What would bring you back to the workplace?
What is the number one factor affecting your return to the workplace?
What support mechanisms could your employer put in place to assist you in your return to the workplace?
How have you been feeling about yourself as a result of this injury?
Would you be willing to participate in a modified return to work program? Why or why not?
How would you like to see this modified program designed or structured?
What types of tasks do you feel you could currently perform at your workplace?
Do you consider yourself disabled as a result of this injury?
Often, family and friends have an impact upon how you feel. How have your family and friends felt about your injury? Are they supportive? What types of things do they do that are helpful or not helpful?
Being injured is generally not a good thing, but is there anything that has been positive about this experience?

APPENDIX K

ROLAND-MORRIS DISABILITY QUESTIONNAIRE DATA

Roland-Morris Disability Questionnaire Data

NUMBER OF POSITIVE RESPONSES	STATEMENTS FROM THE ROLAND-MORRIS QUESTIONNAIRE
2	1. I stay at home most of the time because of my back.
6	2. I change positions frequently to try and get my back comfortable.
5	3. I walk more slowly than usual because of my back.
3	4. Because of my back, I am not doing any of the jobs that I usually do around the house.
5 (1 individual indicated+++)	5. Because of my back, I use a handrail to get upstairs.
6	6. Because of my back, I lie down to rest more often.
2	7. Because of my back, I have to hold on to something to get out of an easy chair.
3	8. Because of my back, I try to get other people to do things for me.
3	9. Because of my back, I get dressed more slowly than usual.
3	10. I only stand up for short periods of time because of my back.
5	11. Because of my back, I try not to bend or kneel down.
3	12. I find it difficult to get out of a chair because of my back.
3	13. My back is painful almost all the time.
3	14. I find it difficult to turn over in bed because of my back.
3	15. My appetite is not very good because of my back pain.
4	16. I have trouble putting on my socks (or stockings) because of the pain in my back.
4	17. I only walk short distances because of my back.
4 (1 individual indicated++)	18. I sleep less well because of my back.
0	19. Because of my back pain, I get dressed with help from someone else.
0	20. I sit down for most of the day because of my back.
6	21. I avoid heavy jobs around the house because of my back.
4	22. Because of my back pain, I am more irritable and bad tempered with people than usual.
4	23. Because of my back, I go up stairs more slowly than usual.
0	24. I stay in bed most of the time because of my back.

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