

**AN EXPLORATORY STUDY OF THE RELATIONSHIP BETWEEN  
BURNOUT AND CARING EFFICACY  
IN NURSES WORKING IN AN URBAN SETTING**

**By**

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In Partial Fulfillment of the Requirements for the Degree of

**MASTER OF NURSING**

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**An Exploratory Study of the Relationship between Burnout and Caring Efficacy in  
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**BY**

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**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University  
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**MASTER OF NURSING**

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## **DEDICATION**

**To my wife Gwendolyn and my children Janelle and Angela,  
for all of their endless love, support,  
and encouragement.**



## ABSTRACT

It has been suggested that burnout a syndrome associated with emotional exhaustion and cynicism is thought to develop from repeated exposure to stressful events. It has been shown that burnout contributes to a reduction in job satisfaction and performance in nurses. Burnout may also contribute to a reduction in quality caring by healthcare providers and limited research exists which specifically addresses this issue. The purpose of this study was to examine the association between burnout and caring efficacy in a cohort of nurses working in acute care settings in the city of Winnipeg.

A cross-sectional descriptive design was employed to explore the concepts of burnout, caring efficacy, and specific objective stressors from the home and work environments. A modification to the Same-Day Stress-Performance model (Stewart & Barling, 1996) as the conceptual framework, allowed for an examination of objective stressors from the home and work environments and their association with burnout and caring efficacy. Four instruments operationalize the conceptual framework: the Caring Efficacy Scale (CES); the Work Life Survey (WLS); the Maslach Burnout Inventory (MBI); and the Home Responsibility Survey (HRS).

A random sample of 80 nurses employed in a hospital setting in Winnipeg participated in the study. Although a moderate level of burnout was measured among the total respondent sample, on average, caring efficacy scores were high. Further examination of the home and work environment stressors indicated that factors from the work environment had a greater impact on caring efficacy than those in the home

environment.

The results have clinical implications for all nurses working in a hospital setting in Winnipeg. The data obtained is a blueprint for the assessment of burnout and caring efficacy and the findings highlight the need for further investigation into this relationship. Furthermore, exploring the impact of both the home and work environmental stressors on the development of burnout may assist in the awareness and prevention of this increasing problem and serve as a guide for the improvement of client care.

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## TABLE OF CONTENTS

<b>DEDICATION</b> .....	i
<b>ABSTRACT</b> .....	ii
<b>ACKNOWLEDGEMENTS</b> .....	iv
<b>LIST OF TABLES</b> .....	xii
<b>LIST OF FIGURES</b> .....	xiv
*****	
<b>CHAPTER 1 : INTRODUCTION</b> .....	1
Background .....	1
Statement of the Problem .....	4
Introduction. ....	4
Work stress. ....	4
Home stress. ....	5
Work and home stress. ....	5
Stress and burnout .....	6
Burnout and caring. ....	9
Purpose of the Study .....	10
Research Questions .....	11
Assumptions .....	11
Significance of the Study .....	12
Summary .....	13
Definition of Terms .....	15

<b>CHAPTER 2: CONCEPTUAL FRAMEWORK</b>	17
Introduction	17
Model Analysis	18
Same-Day Stress-Performance Model	18
Adapting the Same-Day Stress-Performance model.	19
Components of the adapted S-D S-P Model	20
Introduction.	20
Stress.	20
Home vs work environment stress.	22
Burnout.	25
Caring	26
Caring efficacy.	27
Summary	28
<b>CHAPTER 3: REVIEW OF THE LITERATURE</b>	30
Introduction	30
Caring	31
Introduction	31
Theoretical Foundations of Caring	32
Caring Research	35
Caring Efficacy	47
Introduction	47
Caring Efficacy Research	48

Stress .....	51
Introduction .....	53
Sources of Stress .....	53
Work environment stressors. ....	53
Home environment stressors. ....	61
Measurement of Stress .....	66
Burnout .....	69
Introduction .....	69
History of Burnout .....	69
Development of Burnout .....	70
Measurement of Burnout .....	72
Burnout Research .....	73
Introduction. ....	73
Causes of burnout. ....	74
Consequences of burnout .....	87
Associated Burnout Research .....	89
Summary .....	91
<b>CHAPTER 4: METHODOLOGY .....</b>	<b>93</b>
Introduction .....	93
The Research Design .....	93
Survey Methodology .....	95
The Sample and Setting .....	95
Inclusion/exclusion criteria. ....	97
Sampling technique. ....	98
Instrumentation .....	99

Introduction. . . . .	99
Caring Efficacy Scale . . . . .	101
Reliability of the CES . . . . .	101
Validity of the CES . . . . .	102
Response format of the CES . . . . .	103
Work Life Survey . . . . .	104
Reliability of the WLS . . . . .	105
Validity of the WLS . . . . .	106
Response format of the WLS . . . . .	107
Home Responsibility Survey . . . . .	108
Reliability and validity of the HRS . . . . .	108
Maslach Burnout Inventory . . . . .	109
Reliability of the MBI . . . . .	110
Validity of the MBI . . . . .	111
Response format of the MBI . . . . .	112
Survey Demographics . . . . .	113
Procedures . . . . .	114
Preparation for the Data Analysis . . . . .	115
Ethical Considerations . . . . .	116
Summary . . . . .	117
<b>CHAPTER 5: RESULTS . . . . .</b>	<b>119</b>
Introduction . . . . .	119
Statistical Analyses . . . . .	119
Descriptive Statistics . . . . .	120
Demographic Characteristics . . . . .	120
Employment Characteristics . . . . .	121

Work Status. ....	121
Nursing experience .....	122
Shift pattern .....	122
Area of employment .....	123
Analysis of Research Questions .....	124
Research question 1 .....	124
Research question 2. ....	126
Age, nursing experience and burnout scores .....	126
Work status and burnout scores. ....	129
Shift patterns and burnout scores. ....	129
Area of employment and burnout scores. ....	130
Research question 3. ....	131
Nursing experience and caring efficacy. ....	132
Age and caring efficacy .....	133
Area of employment and caring efficacy .....	134
Research question 4. ....	136
Regression analysis of caring efficacy and sub-scales of MBI. ....	137
Research question 5. ....	138
Work environment. ....	138
Regression analysis of caring efficacy on sub-scales of MBI and WLS	
.....	141
Home Environment. ....	141
Regression analysis of caring efficacy on sub-scales of	
MBI and HRS sub-scales. ....	144
Regression analysis of caring efficacy on sub-scales of MBI, WLS, and	
HRS. ....	146
Regression analysis of sub-scales of MBI on the WLS and HRS sub-scales	
.....	147
Ad Hoc Analysis .....	148
Summary .....	151



<b>CHAPTER 6: DISCUSSION</b>	154
Introduction	154
Discussion of Findings.	155
Burnout	155
Research Question 1. What is the prevalence and level of the burnout characteristics in the study population?	155
Research Question 2. What is the relationship between age, employment characteristics, and the level of burnout in the respondent sample	159
Caring Efficacy	165
Research Question 3. What is the prevalence of caring efficacy in the study participants?	165
Burnout and Caring Efficacy	171
Research Question 4. Is there a relationship between burnout and caring efficacy?	171
Burnout, Stress, and Caring Efficacy	176
Research Question 5. What are the associations between home and work environmental stressors and burnout and caring efficacy?	176
Applying the Modified Same-Day Stress-Performance Model to the Relationship of Burnout and Caring Efficacy	186
Implications for Nursing Practice	188
Limitations of the Study	202
Recommendations for Future Research	205
Conclusion	208
<b>REFERENCES</b>	211

<b>APPENDIXES.</b>	229
Appendix A: The Caring Instrument Matrix	229
Appendix B: Watson's Carative Factors	237
Appendix C: Survey Package	238
Appendix D : The Reminder Postcard	250
Appendix E: The Approval Certificate	251
Appendix F: Cover Letter	252

## LIST OF TABLES

Table 1: Number of Registered Nurses Employed in Nursing per 10,000 Population, by Province/Territory, Canada, 1994, 1996, and 1999 .....	2
Table 2: Overview of Caring Theorists .....	34
Table 3: Standardized Reliability Scores for the Work Life Survey .....	106
Table 4: Demographic Characteristics of the Sample .....	121
Table 5: Employment Characteristics of the Sample .....	123
Table 6: Categorization of the Standard Scores of the MBI .....	124
Table 7: Average Maslach Burnout Inventory Scores for Full Sample .....	125
Table 8: Correlations of MBI Sub-Scales Scores using Pearson's r .....	126
Table 9: Results of t-test and Burnout Scores by Median Split Age .....	127
Table 10: Averages of the individual sub-scale scores of the MBI by Age Categories and Nursing Experience .....	128
Table 11: Results of Areas of employment and mean Burnout sub-scale scores .....	130
Table 12: Summary of Caring Efficacy Scores .....	132
Table 13: Correlations of MBI scores & Caring Efficacy Scores using Pearson's r ...	136
Table 14: Summary of Multiple Regression Analysis of Caring Efficacy on Three Sub-scales of MBI .....	137
Table 15: Comparison of Normative Values of the Work Life Survey (N=1492) with Results of WLS .....	139
Table 16: Correlation Analysis (Pearson's r) of the Work Life Survey Items .....	139

Table 17: Correlation Scores (Pearson's $r$ ) between Work Environment Variables with MBI Sub-scales and Caring Efficacy .....	140
Table 18: Summary of Multiple Regression of Caring Efficacy on MBI and WLS Sub- scales .....	141
Table 19: Distribution of Scores for the Home Responsibility Survey .....	142
Table 20: Correlation Analysis (Pearson's $r$ ) of the Home Responsibility Survey Items .....	143
Table 21: Summary of Multiple Regression Analysis of Caring Efficacy on Three Sub- scales of MBI and Five HRS Variables .....	145
Table 22: Summary of Multiple Regression Analysis of Caring Efficacy on Three Sub- scales of MBI and Five HRS Variables .....	146
Table 23: Summary of Multiple Regression Analysis of Three Sub-scales of MBI on the HRS and WLS Variables .....	148
Table 24: Summary of Multiple Regression Analysis Total Home Score on the WLS variables .....	149
Table 25: Summary of Multiple Regression Analysis Total Work Life Score on the HRS variables .....	150

## LIST OF FIGURES

Figure 1. Percentages of Registered Nurses employed in nursing by age group, Canada, 1994 and 1999. ....	3
Figure 2. The Same-Day Stress-Performance Model Proposed by Stewart and Barling (1996) ....	18
Figure 3. The adapted Same-Day Stress-Performance model .....	19
Figure 4. Mean caring efficacy scores by years of nursing experience .....	133
Figure 5. Mean caring efficacy scores by age category. ....	134
Figure 6. Mean caring efficacy scores by area of employment. ....	135

## CHAPTER 1

### Introduction

*Caring*, is an essential function that distinguishes nursing apart from other professions. Caring is both an ideal, as well as an activity performed by nurses primarily designed to assist clients achieve desired patient outcomes. Multiple factors, including the phenomenon of *burnout*, may interfere with the accomplishment of this goal. Burnout and its antecedents, specifically stressors arising from the work or home environments, may impact directly upon caring thereby reducing the quality of care provided. Furthermore, burnout may contribute to the disillusionment of individuals within the profession, which may in turn cause individuals to leave the nursing profession. The overall influence of burnout and its antecedent factors on caring efficacy to date has not been explored. Therefore, this study will consider the association of specific work and home environment factors to the development of burnout, as well as their association with caring efficacy. In this chapter the supporting background and statement of the problem are outlined, the questions guiding the present study are formulated, the significance of the study discussed, and pertinent terms are defined.

### *Background*

The nursing profession is one of the largest group of stake holders within the Canadian health care system. According to the Canadian Nurses Association (1997), the nursing population in Canada is estimated to be approximately a quarter of a million, of

which some 11,000 nurses practice in the province of Manitoba. These practising nurses are licenced and regulated by the College of Registered Nurses of Manitoba (CRNM).

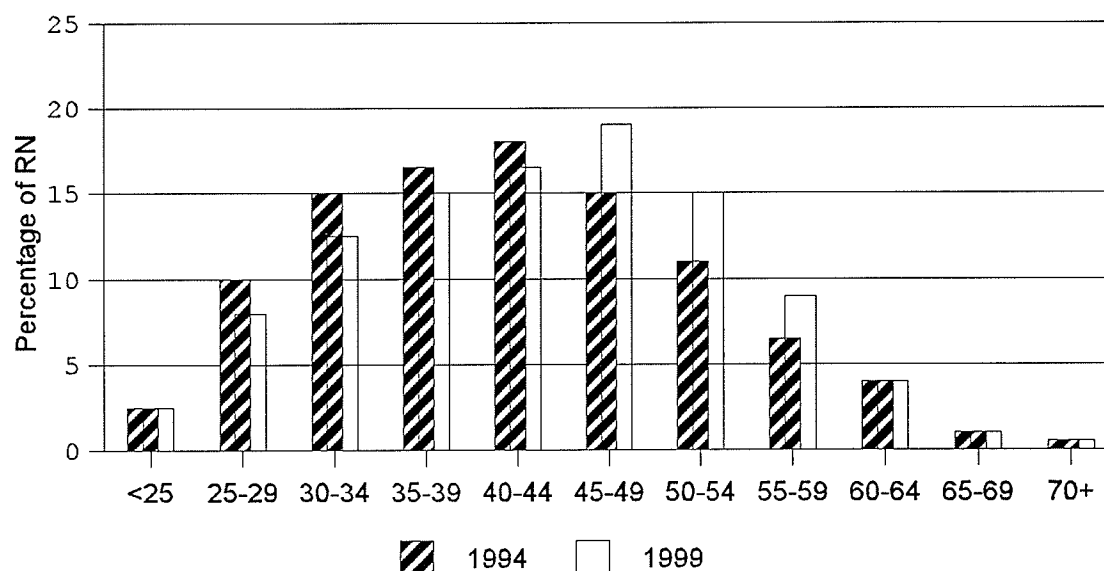
According to the Canadian Institute for Health Information (CIHI; 2000), an important issue for all nurses within Canada is that there is an overall decrease in the number of Registered Nurses per capita and an aging workforce within the nursing profession across all provinces (see Table 1 and Figure 1).

**Table 1**

*Number of Registered Nurses Employed in Nursing per 10,000 Population, by Province/Territory, Canada, 1994, 1996, and 1999*

Province/Territory	1994	1996	1999
Newfoundland	90.7	94.4	97.2
Prince Edward Island	86.5	98.1	88.7
Nova Scotia	98.9	93.6	91.5
New Brunswick	101.2	99.0	101.9
Quebec	84.7	78.6	78.8
Ontario	74.7	71.8	67.6
Manitoba	89.6	92.4	89.1
Saskatchewan	83.9	83.4	83.3
Alberta	80.3	74.0	74.0
British Columbia	73.8	72.3	69.0
Yukon Territory	67.0	71.0	80.1
North West Territory	84.1	81.6	70.6
<b>Canada</b>	<b>80.3</b>	<b>76.9</b>	<b>74.6</b>

*Note.* Adapted with permission from the Registered Nurses Database, Canadian Institute for Health Information (2001).



**Figure 1.** Percentages of Registered Nurses employed in nursing by age group, Canada, 1994 and 1999.

*Note.* Adapted with permission from Registered Nurses Database, Canadian Institute for Health Information (2001).

Currently in Manitoba, chronic nursing shortages and adverse working conditions have been reported province wide by the media, as well as by professional and labor organizations. Although the true source of these shortages and situations may be unclear, the restructuring that Manitoba's healthcare system underwent in the early 1990s may have been the catalyst to the current trend. A second issue for Manitoba nurses is that the average age of a nurse is 43.3 years (CIHI, 2000). In the near future, these individuals will be eligible to retire from the profession, leading to a further depletion of the working pool of practicing nurses. Finally, although the enrollment in nursing education programs has been reported to be on the increase, many new graduates, as well as current practicing nurses, are reportedly leaving the province for higher pay and better working conditions



(Sibbald, 1998; Manitoba Nurses Union, 2001).

These important issues support the need for a further investigation into factors affecting Manitoba nurses. This study was undertaken to investigate the impact of several specific factors arising from both the work and home environments and their influences on nurses currently working within the Manitoba health care system.

### ***Statement of the Problem***

***Introduction.*** Polit and Hunglar (1995), argue that “a good statement of the problem should serve as a guide for the researcher in the course of designing the study” (p. 50). For the purpose of this study, nurses play a unique role by providing direct care to clients in light of healthcare reform and the current nursing shortage. This supports the need to examine factors that influence the working nurse today. The main purpose of this research study was to determine if the work and home environments, as sources of stressors, are contributing factors to the development of burnout, and if there is a association between burnout and caring efficacy within the nursing population in the urban setting where the study was conducted. An examination of work and home stress, and the combined effects of both environments was undertaken to describe how each relate to the individual components of the phenomenon of burnout, which in turn may impact on caring by nurses.

***Work stress.*** Central to the research problem is the fact that nurses provide care to clients twenty-four hours a day. This continuous exposure means nurses are subjected

to many demands in the workplace. These demands can be divided into two types: the physical demands and the psychological/emotional demands. The physical demands are associated with direct care issues and involve the physical energy required to perform the daily duties of nursing. Physical demands include the effects of working a rotating shift pattern, which includes exposure to night shifts, increased patient to nurse ratios, and increasingly higher levels of patient acuity. The psychological/emotional demands relate to the emotional energy required to perform one's professional duties. Examples of the emotional energy includes coping with such stressors as caring for patients with chronic illness, and dealing with issues associated with death and dying (Van Servellen & Leake, 1993).

***Home stress.*** The role of the home environment as a source of stress for nurses continues to gain attention as an evolving area of research study. Prior to this, research mainly focussed on the stressful nature of the work environment. Through recent research into women's health issues the importance of the multiple roles that women play in both environments, has been recognized. It is the duality that nurses play as caregivers and mothers in both environments which can potentially create stressful situations for individuals. For example, stress may be the result of child care issues, or the care of a dependent adult at home, although the exact sources of stress may be varied for individuals. The consequence of this recurrent stress may lead to a reduction in the quality of an individual's personal life. Whether the stress arises specifically from within the home environment or is carried over from the work environment continues to be examined and debated.

***Work and home stress.*** For the purpose of this research study, an attempt was made to delineate and examine stressors from both environments, as each was deemed an important aspect to consider. Although stress is an inherent and widely accepted part of the nursing profession, the goal of the profession should be to understand the impact that this stress has on nurses as individuals both in the workplace and in their home life, as well as on the care they provide to patients. In this way, plans to improve the quality of life for nurses in the workplace, by reducing physical and emotional work-related demands, maybe undertaken. This, in turn may be carried over and impact on the home environment for nurses. The outcome from an improved quality of life may directly impact on the individuals' family life and may also lead to improved patient care.

***Stress and burnout.*** The importance of understanding the impact of the combined home and work environments, their contribution to the development of burnout, and the potential impact on nurse caring, is key to understanding some of the challenges which face today's nurses throughout Manitoba and Canada. The public, as well as the healthcare system, expects nurses to maintain specific professional standards as well as demanding the highest quality of care (Fletcher, 1999).

The outcome of the cumulative effects of increased demands on nursing practice have been reported by the media as added stress for nurses. The impact of recurrent stress within nursing, as well as within other professional disciplines, has been generally well researched. The potential result of recurrent exposure to chronic stress has been linked to

the development of chronic health issues, reduced job satisfaction, job performance, and burnout (Bickley, 1998; Tung, 2000).

The study of burnout, although not exclusive to nursing, continues to gain acceptance as an important occupational issue for the nursing profession. Burnout is described by Freudenberger (1980), as “a state of fatigue or frustration brought about by devotion to a cause, way of life, or relationship that failed to produce the expected reward” (p.13). Specific to nursing, Pines and Aronson (1981) describe work-related burnout as a “syndrome of physical and emotional exhaustion involving the development of negative job attitudes and loss of concern and feeling for patients” (p.15).

Burnout occurs in the helping professions, such as nursing, in response to chronic stress associated with doing *people work* (Maslach & Jackson, 1981). Burnout can lead to a general decline in an individual’s health and well being. This decline can impact directly upon an individual’s professional behaviour or relationships in the work place and can be carried over to an individual’s home life (Maslach, 1986; Leiter & Durup, 1996; Maslach & Leiter, 1997).

The key questions often proposed for the nursing profession to consider in regard to burnout are: Does burnout affect nursing attitudes toward clients, coworkers or family?, and Do the effects of burnout on an individual’s professional attitude result in changes in caring by nurses?

The quality of the work environment has been linked to the issue of retention and recruitment of nurses, as well as to the delivery of quality patient care (Harrison & Reid, 2001; Hoffman & Martin, 1994; McGirr & Bakker, 2000; Stringer, 2001; Tumulty,

Jernigan, & Kohut, 1994). In this case, a quality work environment can be described as one which fosters professional autonomy, as well as one which supports professional practice. Hoffman and Martin (1994) describe the impact of a quality work environment as contributing to positive patient outcomes and enhanced staff satisfaction. McGirr and Bakker (2000) consider the positive work environment to be the result of the active contributions of its members.

Negative work environments and work-place stress have been shown to impact directly on an individual's professional life, which in turn may be carried over and impact directly on the home environment. Leiter (1997), found that negative work environments occurred where mismatches between people and their job were present. He proposed that the resulting mismatches can lead to a further disintegration within the work environment and potentially to the development of burnout. The long term effects of burnout may not be limited to the work environment alone and can ultimately impact on the home environment as well. Although Leiter proposes that it is the work environment ultimately impacting on the home environment, the problem may be far more complex. Stress arising from the home environment may effect an individual's ability to perform their professional duties. In this case, other research has specifically considered the effects of the home environment and burnout on the home and work lives of individuals.

Leiter and Durup (1996), describe the effects of work and home stress as a unidirectional phenomenon described as *spillover*. Spillover attempts to describe the effect of experiences in the work environment and the interaction with the home environment. The overall effects of both home and work environments is shown by Leiter

and Durup (1996) to have both a positive and negative impact on individuals' lives. The significance of this effect may vary between individuals, yet according to Leiter and Durup, the overall effect can contribute to burnout and to a reduction in the quality of either home or work environments. The importance of Leiter and Durup's work is that it identifies the role of both environments as contributing to stress and ultimately burnout for nurses.

***Burnout and caring.*** The cumulative outward effects of burnout on nursing practice needs to be examined. Until now, the discussion has focussed primarily on two fronts: The work and home environments as sources of stress, and the impact that these stressful environments have on the quality of life for individuals. With the current nursing shortage and the issue of quality work environments becoming more prevalent, workplace issues such as burnout, must be addressed. Promoting improvements in the nursing profession has also been identified as an essential issue to aid in the recruitment and retention of both current and future nursing professionals (Fletcher 2000). Furthermore, the demands on nurses to provide quality care, while maintaining a caring approach towards clients, clearly identifies the need to deal with burnout as a threat to nursing practice. It is possible that burnout, whether derived from stressors in the home or work environment, negatively effects caring for patients.

Fletcher (2000), identifies several fundamental changes which must occur in order to promote or improve the working environments for nurses. Although these are primarily work-related, the assumption is that an improved work environment will result in an

improvement in the overall quality of a nurses life, and allow nurses to practice in an environment which fosters caring beliefs and attitudes towards/for clients or patients. These changes include: reducing work place stress, improving working conditions, increasing resources, improving pay, and enhancing recognition for nurses.

There is an expectation from patients and the profession, that nurses provide high levels of professional care and caring despite their stressful working conditions. With this in mind, there is then a clear need to examine the association between burnout and caring in nurses working in the province of Manitoba. In order to accomplish this task, the impact of the home and work environments and the development of burnout will be explored, with specific interest in its association with caring.

### ***Purpose of the Study***

The goal of the study was to examine the relationships between the home environment, work environment, burnout, and caring, in a sample of nurses working in an urban hospital setting. A descriptive, survey design was utilized in the study population to determine :

1. The prevalence of stressors in the home and work environments;
2. The prevalence of burnout;
3. The association of home and work environment stressors and burnout;
4. The perception of caring efficacy among the study nurses;
5. The relationship between caring efficacy and burnout.

### *Research Questions*

For the purpose of this study the research questions include:

1. What is the prevalence and level of the burnout characteristics in the study population?
2. What is the relationship between age, employment characteristics, and the level of burnout in the respondent sample?
3. What is the prevalence of caring efficacy in the study participants?
4. Is there a relationship between burnout and caring efficacy?
5. What are the associations between home and work environmental stressors and burnout and caring efficacy?

### *Assumptions*

The primary assumption of this explorative, descriptive study, is that nursing is accepted as a generally stressful profession. The literature indicates that stress, regardless of the source, is a precursor to the development of burnout. Another assumption is that, although the sources of stress within nursing appear uniform, the perception and experience of stress is unique to the individual nurse. Furthermore, exploring and understanding the nature of the interrelationships between stress, burnout, and caring can potentially lead to the promotion of healthier work environments. The healthy work environment will enhance caring for both client and nurse alike.

In relation to the concept of caring, it is assumed that the nursing profession is



founded on the belief that caring is a necessary component to the nursing process.

Without caring as a guide, the central feature of the role nurses play in assisting individuals to achieve their health potential would be lost. It is also assumed that caring is an active process which requires energy, be it emotional or physical, in order to occur. This assumption puts caring at substantial risk, if one lacks the physical or emotional energy to care.

### *Significance of the Study*

The Canadian Nursing Association's (CNA, 1995) position statement identifies that "the quality of professional nurses' work life has a direct correlation with job satisfaction, work production, recruitment and retention, and ultimately the quality of client care" (CNA, 1995, p. 5). Therefore, one result of a general deterioration of the work environment is that it can lead to persistent stress in the lives of nurses and, as a consequence can lead to a deterioration in caring and in nursing care. Despite this position statement, many work environments continue to erode, placing nurses and clients at substantial risk. These risks include a general decline in physical and emotional health of nurses as well as a reduced job performance and a reduction in quality care.

It is the obligation of all professional organizations to promote quality within the work place, and it is the role of the professional nurse to uphold the standards of care for their clients. To accomplish this task, an analysis of the current home and work life environments of nurses is necessary to provide a base for improvements. The gaps in the current nursing literature examining the potential effects of burnout on caring efficacy and

the role of the home and work environment as the source of stress supports the need for this investigation. Burnout, in itself, can be linked directly to a reduction in quality caring within nursing, but an analysis of the home and work environment may provide insight into the relationship between the triad of stress, burnout and caring efficacy.

### *Summary*

Fundamental changes to the healthcare system over the last ten years, have created working environments which challenge even the most experienced nurses. These challenges, which include dealing with the occurrence of daily work stress, can impact on both the personal and professional lives of nurses. In addition, stress arising from the home environment can also contribute to a reduction in the quality of an individuals home and work life. Although the everyday stress within the healthcare setting and an individual's personal life may never be completely eliminated, understanding and controlling stress may reduce the potential development of burnout.

Burnout, a multidimensional syndrome, is a significant problem within the nursing profession which may impact on the nurse's ability to care. Although not exclusive to nursing, burnout is an important issue for the helping professions and appears to be a major contributing factor to low moral, absenteeism, and poor job performance (Aronson & Pines, 1981). The impact of burnout can be considered costly to both client and caregiver. Clients may, directly or indirectly, experience the impact of burnout through detached concern or substandard care by nurses within the healthcare environment. In addition, the emotional exhaustion and depersonalization associated with burnout may

directly impede the development of optimal nurse/client relationships. Care-givers experiencing the extreme physical and psychological effects of burnout may be unable to meet the expectations of care. Ultimately, care and caring is what the client seeks and needs most from the nursing profession, the goal should be to provide it.

This research study explored for the presence and impact of burnout and the potential relationship it has with a nurses' ability to care. The study also examined stressors derived from both the home and work environments and their association with the burnout phenomenon.

## ***Definition of Terms***

***Stress.*** The physiological definition of the term stress is “the nonspecific response of the body to any demands made of it” (Selye, 1956, p. 27). Within the social sciences, Stress is defined as the “relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being” (Lazarus & Folkman, 1984, p. 21).

***Stressor.*** “A demand made by the internal or external environment of an organism that upsets its homeostasis, restoration of which depends on a non-automatic and not readily available energy expending action” (Vachon, 1987, p. 2).

***Burnout.*** “A psychological syndrome in response to chronic interpersonal stressors on the job. The three key dimensions of this response are an overwhelming exhaustion, feelings of cynicism and detachment from the job, and a sense of ineffectiveness and a lack of accomplishment” (Maslach, Schaufeli, & Leiter, 2001, p. 399).

***Caring.*** “The actions directed toward assisting, supporting, or enabling another individual with evident or anticipating needs to ameliorate or improve a human condition or life way” (Madeleine Leininger, 1988, p. 429). Caring “involves the creative use of presence by the nurse to establish a connection and then a relationship with the patient” (Sadler, 1997, p. 12).

*Self-Efficacy.* A “belief in one’s capabilities to organize and execute courses of action required to meet given situational demands” (Bandura, 1977, p.193).

*Caring Efficacy.* A “belief in ones ability to express a caring orientation and to develop a caring relationship with clients or patients” (Coates, 1997, p. 53).

## CHAPTER 2

### Conceptual Framework

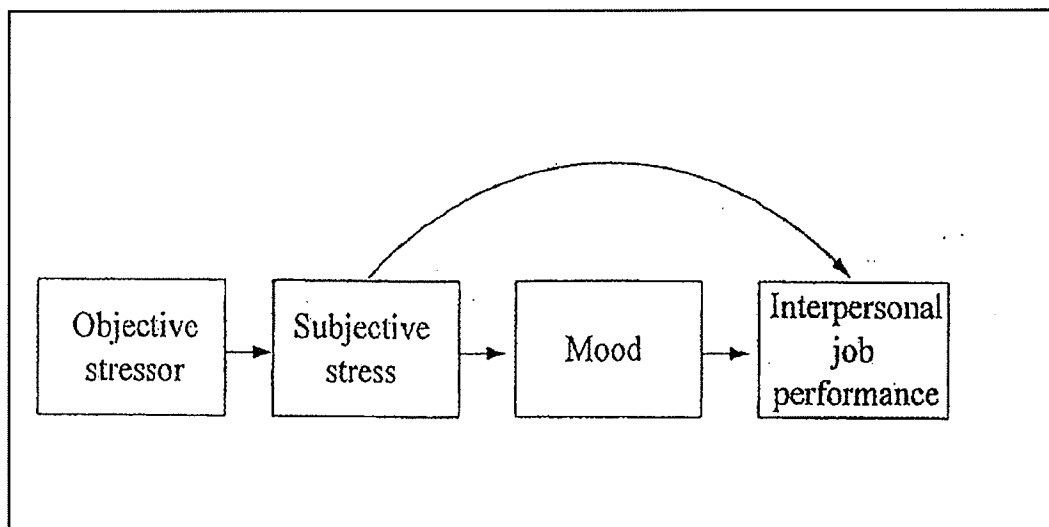
#### *Introduction*

Polit and Hungler (1995) define a conceptual framework as an “interrelation of concepts or abstractions that are assembled together in some rational scheme by virtue of their relevance to a common theme” (p.638). Accordingly, the use of a conceptual framework or model serves as a guide to direct the intent of a research project. The selection of an existing model or the creation of a new model is an important step in creating a template for the intended study. The unknown portion of any research proposal is the potential connection between the concepts (the propositions or proposed relationships), which, for this study include the relationship between potential sources of stress within the home and work environments, burnout, and caring.

A search of the research literature specifically focussing on the concepts of home and work environments, burnout and caring, failed to produce any conceptual models which specifically considered an interrelationship between these concepts. While the concepts of burnout and caring have a long and established research history individually, no research specifically links these concepts. This chapter will describe the conceptual framework which was selected to guide this research study. In addition, specific components of the model will be discussed in relation to the current study, as well as the modifications required in order to conceptualize the association between study variables.

### *Model Analysis*

***Same-Day Stress-Performance Model.*** The Same-Day Stress-Performance (S-D S-P) model proposed by Stewart and Barling (1996; see Figure 2), was the framework selected for this study. This model was developed to explain the effects of stress on mood and interpersonal job performance. The objective stressor is defined by Stewart and Barling (1996) as “reflected in terms of real events which can be measured directly” (p. 336). The subjective stress within the model refers to an individual’s perception of the objective event. The outcome of this subjective stress directly impacts on mood. Under lower levels of mood, healthcare professionals may interact less effectively with their clients and in this scenario are unable to maintain or perform an adequate job performance.

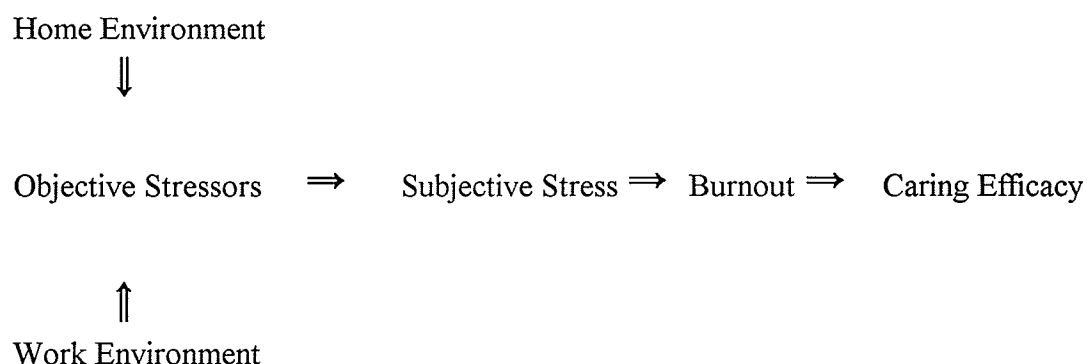


**Figure 2.** The Same-Day Stress- Performance Model Proposed by Stewart and Barling (1996).

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From “Daily work stress, mood and interpersonal job performance: A mediational model,” by W. Stewart and J. Barling, 1996, *Work and Stress*, 10(4), p. 337.

*Adapting the Same-Day Stress-Performance model.* The lack of an existing model to explore the research questions necessitated the adaptation of the Same-Day Stress-Performance model (S-D S-P; Stewart & Barling, 1996, see Figure 2). The S-D S-P model has been modified to include the home and work environment as stressors which potentially result in subjective stress for an individual. The revised S-D S-P model (see Figure 3) also indicates an association between home and work environments, as each may interact and impact on the other in various degrees (the spillover effect). As a necessary precursor to the development of burnout, subjective stress, which is an outcome or response to the objective stressors, remains unchanged within the model.



**Figure 3.** The adapted Same-Day Stress-Performance model

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It was determined that overall the variables of interest in the current study were congruent with concepts delineated in the S-D S-P model (see Figure 2). For example, the role of stressors in the home and work environments could be defined as sources of objective stressors leading to overall subjective stress for individuals. Mood within the



original S-D S-P model has been used to denote the concept of burnout, while interpersonal job performance appears connected with caring efficacy. The following descriptions of the components of the modified S-D S-P model will enhance understanding of its application as a conceptual framework for this study.

### ***Components of the adapted S-D S-P Model***

***Introduction.*** The review will describe the significance of stress and how it relates to the current study, followed by a description of the home and work environments as stressors which may contribute to burnout. In conclusion the association between burnout and caring will be discussed.

***Stress.*** The physical and emotional effects of stress were central to this research project. Stress has been shown in many research studies to be a major presence in the home and work environments. Stringer (2001), explored the common causes and sources of stress within the nursing profession. She identifies the complex work environment as the major contributing source of stressors within the profession. According to Stringer, stress is a significant, growing, occupational hazard for nurses, which must be given consideration. Therefore, one goal for nursing professionals is to gain a better understanding of stress and to determine methods of reducing it.

Historically, stress research is closely associated with the work of Hans Selye. According to Hans Selye's General Adaptation Syndrome or GAS (1936), an individual's ability to respond to challenges or stress is derived through a series of stages. The

response or alarm reaction is the individual's initial reaction to the stressor. This stage has been described as the *fight or flight* stage and is manifested by an individual physiological response to the stressor. The second stage is that of *resistance*, whereby the individual is able to cope with the event. Although the initial physiological responses may have returned to normal, resistance to the stressor is now noted to be above normal. In the final stage, Selye (1974), describes a stage of *exhaustion* occurring as a result of continuous exposure to the same stressor. In describing the adaptation to stress, Selye sees this final stage as a *depletion* of adaptive energy. This depletion can ultimately lead to negative consequences and outcomes for the individual.

Selye's theory is *physiological* in its description, therefore a more meaningful interpretation of stress would encompass the entire *physical and psychological* components of this phenomenon. Within the social sciences, the overall trend has been to broaden the interpretation and definition of the stress phenomenon to include the psychological and physiological domains. Although there has been an exhaustive amount of research done on stress, conceptually the description of stress by Lazarus and Folkman (1982), best describes how the concept of stress fits within the S-D S-P model. Unlike Selye's physiological description, Lazarus and Folkman (1982) describe the uniqueness of the relationship between an individual's *perception* and *response* to stress. Their proposed theory of stress and the adaptation to stress is based on three principles, including: *cognition*, *perception*, and *transaction*.

*Cognition* refers to an individual's interpretation of their relationship with the environment, be it person, place or thing. This interpretation can vary depending on

whether or not an individual *perceives* the event as stressful. The *transaction* which occurs between cognition and perception is what potentially results in stress for the individual. This entire interactive process with stress, requires the individual to actively expend energy throughout the stress transaction. The application of the Lazarus and Folkman analysis of the stress interaction within the proposed conceptual model, allows one to understand how individuals may vary in the perception of the stressors, as well as in the interpretation of the information, and coping mechanisms. Overall, the importance of an individuals experience and coping mechanisms play a vital role in the determination of the outcome or resolution to the stressful event.

***Home vs work environment stress.*** Within the adapted S-D S-P model, the differentiation of the home and work environment as sources of stress and the potential relationship with burnout and caring can be explained. Several studies have explored the impact of home and work environmental in an attempt to identify and measure stressors which potentially impinge on individual nurses (Flarey, 1993; Leiter & Durup, 1996; Maslach & Leiter, 1997; Walters, Lenton, French, Eyles, Mayr & Newbold, 1996). The general focus of this research has been to explain the complex interaction between the two environments within the context of *spillover*. Spillover occurs when the effects of one environment [generally the negative environment] influences the other, although each environment may impact on the other simultaneously. The outcome of this spillover results in a reduction in the overall perception of quality of the particular environment which has been affected.

Because of research in other disciplines which has specifically considered the interaction between home and worklife, spillover continues to gain acceptance as a significant problem which is not unique to nursing. Although the concept of spillover was not a specific component of the current research, it may serve as a guide to examine and explain how each environment is associated with the concepts of burnout and caring efficacy. The general consensus between researchers who have examined the home and work environments, supports the basic principle that both environments can impact on individual lives to varying degrees, yet no one environment can be singled out as the sole source of stress. In this regard, the decision to include a delineation of home and work environments was both necessary and appropriate in order fully understand the significance of each environment.

Several authors, including Walters, et al. (1996), studied the association of home and work environment relationships by considering overall life stress as a predictor of health problems. Building on the work of Baruch (1983), Walters, et al., identify specific factors which are similar in both home and work settings. These include the issues of *concern, control, social support, stress, rewards, and workload*. The interaction or disruption of any of these factors contributes to the sources of stress, which can result in a reduced quality of life, as well as a negative impact on an individuals health.

Flarey (1993), defines the work environment as "social settings which encompass many elements of a social system" (p. 9). This setting is subjected to, and incorporates many of the complex interactions of the society including the effects of stress. Flarey (1993) envisions the work environment as a conduit of change, as healthcare organizations

tend to be in a constant state of transformation. Flarey (1993) also identifies the importance of adequately assessing work environments, commenting that this “will allow us to more readily diagnose problems and guide strategy development to successfully change work environments, thus promoting the continued growth of nursing as a science and profession” (p. 15).

Multiple factors or stressors within the workplace, have been identified as precursors to the development of burnout. Maslach and Leiter (1997) point to fundamental changes in the workplace and the nature of jobs as the root cause of the development of burnout. They describe the workplace as “cold, hostile, and demanding, both physically and emotionally” (Maslach & Leiter, 1997, p. 1). This negative environment leads to “an erosion of an individual’s energy and enthusiasm, thus robbing individuals the joy of success and the thrill of achievement” (Maslach & Leiter, 1997, p.1).

Maslach and Leiter’s (1997) examination of work life identified six areas of organizational life which are key elements of many negative work environments. These include: *work overload*, *lack of control*, *insufficient reward*, *breakdown in community*, *absence of fairness*, and *conflicting values*. They found that imbalances within any or all of these six areas of organizational life place an individual at risk for the development of burnout. According to Maslach and Leiter (1997), the key outward visible dimensions of burnout are “exhaustion, cynicism and ineffectiveness in the workplace” (p. 17).

Environmental stress, regardless of the source, can have a positive or negative impact on individual lives. In some situations the stressors can motivate an individual, while in others, they can predispose an individual to develop burnout. The work of

Lazarus & Folkman (1985), examines variations within individual style of appraising and coping with stressful events. An individual's perceptions and responses to the stressful events are critical to understanding nuances in the human responses to stress. The consequence of stress is an important issue for the nursing profession to assess. According to Maslach and Leiter (1997) the most important consequence is burnout.

***Burnout.*** Within the S-D S-P model, mood [a psychological concept] can be linked with several of the key features of burnout including emotional exhaustion and depersonalization (Freudenberger, 1974). For the purpose of this research study, burnout replaced mood and was linked directly to caring efficacy. This potential relationship is one of the study's main research questions, that being, to determine if there is an association between burnout and caring efficacy. The examination the burnout phenomenon individually, as a key concept within this conceptual framework and study, is also considered important to the overall success of this research.

Burnout has been described as "a syndrome of physical and emotional exhaustion" (Maslach & Jackson, 1982, p. 1). The importance of which has been identified as "... the failure of the health professional to recognize, acknowledge, and understand these feelings [burnout] makes it especially difficult for them to cope with their emotions successfully in ways that are not detrimental to both self and others" (Maslach, 1979, p. 112). Ultimately, burnout leads to a general decline in an individual nurse's ability to connect and care for the client. Therefore, the concept of burnout is considered the major constituent of the research study, and is supported, in part, by the lack of empirical testing

within this sample population.

Burnout, as defined by Maslach and Jackson (1982), consists of three key features: *emotional exhaustion*, *depersonalization*, and *lack of personal accomplishment*. The depersonalization which occurs with burnout can directly impact the nurse-client relationship. Emotional exhaustion and lack of personal accomplishments lead to a decline in an individual's health and self esteem, thus contributing to the overall feelings of being *burnt-out*. These outcomes may have a direct impact on an individual nurse's ability to perform and maintain expectations of care.

Although the impact of stress and burnout has been studied extensively, with a variety of focuses including: job satisfaction, absenteeism, and performance, specific research examining whether or not burnout is linked to a reduction in caring by nurses is lacking. Therefore, in this study, the association of burnout with caring was undertaken.

**Caring.** Caring "... is a complex phenomenon that has been variously described as a concept, behaviour, attitude, environment, or process. Documenting and understanding caring are essential to explain client outcomes from nursing practice and to predict client well-being and health" (Sherwood, 1997, p.32). The importance of caring within the nursing profession has a long and distinguished history. Although it has been described previously, caring is the central theme of nursing and nursing practice. The concept of caring has been largely associated with the interpersonal relationships and job performance of nurses (Wolf, Giardino, Osborne, & Ambrose, 1994).

Current research on caring within nursing has concentrated on the caring behaviors

or the attributes of nurse caring. Generally, there is a lack of empirical research which examines factors that may directly impact on caring. As a means to summarize caring research, Jean Watson (1997), has compiled an extensive review of nursing research studies which consider the theory and application of caring. She integrated this work into a convenient matrix (see Appendix A). Most studies within the matrix explore the behaviors of nurses in relation to caring alone. Caring efficacy which is also identified in the matrix is another theoretical approach to evaluating caring by nurses.

*Caring efficacy.* Carolie Coates (1997), developed a caring efficacy theory based on Watson's (1979), theory of trans-personal caring and Alfred Bandura's (1977), theory of personal efficacy. Efficacy theory, which is central to caring efficacy, is founded on "...the conviction that one can successfully execute the behaviour required to produce the outcomes" (Bandura, 1977, p. 193). Bandura (as cited in Layman & Guyden, 2000), envisioned self-efficacy as "...the personal belief that one will prevail despite obstacles" (p. 56). Furthermore, Bandura described self-efficacy as "inspiring persistence and fostering successful performance and the attainment of desired outcomes" (as cited in Layman & Guyden, 2000, p. 56). According to Bandura (1995), self-efficacy develops through a process of four events. These events include the successful accomplishment of challenging tasks, observing others being successful, receiving words of encouragement, and controlling negative reactions to stress. As a result of this process, the nurse has the capacity and the means to develop the caring relationship with the client.

The integration of Watson's (1979) carative factors, from the transpersonal caring



theory into caring efficacy theory by Coates, creates a unique approach to exploring caring from previously established approaches which evaluate caring based on predefined notions or behaviors of nurses. To test her theory, Coates developed the Caring Efficacy Scale as a means to assess the belief in one's ability to express a caring relationship with a client. This research tool evaluates the individual nurse's perception of caring, rather than measuring discrete behaviors associated with the caring process.

The Caring Efficacy Scale was selected as a means of testing caring efficacy theory in this study because it supports many of the personal beliefs of caring that have evolved from this researcher's clinical practice. The nurse/client relationship for this researcher is considered a unique interpersonal experience which is guided by many of Watson's Carative Factors (see Appendix B). Furthermore, the potential negative outcome of stress and the development of burnout has been shown to impact on interpersonal relationships. The ability to examine whether stress and burnout are associated with caring efficacy is, therefore, essential. For the purpose of this study, the influence of stress and burnout was assessed by a nurse's belief in his/her ability to form strong nurse/client relationships.

### *Summary*

The lack of a specific supporting conceptual model necessitated the adaptation and selection of the S-D S-P model (Stewart & Barling, 1996). This decision was strengthened by an examination and comparison of the S-D S-P model with the expanded, modified components. In the spirit of the original intent of the S-D S-P model, the impact of the home and work environments as objective stressors and the development of subjective stress was maintained. The psychological concept of mood, within the S-D S-P

model can be related to burnout as an outcome of subjective stress. The linkage between caring efficacy and interpersonal job performance is apparent if one considers the attributes of caring within nursing and the interpersonal nature of a nurse's work. Overall, the adapted components enhance the application of the S-D S-P model, and as a result a conceptual framework was created.

The paucity of research which explores the association between home and work environments as stressors and the development of burnout underscores the need to examine the specific relationship between and among these study variables. Further to this inquiry, the potential outcome effect of burnout on the nurse/client relationship needs to be examined in order to protect the caring ideals within the nursing profession.

The strength of the adapted S-D S-P model established a new conceptual framework which specifically addresses the home and work environments as sources of objective stressors. Furthermore, the adapted model expands upon caring efficacy theory, by testing whether burnout is associated with caring efficacy. Thus the adapted Stewart and Barling model provided an appropriate framework to guide this research study.

## CHAPTER 3

### Review of the Literature

#### *Introduction*

A review of the literature will establish a base of support for this research study. Polit and Hungler (1995), define useful research as an extension of previous knowledge, as well as a guide for future research. Specifically, they describe the literature review as “a critical summary of research on a topic of interest, generally prepared to put a research problem in context or to identify gaps and weaknesses in prior studies so as to justify a new investigation” (Polit & Hungler, 1995, p. 645). This chapter will review current research to evaluate the supportive literature associated with home and work environmental stressors as sources of subjective stress, burnout, caring, and caring efficacy.

This review was performed using CINHALL, Medline, and the World Wide Web. The key words utilized included: nursing, stress, caring, caring efficacy, home and work environment stressors, and burnout. While the search results revealed limited research linking the concepts of burnout, caring, and caring efficacy, linkage of subjective stress and burnout produced an extensive array of information within nursing as well as other disciplines. Since this study primarily examined the relationship between burnout and caring efficacy, the absence of supportive literature in this area indicates that this investigation could make a significant and unique contribution to scholarly literature.

The literature review will begin by examining the concept of caring, both

theoretically and empirically, within the discipline of nursing. Since this study did not directly examine the concept of stress, the literature review was confined to stress research which was specific to stressors within the home and work environments. This provided the identification of potential sources of stress for individuals. The current study was based on the assumption that stress is a precursor of burnout. Burnout which is a major component to this research study will be examined within the literature with specific emphasis on the nursing profession. The literature review will conclude with a discussion of associated research which has implications on the burnout phenomenon.

## *Caring*

### *Introduction*

Sister Simone Roach (1984) wrote, "To care is human; to be human is to care" (p.1). The word *care* or *caring* is integral to the role of the nurse and is often perceived as being synonymous with what it means to be a nurse. It is also often associated with the ideals which draw individuals to the profession of nursing, that being a desire to help or care for individuals. Specifically, "nurses find meaning in their work when they are able to care for patients by performing in a way that conforms to the philosophy of care held by the nursing profession" (Baumann et al., 2001, p.8). Caring also results in the source of satisfaction one receives from helping individuals overcome obstacles.

Images of the nursing profession are usually ones of caring, compassion, and concern. The term caring within nursing is both an expectation from the recipients of care, and the one all encompassing term which defines the profession. The following

review of several theoretical interpretations of caring provides a context for the analysis of caring research, as well as support for the selection of caring efficacy, the outcome of interest in this study.

### ***Theoretical Foundations of Caring***

To understand and describe what is currently known about caring and caring research, selected caring theories within nursing were reviewed. The goal was to define and interpret the importance of caring as it pertains to the nursing profession. Although there are many theories surrounding the concept of caring within the nursing community, the contributions of Madeleine Leininger, Patricia Benner, Lydia Hall, Sister Simone Roach, and Jean Watson are noteworthy (see Table 2, p. 34). The efforts of these theorists, along with the work of others, have helped to define the meaning of caring within the profession of nursing. Although no one theory completely captures the true essence of caring, the combined theories provide a more meaningful understanding of the importance of caring within the nursing profession.

The common feature identified by each of the reviewed theorists is the importance of caring, as it relates to the relationship between nurse and client. Caring, in each of these theories, relates to both the physical and emotional acts of caring for an individual. The work of Hall, relates mostly to the physical aspects of providing care, as caring is described as the connection between nurse, client, and disease. Leininger, on the other hand, asserts the importance of culture in order to provide the highest quality care and caring which meets the cultural health needs of the individual. Roach's theory of caring describes the important qualities of caring, defined by the attributes of *Compassion*,

*Competence, Confidence, Conscience, and Commitment.* These attributes describe the behaviors and attitudes associated with quality care and caring by nurses. Benner's theory of Novice to Expert, assists in understanding the process by which caring develops for nursing through experience and practice. According to Benner, the unique bond between nurse and client evolves as "caring sets up the possibility of giving help and receiving help" (as cited in Marriner-Tomey, 1994, p. 169).

Watson's Transpersonal Theory of Human Caring proposes a philosophy of nursing and caring to reduce the dichotomy between theory and practice. There are several assumptions on which Watson's theory is based. These include: Caring is an interpersonal process which consists of specific caring factors that assist in the fulfillment of human needs; Caring promotes health and well-being, and accepts the individual as they are or how they may become; Caring allows the individual to participate in the decision making of their own health. Caring is also important to the curing process, as it [caring] denotes a responsiveness to an individual's problem, by assisting the client to gain control, knowledge and health. These assumptions integrate the commonalities among the reviewed theorists and informed the current study by providing the foundation to the importance of caring for nursing. Watson's ten carative factors on which the science of caring is based is outlined in Appendix B.

**Table 2***Overview of Caring Theorists*

Theorist	Theory	Definition of Caring	Major Constructs of Theory
Madeleine Leininger	Cultural Care Theory	Caring relates to actions directed at assisting, supporting or enabling an individual towards evident or anticipated needs to promote or enhance the human condition.	Transcultural nursing is a key component of nursing practice which focuses on the uniqueness of culture in the definition of health and illness for individuals, as well as in the provision of care by nurses.
Patricia Benner	Novice to Expert	Caring is described as the enabling relationship of connection and concern between nurse and client.	Nursing develops through a series of stages based on the Dreyfus skill acquisition model beginning with the novice stage and through experience and practice the expert nurse evolves.
Lydia Hall	Core, Care, and Cure	Caring refers to the direct contact with the patient which implies a comforting, nurturing relationship.	Hall's theory identifies the importance of nursing as the basis for providing the direct care to clients. Each component of the Core, Care, and Cure Model integrates nursing practice.
Sister Simone Roach	The five C's of Caring	Caring is seen as not unique to the nursing profession, but innate to us as human beings.	Nurses display specific caring behaviors defined by compassion, competence, confidence, conscience, and commitment.
Jean Watson	Transpersonal Theory of Human Caring	Caring defines the factors nurses use to provide care to clients, and caring is the most valuable attribute of nursing.	Nursing is the science of caring, which is defined and guided by the ten carative factors developed by Watson.

In summary, these theorists only begin to highlight the great expanse of knowledge which exists today on the topic of caring. It is difficult to ascertain exactly how caring enables clients to achieve their health potential. The above carative factors attempt to define the basic components of the caring process, which occurs during the interaction between nurse, client, and disease. The results of this literature review indicate that there is a lack of a unified definition of the concept of caring. Although no one theory exists today that can completely describe all the nuances related to caring and this creates difficulties in a consistent application of the concept across various studies, it is evident however, that caring within nursing is often perceived, not by theory, but rather by the objective processes by which care is provided to clients. Therefore, an examination of caring research will include an examination of the physical and psycho-social aspects of caring, for both the nurse and client alike.

### *Caring Research*

The link between quality nursing care and positive patient outcomes has been established (Baldursdottir & Jonsdottir, 2002; Larrabee & Bolden, 2001; Miller, 1995; Vincent, Alexander, Money, & Patterson, 1996; Yam & Rossiter, 2000). The importance of this association has generally been identified through research by healthcare organizations as a means to determine the effectiveness of the healthcare system and the nursing care provided. To justify the importance of caring within the current study, several studies have been examined to identify caring's overall importance to nursing and nursing practice.



The research into caring within nursing generally focuses on the behaviors associated with nursing practice. These caring behaviors are examined using three main areas of study: patients' perceptions of nurses' caring behaviors; nurses' perceptions of what constitutes caring; and the comparison of patients' and nurses' perceptions of which behaviors convey caring (Larrabee & Bolden, 2001; Walsh & Dolan, 1999; Wolf, Giardino, Osborne, & Ambrose, 1994; Yam & Rossiter, 2000). These research strategies are designed to measure and quantify caring by the providers within the particular healthcare setting, and by evaluating patient satisfaction with care. Larrabee and Bolden (2001), examined the relationship between quality nursing care and patient satisfaction in a study which utilized a modified scale designed to measure nursing care, as well as conducting interviews to capture what constituted good nursing care. Five recurrent themes evolved, which directly relate to the caring process between nurse and client. "These included: providing for an individuals needs, treating an individual pleasantly, caring about an individual, being competent, and providing prompt care" (Larrabee & Bolden, 2001, p. 36).

Although these themes identify several positive attributes of nursing, which were reflected in good nursing care, the Larrabee and Bolden study was conducted on the recipients of care alone. The study did not examine the nursing population as a means to investigate for congruence between the respondent group and the nurses providing care. Furthermore, Larrabee and Bolden identify the qualitative nature of the study as a limitation due to the method by which the data was collected. Despite this, however, the significance of these five recurrent themes reaffirms the importance of caring as it relates

to patient satisfaction and perceived quality of nursing care. In relation to the current study, the importance of quality care and caring by nurses is an important underpinning for clinical practice.

Yam and Rossiter (2000) examined perceived caring behaviors in a sample of nurses to identify the barriers to, and solutions for, the identified behaviors. Their results indicate that the perceived behaviors of caring are consistent with other previous caring research. What was unique about the Yam and Rossiter study was the specific identification of barriers to caring which included: human barriers, barriers created by the culture of nursing, and administrative and resource barriers. These identified barriers are similar to the issues identified by nurses in the Worklife Task Force Report prepared in 2001 for Manitoba's Minister of Health.

The solutions to the barriers of caring within the Yam and Rossiter (2000) study are also conceptually similar, in part, to the recommendations within the Worklife Task Force Report. Many of the recommendations in the report are aimed at improving all of the identified barriers to caring. The application of Yam and Rossiter findings on improving work environments and professionalism within nursing are essential underpinnings to the current study. Specifically, the issue of promoting professionalism within nursing relates directly to the concept of personal accomplishment within the Maslach Burnout Inventory.

While caring has been shown in the literature to be a positive attribute of the nursing profession, there are potential risks involved with care and caring. Although the current study did not explore these risks, a lack of caring or caring efficacy could certainly

be construed as a potential risk for nurse and client. The ability to critically record and analyze care and caring from all perspectives, both positive and negative, is essential to understanding what caring truly is.

Mona Kines (1999), studied the overall potential negative effects of nurse caring, proposing that it is possible to become over-involved with caring within the nursing profession. She describes *over-involvement* in caring as having potential risks for both nurse and client alike. The working assumption here is that co-dependence is a major component of over-involvement. She defines over-involvement as "an attempt to meet another's needs at the expense of one's own needs" (p.27). The key feature of over-involvement is one of over-commitment, which contributes to personal distress for the individual. This distress can be exhibited in several ways, including: anxiety, anger, burnout or even physical or emotional illness.

Using a correlational, descriptive design, Kines distributed a questionnaire to a random sample of nurses in British Columbia. Although limited by a low response rate (34%), she found that there were significant co-dependency issues within the sample. Co-dependency in this case was measured using the Friel Co-Dependency Assessment Inventory (Friel & Friel, 1988). The overall results indicate that co-dependency was more evident in nurses working in direct care settings, as well as in individual nurses working in institutions, rather than community health settings. Although the working experience of the respondents had no statistically significant effect on co-dependency, Kines found that higher co-dependency scores were related to the perception of a demoralized practice environment. Thus, the overall findings appear to support her initial proposition of the

risks of over-involvement in caring.

The results of the Kines study, in relation to the current study, underscore the issue of over-involvement, the work environment, and caring by nurses. The uniqueness of nursing is often reflected in the relationships which are formed and in the interactions between nurse and client. If over-involvement is a potential threat, caution must be taken to protect both nurse and client from its effects. Further research is needed as a means to support or disavow the findings of Kines' study.

To explore and summarize caring measurement research, the extensive work of Jean Watson is pivotal. Watson and several associates at the University of Colorado reviewed all research regarding caring within nursing and summarize the findings in a Caring Instrument Matrix (see Appendix A). A cursory review of this matrix for the purpose of examining caring research indicates that most early research into caring utilized the instrument known as the Care-Q. These early Care-Q studies, as with a large portion of the caring studies, were supported by and incorporated in Watson's Transpersonal Theory of caring.

Notably, the work of Patricia Larson (1984), measured the perceptions of caring behaviors using a Q-sort technique. This technique involved sorting cards into piles which prioritized the perceived behaviors of nurses in relation to caring. The target population selected by Larson was oncology patients, as these patients were perceived as having a high level of nurse involvement and therefore could evaluate nurse caring behaviors most effectively. Although the results of this study showed favorable reliability and validity scores, further replication was needed in order to strengthen the Care-Q instrument.

Therefore, much of the research in the 1980s and 1990s was built on, and attempted to replicate the work of Larson. Several revisions of the original Care-Q instrument incorporate items to measure patient satisfaction. The revised instrument is currently known as the Caring Satisfaction or CARE/SAT, an instrument which assesses patients' satisfaction with caring during hospitalization. Although reliability and validity are also reportedly high for the CARE/SAT, the Caring Instrument Matrix reflects limited use of this instrument in the literature to date. A further limitation of several of these studies is that they only address the perception of caring from the patient's perspective, while the current study assesses individual nurses' beliefs in their ability to care.

Additional limitations of many of the identified studies in the matrix are small sample sizes and the instruments inability to measure caring from a holistic perspective rather than as the sum of discrete behaviors. The decision not to use the CARE/SAT instrument in the current study was primarily based on the fact that patient satisfaction, although extremely important, was outside the scope of this research. Understanding nurses' perceptions of their ability to care was central to the overall goal of this study.

Watson, Deary, and Lea's (1999) longitudinal study of the perceptions of caring in a group of student nurses evaluated the relationship between nursing and caring, and assessed whether or not perceptions of caring change over time. They administered two instruments: the Caring Dimensions Inventory (CDI), and the Nursing Dimensions Inventory (NDI) at the beginning of the nursing program and then again twelve months later.

The selection of student nurses as the study group enabled the researchers to

evaluate how perceptions changed as students gained experience and exposure within the nursing environment. The researchers' main assumption, that early nursing students had a pre-conceived idea of nursing and caring prior to their exposure to both education and clinical applications, enabled them to measure variations in the perception of caring and nursing over time. Watson, Deary, and Lea found that the most significant feature was the loss of idealism by the sample group. They identify this change in the perception of caring over time as a negative development, with possible linkages to burnout. The overall importance of Watson, Deary, and Lea findings to the current study is the notion that caring perceptions may change with experience.

Leppanen-Montgomery (1997), attempts to understand the emotional demands of caring on nurses, during the course of their professional duties. She identifies the caring experience as potentially positive or negative. The greatest risk she identifies for individuals is that of getting too emotionally involved with clients or patients. The main sources of emotional risks are firstly, the experience of personal loss, and secondly, emotional overload.

According to Leppanen-Montgomery (1997), personal loss is the feeling often associated with death. Nurses tend to build strong relationships with clients in their care. Personal loss is often felt when something severs that bond. On the other hand, emotional overload can also be "the result of being overwhelmed by exposure to trauma, loss, and suffering" (Leppanen-Montgomery, 1997, p. 77). Emotional overload is the precursor to emotional depletion and disillusionment within nursing (Leppanen-Montgomery, 1997). These two consequences have significant implications for nursing practice and therefore

need further exploration as potential precursors to burnout.

Within the discipline of nursing, the term *caring* can be defined from several behavioral perspectives. Firstly, *caring*, can be considered as the physical act of caring for, or taking care of, an individual. This is often the public's perception of a large part of what nurses do in their daily practice. Secondly, *caring*, can be considered to be the emotional or psycho-social acts of *caring* about someone. This psycho-social ideal directs us to the emotional connection between nurse and client, which for many individuals, truly defines what nursing is all about. The emotional act of caring has been described by Kines (1999) as the major component of nursing practice.

The current study concurs, and defines caring as both caring *for* and caring *about* someone. Watson's (1979) theory of human caring seems to encompass many of the researcher's beliefs of caring within nursing and, thus, informed the basis of this study. The ability to measure caring empirically from several perspectives is essential to ensure that the recipients of care receive the highest level of care and caring possible. For the purpose of the review, several studies are examined in order to demonstrate the importance of caring research to clinical practice.

Wolf and associates (1994), examined the physical and psycho-social components of caring, by exploring the acts of caring by nurses from two perspectives: those involving the physical involvement between nurse and client and secondly, the emotional connection a nurse develops with an individual in one's care. Wolf et al. (1994) define nurse caring as an "interactive and inter-subjective process between nurse and patient" (p.107). The ultimate goal of their study was to examine and describe the dimensions of the processes

by which caring occurs between nurse and client in an attempt to provide support for their definition of caring. As a result, several consistent perceptions of nurse behaviors were unveiled, from both client and nurse respondent groups.

Using the Caring Behaviors Inventory (CBI) developed by Wolf (1994), the respondents were required to rank caring words or phrases associated with specific nursing behaviors. Although several other authors have similarly examined caring behaviors from the patient perspectives (Larson, 1984), Wolf and associates used both patients and nurse populations within their study. While Wolf and associates found that their study was limited by sample size and selection techniques, related to cost and logistical barriers, their findings reaffirm many of the attributes that are congruent with the perceptions of nurse caring. These perceptions include: the assurance of human presence, professional knowledge and skill, connectedness, attentiveness, and respect. The results of this work by Wolf and associates, supports the belief in the importance of caring for both the nursing profession and the recipients of care, and verifies that the overall perceptions of caring from both respondent groups [nurse and patient] are generally consistent.

In relation to the current study, the work of Wolf and associates establishes the significance of caring which was necessary prerequisite to understand why promoting the caring process is so important to both nurse and client. Although the work of Wolf and associates is an important contribution to caring research, the current study was generally not concerned with the process of caring, nor the behaviors which constitute caring by nurses. Therefore the CBI utilized by Wolf was not a useful instrument for undertaking



this study.

Walsh and Dolan (1999), conducted a study comparing emergency nurses and their perceptions of caring, by examining whether or not they perceive caring differently from their colleagues in other areas. Using the Caring Dimensions Inventory (CDI), Walsh and Dolan measured the importance of doing physical tasks as well as the psycho-social dimensions of caring. They administered the CDI to several different groups of nurses including: nurse practitioners, general duty nurses, and emergency nurses. Overall, Walsh and Dolan found that the perceptions of caring by emergency nurses is consistent with nurses in other areas of nursing. These results support the idea that caring within the profession of nursing is a universal concept.

The process in the evaluation of caring has tended to focus on the task of defining what constitutes good nursing care, as well as caring by nurses. The main impetus for this relates directly to the consumers of health care, as well as the nursing profession, as they are both more keenly aware of the important issues surrounding health and healthcare. Consumers of health care, and the system as a whole, are demanding care which is increasingly more comprehensive as a direct result of technological advances in medicine. The ultimate goal of the nursing profession has always been to provide quality care, although pressures within the system have made this goal increasingly difficult to achieve. To understand how nursing is currently *measuring up* in relation to care and caring, a means to evaluate care from a quality perspective is needed.

Taylor, Hudson, and Keeling, (1991) evaluated quality nursing care from the consumer's perspective. A sample of 140 patients evaluated their perspective of quality

nursing care. The goal of the study was to determine the attributes of quality nursing care as a means of evaluating the effectiveness of the healthcare system. The findings indicate that the perception of quality nursing care falls within two categories: the practice attributes and the nurse attributes. These attributes, which included: nurse/client issues; communication; and personal quality issues, were described by greater than 95 percent of all telephone interview respondents as being most important. The significance of this study underscores the role of the work environment as a vehicle by which caring is provided. In relation to the current study, understanding the effects of the work environment on care and caring is important if the issue of quality care for both the consumer and nurse is to be addressed.

Valentine (1991) explored the relationship between caring and patient outcomes, stating that "caring does not occur in isolation, and therefore to examine caring one must also examine the context, resources, processes, and outcomes relevant to a given setting" (p. 59). Using a case study analysis of nurse-patient caring, Valentine found that caring contributed to the variance in outcome scores for patient satisfaction, post-operative complications, and hospital preference. These findings support the importance of caring as a whole and its relationship to the entire health experience for individuals.

Several other studies have followed a similar approach to the evaluation of care and caring (Huycke & All, 2000; Leiter, Harvie, & Frizzell, 1998; Ludwig-Beymer et al., 1993; Peters, 1993). The impact of care and caring on patient satisfaction was determined by using focus and patient focus groups as the source of information. The ultimate goal in each of these studies was aimed at promoting quality care. The overall

importance of this process is seen as a means to ensure the effectiveness of the healthcare system and to provide an opportunity to evaluate caring behaviors of nurses. Although not utilized in the current study, focus groups, can identify deficiencies and make recommendations for improvements from those providing care to clients.

Of particular relevance to the current study, Leiter, Harvie, and Frizzell (1998), considered the effects of nurse burnout on patient satisfaction with nursing care. Their findings indicate that the perception of nurse caring directly influences patient satisfaction scores. They used patient satisfaction as an outcome measure of caring by nurses and found that the patients' perceptions of the overall quality of care was directly related to the perceived relationship that the nurses had with their work environment, as well as the quality of interactions between the patient and staff nurse. Patients on particular units where nurses found their work more meaningful were apparently more satisfied with all aspects of their hospital stay. The Leiter, Harvie, and Frizzell study supports the hypothesis that burnout and caring are directly related.

Several further recurrent themes evolved from the literature review related to the importance of care and caring to the successful outcomes of clients within the healthcare system. Many research studies identify specific concerns which must be addressed in order to promote quality care and caring. The role of the work environment has been recognized as being an important influence to the overall significance of caring. Maintaining quality work environments for the nursing profession must be given priority in order to maintain a caring philosophy and caring relationship, which in turn will protect the health care environment for both the nurse and client alike.

However, the behavioral approach applied in the vast majority of the studies within the caring matrix (see Appendix A), as well as studies examining perceived caring, have failed to record the true meaning of an individual nurses' caring ability. Coates (1997) a contemporary of Watson, identifies several variations and deficiencies within the current literature regarding the understanding and defining of caring, which are the direct result of difficulties in the conceptualization, definition, and assessment of caring. To date, most research related to caring according to Coates, focused primarily on caring behaviors, although several instruments explored caring attributes or abilities. Little research has directly examined the individual's perspective on caring. This inadequacy guided the development of Coates' caring efficacy theory. The current study builds on this need to further explore caring using an individual's perceptions of his/her ability to define, express and demonstrate a caring approach towards clients.

### *Caring Efficacy*

#### *Introduction*

The progression from caring to caring efficacy theory is a relatively new concept within the nursing literature. The context of linking caring with personal efficacy was first introduced by Coates in 1992. For Coates, caring efficacy theory evolved from the integration of Watson's (1979) human caring theory and Bandura's (1977) theory of self-efficacy. Coates (1997) defines caring efficacy as a "belief in one's ability to express a caring orientation and to develop a caring relationship with clients or patients" (p. 53). The caring efficacy dogma implies that an individual has the underlying knowledge and

attitudes, as well as the behavior repertoire, to influence the outcome of the nurse/client interaction or relationship.

The unique approach of caring efficacy sets it apart from previous attempts at caring measurement. Caring efficacy does not rely, nor focus completely on the behaviors which have historically defined caring within nursing. This provides researchers with the ability to examine caring from the individual nurse's own perspectives, which can then be compared to other measures, including patient satisfaction. This makes it possible to capture a more meaningful interpretation since one can evaluate caring from the client, organizational, and personal approaches.

### ***Caring Efficacy Research***

The Caring Efficacy Scale (CES) was developed and tested to assess the belief in one's ability to express a caring orientation and to develop caring relationships with clients or patients (Coates, 1997). The CES consists of thirty test items which measure a respondent's perspective towards clients/patients. The statements contained within the CES are balanced and contain fifteen positive and fifteen negative test items. Each question uses a six point Likert-like scale, ranging from strongly disagree (-3) to strongly agree (+3) and the respondents are required to select an answer which best describes their feeling about particular statements. Respondents are forced to choose a particular response, since the CES does not utilize a neutral category.

Initial testing of the CES demonstrated that the reliability and validity are within acceptable psychometric limits. Reliability scores, using Cronbachs alpha (a standard test

of reliability which reflects accuracy), are reported at 0.85 and 0.88 indicating a high level of internal consistency (Polit & Hungler, 1995). Validity for the CES was established by comparing scores with the Clinical Evaluation Tool (CET).

The CET measures performance from ten clinical practice dimensions and known performance standards of nurses. Using several similar test groups [alumni and graduating students], Coates demonstrates that scores on both the CES and CET are of similar value, which supports the design of the CES. Psychometric testing between the CES and CET produced Cronbach's alpha scores of 0.85 and higher, indicating convergent validity of the CES. Convergent validity refers to the degree that two measures of a single construct are similar (Polit & Hungler, 1995). The single deficiency of the CES, although it appears promising, is that it lacks extensive empirical testing by researchers.

The one research study which utilized the CES, outside the initial developmental testing, was conducted at the Boulder Community Hospital in 1999. A copy of this study was provided to this researcher by Coates. The study evaluates a training program intended to empower health care providers at the facility, with the goal of enhancing caring relationships between staff and clients, greater autonomy and personal empowerment, as well as a reduction in burnout and job stress. Burnout was evaluated using the Maslach Burnout Inventory (MBI; Maslach, Jackson, & Leiter, 1996) and stress was evaluated using the Job Stress Survey (JSS; Spielberger & Vagg, 1999). According to Coates, the results indicate that the CES can determine improvements in caring efficacy as a result of the training program at the institution. Furthermore, the reduction in the reported frequency of job stress and a reduction in burnout scores were also linked to the

training program.

Although this work is not directly applicable to the intent of the current study, the decision to utilize the CES was based on the results of Coates work. Firstly, Coates demonstrates that caring efficacy can be enhanced through a specifically designed training program, which in this case may point to a means by which to enhance caring by nurses. Furthermore, as burnout is a major component being explored in the current study, the fact that the two instruments were used together successfully, cannot be discounted as contributing to the decision process. The adequate psychometric properties of the CES instrument also support the decision to use it to measure caring efficacy in the current study.

A further review of the literature did not uncover any additional studies which utilize the CES as a means of measuring caring efficacy. In fact, beyond the unpublished work of Coates, no further research has explored the concept of caring efficacy. In this regard, the proposed study will expand upon the work of Coates and contribute to the overall reliability and validity of the Caring Efficacy Scale.

The importance of the concept of caring to both the client and nursing profession has been established. Several threats to caring have been identified in the reviewed studies. The following review of stress literature will provide supporting literature for components of the conceptual framework which served as a guide for this study. Although a brief review of stress related literature is undertaken, only literature deemed relevant to the conceptual model, with emphasis on the home and work environments stressors producing subjective stress are considered.

## *Stress*

### *Introduction*

Stress and stress research within nursing has been an important focus for approximately forty years. The continuous evolution within health and healthcare has been associated with increasing levels of stress for many individuals working in hospital settings. As a result, researchers have examined various aspects of stress and its impact on individuals. The association between stress and the development of burnout has been made, and continues to be an ongoing workplace issue for healthcare professionals.

Many authors throughout the 1960s and early 1970s have written extensively, and from different perspectives, about the stress associated with nursing practice (Holsclaw, 1965; Jones, 1962; Kornfeld, Maxwell & Momrow, 1968; Menzies, 1960; Vreeland & Ellis, 1969). These authors have identified the many health risks for nurses as being a direct result of stress in the work place or work environment. Menzies (1960), for example, reported that "stress was a problem of the profession arising from professional situation, rather than a matter of the individual nurse's personality" (p. 9).

The hypothesis that stress within nursing was generally unfavorable for the profession was explored by Jones in 1962. Jones' interest in *caring for the care-giver* is exemplified by her question: "Who supports the nurse?" (p. 476). Unfortunately, this question is still a workplace issue today, with no clearly defined answer. Jones (1962) felt that the "continuous support for nursing would enable the profession to respond to the challenges of nursing" (p. 478). According to Jones, nurses' feelings of inadequacy as a result of stress may disrupt their ability to connect with clients. Furthermore, Jones



believed that a system of support and understanding would provide the necessary tools for coping with stress in the work place.

Many of the early stress studies were carried out primarily in intensive care units, which were perceived as the most stressful working environments for nurses (Gardam, 1969; Hay & Oken, 1972; Holsclaw, 1965; Kornfeld, Maxwell & Momrow, 1968; Michaels, 1971; Strauss, 1968). Following the Korean conflict and during the Vietnam war, intensive care units and caring for critically ill patients became highly developed specialties of medical and nursing care. These units generally housed the sickest patients and, as a result, it was believed that nursing under these conditions was somewhat more stressful than working in other areas of nursing. Although the examination of stress was not limited to these specific areas alone, the majority of the early research focused on these particular units.

Vreeland and Ellis (1969) explored the stresses of nursing in the intensive care unit. Using an observational approach, in a small four bed intensive care unit, Vreeland and Ellis interviewed and observed nurses as they cared for a variety of post-operative patients. The stress that individual nurses reported was perceived as an expected part of caring for the sick in the intensive care unit. In many cases, the ability to deal with the intense stress of the intensive care unit setting was seen as providing gratification for these nurses. More subtle factors that contributed to physical and emotional fatigue were not as easily identifiable to the researchers. Vreeland and Ellis wrote that more research was needed in this regard.

These early examinations of the work environment established the foundation on

which all research into stress within nursing has been based. The issue of stress in nursing is an ongoing topic for research, as the profession of nursing continues to expand and develop. For the purpose of this study, stress was assumed to be present and an inherent part of the professional practice. The identification of the specific sources of stress is seen as an important step in the reduction and prevention of its proven negative affects.

### *Sources of Stress*

There is an abundance of research which attempts to uncover the causes and consequences of stress within the nursing profession. Ongoing stress research seeks to understand the impact that the continuous exposure to stress has on individuals. In general, stress research within nursing has indicated several potential negative outcomes that stress and negative work environments can impart on the individual. These include a combination of both physical and emotional outcomes (Barton, Spelten and Tootterdell, 1995; Harma, et al.; 1988; Howard, 1999; Kandolin, 1993; Landeweerd and Boumans, 1988; Rogers, 1997; Skipper, Jung and Coffey, 1988; Skipper, Jung and Coffey, 1990). Considerable research has also been undertaken to identify and explore specific factors which contribute to stress in nurses. With this in mind, the following review will analyze nursing research which has identified and examined sources of stress within the work and home environments, thus establishing support for the study's conceptual framework.

***Work environment stressors.*** Work environment stress within nursing, as well as

other healthcare professions, is generally seen as a potential threat to an individual's well-being. Although, in most cases chronic stress can be regarded as having mainly negative effects, it may, in some circumstances, generate positive outcomes for individuals.

Unfortunately, stress is an inherent part of our everyday work life and for the most part cannot be avoided. Furthermore, continuous exposure to chronic stress in the workplace has been shown to impact upon an individual's personal and professional life (McGrath, Reid, & Boore, 1989).

For the nursing profession, sources of stress or stressors are generally associated with death and dying, pain management, shift work, conflicts in the workplace, job satisfaction, and personal conflicts (Healy & McKay, 1999; O'Brien & Page, 1994; Schaefer & Moos, 1996; Skipper, Jung & Coffey, 1990; Stewart & Barling, 1996; Van Servellen & Leake, 1993). These stressors are encountered within many healthcare settings throughout North America. Other sources of stress can be specifically linked to the restructuring and cutbacks to the delivery of health care in Manitoba, as well as the rest of Canada which caused increased workloads and reduced support for nurses (Spence-Laschinger & Sabiston, 2000). These changes have produced scenarios such as bed and staff shortages, increased working demands, and the generally poor working conditions which were identified as work-place issues as early as 1990 by Skipper, Jung, and Coffey. More recently, these issues were reaffirmed in the work life study conducted in 2001 within the nursing population in Manitoba (Worklife Task Force Report, 2001).

The role of the work environment as a means of evaluating the impact of stress has also been examined by several other researchers (Burke & Greenglass, 2000; Fletcher,

2000; McDonald, 1999; Spence-Laschinger & Sabiston, 2000; and Valmy, 1999). In each study, confirmatory evidence supports the significance of sources of stress within the work environment, as discussed by Skipper, Jung, and Coffey (1988, 1990). An understanding of which factors within the work environment contribute the most to stress will serve as a guide for the control, reduction, and prevention of stress-related consequences for both the nurse and client.

Shift work, which is an inherent part of nursing practice, appears to be a common thread within much of the reviewed stress-related literature. Skipper, Jung, and Coffey (1988), examined the impact of shift work on job performance and job-related stress. Their findings indicated that shift work has a stronger relationship with job-related stress than with job performance. Specifically, this effect was found in the sample which worked a rotating shift pattern in their work schedule and was thought to arise from circadian rhythm disturbances. Although the intent of the current study was not to examine shift work specifically, its [shift work] contribution to job-related stress is an important finding. Additional findings that nurses working a permanent shift exhibited the lowest amount of work related stress provided further support for this hypothesis. These result reflect the importance of understanding how a work environment factor, such as shift work, affects the individuals exposed to it. The ability to differentiate between the type of shift patterns contributing to stress was deemed an important component of the current study.

In a study which examined stress within the nursing profession, Barak, Achiron, Kimh, Lampl, Gilad, Elizur et al. (1996), explored common health risks associated with performing shift-work. This task was accomplished by examining the relationship between

stress and common behaviors which can potentially have negative affects on an individual's health. These behaviors included smoking habits, alcohol consumption, and the use of prescription medications. Barak and associates also examined stressors in the home as well as the work environment to determine which environment produced the greatest amount of subjective stress for the respondents.

Results from the Barak et al. (1996) study indicated that many of the health risks and negative health behaviors among the female nurses were directly related to stressors in the work- place, resulting from shift-work. A significant health risk was considered to be present if smoking, alcohol, antacid or sedative use was reported by the respondents. Results from the study also indicated that stress arising from the home environment was, in most cases, minimal or nonexistent, since only 26 percent reported mild subjective stress at home. Stress in the work place was the only study variable which was highly correlated with smoking. The importance of this study in relation to the current study, as well as nursing in general, is the association between health risks and subjective stress. Work stress, has potentially negative effects on nurses, as well has been linked to the development of burnout.

Skipper, Jung, and Coffey (1990), also investigated links between the effects of shift-work, physical health, and mental depression. The study proposed two hypotheses in relation to how shift-work influences an individual's life. The results are supportive of their 1988 study, that shift-work has a greater impact on the development of job stress than on job performance overall. However, the relationship between shift-work and depression was not statistically significant and shift-work was only moderately correlated

with a measure of an individual's health. The significance of these results in relation to the current study once again supports the importance of the work environment factors such as shift-work as contributing to the stress response. The failure of shift-work to significantly impact on job performance may also have implications for the current study. In this regard, job performance may be related, in some way, to the care and caring performed by nurses.

Poissonnet and Vernon (2000), undertook an exhaustive review of the literature to examine the health effects of work schedules in healthcare professionals. Their findings indicated that work schedules can impact on physical and mental health, sleep, and the daily functions of individuals. They also found several risks related to work patterns which were specific to women, as women make up a large part of the work force in healthcare. These included hormone disturbances, as well as pregnancy difficulties. Although there also appears to be somewhat of a spillover affect, the overall impact of these negative health effects reduces the quality of life for an individual both in and outside of the work environment.

Several studies have linked stressors in the work environment, including shift-work, to the development of burnout (Grunfeld, Whelan, Zitzelsberger, Willan, Montesanto, & Evans, 2000; Iskra-Golec, Folkard, Marek, & Noworol, 1996; Skipper, Jung & Coffey, 1990; Walsh, Dolan, & Lewis, 1998). In each of these studies, the negative effects of shift-work and other work environment stressors were identified as having potentially deleterious consequences for nurses. The major repercussions of these stressors were shown to be directly associated with the development of burnout. Burnout

in this case, was measured in terms of the emotional distress and isolation which is largely associated with this phenomenon. The negative features associated with shift-work, as well as other work environment stressors, contribute to both physical and emotional difficulties for individuals and can potentially impact on professional practice.

Other research has shown that the quality of the work environment, specifically the working conditions as a stressor, can impact greatly on an individual's job satisfaction and staff morale (Hoffman & Martin, 1994; Schaefer & Moos, 1996; Tung, 2000). Work environment factors identified within the Schaefer and Moos study are congruent with the findings of others and include: workload, job satisfaction, autonomy, and relationships within the work place (Farrington, 1995; Harris, 1984; Healy & McKay, 1999; McAbee, 1994).

Hoffman and Martin (1994) specifically examined the work environment to assess the social climate or work conditions of hospital working units. They compared their environment assessments specifically with staff turnover rates, in an attempt to determine the association between the quality of the work environment and the desire to stay within that environment. Their working hypothesis was that reduced environment stress improves the quality of the working environment, which impacts on job satisfaction and equates with reduced staff turnover. By reducing turnover, as well as attracting individuals to the quality environment client care could be enhanced. Hoffman and Martin's findings support, in part, the importance of examining and measuring the impact of stress in work environments. In comparing these result to results obtained by Grunfeld, Whelan, Zitzelsberger, Willan, Montesanto and Evans (2000), the quality of the work

environment was correlated with the intent to leave that environment. Thus the Hoffman and Martin results were substantiated.

The interpersonal nature of the work environment within healthcare can be considered a significant stressor for the nursing profession. The ever-changing client population, in combination with the varying healthcare needs on individuals have important implications for nursing practice. Nurses are expected interact and build relationships with a variety of clients daily, which may create added stress for individuals. The daily exposure to work environment stressors without an adequate support system may contribute to a negative response through a reduced job satisfaction for individual nurses.

Tulmulty, Jernigan, and Kohut (1994) measured the perception of work environment factors which have the greatest impact on job satisfaction. The authors surveyed healthcare workers from two medium-sized hospitals in the United States. Although the response rate was only 40 percent, results indicate that highly satisfied individuals perceived the work environment more positively than those less satisfied. The results also indicate that specific relationship factors in the work environment contribute significantly to job satisfaction of nurses, which, in turn, may contribute to an individual's engagement with his/her work. These relationship factors include: involvement in the workplace, peer cohesion, and supervisor support.

Gaynor, Verdin, and Bucko (1995), explored the relationship between peer social support in care-givers and job morale. They viewed job morale as a component of an individual's job satisfaction. The researchers utilized the Nursing Stress Scale (NSS)



developed by Toft and Anderson (1981) and the Work Environment Scale (WES) developed by Moos (1981), to establish baseline scores for stress, and an assessment of the work environment for the hospital. Although the WES had been used successfully in other studies and was initially thought to be useful for the study at hand, it seemed to dilute specific work environment factors identified in several research studies and therefore was not selected for use in the current study. As well, Moos (1981) developed the WES to record a blend of personal and workplace factors, which was not the approach taken within the current study.

The results from the Gaynor et al. study indicated that peer support was higher in units where morale was perceived to be higher. Units with higher morale also reported significantly lower workloads and work pressure and generally less conflict and stress in the work environment. These results underscore the importance of social support as a means of reducing the impact of stress on individuals. Furthermore, they point toward possible strategies for stress management.

In a presentation to the Canadian Nurses Association, Lowe (2001) evaluated issues surrounding quality work environments for Canadian nurses, identifying several consistent themes which have been explored within the review literature. These themes include: stress, burnout, job satisfaction, workload, autonomy, control, and work-life balance, as well as others. Lowe identified perceived job stress as a significant factor contributing to a reduction in the quality of the work environment, as well as the quality of an individual's life. The importance of Lowe's work in relation to the current study lies in the assessment of work place stress and its potentially negative affects on the work

environment as well as the individual.

The issue of control, or lack of control, has been identified as an important work environment stressor. Nurses are often seen as having little control over many of the identified stressors, yet they must continually work under such adverse conditions. An example of a lack of control for nurses is the number of admissions through an emergency department. This lack of control impacts significantly on workload [another stressor], and can lead to potentially harmful situations in the work environments, diminish the quality of healthcare, and can impact on the nurse physically or emotionally (Tung, 2000).

According to the Worklife Task Force Report (2001), workload as a work environment stressor was identified as a significant issue for nurses in Manitoba. It was also a factor being examined within the current study.

The continuous effects of a stressful work environment directly affect the lives of both nurse and client. Working under continually stressful conditions leads to the potential break down of the health care system and may create difficulties for individual nurses, in the work environment, as well as in the home. Besides the work environment, an understanding of the influences of the home environment can enable a holistic understanding of what is actually occurring in the lives of individual nurses. The following review focuses on research related to the home environment stressors and the development of subjective stress.

***Home environment stressors.*** An examination of the home environment as a source of stressors for individual nurses is central to a full understanding of the potential

development of negative consequences of stress. For the purposes of this study, the home environment was defined as the portion of an individual's life that is spent away from the work environment and includes the complex relationships of daily living. Often, the duality of roles that nurses play as health care professionals and care givers impacts primarily on an individual's home life.

The dynamics of the home environment are often considered as synonymous with those of the work place. Issues such as control, workload, rewards, and concerns within the home, can directly influence individuals' home life and satisfaction, as well as their job performance. Leiter and Durup (1996) considered the complex interaction of work and family life within the concept of *spillover*. They described spillover as the interaction of the relationships of work to home and to a lesser extent home to work. The current trend towards two-career families and the dual roles that individuals must play in the home and work settings impact individuals' quality of life. Leiter and Durup found that personal family conflict was the only predictor specific to the family domain that had a direct relationship on work life. The study's other findings indicate that spillover from work had more of an impact on family states than spillover from home to work states.

Walters, Lenton, French, Eyles, Mayr, and Newbold (1996), studied the effects of paid and unpaid work as predictors of the health of nurses. Although they indicated that the work environment had the largest impact on individuals in relation to health prediction, the effects of the home was also significant, although shown to have a lesser effect. Both of these studies point toward the complex interaction between home and work and how they influence individual's lives.

A review of the literature uncovered an abundance of information on families and stress, however, there has been limited research on the multiple roles that nurses often play. For the purpose of this research study, it was important to distinguish between factors in home and work environments as potential sources of stress. Although the research on stress within nursing is extensive, limited research exists which focuses on the role of home stressors as a major contributor to stress in the workplace for nurses.

Ross, Rideout, and Carson (1994), studied the combined role that nurses play as dual caregivers. Of particular interest to them were the feelings associated with providing care to their patients, as well as to their own family. Several themes emerged from their interviews which were significant for the study's respondents including level of satisfaction from homelife and worklife, lack of control, and increased stress within both environments. Implications from this study underscore the need for individuals to find a sense of balance between home and work. An important underpinning identified as a means to reduce the overall impact of the home environment role was the importance of the nurse's support system. The study also indicates that the quality of the work environment can impact significantly on the quality of life in the home environment.

Walters, et.al. (1996), studied the effects of paid and unpaid work and social support as predictors of health in male and female nurses. Their findings indicated that a combined effect of paid and unpaid work and overall stress was associated with increased health problems. The study also concluded that a supportive relationship significantly ( $p < 0.000$ ) reduces the likelihood of health problems in the target population.

Walters and associates (1996), also identified similarities between home and work

in terms of factors which contribute to a negative stress response. These factors included: increased workload, lack of reward, concern over responsibilities, and social support. Although each environment had different factors which combined to make up each of these variables, a comparison was made between home and work to identify which was a stronger predictor of health issues. The overall findings from this study indicated that, although the demands of home life can have an impact on health problems, the main influence on health arises from the work environment.

Burke and Greenglass (2000), studied work and family concerns of full and part-time nurses in Ontario hospitals. The study proposed that there may be a difference in the work and home concerns of full and part-time workers. Specifically they considered two associations, firstly, the *family to work* association, and secondly, the *work to family* association. The study results indicated that there were, in fact, no differences between full and part-time workers in the specific measurement of family-work conflicts and spousal support. However, full-time workers in the study reported greater work-family conflicts and less satisfaction with the family. There was also an indication that many full-time nurses wished to change their employment status to part-time. Although no rationale was provided to support this finding within the results, one might assume that job satisfaction could be enhanced by a reduction in time at work.

Overall, Burke and Greenglass report that the sample was homogeneous in relation to the demographic variables reported by the Ontario Nurses Union (age, sex, employment status). This improves the ability to generalize the findings to the entire population. Despite being limited by a response rate of 35 percent, the researchers were able to

measure the relationship between the work environment and home life. Because this was a cross-sectional study, one cannot assume that a causal relationship exists between work environment and home life concerns. Generally, the area of research which considers dual impact of work and home environments is lacking and therefore the current study will contribute to the body of knowledge which considers this relationship.

Poissonnet and Vernon (2000), reviewed literature which had examined the home environment effects of work schedules on physical and mental health, sleep, and the daily home functions of individuals. Several significant health risks related to the work patterns of women were identified, including hormone disturbances, as well as pregnancy difficulties. These two outcomes have specific implications for the quality of the home environment. Although there appears to be a complex interaction occurring, the impact of these negative health effects specifically reduces the quality of life for an individual outside of the work environment.

Poissonnet and Vernon's review also indicates that the recovery time from work schedules impacts directly on the home environment. They describe recovery time as the time needed to recover at home from stressful work environments and changing shift-work patterns. The perceived alteration in recovery time may have home life implications, as alterations in mood and energy may affect personal relationships and roles at home.

Historically, it has been difficult to measure and understand the true social impact of both home and work environments. One reason for the deficiency within the literature is the limited number of instruments which exist today that can capture the nuances and complex interactions which occur in and throughout an individual's daily life.

Rudolph Moos (1981), a researcher in the study of social environments, has also considered the impact of the family and work environments on the individual. Moos analyzed the underlying patterns of work and the family in the development of his work and family environment scales, identifying the concept of stress as a main threat to both work and family environments. He considered stressors, whether derived at home or in the work place, as having a negative impact on a person's overall life. Although the purpose of the current study was not to measure stress in the sample population, a review of the measurement of stress within nursing is seen as an important element to understanding the potential outcomes of stress.

### *Measurement of Stress*

In 1981, Toft and Anderson developed the Nursing Stress Scale (NSS) which was specifically designed to measure stressors in the nursing population. Prior to its development, most examinations of stress in the nursing populations were qualitative in nature. As well, numerous studies had explored the consequence of stress as measured by an analysis of job satisfaction, turnover rates, and patient care outcomes. At present, few direct measurement instruments exist which focus on nursing stressors. The NSS recorded the frequency and sources of stress of individual nurses. It was developed from thirty-four potentially stressful situations, gleaned from a review of the related literature. Four response categories were provided and respondents were to answer based on frequency (from never to very frequently). Initial reliability and validity testing for the NSS was favorable and supported by alpha scores  $>.70$ .

Using an interview methodology similar to Toft and Anderson (1981), Harris (1989), developed the Nurse Stress Index (NSI). This instrument differentiates between groups of nurses, using various exemplars of stressors. The underlying assumption, according to Harris, was that the varying levels of responsibilities among different individuals was thought to create deviations in stress for individual nurses. Several recurrent factors associated with stress were identified including, workload, conflict, death and dying, and role performance.

While, overall, the NSI, like the NSS, reported acceptable levels of reliability and validity (alpha scores  $>.90$ ), there has been limited use of the NSI reported in the literature. Also, since it was not the intent of this study to differentiate the perceptions of stressors within the sample, the NSI was not deemed an appropriate instrument to utilize nor was it applicable to the conceptual framework.

Other measures of stress including the Critical Care Nursing Stress Scale (CCNSS) and the Perceived Stress Scale (PSS) were utilized by Sawatzky (1996) in a study of critical care nurses. The CCNSS was modeled after the previous work of Bailey, Steffen and Grout (1980) and a pilot study conducted by Sawatzky in 1993. The intent of the CCNSS is to identify perceived stressors within the critical care work environment. Results from Sawatzky's study indicated several variations between the actual and perceived stressors within the four critical care areas that were studied. The overall importance of this research points toward the need to prioritize stressors on an individual basis, as variations in stressors can, in fact, exist in different settings. Notwithstanding, consistent themes did evolve, which appeared consistent across various work



environments and were not limited to critical care alone.

The decision not to explore stress specifically, by empirical measurement, was based on the exhaustive amount of research which already exists in this area. As well, examining specific factors which might contribute to stress was seen as the more practical approach to exploring the home and work environments. Finally, the study did not focus specifically on only one particular area of nursing.

The overall impact of recurring stress, whether derived from the home or work environment, has been measured within organizations through factors such as reduced productivity, reduced job satisfaction and increased sick time by employees (Schaefer and Moos, 1996). Despite the proven associations between recurrent stress and many of these work place issues, healthcare organizations have continued to invoke change on its members. The end result of ongoing restructuring demands within healthcare today are coupled with the generally accepted knowledge that nursing is an extremely stressful profession. This creates scenarios which may have negative implications for the nurse, client, and profession. The combined effects have been explored under the broad heading known as burnout (Kelly & Cross, 1985; McGrath, Reid & Boore, 1989; Wakefield, 1992). The home environment as a source of stressors, although not explored to the same extent as the work environment, cannot be disregarded as adding a significant part to an individual's overall stress response. The general theme which has evolved from the reviewed literature is that stress has negative consequences for individuals. With this in mind, the physical and emotional risks associated with outcomes of stress will be examined in relation to the development of burnout and the conceptual framework for the current study.

## ***Burnout***

### ***Introduction***

Burnout, as a serious and pervasive problem within the nursing community, has been studied extensively. A review of the nursing literature over the past twenty-five years shows that burnout has been evaluated from an organizational, professional, and personal approach. The recurrent theme evident throughout the literature is that burnout is a growing issue for nursing professionals. Anecdotally, many individuals have used the term *burnt-out*, possibly without truly understanding and evaluating what the term really means. Often, burnout is seen merely as an occupational hazard within nursing, without recognition of its true impact. In this regard, the significance of burnout needs to be assessed in order to protect nurses, clients, and organizations from its negative effects.

### ***History of Burnout***

The term “burnout” has its roots in both the medical and nursing disciplines. Within the medical literature, the term burnout was first described by Herbert Freudenberger in 1974. A psychiatrist by profession, Freudenberger’s theory of burnout developed as a result of his clinical experience with psycho-analysis. The descriptions of the turmoil everyday people were experiencing led him to explore this topic more completely. Freudenberger (1980) wrote, “the more I studied, the more I realized that burnout was robbing our society of what it could least afford to lose” (p. xvii). He attributed the development of burnout to the “times we live in, the swift acceleration of

change, the depersonalization of neighborhoods, schools, and work situation”

(Freudenberger, 1980, p. xvii).

The earliest use of the burnout term in the nursing literature can be found in articles published by Seymour Shubin in 1978. Shubin (1978) described a “progression to disillusionment or burnout” (p. 22), as a potential hazard of nursing and that all members of the helping professions are at risk as a result of neglecting their own needs. Shubin identified “the two faces of burnout”(p. 24), which he perceived as the two main features of burnout, detachment and over-involvement. These features develop as a result of an individual’s ongoing interaction with clients during the course of their professional duties.

Christina Maslach (1975), studied the dynamics of burnout among health and social service groups. Her findings described the *distancing* that individuals develop in order to cope with stressful situations. Maslach described distancing as unhealthy for both client and caregiver, since it could negatively influence caring behaviors. Maslach defined three distinct phases associated with the development of burnout. In the first phase the individual develops emotional and physical exhaustion. This can lead to significant health problems for individuals such as colds, headaches, and sleep disturbances. In the second stage, individuals become detached from their clients and are more cynical towards them. Finally, in phase three, individuals become isolated from themselves and society. Maslach describes this final stage as the terminal stage of burnout.

### ***Development of Burnout***

To understand the etiology of burnout and its relationship with nursing,

researchers have proposed several theories. The major theory proposed in the literature is that work environment stressors can lead to chronic subjective stress, which contributes to the development of burnout through a failure to cope with these multiple stressors (Cronin-Stubbs, 1985; Davis, 1996; Maslach & Jackson, 1996; McConnell, 1982). The idea that nursing is a stressful profession has been extensively explored and verified within the literature therefore it will not be re-examined here.

A theory proposed by Maslach and Leiter (1997), points to fundamental *changes* in the workplace and the nature of jobs as the root cause to the development of burnout. The workplace, for Maslach and Leiter, is cold, hostile, and demanding, both physically and emotionally. This environment leads to “an erosion of an individual’s energy and enthusiasm, thus robbing individuals the joy of success and the thrill of achievement” (p.1).

Prior to the development of the above theory, Maslach (1986), stated that burnout “develops as a result of continued exposure to negative experiences for individuals who do people work” (p. 1). Maslach describes burnout as a multidimensional syndrome made up of three components. These include: emotional exhaustion, depersonalization, and lack of personal accomplishment. The key feature which connects these components is the constant exposure to stressful events such as those which occur daily within nursing. This theory proposed by Maslach (1986) is the generally accepted and applied three-component model of burnout which has guided the majority of burnout research. Specifically, burnout is derived from the cumulative affects of each component, and not one component in isolation. Therefore, the review will examine the measurement of burnout using this approach.

### *Measurement of Burnout*

Historically, the task of capturing the essence of burnout has been undertaken using several methods. The earliest attempts at recording burnout were performed using an observational approach, as described by the early works of Freudenberger in the 1970s. These observations generally lacked a systematic and standardized method of recording what was occurring at the time. Overall, these methods were neither reliable nor valid, which according to social-science standards is a necessary requirement (Schaufeli & Enzmann, 1998). Furthermore, the particular biases of the observer were often difficult to control for or eliminate during the observational period. Although limited by design, an invaluable amount of insight into the burnout phenomenon was learned which provided the groundwork for further research.

The progression from an observational approach to an interview technique in the early 1980s was quite popular for physicians, counselors, and social workers, yet was found to be extremely labor intensive. The evolution of the self-report questionnaires allowed for the process of recording the phenomenon of burnout more expeditiously. These questionnaires address the issue of reliability and validity due to the standardization of the tools (Schaufeli & Enzmann, 1998). The removal of the subjectivity of the assessor enables consistent and reproducible results. The main limitation to this methodology is the general lack of flexibility as well as the risk of non-response (Fink, 1995). Although advantages include geographic coverage, time savings, and larger samples.

The development of the Maslach Burnout Inventory (MBI) in the 1980s, was an important step in quantifying burnout in the helping professions [the MBI is described in

detail in Chapter 4]. It has been used extensively by many disciplines in an attempt to understand and aid in improving working environments in many of the social services. Often, it is used as an assessment tool, in combination with other instruments, to fully capture the dynamics which are occurring at a given point in time, within the particular setting.

Although the research literature indicates that several other instruments exist which claim to measure the phenomenon of burnout, no other instrument has achieved the same success and exposure of the MBI. The early inventories, prior to the development of the MBI, generally failed to be applicable across multiple professions, or they tended to be uni-dimensional. In this regard the MBI was deemed appropriate for the current study and accordingly was selected for use in the current study.

### ***Burnout Research***

***Introduction.*** The focus of burnout research generally explores three aspects of the phenomenon including: assessment of the causes; outcomes or consequences; and recommendations to prevent burnout. The majority of the early research by Pines and Maslach (1978), as well as others was designed to examine the characteristics of burnout as an emotional and physical problem for the individual. As stress was determined to be the main precursor to the development of burnout, the mechanisms by which individuals coped with stress, as well as burnout were also explored. More recent research generally evaluates burnout from an organizational approach, within healthcare. This focus allows an organization the means to evaluate the effects of the work environment with specific

issues such as job performance, satisfaction, and staff turnover. On the other hand, few researchers have explored the consequences of burnout in terms of its association with caring. As the current study was designed to examine the association of work and home environments as stressors and burnout, the following review will examine research associated with this relationship. Specifically, the causes, and consequences of burnout will be reviewed.

*Causes of burnout.* Fong (1993) studied the relationships between work overload [a measure of workload], social support, and burnout in a sample of nurse educators. She proposed that job or work overload and a lack of social support results in increased job stress, resulting in the development of burnout as effective coping mechanisms are depleted. Although this study was longitudinal in design, an approach not utilized in the current study, findings indicated that workload and lack of support were significantly related to burnout. Specifically, job demands, pressure of time, and feelings of job inadequacy were positively associated with the burnout phenomenon, while social support indicated a negative correlation with burnout. These findings were also supported by research performed by Janssen, De Jonge, and Bakker (1999), in which workload and social support were determined to be predictors of burnout.

The antecedent variables identified by Fong, are in many ways related to the environment factors being explored in the current study. Workload, community [a measure of social support], as well as reward, control, fairness, and value are significant components of a healthy work environment. The ability to identify the most significant

factors may enable one to address the cause of burnout thereby improving the work environment which may equate to better care for clients.

Van Servellen and Leake (1993) examined burnout in nurses working in several hospital clinical settings. Their aim was to explore personal characteristics, e.g, age and sex, and work related characteristics, e.g, shift worked and years of experience, in addition to job stress and control as predictors of burnout. Specifically, Van Servellen and Leake determined there was a lack of research which focused on AIDS care nurses and the burnout phenomenon. As a result, their goal was to explore if nurses involved in AIDS related nursing care developed burnout differently from their nursing counterparts. Although the study findings indicated no significant differences in burnout scores across the nursing samples, with the exception of critical care nurses who reported lower personal accomplishment scores. Nurses involved in AIDS care showed a trend toward higher emotional exhaustion scores overall. Job stress was found to be positively correlated with emotional exhaustion and depersonalization, while control was negatively associated with emotional exhaustion and positively associated with personal accomplishment in their analysis.

Duquette, Kerouac, Sandhu, and Beaudet (1994), performed an extensive literature review to ascertain the common factors related to nursing burnout. They identify several organizational stressors as major contributor to the development of burnout. These stressors were identified as workload and role ambiguity. Duquette and associates also reviewed the socio-demographic features within the literature associated with burnout. The researchers identify age as the only socio-demographic variable which



is related to its development. Specifically, younger nurses were found to be at higher risk for developing symptoms of burnout. These findings were similar to those of Robinson and associates (1991), where the age of the nurse [younger nurses], was found to be a significant predictor of burnout. Interestingly an earlier study conducted by Pines and Maslach (1978) showed older nurses exhibited greater burnout symptoms. Contrary to these findings, Pines (2000), did not find the socio-demographic feature of age, or the experience of the nurse, correlated with burnout.

Other findings from Duquette and associates' (1994) study, indicated there was no correlation between sex, education, or number of children [a measure of home workload], and the development of burnout. The role of hardiness, social support and coping strategies [buffering factors], was determined to be inversely related to the overall development of burnout. On the other hand, the amount of time spent with a patient, or the specific area of nursing was not statistically related to the development of burnout. These findings are somewhat surprising as one might consider different areas within nursing more stressful than others. However, the perception of stressful events was shown by Sawatzky (1996) to be individually experienced. In this regard, it may not be the stressor itself which is the problem, but rather an individual's perception of the stressor which may impact negatively on the individual, thus contributing to the development of burnout.

Vlerick (1996) examined the role of nurses' work organization as a precursor to the development of burnout. He identified and examined two main patient care delivery models for nurses working within clinical settings. These were the task-oriented model,

where nurses are assigned specific tasks to accomplish for all patients, and secondly, the patient assignment/primary care model, where individual nurses are wholly responsible for their patient assignments. The working hypothesis for the study was that the greater the number of nurses who were responsible for, or had contact with, one patient during one work shift, the higher the experienced level of burnout would be. The underlying assumption was that the nurses would be repeating the same tasks over and over for a variety of patients thus losing the opportunity to build strong nurse/client relations.

The MBI (Maslach & Jackson, 1986) and the Nurses Work Organizational Scale (NWOS; Bourmans, 1990) were used to measure burnout and the organization of nurses work respectively. The study's findings indicated that although there was no significant statistical difference between samples in the perceived organization of care by nurses, there were differences in average burnout scores in both sample groups. Higher levels of emotional exhaustion and reduced personal accomplishment were determined within the sample group who performed more task-orientated care versus those performing primary care. However, individuals who attempted to work according to the primary care model experienced higher levels of emotional exhaustion and reported higher depersonalization scores. These results were not supportive of the study's hypothesis.

A second sample of nurses who normally worked according to the primary care model, experienced higher emotional exhaustion and depersonalization when exposed to the task-orientated model. This finding was congruent with the study's hypothesis. Overall personal accomplishment was reported to be independent to the type of nursing care. These results were not supported in a study conducted by Melchior, Philipsen, Abu-

Saad, Halfens, Van de Berg, and Gassman (1996), where the introduction of the primary nursing care model was determined to have no contributing effect on the level of burnout among psychiatric nurses. In this study, the hypothesis was that primary nursing would equate to a reduced the level of burnout. Although the nurses were able to change to a primary care model no change in burnout level was detected.

The overall importance of these studies alludes to the way in which nursing care is provided and the development of burnout. The experience of the researcher has shown that although both models are utilized, often nursing units such as emergency become very task orientated, which, according to the Vlerick study, may contribute to the development of burnout, additionally, although the introduction of primary nursing failed to reduce burnout in the Melchior and associates (1996), it also did not increase either. These findings demonstrate the need for further research to confirm these results as several limitations were identified, including sample size and response rate, and the results were somewhat inconsistent.

In a study conducted by Howard (1997), nurses in three Ontario Hospitals were assessed for the presence of burnout. Findings from the study report moderate levels of burnout across all three sub-scales of the MBI, thus supporting the three-component model of burnout. Specific workplace factors were examined, which confirmed the findings from previous research studies linking organizational and personal factors with the development of burnout. The significance of the Howard (1997) results are that they represent the Canadian healthcare system. Generally, the universal system of healthcare within the provinces can be assumed to be consistent with respect to the organizational

structure, as well as the daily stressors of providing care to Canadians. In relation to the current study, by examining for burnout in the Manitoba healthcare system, confirmatory evidence of the burnout phenomenon can be established. Furthermore, Howard's findings support the basic tenet of the conceptual framework and the goal of the present study, which is to explore the work environment for factors which may be related to burnout.

Melchior, Bours, Schmitz, and Wittich (1997), undertook a meta-analysis of the literature to identify the variables associated with the development of burnout within psychiatric nursing. Inclusion criteria were identified as a means to focus on research studies pertaining specifically to psychiatric nurses. This included a limited search frame from 1974 to 1994. As a result, only nine articles were identified which met all the criteria for meta-analysis which were examined for their relative strengths with the burnout phenomenon. The main difficulty outlined by Melchior and associates was that the variations in the methodology, in all reviewed studies, made conventional assessments difficult, hence the meta-analysis approach.

Their analysis revealed 43 variables within psychiatric nursing which were associated with burnout. These variables were then correlated with the three components of burnout (emotional exhaustion, depersonalization, and personal accomplishment). The findings were compared to other research not specific to psychiatric nursing. The results indicated that consistent with research outside of the psychiatric domain, several consistent variables were present. These include issues of conflict, control, autonomy, social support, work pressure, as well as job satisfaction. Job satisfaction [an indication of the work environment] was inversely correlated with burnout across most of the reviewed

studies. Conflict in the workplace as well, was a significant contributor to the development of burnout. The analysis by Melchior and associates revealed that the MBI was the instrument of choice in all the reviewed literature. It also provided further evidence that the MBI is a reliable instrument to use across different areas of nursing. More importantly, it supports research performed by Leiter and Schaufeli (1996) who examined the consistency of the concept of burnout in different occupations. Thus, despite the cross-sectional nature of the respondent sample within the current study, burnout can be expected to be examined consistently using the MBI.

Walsh, Dolan, and Lewis (1998), examine burnout and stress in emergency room nurses to determine whether fatigue associated with work-related stress was correlated with the dimensions of burnout. The main stressors indicated by the study group were: staffing issues, pressures of work, and patient aggression. A lack of support and inadequate resources were also contributing factors to burnout. Results from the study indicated moderate scores across all three elements of burnout: emotional exhaustion, lack of personal accomplishment, and depersonalization. Walsh, Dolan, and Lewis (1998) were unable to show differences between age and degree of burnout. This, again, is contrary to the results of the Duquette et al. (1994) study, where age was the only socio-demographic variable which was related to the development of burnout.

Kalliath, O'Driscoll, and Gillespie (1998), examined the effects of organizational commitment and the levels of burnout between two samples of healthcare professionals (nurses; N=197 & lab technicians; N=110). According to Kalliath et al., although previous research had examined the negative effects of burnout on commitment, no

research had explored the impact of organizational commitment on burnout. Kalliath and associates proposed that increased commitment would equate to reduced levels of burnout within the organization. Although the current study does not specifically examine organizational commitment, factors such as community, reward, and fairness were considered to be factors which would contribute to an individual's organizational commitment, thus bridging this research to the current study.

The results from the Kalliath and associates work (1998), demonstrate the importance of commitment to an organization as a predictor of burnout. Organizational commitment was negatively correlated with both emotional exhaustion and depersonalization, two components of the burnout construct. These results were confirmed within the two sample groups, with the exception of depersonalization in the sample of laboratory technicians. A possible explanation for this result may be explained by the closer relationship that nurses have with clients. Overall, the ability to predict or consider all potential influencing factors on burnout, in any setting, is key to improving the quality of that environment for both nurse and client.

Pines (2000) evaluated the concept of burnout from a different perspective. For Pines (2000), burnout is not caused by the daily stress that nurses are subjected to, but rather by, "a sense of failure in an individual's attempt to find a sense of meaning through work" (p. 24). She proposes an existential perspective as a means to explain the cause of nurses' burnout. The fundamental understanding of existential theory is that everything has a meaning or purpose to it. In this regard, nurses' burnout is a "result of the disruption in the meaning that an individual gives to themselves and the work they do"

(Pines, 2000, p. 26).

Several assumptions of Pines' study are significant. First, she assumed that nurses working on maternity wards would have lower levels of burnout than cancer ward nurses. This, according to Pines, was related to the variations between life and death issues. Secondly, she assumed that burnout arose due to a sense of failure in the existential quest or rather a failure in attempting to give meaning to one's work. Finally, Pines proposed that nurses in Israel would have more existential significance to their lives than American and European nurses due, in part, to cultural upbringing.

The results from the study support the overall propositions. Firstly, higher levels of burnout were identified in cancer ward nurses compared to nurses working in maternity wards. Secondly, 92% of the respondents mentioned stresses related to hopelessness, helplessness, and lack of control. Thirdly, the burnout rates were significantly lower for Israeli nurses than for American and European nurses. Several significant positive correlations with burnout, were determined from the study, including: health problems, tension, decreased job satisfaction, decreased involvement, and helplessness. In this study burnout did not correlate with age, experience or work hours, which was contrary to the results of the Duquette et al. (1994) study.

In an important study, conducted by Grunfeld, Whelan, Zitzelsberger, Willan, Montesanto, and Evans (2000), cancer care workers in Ontario were surveyed on levels of burnout, job stress, job satisfaction, and intent to leave. The growing concern over anecdotal reports of burnout, high levels of stress, job dissatisfaction, and variations within the work environment led to this study which utilized several survey instruments, including

the MBI, the General Health Questionnaire and a survey to measure job satisfaction and stress.

Overall, Grunfeld et al. (2000) found that all three components of burnout were at significant levels within all the response groups. Although emotional exhaustion was highest in the physician population, it was also significant within the nursing population. Low personal accomplishment and depersonalization also followed a pattern similar to that of emotional exhaustion. Stress and job satisfaction were related to several different factors within the work environment. The findings indicate that approximately 40% of the respondent sample reported increased stress and a reduced job satisfaction. High job satisfaction was correlated to variety in the work environment, intellectual stimulation, and professional efficacy. Job stress, on the other hand, was correlated with workload, staffing concerns, pressure, conflicting demands on time, and home life disruption. The most significant finding indicated that burnout was associated with the intent to leave the area of cancer care. The findings of this Canadian study are consistent with American studies using the same variables even though the health care systems are very different.

In a similar study conducted by Um and Harrison (1998), an attempt to understand the process by which social workers experience burnout was explored. They proposed that role conflict, decreased social support and role ambiguity all contributed to stress and the development of burnout through a stress - strain process. The findings indicated that the variance of burnout scores (36%) could be explained by the effects of role conflict, social support, and role ambiguity. However, role ambiguity was found not to have a significant statistical impact on the development of burnout, as role conflict and social



support did ( $\beta = 0.570$  and  $-0.331$  respectively,  $p < 0.05$ ). Although job dissatisfaction indicated an overall variance of 44% with the combined predictor variables of role conflict, role ambiguity, social support, and burnout. In predicting job dissatisfaction, as an outcome of the burnout phenomenon was only shown to be only marginally related to burnout through regression analysis ( $\beta = 0.169$ ,  $p < 0.05$ ).

Generally, this study examined and confirmed the influences of several work environment factors and their association with burnout and job satisfaction. Although Um & Harrison (1998), used social workers as a target population for their study, the dynamics of the interrelationships which develop between professional social workers and clients is likely similar to that which occurs within nursing and medicine.

In summary, the results of the study indicate that although burnout is associated with role conflict, burnout was not a predictor of an individuals job dissatisfaction. This was somewhat contrary to the Grunfeld et al. (2000) study, where high levels of burnout and reduced job satisfaction was found in 45% of the respondent group although no direct statistical correlations were reported. Emotional exhaustion also a component of burnout and job dissatisfaction, were significantly correlated ( $r = 0.297$ ,  $p < .01$ ) in the Um and Harrison study, but this relationship became insignificant when mediated with social support and coping skills. The Grunfeld et al. study did not consider social support as a study variable, therefore caution must be taken in comparing these studies. The underlying implications for clinical practice as significant and point toward the importance of addressing role stressors and role conflict as a means to reduce burnout and improve job satisfaction.

The three-component model of burnout has guided the vast majority of the reviewed research studies. This approach focuses specifically on the issues of emotional exhaustion, depersonalization, and lack of personal accomplishment, which all contribute to burnout. According to the literature, the appeal of this framework was generally related to the past successes of the MBI. As with many conceptual frameworks, the concept of burnout has undergone changes, such as the inclusion of specific organizational stressors that contribute to the development of burnout. Many of the organization factors identified were examined previously in research described within the literature review, and included work environment issues such as: job performance, work load, and control.

Maslach and Leiter (1997), identified six specific areas of organizational life which contribute to the development of the organizational model of burnout. These include: work overload, lack of control, insufficient reward, breakdown in community, absence of fairness, and conflicting values. Any imbalance within these six features places an individual at greater risk for the development of burnout. In this model, the key, outward, visible dimensions of burnout include exhaustion, cynicism and ineffectiveness in the workplace. These outward dimensions synonymous with the original three-component model of burnout and therefore may also impact on caring behaviors in the work place.

In response to the organizational model of burnout Leiter (1997), (with cooperation of Maslach) developed the Worklife Survey. According to Leiter (2001), the guiding principle to the development of this measurement tool was that persistent qualities of the work environment play a key role in the relationship that an individual develops

with their work. Specific to the development of burnout, serious mismatches of an employee's expectations and the reality of the work environment was the root cause of burnout. This approach to exploring burnout is relatively new compared to the wealth of knowledge that exists using the three-component model. Maslach and Leiter (2001) agree that without empirical testing of this model "...the potential to make a major breakthrough in our understanding of what burnout is, what causes it, and what we can do about it..." will be significantly impaired (p.420).

The selection of the Work Life Survey (WLS; Leiter, 1997) in addition to the MBI for the current study was based on the promising features of the WLS and the proven experience of the MBI. Furthermore, the combined efforts of Maslach and Leiter in relation to their extensive efforts in this regard makes the selection of these instruments the logical fit with the conceptual framework. Additionally, the organizational changes in Manitoba's healthcare over the last ten years may have created some imbalances for employees, which could contribute to increased stress and burnout.

In summary, the literature revealed that there is an exhaustive amount of research which supports the three component model of burnout. Specific research also exists which focuses on the association between several work place factors as stressors to the development of burnout. The following review will examine research focusing on the consequences of burnout as a significant problem for nurses working in healthcare settings.

*Consequences of burnout.* The discussion of burnout consequences often crosses over to burnout causes because of a circuitous relationship. For example, as the individual begins to experience the effects of burnout, the factors impacting on the burnout may, as a consequence, be negatively affected. The most serious effects are the physical and emotional exhaustion which contribute to, but also result from, the burnout phenomenon. The *burnt-out* individual has exhausted useful coping mechanisms and begins to distance themselves from clients. This may contribute to a reduction in care provided and perceived as a reduced satisfaction by clients with care (Maslach, 1979). This review will focus on several research studies that considered the consequences from burnout.

In a study conducted by Leiter, Harvie, and Frizzell (1998), the link between burnout and patient satisfaction was explored. Overall the study's findings indicated that patients who were surveyed on units where nurses felt more exhausted both physically and emotionally [a symptom of burnout], were less satisfied with various aspects of their care. This finding alone has significant implications for the current study. Although patient satisfaction with care was not examined in the current study, these findings point toward a possible connection between burnout and caring efficacy.

Further findings from the Leiter, Harvie, and Frizzell (1998) study link the intent to leave the profession with burnout. Specifically, individuals with increased burnout scores had a greater intention to leave than those with reduced burnout. These results were supported by Grunfeld and associate's (2000) finding that burnout and the intent to leave the Ontario cancer care system was highly correlated. The reported desire of approximately one-third of respondents to leave the specialized area of cancer care was

directly attributed to burnout. Several respondents indicated a further desire to leave the province altogether. Given the current trend in nurse staffing in Canada, which has been reported in the media, as well as by professional organizations as alarming, these findings are significant and cannot be ignored. In relation to the current study, the respondents were asked specifically if there was an intent to leave nursing or change jobs within nursing.

The implications of those studies reinforce the overall importance of research into burnout. Grunfeld et al. (2000), recommends future research to consider the impact of burnout on either process or outcome measures of quality care within the confines of the Canadian health care system. Although the purpose of the current study was to examine caring efficacy by nurses, the link between quality care and caring has already been established through patient satisfaction research. The current study also examined the association between burnout and caring by nurses.

Overall the consequences of burnout may be difficult to ascertain from an individuals perspective, although organizations may experience the effects of burnout through lost productivity and individual commitment. The solutions to this pervasive problem may be as simple as reducing stress for individuals. Although several of the reviewed study's have made suggestions for the prevention of burnout, the reality is that it may be completely impossible to change the stressful nature of the nursing profession. An exploration of some of the recommendations for the prevention or treatment of burnout will be examined in the subsequent chapter to follow. In an attempt to acknowledge several other aspects of burnout research, a review of associated research was undertaken,

several findings are reported here.

### ***Associated Burnout Research***

The purpose of this research study was to explore burnout and caring efficacy in the sample population, hence, the majority of research reviewed focuses on the negative aspects of burnout. Despite the acknowledgment that burnout exists across different areas of nursing, as across various occupations, few studies explore why certain individuals fail to show burnout symptoms. One explanation for this phenomenon is the concept of hardiness. Although the hardiness was not investigated in the current study, it is important to mention here.

Although not unique to nursing, the ability to respond and adapt to stress in a changing work environment supports the concept of *hardiness* within nursing. This study did not consider hardiness as part of the research question, however, the concept may serve to answer why stress does not seem to affect some individuals. Hardiness was first described by Kobasa (1979) as an individual's ability to "control, commit, and challenge" their environment in response to stress (p.3). Several studies are reviewed in an attempt to establish the association between hardiness, burnout, and stress.

Wright, Blache, Ralph and Luterman (1992), studied the effect of hardiness as a potential buffer to stress and the development of burnout. The sample was selected from intensive care nurses who, in the past, had shown higher turnover rates than other nursing units. The intent was to determine the role of hardiness in predicting who was at risk for the development of burnout. The ongoing shortage of qualified nurses in intensive care

units was identified as a major driving force for the research study. Wright et al.'s study (1992) found that hardiness was inversely correlated with measurements of stress and burnout. As well, the individuals who displayed high levels of hardiness did, in fact, report low levels of burnout. These findings indicate that the effects of hardiness may, in fact, be the one trait that protects individuals from burnout.

Sawatzky (1993) examined the relationship between hardiness and the perception of stressful events in female critical care nurses, using Pollock's Adaptation Nursing Model. Sawatzky proposed that the stressful nature of the work environment within critical care areas has negative influences on individuals and potentially on the care they provide. Using a descriptive correlational design, Sawatzky measured actual and perceived stressors in a sample of critical care nurses. Several interesting patterns were noted in the study results. Patient care issues were identified as the most stressful by the respondents. As well, lack of control was identified as a recurrent theme in stressful situations. Overall, Sawatzky concluded that there is diversity across actual and perceived stressors in an ICU setting and that hardiness is related to stress resistance.

McCranie, Lambert, and Lambert (1987), studied work stress, hardiness, and burnout among hospital staff nurses. Results indicated that burnout scores were not related to age, years of nursing experience, marital status, or clinical work setting. However, nurses exposed to a rotating shift pattern did indicate a higher burnout score. Job stress and low hardiness scores both correlated positively with the concept of burnout. A significant finding from the study indicated that although hardiness was not able to prevent high levels of work environment stress from leading to increased burnout levels, it

did in fact have some benefit in reducing burnout.

Simoni and Patterson (1997), expanded upon the work of McCranie and associates by examining the relationships between hardiness, coping, and burnout in a random sample of nurses in the United States. There were two main hypotheses for undertaking this study. Firstly, increased hardiness and coping would result in lower levels of burnout and secondly, the nature of the coping mechanisms would be directly related to the level of hardiness. Using several survey instruments, Simoni and Patterson were able to show statistically that the first hypothesis was in fact supported by the results. A Pearson's "r" coefficient was  $r = 0.47$  with  $p = <.001$ , indicating that individuals who measured highest on hardiness, measured lowest on burnout. The second hypothesis was not supported by the results as no statistical relationship could be shown.

Overall the buffering effects of hardiness have been shown to reduced the negative effects of the burnout phenomenon. However, the impact of recurrent stress within our daily lives cannot be entirely prevented by the concept of hardiness. It may however explain why variations exist in the experience of burnout and may serve as a mechanism by which at risk individuals can be taught to cope with the stresses of daily lives.

### *Summary*

The review of the literature has identified several deficiencies which support the value of the present research study. Studies examining caring and the behaviors associated with caring have used a variety of perspectives. Several theoretical definitions of caring have been provided. As caring efficacy is a relatively new approach to caring, it



is not surprising that limited research exists which examines this concept. Only one instrument was identified (the Caring Efficacy Scale), which was developed as a means to measure the concept of caring efficacy. As this study is an exploration of the caring efficacy concept, it will contribute to this body of nursing knowledge. In addition, it will specifically contribute to the empirical testing of the caring efficacy scale and therefore will build on the work of Dr. Coates in regards to Caring Efficacy.

The significance of stress within nursing has been verified. Several recent studies have considered the dual roles that many nurses must fulfill, as potential sources of stress. The impact of the work environment as the main source of stress has been described, yet the home environment cannot be discounted as a significant stressor as well. To date, no other study has considered the potential relationship of the home and work environments on the development of burnout and their combined impact on caring efficacy.

The concept of burnout has been explored and studied from a variety of perspectives. Limited research on burnout has been performed on Canadian nurses in general, and on Manitoba nurses, in particular. Although the impact of burnout has been studied from an organizational approach, the overall impact of burnout on caring efficacy is nonexistent. The current study provided an opportunity to expand upon previous burnout work. Furthermore, the effects of burnout were examined by considering the associations between home and work environment stressors, burnout, and caring efficacy.

## CHAPTER 4

### Methodology

#### *Introduction*

This chapter identifies the methods and procedures central to undertaking the study. Consideration is given to the research design as well as to the sampling technique used to gather data from the respondents. Instrumentation and methods of data analysis are outlined and the sample and the setting of the research study are described. Ethical considerations for the study will be discussed.

#### *The Research Design*

“The research design provides an explicit blueprint of how research activities will be carried out. Its objective is to answer the research question” (Schantz & Lindeman, 1982, p. 35). The potential relationship between caring efficacy and burnout has not been empirically tested. This study explores this relationship in a cohort of hospital-based nurses within the city of Winnipeg. In support of the inquiry, an examination of the impact of stressors associated with the home and work environments and the occurrence of subjective stress leading to burnout was undertaken. Within the discipline of nursing, work environment stressors, burnout, and caring have been investigated as individual concepts. The study of the effects of the home environment on nursing practice, however, has not been explored to the same extent. To date, insufficient research has been conducted on the interaction between the concepts of home and work environments stressors, burnout, and caring efficacy. To explore the interactions between these four

concepts a cross-sectional descriptive survey design with correlational analyses was undertaken.

The cross-sectional descriptive survey design addresses the research questions/hypotheses of this study since cross-sectional studies are “based on observations of different age or developmental groups at a single point in time for the purpose of inferring trends over time” (Polit & Hungler, 1995, p. 639). A cross-sectional method was also viewed as the most practical and economical approach of recording and describing the relationships in question.

The descriptive design provides an opportunity to explore the interrelationships of the concepts of stressors in the home and work environments, burnout, and caring efficacy in this cohort of nurses. Descriptive studies are defined as “research studies that have as their main objective, the accurate portrayal of the characteristics of individuals, situations, or groups and the frequency with which certain phenomena occur” (Polit & Hungler, 1995, p. 640). The descriptive design permitted quantifying the prevalence of burnout and caring efficacy in the target population.

The results obtained from the study were analyzed using a correlational approach in order to establish the strength of the relationships between stressors in the home and work environments, burnout, and caring efficacy. A correlation is defined as the “tendency for variation in one variable to be related to variation in another variable” (Polit and Hungler, 1995, p. 638). Polit and Hungler (1995), describe correlational research as an “investigation that explores the interrelationships among the variables of interest without any active interventions on the part of the researcher” (p. 638). The general lack

of supportive research/evidence linking burnout to a reduction in caring efficacy demonstrates the need for this type of inquiry.

### ***Survey Methodology***

The survey methodology employed in this study was a self-administered mail-out questionnaire (see Appendix C), sent to a random sample of nurses, within the city of Winnipeg. Survey research is defined as “a type of non-experimental research that focuses on obtaining information regarding the status quo of some situation, often by means of direct questioning of a sample of respondents” (Polit & Hungler, 1995, p. 654). The advantage of this method of data collection includes the ability to gather data from a large group of respondents over a short period of time. Disadvantages for this type of data collection include expenditures associated with postage, and low response rates. Overall, it may be less effective than direct contact with individuals either by telephone or face to face interview.

The potential issue of the lower response rates, which are normally associated with mail-out surveys, and which may affect the generalizability of the results, was offset by a conviction that the respondents would find the topic interesting enough to participate, thus reducing the impact of non-response. As well, a follow-up reminder postcard (see Appendix D) was used as a strategy to increase the response rates.

### ***The Sample and Setting***

A key goal of this research study was to obtain a sample which was representative

of the nursing population working in hospital settings in Winnipeg, Manitoba, Canada.

Polit and Hungler (1995), define a representative sample as "one whose characteristics are similar to those of the population from which it is drawn" (p. 652).

This study surveyed a cross-section of general duty nurses working in any of six main hospitals in Winnipeg. A complete and accurate mailing list of all nurses who were currently employed in any of these settings was obtained. The sample frame was created from the data bank at the College of Registered Nurses of Manitoba (CRNM), the nursing licencing body in the province of Manitoba. The selection of potential respondents, as well as the mail-out of the survey packages, was performed independently by the CRNM. The selection list was kept confidential from the researcher.

In choosing the most appropriate technique for data collection, many variables were taken into consideration. Varying shift-work patterns, as well as the anonymity of the potential respondents, made in-person interviews impractical. The telephone survey approach was also deemed unrealistic due to the time, logistics, and costs associated with such a technique. The selection of the mailed survey technique for the collection of data was deemed most appropriate based on the nature of the survey instruments used for the study. This technique allowed for the collection of data from a large number of respondents at a given point in time. As the survey package was quite large, the mail-out technique allowed respondents to fill out the surveys at their leisure. The costs associated with the study included postage costs related to the mailed survey, and the copyright fee for a portion of one survey utilized in the study.

*Inclusion/exclusion criteria.* All Registered Nurses licensed within the province of Manitoba and who indicated on the annual licencing renewal form that they were employed within the city of Winnipeg, at one of the two tertiary hospitals or four community hospitals, were eligible to participate in this research study. "The criteria for inclusion in a survey refer to the characteristics of respondents who are eligible for participation in the survey; the exclusion criteria consists of characteristics that rule out certain people" (Fink, 1995, p. 27 ).

For the purpose of this study, all nurses who were employed at the general duty level and who provided direct patient care in any of the identified hospitals were eligible to be randomly selected for the study. The reason for this decision was based on several factors. Firstly, a large percentage of nurses within the province are employed at one of the six main hospitals in Winnipeg. This target group falls under the control of the Winnipeg Regional Health Authority (WRHA), whose policies and decisions directly impact these individuals, in terms of resource allocation. Secondly, although caring and caring efficacy is a potential concern throughout the province's nursing population, the practice dynamics of nursing in rural communities may be different from those in an urban setting, which makes the generalization of findings across groups problematic. Thirdly, the decision to limit the sample to an urban group was the most logistically efficient use of time, cost containment, and access to the sample group.

This study measured burnout and its relationship with caring efficacy in a reasonably homogenous cohort of general duty nurses working in hospitals within the city of Winnipeg. It was hypothesized that workplace stressors and urban living influences

would be similar. Although other nursing cohorts, such as community health nurses, rural nurses, or long term care nurses may be potential future target groups, the inclusion of these individuals may have biased the study results. Although it is difficult to categorically state what the impact might be, individual nurses employed in these other settings may have different concerns related to work and or environmental stressors.

*Sampling technique.* Random sampling technique, a form of probability sampling, was used to identify and select the sample group. Fink (1995), stated the following:

In simple random sampling every subject or unit has an equal chance of being selected. Members of the target population are selected one at a time and independently. Once they are selected, they are not eligible for a second chance and are not returned to the pool. Because of this equality of opportunity, random samples are considered relatively unbiased. (p.10)

The College of Registered Nurses of Manitoba (CRNM), completed the random sampling process for the researcher. In order for this to proceed, the researcher provided the inclusion criteria, which were subsequently entered into the data bank at the CRNM. Inclusion criteria specified hospitals, areas of nursing, and employment status of nurses. Using registration numbers and the inclusion criteria, a sample of 200 nurses was selected from the sample frame. The sample size was determined from a power analysis performed by the statistician provided by the Manitoba Nursing Research Institute. Using an

established power of 0.80 (Polit, 1996), and considering a moderate effect size between study variables, a sample size of  $N = 80$  was determined. In order to meet these requirements, taking into account non-response, 200 respondents were selected to receive the survey package.

### ***Instrumentation***

***Introduction.*** The importance of selecting instruments which accurately measure and record the concepts under study is paramount to the success of any research investigation. The link between the abstract and the concrete world is accomplished through the selection of instruments which will accurately reflect the concepts being studied. The major problem for researchers who develop instruments is the issue of measurement error. Measurement error is defined as “the difference between what exists in reality and what is measured by a research instrument” (Burns & Grove, 2001, p. 390). Although researchers strive to control for the amount of measurement error, some error is inevitable and beyond the control of the researcher. The primary concerns for researchers to consider when selecting any potential survey instrument are the reliability and validity of the particular instrument.

For the purpose of this study, the reliability and validity of the selected instruments were reviewed prior to the final selection. The reliability of a survey instrument refers to the consistency by which a survey instrument measures a particular concept or attribute and is concerned with qualities such as: dependability, consistency, and comparability. According to Fink (1995), “A reliable survey instrument is one that is relatively free from



measurement error” (p. 46). Eliminating or reducing measurement error is important, as it can impact on the accuracy of a survey’s results. Reliability is expressed as a correlation coefficient alpha between 0.0 and 1.0, with 1.0 indicating perfect reliability (Burns & Grove, 2001, p. 396). Generally speaking, a reliability coefficient greater than 0.70 is an acceptable level of reliability. The most common process for testing reliability involves repetitive testing of the instrument known as test-retest reliability.

Validity of a survey instrument refers to “the degree to which a survey instrument assesses what it purports to measure” (Litwin, 1995, p. 36). Although a survey may be consistent (reliable), the question to consider is the degree that it is accurate (valid). For example, a scale which consistently weighs one kilogram heavier than the true weight, although reliable, is not valid. Validity, like reliability, exists in degrees and cannot be assumed to be without some degree of error. The process of determining validity for a survey is often very time consuming. It involves an exhaustive review of the concept and constructs associated with the topic and the ways that they relate to other measures of similar concepts. A correlational coefficient alpha can also be calculated for validity, using the same 0.0 to 1.0 scale. The interpretation of the strength of the coefficient alpha is the same to that of reliability.

The survey mailed to each respondent was made up of demographic questions and four instruments selected for their ability to measure the components within the conceptual model. These included, the Caring Efficacy Scale, the Areas of Worklife Survey, the Home Responsibility Survey, and the Maslach Burnout Inventory (see Appendix C). Each measurement instrument used in the study will be discussed, with consideration given to

the reliability and validity of each instrument, as well the specific response formats of each survey.

### ***Caring Efficacy Scale***

The Caring Efficacy Scale (CES; see Appendix C, section B), developed by Dr. Carolie Coates (1997), assesses conviction or belief in one's ability to express a caring orientation and to develop caring relationships with clients or patients (Coates, 1997). The theoretical foundation of the CES is based on Watson's (1979), theory of transpersonal caring and on Bandura's (1977), concept of efficacy. The CES is a relatively new instrument with limited exposure to empirical testing. The CES is unique in its approach to examining caring within nursing from an individual perspective.

The CES, in its current form, is derived from an original scale consisting of forty-six test items. Like many survey instruments which undergo psychometric testing and development, the CES has been modified to thirty test items. The decision to eliminate sixteen test items resulted from inter-item correlation and factor analysis. According to Coates (1997), these items failed to show any pattern of significant statistical relationship and have been eliminated. She has accomplished reliability and validity testing through a variety of techniques.

***Reliability of the CES.*** Initial testing of the CES for reliability was completed through the use of convenience samples, which included student nurses, preceptors, alumni, and graduate nurses. This initial testing provided an internal consistency score of

0.92 using Cronbach's alpha as a means of calculating a reliability coefficient. Polit and Hungler (1995) define internal consistency as:

A form of reliability testing, which refers to the degree to which the sub-parts of an instrument are all measuring the same attribute or dimension. The normal range of values for calculating Cronbach's alpha is between 0.0 and +1.0, with the higher values reflecting a high degree of internal consistency. (p. 351)

Coates' further testing of various versions of the CES, provides strong support for the internal consistency of the CES. Cronbach's alpha scores of 0.84 and higher were obtained through this testing, indicating a relatively high measure of reliability. No test-retest reliability scores were reported for the CES. The overall outcomes resulting from this study will enhance the exposure and contribute to the empirical testing of Coates' caring efficacy theory. In addition, the CES has not previously been administered to Canadian nurses.

*Validity of the CES.* The original version of the CES was reviewed for content validity by members of nursing faculties across North America. This type of validation is not quantified by statistics, but rather the content of the instrument is reviewed and judged by nursing experts based on the accuracy of the instrument measures compared with what it is attempting to record. Content validity, in other words, "...is a subjective measure of how appropriate the items seem to a set of expert reviewers who have advanced knowledge of the subject matter" (Litwin, 1995, p. 35).

Validity of the CES has also been verified via convergent validity. Coates utilized the Clinical Evaluation Tool (CET), as a means to evaluate the validity of the CES. To do this, Coates proposed that caring and competence were related positively in nursing practice. The CET, which measures performance from ten clinical practice dimensions and known performance standards, was shown to be internally valid with an alpha score of 0.85. Using several similar test groups (alumni and graduating students), Coates demonstrated that scores on both the CES and CET had similar values. Psychometric testing produced Cronbach's alpha scores of 0.85 and higher indicating convergent validity of the CES.

*Response format of the CES.* The CES consists of thirty test items, which are designed to measure a respondent's perspective towards clients/patients. The statements contained within the CES are balanced and contain fifteen positive and fifteen negative test items. Each question uses a six point Likert-type scale, ranging from strongly disagree (-3) to strongly agree (+3). This scale is at the ordinal level of measurement. The assumption of ordinal scales is that the distances between response categories are of equal value and each category is mutually exclusive. The responses from the test items are then re-coded for the purpose of analysis.

No neutral category was utilized in the development of the CES. This strategy forces the respondent to choose a particular response. The disadvantage of this format is that individuals may refuse to answer questions on the survey, and thus this method may contribute to non-response or missing data.

The selection of the CES for use within the current study was based on the promising features described. The issues of reliability and validity have been addressed, the results of which show the CES to be both reliable and valid. In this regard, the CES appeared to be an appropriate instrument to operationalize the concept of caring efficacy.

### ***Work Life Survey***

The evaluation of the work environment was undertaken using Dr. Michael Leiter's (1997), Areas of Work Life Survey (WLS; see Appendix C, section C). The WLS is a twenty-nine item survey which assesses organizational environments which have undergone change, and the effect that this change has on employees. The main principle here is that the quality of the work environment plays a key role in the relationship that an individual develops with their work environment. Disruption in the quality of the work environment potentially leads to increased stress for the individual and ultimately the development of burnout.

Leiter (1997), identifies six areas of worklife which are central components to assessing the quality of the work environment. These include: workload, control, reward, community, fairness, and values. *Workload* includes the impact of the physical and emotional demands of one's work. From an organizational perspective, workload means productivity, whereas from the individual's perspective, workload means the time and energy required to perform work. *Control* describes the inability to set priorities within the workplace, as well as not participating in the selection of various approaches to doing work, and decisions making. Policies that interfere with this capacity reduce individual

autonomy and involvement with work. If individuals have no control over important aspects of their job, whether that control is individual or shared, people are vulnerable to the exhaustion, cynicism, and the ineffectiveness of burnout. *Rewards* are described as being either intrinsic or extrinsic. Intrinsic rewards include self-satisfaction and examples of extrinsic rewards are money, prestige, and security. *Community* refers to the social support an individual has within the workplace. When people have social support, the demands of work are less closely related to exhaustion within the workplace. *Fairness* is an indicator of a quality work environment in regards to the distribution of rewards, opportunities, and recognition. *Values* within the area of work life is at the heart of staff members' relationships with their work and encompasses the ideals and motivations that originally attracted them to the organization. It is the connection between individuals and their workplaces that goes beyond the fundamental exchange of time for money or advancement (Leiter & Maslach, 1999).

Leiter (1997), believes that although mismatches in any of these qualities can occur on a daily basis, long term mismatches can lead to disintegration within the work environment which creates stress and potentially leads to the syndrome known as burnout. Leiter (1997) states: "...when the gap between people and the demands of the job are so great, this progress comes at a high human price" (p. 10).

***Reliability of the WLS.*** According to Leiter (1997), the reliability of the WLS continues to be strengthened as it gains exposure and acceptance by organizations wishing to assess their work environments. This study assesses the reliability scores (see Table 3),

according to the standards highlighted earlier. Alpha scores for each of the individual qualities indicate that the overall reliability of the WLS instrument is adequate. A further test of reliability will include a comparison of the reliability scores calculated from the current study's mail out survey with the provided standardized reliability alpha scores. Thus, the results from the current study may provide Dr. Leiter a means to strengthen the overall reliability of the Work Life Survey by adding the results of this study to the WLS pooled results.

**Table 3**

*Standardized Reliability Scores for the Work Life Survey*

Work Life Quality	Alpha score
Workload	0.80
Control	0.70
Reward	0.89
Community	0.85
Fairness	0.87
Values	0.75

**Validity of the WLS.** Validity for the WLS has been determined by studying the key features which make up a quality work environment. The six qualities include: workload, control, reward, community, fairness, and values. Leiter accomplishes convergent validity testing of the WLS by comparing the scores with scores recorded by the MBI and looking specifically for mismatches between the two instruments. His

working hypothesis for this test of validity is that scores on the key features of burnout including: emotional exhaustion, depersonalization, and lack of personal accomplishment will equate to similar scores on the WLS. For example, a high score on the component of emotional exhaustion will correlate with increased scores on workload. Leiter was able to show convergent validity between the WLS and the MBI. Leiter, along with Maslach (1997), stated "that the MBI is an excellent compliment to the WLS as means to assess how the work life and burnout are interacting within work environments"(p. 157).

*Response format of the WLS.* The response format for the WLS is a numbered rating scale from one to five, based on the level of agreement with the specific statement from strongly disagree to strongly agree. The midpoint of the scale "hard to decide" allows an individual to be neutral on any individual statement. Several questions contained within the WLS, although negatively worded, are reverse scored for the purpose of analysis.

The reliability and validity of the WLS instrument has been determined to be adequate. Moreover, the WLS appears to support the conceptual framework by operationalizing an assessment of the work environment as to the sources of stressors for respondents. Therefore the inclusion of the WLS in the current study was deemed an important contribution to the success of the study.



### ***Home Responsibility Survey***

The Home Responsibility Survey (HRS; see Appendix C, section D), which was utilized in this study was adapted from the work of Walters, Lenton, French, Eyles, Mayr, & Newbold (1996), from the Paid Work, Unpaid Work, and Social Support study. The home life section of the original Walters et al. (1996) survey was deemed appropriate for this study as it contains several concepts similar to those in the WLS. These include home environment issues such as concerns, control, workload, rewards, and social support.

*Concerns* are related to the individual's home responsibilities and include an indication of a lack of challenge, inability to set goals, financial worries, and a lack of time. *Control* over home life is an indication of autonomy and control over an individuals income.

*Workload* reflects the amount of work at home in relation to child care and/or caring for dependent adults. *Rewards* within the home environment relates to the satisfaction one receives from being at home. *Social support* reflects the confiding relationship with a partner or friend. Although these home issues are not exactly interchangeable with the work environment variables, they appear to fit within the general theme of the conceptual model as potential sources of stress arising from the home environment.

***Reliability and validity of the HRS.*** Walters, et al. (1996), state that the survey in its current form lacks extensive reliability and validity testing. Although they report adequate internal inter-item reliability scores ranging from 0.80 to 0.86 on several of the home environment issues, Walters and associates identify the need for further empirical testing. The internal reliability testing is accomplished by testing sub-samples from within

the data, a form of reliability testing known as internal consistency. They also discuss construct validity as favourable for the survey items within the HRS. Construct validity, by definition, is a means of testing items in their ability to measure what they were intended to measure. This is accomplished by having experts review the test items similar to the process undertaken by Coates (1997).

The selection of the HRS for the current study was made based on its promising features and its ability to evaluate the home environment as a source of stressors. Specifically, the components of HRS are similar to those measured within work environment by the WLS. Although the HRS does not report the same level of reliability and validity as the other selected instruments, it does appear to fit with the intent of the study as well as with the conceptual framework.

### ***Maslach Burnout Inventory***

The Maslach Burnout Inventory (MBI; see Appendix C, section A), developed by Maslach and Jackson in 1986, is a well-established instrument for the measurement of burnout in the area of human services. The MBI is derived from an original survey consisting of 47 items, which measured two dimensions: intensity and frequency. The evolution of the MBI to its current form, containing 22 items, and measuring frequency only, is the result of ongoing testing and analysis. For example, factor analysis in the original study using the 47 item test revealed that ten items accounted for over three-fourths of the variance. Selection criteria was developed and applied by Maslach which lead to the reduction in the number of test items.

The final format of the MBI (see Appendix C, section A), which was selected for this study, is a series of statements about personal feelings or attitudes and is specifically designed for individuals in social service occupations. Maslach uses the term “recipients” within the inventory to refer to the clients for whom the respondent is responsible for providing care. Each experience or attitude is rated or ranked using a Likert-type scale. The respondents are required to assess each statement and respond using the dimension of frequency (how often). The MBI is constructed to assess the three aspects of burnout: emotional exhaustion, depersonalization, and personal accomplishment.

The emotional exhaustion sub-scale assesses an individual’s feelings of being emotionally overworked. An example of a question which explores the concept of emotional exhaustion from the MBI is: “I feel emotionally drained from my work” (MBI, 1996; see Appendix C, section A, question 1). The depersonalization sub-scale assesses an individual’s unfeeling and impersonal response towards clients. An example from the questions which examine the depersonalization sub-scale is: “I feel I treat some recipients as if they were impersonal objects”(MBI, 1996; see Appendix C, section A, question 5). The personal accomplishment sub-scale assesses feelings of competence and successful achievement in one’s work with clients. A question which measures personal accomplishment is: “I can easily understand how my recipients feel about things” (MBI, 1996; see Appendix C, section A, question 4). These sub-scales have been shown to be both reliable and valid.

***Reliability of the MBI.*** Reliability co-efficient alphas for the original MBI on each

of the sub-scales are reported as follows: .90 (frequency) and .87 (intensity) for Emotional Exhaustion, .79 (frequency) and .76 (intensity) for Depersonalization, and .71 (frequency) and .73 (intensity) for Personal Accomplishment. In its current form, the MBI no longer measures intensity on each of the dimensions of emotional exhaustion, depersonalization, and personal accomplishment. This, according to Maslach, was part of the evolution and ongoing development of the MBI. (C. Maslach, personal correspondence, June 17, 2001). The MBI reports excellent test-retest reliability. Maslach provides test-retest reliability rates as follows: 0.82 for Emotional Exhaustion, 0.60 for Depersonalization, and 0.80 for Personal Accomplishment. All of these results are significant beyond the  $p=0.001$  level.

*Validity of the MBI.* Validity for the MBI has been demonstrated using the techniques of convergent and discriminant validity. "Convergent validity implies that several different methods for obtaining the same information about a given trait or concept produce similar results" (Litwin, 1995, p. 43). Maslach correlates individual scores on the MBI with independent behavioural ratings from individuals who knew the respondents well; these included co-workers or the person's spouse. The results of these correlations support the results of the individual scores on the MBI. To further explore convergent validity, Maslach correlates certain job characteristics that were expected to contribute to burnout. Maslach hypothesizes that the number of clients with whom an individual interacts is related to higher scores on the MBI in each of the three dimensions. The findings of this test of convergent validity, support the proposed hypothesis. As a final test of convergent validity, Maslach correlated the MBI scores with various outcomes

related to burnout, such as personal outcomes. These personal outcomes include job satisfaction, personal relationships, and job performance.

To test divergent validity, Maslach correlates the MBI with the Job Diagnostic Survey (Hackman & Oldham, 1974), and the Social Desirability Scale (Crowne & Marlowe, 1964) to distinguish its abilities from other measures which proclaim to measure the concept of burnout. "Divergent (discriminant) validity is another theoretically based way of thinking about the ability of a measure to estimate the underlying truth in a given area" (Litwin, 1995, p. 44). In other words, Maslach measures burnout using several different or discriminant techniques and compares the result between the techniques. She found that job satisfaction had a moderate negative correlation with the sub-scales of the MBI and the Social Desirability Scale correlations were not significantly correlated with the MBI. This indicates that scores on the sub-scales of the MBI corresponded with a reduction in job satisfaction.

***Response format of the MBI.*** The response category for the MBI measures the frequency of a particular event. Respondents completing the MBI are required to read each statement and rank their responses on a scale of one (a few times a year or less), to six (every day). The respondent records their response in terms of how often (frequency), an event or feeling occurs for them. A *never* category is also provided in the answer selections in order to capture all possible responses. Maslach's use of the *never* category is important here as, according to Fink (1995), "an exhaustive list of possible response categories is necessary since 'never' is a potentially valid response within surveys" (p. 52).

The study employs a balance between both positive and negative statements within the survey. According to Polit and Hungler (1995), "the instrument designer should strive for a balanced measure to minimize response-set biases and to facilitate content validity" (p. 360). To this end, questions within the MBI are designed to contain both positive and negative statements in the measurement of burnout. This creates balance within the overall instrument and may limit response set bias.

Overall, the MBI was selected for use in this study primarily because of its well-established reliability and validity. The selected form of the MBI (the Human Services Survey), was specifically designed by Maslach for use in the helping professions such as nursing. Thus, the MBI was both practical and appropriate for this research study. This instrument, according to the reviewed literature, has been used with great success in many research studies. The decision to select this instrument for use in this study is based on these findings.

### *Survey Demographics*

The random selection technique utilized for the selection of respondents facilitated the ability to accurately generalize the findings of the research to the target population.

Research by Robinson, Roth, Keim, Levenson, Flentje, and Bashor (1991), explores demographic and work related variables as a means of predicting burnout in a sample of nurses. Their study was utilized as a guide for selection of demographic variables in the current study (see Appendix C, section E). These variables included: age, gender, type of nursing, employment status, shift pattern, marital status, number of

children, and years of nursing experience.

### *Procedures*

Upon receiving ethical approval from the Education/Nursing Research Board (ENREB) of The University of Manitoba (see Appendix E) and the College of Registered Nurses of Manitoba (CRNM), the researcher gave the selection criteria to the licensing body, who then undertook the random selection procedure. The College was also provided with copies of all printed material, including return addressed envelopes, and follow-up postcards (see Appendix D). Since the researcher did not participate with the sample selection or mail-out of the surveys to the potential respondents, the confidentiality of the selected respondents was maintained.

The technique utilized for the sample selection for this study was a simple random technique, which is a form of probability sampling. Specifically, all nurses employed at the six main Winnipeg hospitals who met the inclusion criteria had an equal chance of being selected for this study. This random selection process aids in reducing errors associated with sample selection. As well, it is assumed that the sample frame was complete and accurate which is a means of reducing sample errors and non-response. An accurate mailing list will ensure that at the very least, the survey reaches potential respondents, although it may not ensure that the individual responds to the survey.

The instruments were distributed in the following manner: 1) In July, 2001, prepared surveys including cover letter, survey instrument, and return envelope were provided to CRNM for distribution. 2) A follow-up mailed post card (highlighting the

importance of the study) was provided for distribution approximately ten days after the initial mailing. Although these techniques increased the overall costs of the study, the desired benefit of an improved response rate would offset the financial impact of a second follow up mailing. Five to seven days were allowed for the instrument to be distributed by Canada Post. The follow-up mail-out, occurred ten days after the initial mailings. This technique is identified by Fink (1995) as an appropriate method to follow for mailed surveys. The researcher anticipated a further five to seven days for the return of data. The closing date selected for the study was September 1<sup>st</sup>, 2001, and, in fact, no surveys were received after that date.

*Preparation for the Data Analysis.* Returned data were reviewed for completeness and coded according to instrument protocols. Several of the instruments needed to be reverse scored according to the surveys' authors. A simple numbering system was utilized to code each survey. With the assistance of the statistician provided by the Manitoba Nursing Research Institute, all data were reviewed prior to the actual computer entry. Several sub-files were created to facilitate data manipulation and analysis.

Data were analyzed using the standard SPSS version 10 computer program and included measures of central tendency and standard statistical analysis procedures. Correlational analysis of the data, as means to test components of the conceptual model, was also performed. Missing data was limited and was recorded as such on coding sheets.



### *Ethical Considerations*

“When humans are used as subjects in scientific investigations, as they usually are in nursing research, great care must be exercised in ensuring that the rights of those humans are protected” (Polit and Hungler, 1995, p. 117).

During the course of this study, all ethical policies and procedures were strictly adhered to. Any issues regarding access, confidentiality, or legalities were addressed using the guidelines of the Human Subject Research Ethics Protocol provided by the ENREB from The University of Manitoba and the CRNM. The researcher took great care to protect the rights and privacy of individual respondents. The ethical review required a minor editorial change to the cover letter, after which approval was granted to proceed. No issues arose during the implementation of the research study.

The cover letter, which was provided with the instruments (see Appendix F), explained the purpose of the study. To reduce response bias and to enhance response rates, the details of each research component were not specifically discussed. This practice followed an acceptable research technique similar to that which Maslach uses to reduce response bias in the measurement of burnout. Sensitisation of potential respondents is a substantial risk to any research endeavour and may influence overall results. In this case, the researcher deemed overall risk to the participants as minimal, at best. Therefore, true informed consent was not needed in this case. The voluntary participation by potential respondents was addressed in the cover letter, and consent to participate was assumed by the return of the completed surveys to the researcher.

The cover letter reinforced and ensured confidentiality and anonymity issues for all

respondents. At no time was the researcher able to identify potential respondents prior to, or from the return of, the completed surveys. Respondents were given the opportunity to request a copy of the research findings by filling out a mailing address section with the returned survey forms.

Although it was not the intent of the researcher to mislead the potential respondents in any way, the deception involved in this study was minimal. The issue of deception surrounded the name of one of the survey instruments used in the survey. The MBI survey was a copyrighted and pre-printed survey. The name of the MBI was changed to the Human Services Survey by the survey's author in order to avoid biasing and sensitizing potential respondents to the intended research topic. Preventing sensitization and bias enhances the likelihood of achieving an improved response rate and a reduction in missing data. In addition, individual respondents may not have wished to participate in the intended research if they could not identify with the subject matter or, conversely, were highly motivated on the particular subject.

Access to the researcher and supervisor was made available by the provision of appropriate names and telephone numbers in the cover letter. This technique provided an opportunity for all potential respondents to ask questions about the study.

### *Summary*

In summary, this study utilized probability sampling techniques to obtain a cross-sectional sample of nurses from within the city of Winnipeg. A cross-sectional descriptive, correlational design explored the relationship between the stressors in the home and work

environments, burnout, and caring efficacy.

The Caring Efficacy Scale , Worklife Survey, Home Responsibility Survey, and the Maslach Burnout Inventory, were incorporated into the survey package, and were distributed to the potential respondents. The demographic information collected was based on the previous work of Robinson, et al. (1991). All ethical considerations were addressed using the Human Subject Research Ethics Protocol from the University of Manitoba. Ethical approval from the ENREB and the CRNM was obtained.

A systematic method of selection and distribution of the survey instrument was followed to ensure the confidentiality and anonymity of the survey respondents. Returned data were handled using standard and accepted research procedures. The results obtained were analyzed using the SPSS 10 software.

## CHAPTER 5

### Results

#### *Introduction*

This chapter presents the findings of this study which explored the association of stressors in the home and work environments, with the phenomenon of burnout and caring efficacy. Analysis of the relationship of demographic and employment characteristics of the nursing cohort with the above mentioned variables is also presented. Data was collected over a period of six weeks during the months of July and August, 2001. Of the two hundred surveys mailed to general duty nurses working at any one of six urban hospitals by the College of Registered Nurses of Manitoba (CRNM), 82 surveys were returned, for a response rate of 41%. Two unscored surveys were eliminated from the analysis. The remaining 80 completed surveys were checked for missing data, hand scored, coded, and entered into a computer data file. The Statistical Package for Social Science (SPSS 10) was used to analyze the results.

#### *Statistical Analyses*

Descriptive statistics were used to organize and summarize the demographic data recorded from a randomly selected sample of nurses. Upon examination of the distribution of the demographic variables, the results indicated a near normal distribution according to age, and nursing experience. Other demographic variables, including gender, marital status, and shift pattern were categorical in nature and therefore not subjected to a frequency distribution. *T-tests* and analysis of variance (ANOVA) were used to examine

the statistical significance of the data. Correlational analysis, using product-moment correlation coefficient (Pearson's  $r$ ), was used to determine association between pairs of variables. Due to the small cell sizes in some of the performed correlations, Spearman's rank order correlation (a non-parametric test) was used to confirm the Pearson's results. Overall the Spearman's correlations were congruent with the Pearson's findings, therefore only the Pearson's correlations are reported here. Multiple regression analysis was used to examine the effects of the independent variables on the dependent variable. The main dependent variable in this study and in the conceptual model is caring efficacy; however, the phenomenon of burnout was also identified as a dependent variable in some of the regression analyses.

### ***Descriptive Statistics***

***Demographic Characteristics.*** Table 4 provides a summary of the demographic characteristics of the study sample. The mean age of the respondents was 39.68 years, with ages ranging from 23 to 62 years. The median split age for the entire sample was 38 years. The majority of the sample were between 36 and 40 years of age (32.5 %).

The survey respondents were primarily female (96.2%). The percentage of male respondents (3.8 %) was congruent with provincial statistics. In Manitoba, 4.8 percent of the nursing population are males (CRNM, 2000). Since the number of male respondents was limited, differences between males and females could not be evaluated.

The majority of respondents were married (73.8%). Fifty-three (66.3 %) had dependents living either at home or away, and of these, twenty-seven indicated that at

least two dependents lived at home. It was not determined if these dependents were children or adults.

**Table 4**

*Demographic Characteristics of the Sample (N=80)*

Characteristic	Mean	SD	n	( % )
Age (years)	39.68	8.68		
Age by Category (years)				
under 30			13	(16.3)
31-35			11	(13.8)
36-40			26	(32.5)
41-45			12	(15.0)
46-50			6	( 7.5)
over 50			12	(15.0)
Gender				
Males			3	( 3.8)
Females			77	(96.3)
Marital Status				
Single			14	(17.5)
Married or Common Law			59	(73.8)
Separated			2	(2.5)
Divorced			5	(6.3)

*Employment Characteristics*

*Work Status.* Table 5 provides a summary of the employment characteristics of the study participants. The data indicated that more than half (n=52) of the sample were

employed part time. Specific levels of part time status were not determined. Full-time employment status was reported by 32.5% of the respondents, while casual employees represented the smallest grouping at 2.5% (n=2). No respondent cited employment in more than one facility, or worked greater than the traditional full-time hours. As well, the casuals who responded to the survey indicated that they currently worked in only one hospital setting.

***Nursing experience.*** Years of nursing experience appeared to roughly follow a normal distribution with an average of 16.4 years of experience and a standard deviation of 9.6 years. The modal group of individuals was within the range of 16-20 years of nursing experience and represented 27.5% of the sample.

***Shift pattern.*** Sixty percent of the respondents worked rotating shifts (see Table 5), which is defined as either days/evenings or days/nights, while the remaining 40% worked a permanent shift which included permanent days, evenings or nights. As shift work has been linked to stress and development of burnout, exploration of this variable was deemed an important feature to explore within the response data.

Although not shown on Table 4, the majority of the respondents (63.8%) indicated that they worked 8-hour shifts, while the remaining respondents (36.2 %) worked a 12 hour shift. As well, 60% of respondents reported that they were considering changing jobs within nursing. No determination could be made from the results as to the nature of the change.

*Area of employment.* The area of employment is categorized into traditional clinical units categories which exist within hospitals (see Table 5). Twenty-seven respondents (33.8%) worked in Medical-Surgical units, and twenty-eight (35%) worked in Critical Care and Emergency.

**Table 5**

*Employment Characteristics of the Sample (N=80)*

Employment Characteristics	N	( %)
<b>Work Status</b>		
Full Time	26	(32.5)
Part Time	52	(65.0)
Casual	2	( 2.5)
<b>Nursing Experience</b>		
less than 5 years	14	(17.5)
6-10 years	9	(11.3)
11-15 years	11	(13.8)
16-20 years	22	(27.5)
21-25 years	8	(10.0)
over 25 years	16	(20.0)
<b>Shift Patterns</b>		
Straight Days	14	(17.5)
Straight Evenings	12	(15.0)
Straight Nights	5	( 6.3)
Days / Evenings	20	(25.0)
Days / Nights	28	(35.0)
Other	1	( 1.3)
<b>Areas of Employment</b>		
Emergency	14	(17.5)
Med / Surg	27	(33.8)
Critical Care	14	(17.5)
Mat / Child	13	(16.3)
Other*	12	(15.0)

\* Other represented several areas of nursing including: Geriatric, Psychiatric, and Rehabilitation nurses



### *Analysis of Research Questions*

**Research question 1.** What is the prevalence and level of the burnout characteristics in the study population?

Prevalence of the burnout characteristics within the sample population was determined using the self-administered Maslach Burnout Inventory (MBI). Burnout is a phenomenon which, as previously described, is composed of three components: emotional exhaustion, personal accomplishment, and depersonalization. The authors of the MBI do not include a method to compute an overall burnout score. Rather, the authors of the MBI have developed and defined three outcome scores for each of the sub-scales (low, moderate, or high; see Table 6). Mean sub-scale scores of the study cohort (see Table 7) were compared to these standard scores in order to establish an individual's position on the burnout continuum.

**Table 6**

*Categorization of the Standard Scores of the MBI*

	Emotional Exhaustion	Depersonalization	Personal accomplishment *
High	≥30	≥12	0-33
Moderate	18-29	6-11	34-39
Low	0-17	0-5	≥40

\*Personal accomplishment (PA) sub-scale is scored in opposite direction from the Emotional Exhaustion (EE) and Depersonalization (DP) sub-scales.

**Table 7***Average Maslach Burnout Inventory Scores for Full Sample (N= 80)*

	Emotional Exhaustion	Depersonalization	Personal Accomplishment
Mean	24.07	7.45	36.21
Median	21.50	6.00	37.50
Std. Dev.	11.23	6.19	6.95
Min	2.0	0.00	24.0
Max	53.0	29.0	48.0

Comparison of the sample mean sub-scale scores to the established predefined levels of the sub-scale scores on the MBI indicates that, on average, the scores of all respondents fall within the moderate level within each sub-scale. It is important to state here that the results reported only provide a *snapshot* of the current state, or situation, in relation to burnout. Specifically, it does not indicate whether mean scores are moving up or down each burnout sub-scale.

Pearson product-moment correlation coefficient (Pearson's  $r$ ), was used to determine the magnitude and direction of the relationship between the components of the MBI. Table 8 provides a summary of the correlation coefficients for the individual sub-scale of the MBI.

**Table 8***Correlations of MBI Sub-Scales Scores using Pearson's  $r$  ( $N=80$ )*

Sub-scale	1	2	3
1. Personal Accomplishment (PA)	-	-.377*	-.391*
2. Emotional Exhaustion (EE)		-	.707*
3. Depersonalization (DP)			-

\*sig.  $p < .01$  Level (2-tailed)

Examination of the results in Table 8 indicates a moderate inverse relationship between personal accomplishment and emotional exhaustion and between personal accomplishment and depersonalization. There is also a strong positive correlation between emotional exhaustion and depersonalization. These results are congruent with the work of Maslach (1996), the author of the MBI.

**Research question 2.** What is the relationship between age, employment characteristics, and the level of burnout in the respondent sample?

**Age, nursing experience and burnout scores.** Considering a near-normal distribution of the respondent data, the parametric statistical procedure utilized to explore this research question were the *t-test* and the analysis of variance (ANOVA). A *t-test* compares the mean scores of two groups to determine if a significant statistical difference exists between them. Table 9 provides a summary of the sub-scale burnout scores split by

median age (38 years). The decision to split the respondents into two age groups was made in order to consider potential differences in burnout scores between younger and older nurses. The results of the t-tests demonstrated no statistical difference in mean burnout scores by median split age groups ( $\leq 38$  years and  $\geq 39$  years).

**Table 9**

*Results of t-test and Burnout Scores by Median Split Age (N=80)*

Sub-scale	<u><math>\leq 38</math> years (n=42)</u>		<u><math>\geq 39</math> years (n=38)</u>		t	Sig.
	Mean	Std. Dev	Mean	Std. Dev.		
Personal Accomplishment	36.47	6.92	35.92	7.06	.354	N/S
Emotional Exhaustion	24.09	10.82	24.05	11.81	.017	N/S
Depersonalization	7.95	6.17	6.89	6.24	.761	N/S

N/S = non-significant

Average burnout scores by age categories were examined with a one-way ANOVA, which involves the comparison of means among three or more groups of respondents. Like the t-test, ANOVA assumes the sample to be randomly selected from a normally distributed population. While the ANOVA assumptions were met, no statistically significant differences in mean scores were found, and therefore the results are not shown here. Table 10 reports the individual burnout sub-scale scores according to the defined age categories and nursing experience [years].

**Table 10**

*Averages of the individual sub-scale scores of the MBI by Age Categories and Nursing Experience(N=80)*

age category	(n)	EE	DP	PA
≤ 30	13	25.15	7.46	35.76
31-35	11	23.63	8.63	37.63
36-40	26	23.03	7.34	35.92
41-45	12	19.91	6.00	35.41
46-50	6	27.66	7.33	37.00
≥ 50	12	27.91	8.08	36.41
years experience				
≤ 5	14	24.64	8.14	36.85
6-10	9	23.33	7.66	34.44
11-15	11	23.63	6.00	38.45
16-20	22	23.09	7.36	35.04
21-25	8	19.00	4.25	37.62
≥26	16	28.18	9.43	36.00

Note: EE = Emotional Exhaustion; DP = Depersonalization; PA = Personal Accomplishment

Respondents from the various age and experience groups reported moderate levels of burnout on each of the three sub-scales of the MBI using Maslach standardized scores for burnout (see Table 6). Despite no significant statistical difference between the mean scores in any of the age or nursing experience categories, there were notable variations within both the emotional exhaustion and depersonalization sub-scales. Nursing experience in years and burnout scores followed a similar pattern to the age and sub-scale burnout scores. Using ANOVA, no statistically significant differences were found among

the mean scores of the experience categories. All experience categories reported moderate average scores across all sub-scales except for 21-25 years of nursing experience. This group reported below average emotional exhaustion and depersonalization scores (4.25 compared to 7.45 overall), although this difference is not statistically significant at the 0.05 level. Conversely, the group with over 25 years of experience had the highest mean depersonalization score (9.43).

***Work status and burnout scores.*** An examination of the work status data indicated mean scores within the moderate range for each of the sub-scales of the MBI (not shown). Although full-time employees (n=26) had lower depersonalization scores (6.34) than part-time employees (n=52; 7.73), these findings were not statistically significant according to the t-test. Average emotional exhaustion and personal accomplishment sub-scale scores were also at the moderate level for full time and part time respondents ( EE 23.53 & 23.98, PA 37.5 & 35.71), respectively.

***Shift patterns and burnout scores.*** There were no statistically significant relationships between shift patterns and mean burnout sub-scale scores according to the t-test and analysis of variance (ANOVA; not shown). Furthermore, no other significant statistical associations emerged between shift length (8 vs 12 hours) and any of the sub-scales on the MBI.

Type of shift-work (defined as either rotating, for example, days/nights or days/evenings or permanent) was also examined with the sub-scales of the MBI using the

t-test (permanent shifts vs rotating shift workers). All groupings of shift-work were tested using ANOVA to compare mean scores. Although each of these tests failed to show any statistically significant variations in mean scores, respondents who indicated that they worked a rotating shift pattern reported higher average depersonalization scores (8.04) compared to those who worked a permanent non-rotating shift pattern (6.61).

*Area of employment and burnout scores.* To compare burnout sub-scale scores with area of employment, traditional departments within hospital care areas (see Table 5) were used to define study groupings. The average emotional exhaustion and personal accomplishment sub-scale scores on the MBI were at the moderate level in each area of employment. However, a closer examination of the depersonalization sub-scale scores revealed some unexpected patterns among areas of employment (see Table 11).

**Table 11**

*Results of Areas of employment and mean Burnout sub-scale scores (N=80)*

category	n	Emotional Exhaustion	Depersonalization	Personal Accomp.
Emergency	14	28.42	12.28	33.92
Med / Surg	27	23.37	6.81	36.51
Critical Care	14	25.57	7.14	34.78
Mat / Child	12	20.66	4.50	38.41
Other*	13	22.38	6.61	37.53

\* Other represented several areas of nursing including: Psychiatric, Geriatric, and Rehabilitation nurses.

It is interesting to note that the critical care areas (excluding emergency), had depersonalization scores slightly below the full sample mean score of 7.45 at 7.14. However, the mean depersonalization score within the emergency category was 12.28, which falls within the high level according to the standard scores defined by Maslach (see Table 6). Based on the ANOVA findings the depersonalization scores of the emergency nurses was statistically significant ( $F=3.29$ ;  $p=0.015$ ). This was the only department which had significantly mean scores compared to the other areas examined. The implications for clinical practice may be significant and therefore another study using a larger sample size may be warranted.

Correlational and regression analyses were performed with the individual MBI subscales and the demographic and work characteristics (Table 4 and 5 respectively). Overall, no statistical association or predictive power was shown and therefore no results are shown here.

***Research question 3.*** What is the prevalence of caring efficacy in the study participants?

The Caring Efficacy Scale (CES) was used to measure caring efficacy within the respondent sample. The total score on the CES is calculated by using the average score between the 15 positive and 15 negative test items. Table 12 shows the summary of scores on caring efficacy for the full sample.



**Table 12***Summary of Caring Efficacy Scores (N=80)*

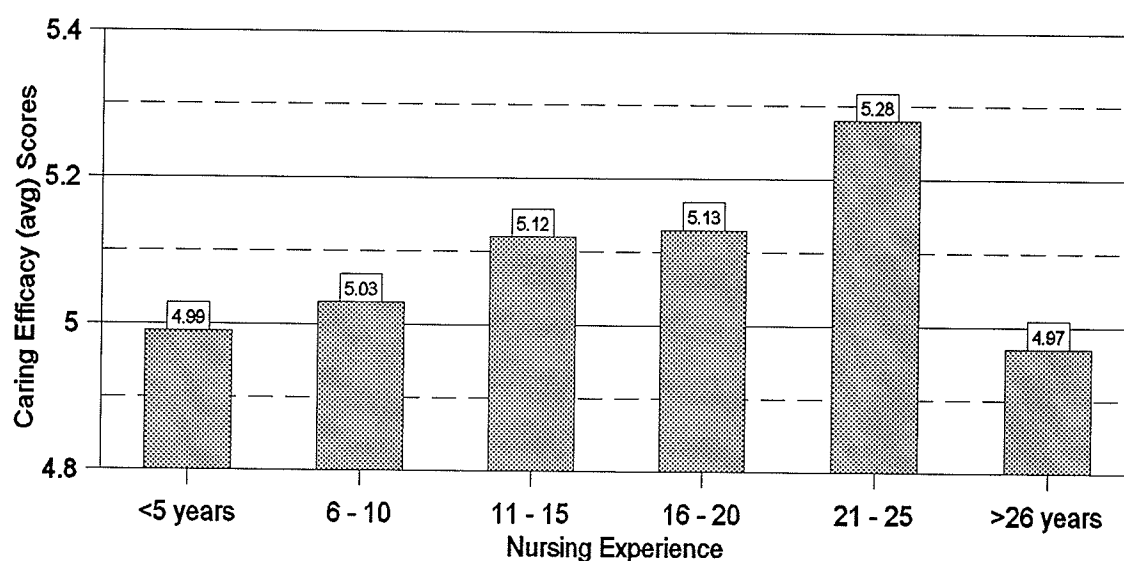
Mean	Median	Std. Dev	Min	Max
5.05	5.11	0.4754	3.67	5.80

*Nursing experience and caring efficacy.* The perception or presence of caring efficacy is a belief in one's ability to form a caring relationship with clients and is reflected in higher scores on the CES. The author of the CES (Coates) indicated that there were no standardized levels of caring efficacy scores similar to the MBI (Dr. C. Coates, personal communication, January 21, 2001). In order to determine how the current scores compared to other samples, a comparison was made with results obtained in an earlier study of nurses by Coates (1997). In this original study, Coates examined levels of experience within several nursing groups and tested each for caring efficacy; however, she defined experience categories in terms of educational attainment and working experience in new graduates and experienced alumni rather than by years of experience. She indicated that overall, higher levels of caring efficacy were found among more experienced nurses, but did no formal statistical analysis to support this contention.

In comparison sixty-six respondents in the current study had more than 5 years of nursing experience. Although the interpretation or definition of experience varies between the current study and that of Coates one might draw a parallel from her findings. The results of nursing experience and caring efficacy from the current study are reported in Figure 4.

Although there is some difficulty in directly comparing the current findings to that of Coates' (1997) based on variations in methodology. Indirectly, the findings are

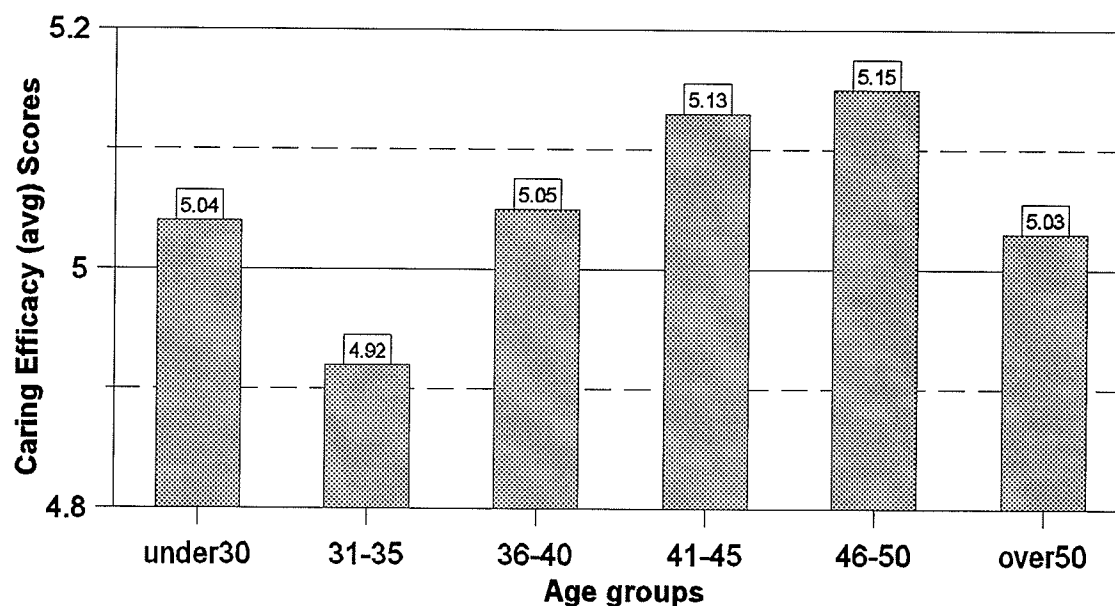
congruent in relation to mean caring efficacy scores and standard deviations overall, and the general increasing trend in caring efficacy score based on experience (see Figure 4). In this study caring efficacy scores in nurses with >26 years of experience (4.97), fall slightly below the full sample mean (5.05). This finding was not an area that Coates had explored in her developmental study.



*Figure 4.* Mean caring efficacy scores by years of nursing experience.

*Age and caring efficacy.* The age category and caring efficacy scores were also explored in a similar approach to that of the burnout phenomenon (see Figure 5). Despite some slight variations in mean caring efficacy scores based on age, overall higher levels of caring efficacy (>5.0) are reported across the majority of age categories. The 31-35 group however did report slightly lower scores (4.92) in relation to the full sample mean (5.05).

Coates did not report caring efficacy scores based on age of respondent therefore no conclusions are made or reported here.



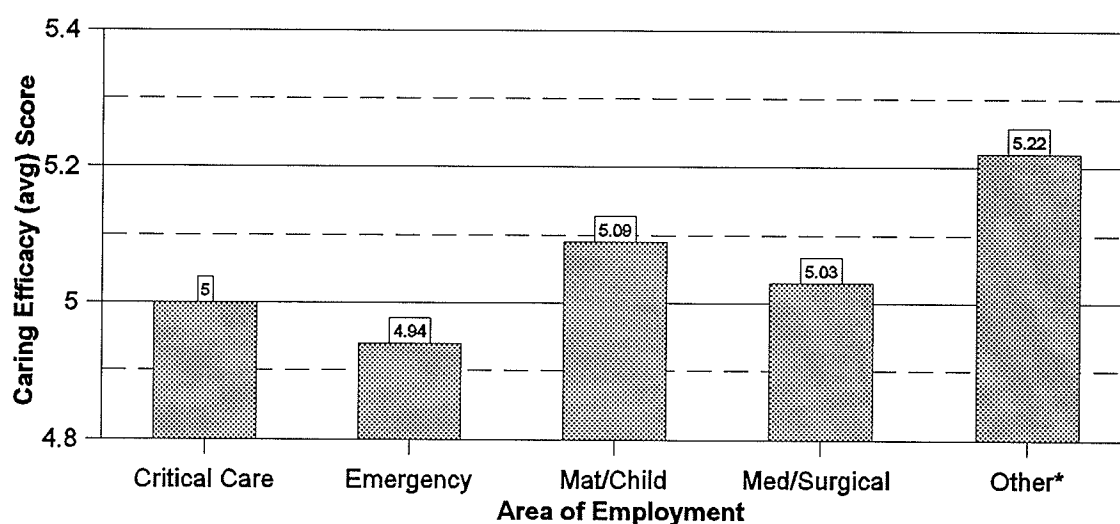
**Figure 5.** Mean caring efficacy scores by age category.

**Area of employment and caring efficacy.** The mean caring efficacy scores were also compared to the areas of employment within hospital settings (see Figure 6).

Although not statistically significant, caring efficacy scores of nurses employed in the emergency areas (4.94) were slightly lower when compared to the full sample mean score (5.05). In addition, the combined *Other* category, which was composed of a variety of clinical areas including geriatric, oncology, psychiatric, and rehabilitation nurses reported higher caring efficacy mean scores (5.22). But the numbers within each of these cohorts were small (n=1 or 2 respondents) and therefore no inferences can be made here. Data

analysis of caring efficacy using t-tests and ANOVA, compared caring efficacy with median split age, nursing experience, area of employment, shift patterns, and employment status. The findings of these analyses were not significant and therefore are not reported here.

Pearson's  $r$  and Spearman's correlations, as well as regression analysis were also performed on the demographic and work characteristic variables with caring efficacy. No statistical association or predictive power was shown.



**Figure 6.** Mean caring efficacy scores by area of employment.

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\*Note the other category is represented by Geriatric, Oncology, Psychiatric, and Rehabilitation nurses.

**Research question 4.** Is there a relationship between burnout and caring efficacy?

This research question was addressed by considering the association between the sub-scale scores of the MBI and the CES score. Pearson's  $r$  was used to determine the magnitude and direction of the linear association between the components of burnout and caring efficacy, all of which are statistically significant ( $p \leq 0.01$ ). Table 13 provides a summary of the correlational analysis of the sub-scale scores of the MBI and caring efficacy for the study cohort.

**Table 13**

*Correlations of MBI scores & Caring Efficacy Scores using Pearson's  $r$  ( $N=80$ )*

Sub-scale	1	2	3	4
1. Personal Accomplishment	-	-.337*	-.391*	.486*
2. Emotional Exhaustion		-	.707*	-.396*
3. Depersonalization			-	-.545*
4. Caring Efficacy				-

\* sig.  $p < .01$  (2 tailed).

The analysis revealed a moderate positive correlation between caring efficacy and personal accomplishment. A moderate negative correlation between emotional exhaustion and caring efficacy also exists. As well, depersonalization is strongly (negatively)

correlated with the caring efficacy score.

***Regression analysis of caring efficacy and sub-scales of MBI.*** Multiple regression analysis is a statistical procedure for understanding the effects of two or more independent variables on the dependent variable (Polit, 1996). Regression analysis was undertaken using the three sub-scales of the MBI as the independent variables with caring efficacy as the dependent variable. The results of this analysis are summarized in Table 14.

**Table 14**

*Summary of Multiple Regression Analysis of Caring Efficacy on Three Sub-scales of MBI (N=80)*

Variable	B	SE (B)	$\beta$
Emotional Exhaustion	0.0008	0.005	0.018
Depersonalization	-0.033	0.010	-0.431***
Personal Accomplishment	0.022	0.007	0.323**

$R^2 = 0.385$ ; Adjusted  $R^2 = 0.361$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$

Results from this regression analysis indicate that 38% of the variation in caring efficacy was explained by the effects of the burnout variables. Although this effect is somewhat low, it is statistically significant ( $p < 0.05$ ). The beta scores (ie. standardized regression coefficients) of the independent variables indicate that depersonalization and

personal accomplishment sub-scales are significantly associated with caring efficacy, but emotional exhaustion is not.

**Research question 5.** What are the associations between home and work environmental stressors and burnout and caring efficacy?

In order to determine values associated with home and work environmental stressors, two instruments, the Work Life Survey (WLS) and the Home Responsibility Survey (HRS), were used. The relationships between the values of the WLS and the HRS with the burnout and caring efficacy results were explored through correlational and multiple regression analyses.

**Work environment.** The results of the present study were compared to the normative values for the WLS provided by its author, Dr. M. Leiter. Results from the current study will be forwarded to Dr. Leiter to further expand the base of data related to the WLS. Table 15 reports the mean and standard deviation for the normative sample as well as the scores of the WLS instrument for the study sample.

**Table 15**

*Comparison of Normative Values of the Work Life Survey (N=1492) with Results of WLS (N=80)*

Variable	Normative		Sample	
	mean	std. dev.	mean	std. dev.
Workload	2.92	0.80	2.67	0.79
Control	3.46	0.87	3.02	0.82
Reward	3.13	0.60	3.20	0.97
Community	3.37	0.88	3.74	0.70
Fairness	2.71	0.90	2.72	0.70
Value	3.28	0.75	3.42	0.64

The mean survey scores appear congruent with the normative values. This was confirmed with t-tests, which failed to show any significant statistical difference between the reported mean scores and the respective normative values. No unusual patterns appeared in the mean scores of the data. To gain a better understanding of the association of these variables with one another, correlation analyses were undertaken (see Table 16).

**Table 16**

*Correlation Analysis (Pearson's r) of the Work Life Survey Items (N=80)*

Variable	1	2	3	4	5	6
1. Workload	-	0.306**	0.227*	0.055	0.483**	0.278*
2. Control		-	0.351*	0.374*	0.456**	0.279*
3. Reward			-	0.413**	0.404**	0.349**
4. Community				-	0.391**	0.362**
5. Fairness					-	0.483**
6. Value						-

\*sig. p<.05 level (2-tailed); \*\*sig. p<.01 Level (2-tailed)



A review of the correlation matrix indicates that all pairwise correlations, except for workload and community, were statistically significant ( $p < 0.05$ ). The observed correlations are primarily of moderate strength, although a few could be classified as weak, based on a correlation less than 0.30 (Burns & Grove, 1987).

The relationship between the work environment stressors and burnout and caring efficacy was examined by looking for patterns within the correlation matrix, as well as by the regression analysis results. To this end, the six work environment variables were examined with the three sub-scale scores on the MBI and the CES. Table 17 provides a summary of the findings of the correlational analyses.

**Table 17**

*Correlation Scores (Pearson's  $r$ ) between Work Environment Variables with MBI Subscales and Caring Efficacy ( $N=80$ )*

Variable	EE	DP	PA	Caring Efficacy
Workload	-0.586**	-0.446**	0.318**	N/S
Value	-0.440**	-0.382**	0.348**	0.310*
Control	-0.380**	-0.345**	0.306**	0.280*
Community	N/S	-0.220**	0.229**	N/S
Fairness	-0.399**	-0.382**	0.310**	N/S
Reward	-0.283*	-0.304**	N/S	N/S

\*\*sig.  $p < .01$  Level (2-tailed) EE = Emotional Exhaustion, DP = Depersonalization

\*sig.  $p < .05$  level (2-tailed) PA = Personal Accomplishment, N/S = non-significant

Correlations of the individual work environment variables with the MBI sub-scales indicate a moderate association between most of the variables, yet failed to show the same significant correlations with caring efficacy. The value and control variables within the work environment were, however, significantly correlated with caring efficacy ( $p=0.05$ ) and the MBI sub-scales.

***Regression analysis of caring efficacy on sub-scales of MBI and WLS sub-scales.*** Multiple regression analysis was undertaken to test the effects of the work environment variables and the sub-scales of the MBI on caring efficacy (see Table 18).

**Table 18**

*Summary of Multiple Regression of Caring Efficacy on MBI and WLS Sub-scales (N=80)*

variable	B	SE (B)	$\beta$
<u>MBI</u>			
Emotional Exhaustion	-0.001	0.006	0.025
Depersonalization	-0.034	0.010	-0.433**
Personal Accomplishment	0.022	0.007	0.322**
<u>WLS</u>			
Workload	-0.058	0.073	-0.097
Control	0.058	0.063	0.101
Reward	-0.016	0.052	-0.033
Community	0.032	0.074	0.047
Fairness	-0.129	0.084	-0.191
Value	0.076	0.084	0.104

$R^2 = 0.428$ ; Adjusted  $R^2 = 0.354$ ; \*\*  $p < .01$ , \*\*\*  $p < .001$

The regression analysis indicates that 42% of the variance of the dependent variable is explained by the effects of the independent variables ( $p < 0.05$ ). The addition of the work life variables to the regression model enhanced the  $R^2$  slightly (see Table 14).

In this multiple regression model, the components of the WLS have no statistically significant impact on predicting caring efficacy. In a separate regression model (not shown), the MBI sub-scales were removed from this regression model. This resulted in a reduction of variance to 16%, with only the Value variable indicating a significant Beta score of 0.273 ( $p < 0.05$ ). These findings are consistent with the relatively low correlations reported within Table 16.

**Home Environment.** Descriptive summaries of the Home Responsibility Survey (HRS) are reported in Table 19. Missing data are noted for each sub-scale. The missing data in the relationship category can be explained, in part, by marital status, as only 59 respondents indicated that they were married or living common law.

**Table 19**

*Distribution of Scores for the Home Responsibility Survey (N=80)*

Variable	Mean	Median	Std. Dev.	Range	missing
Control	3.11	3.16	0.655	1.00-4.00	n=1
Concern	1.60	1.55	0.530	0.50-3.08	n=1
Reward	3.14	3.10	0.536	1.30-4.00	n=1
Relationship	4.13	4.40	0.793	2.00-5.00	n=20
Workload	27.31	25.0	16.19	3.00-74.0	n=1

Similar mean and median scores for each of the HRS variables suggest an approximate normal distribution among the respondent scores. T-tests performed on the median split age and the HRS variables showed no significant difference between mean scores. ANOVA was performed separately on the age category and nursing experience factors; once again, no significant statistical differences in mean scores were found. Since no normative values were provided by the authors of the HRS, no direct comparisons with the values of this study could be undertaken. The scores for the workload variable from the HRS are derived, in part, by the number of hours spent per week on homemaking activities, in addition to caring for dependent children or adults. A correlation matrix was used to determine relationships between the HRS variables (see Table 20).

**Table 20**

*Correlation Analysis (Pearson's  $r$ ) of the Home Responsibility Survey Items ( $N=80$ )*

Variable	1	2	3	4	5
1. Relationship	-	-0.393**	-0.047	0.488**	-0.158
2. Concern		-	0.158	-0.372**	0.175
3. Reward (home)			-	-0.063	0.227*
4. Control (home)				-	-0.123
5. Workload (home)					-

\*\*  $p < .01$ , \*  $p < .05$

Generally, the inter-item correlations reported in Table 20 are quite weak. The matrix does indicate significant associations among Relationship, Concern, and Control; however, the associations are moderate, at best. Workload, the factor which was thought

to have the greatest effect in the overall home environment, correlates marginally with reward. No other statistically significant correlations exist between workload and the other home environment variables.

Correlation analysis was also undertaken to explore the relationship between home environment variables and the components of burnout and caring efficacy (results not shown). The results from this analysis indicated a limited number of statistically significant associations between several home environment variables and the MBI sub-scale variables. Concern regarding home responsibilities was weakly correlated with the emotional exhaustion  $r = 0.293$ ;  $p < 0.05$ ) and depersonalization sub-scales  $r = 0.260$ ;  $p < 0.05$ ). Reward from home responsibility followed a similar pattern, indicating a weak correlation with personal accomplishment ( $r = .236$ ;  $p < 0.05$ ). There were no statistically significant correlations between caring efficacy and any of the home environment variables.

***Regression analysis of caring efficacy on sub-scales of MBI and HRS sub-scales.*** Multiple regression analysis was undertaken to explore the relationships between the home environment and burnout variables and caring efficacy (see Table 21). The results indicate that only 28% of the variance in caring efficacy was explained by the independent variables. The Beta scores for the MBI sub-scales are reflective of the previous regression model recorded in Table 14 (see p.137). The low R-square provides a fairly clear picture of the poor predictability and poor explanatory power for caring efficacy, based on the combined effects of burnout and home life scores.

It is interesting to note that the addition of the home life variables to the regression

model reduced the adjusted  $R^2$  relative to the model based on the burnout sub-scales alone (see Table 14). Removal of the MBI sub-scales from this regression model dramatically reduces the variance explained to less than 5%, with no statistically significant variables from the HRS associated with caring efficacy. In other words, the HRS sub-scales have no apparent association on caring efficacy, either alone or in combination with the MBI sub-scales.

**Table 21**

*Summary of Multiple Regression Analysis of Caring Efficacy on Three Sub-scales of MBI and Five HRS Variables (N=80)*

Variable	B	SE (B)	$\beta$
<u>MBI</u>			
Emotional Exhaustion	-0.001	0.008	-0.024
Depersonalization	-0.032	0.015	-0.379*
Personal Accomplishment	0.016	0.009	0.240
<u>HRS*</u>			
Workload (home)	0.001	0.004	0.045
Control (home)	-0.046	0.122	-0.058
Reward (home)	-0.082	0.131	-0.081
Relationship	0.010	0.082	0.017
Concern	0.058	0.135	-0.065

$R^2 = 0.286$ ; Adjusted  $R^2 = 0.172$ ; \* $p < .05$

\*Note the HRS respondent data was based on n=60 (missing data).

*Regression analysis of caring efficacy on sub-scales of MBI, WLS, and HRS*

*sub-scales.* The full regression model, which regressed all the home and work environment variables, as well as the sub-scales of the MBI with caring efficacy is reported in Table 22.

**Table 22**

*Summary of Multiple Regression Analysis of Caring Efficacy on Three Sub-scales of MBI, Six WLS Variables and Five HRS Variables (N=80)*

Variable	B	SE (B)	$\beta$
<u>MBI</u>			
Emotional Exhaustion	-0.002	0.009	-0.041
Depersonalization	-0.025	0.015	-0.279*
Personal Accomplishment	0.015	0.009	0.229
<u>WLS</u>			
Workload	-0.047	0.104	-0.077
Control	0.186	0.095	0.293
Reward	0.045	0.076	0.089
Community	-0.013	0.106	-0.019
Fairness	-0.201	0.104	-0.292
Value	0.101	0.135	0.126
<u>HRS*</u>			
Workload (home)	0.002	0.004	0.073
Control (home)	-0.012	0.133	-0.016
Reward (home)	-0.141	0.134	-0.140
Relationship	0.027	0.084	0.046
Concern	-0.071	0.141	-0.079

$R^2=0.392$ ; Adjusted  $R^2=0.198$ ; \* $p<0.05$

\*Note the HRS respondent data was based on n=60 (missing data).

This regression model produced an R-square of 39%, which is reflective of the findings of the regression model reported in Table 14 (see p.137). Although the overall results achieved a level of statistical significance beyond  $p<.05$ , the majority of the Beta coefficients were not statistically significant among the study variables here. Only depersonalization appeared statistically significant, however the association was weak. The remaining independent variables did not indicate any statistical association with caring efficacy. However the full regression model scores from the home and work environments and the MBI sub-scales were able, in this case, to predict caring efficacy to some extent.

*Regression analysis of sub-scales of MBI on the WLS and HRS sub-scales.* In an attempt to understand the relationship of home and work environments on the individual sub-scales of burnout, three further regression analyses were undertaken. For the purpose of this regression analysis each of the sub-scales of the MBI was considered to be a dependent variable (see Table 23), only significant findings and variables are reported.

The combined effects of the home and work environment variables had no significant effect on personal accomplishment. In addition, variables from the HRS had no significant effect on the predictive power of depersonalization. However, workload and value did have significant explanatory power on depersonalization and emotional exhaustion ( $p<0.05$ ). The R-square's reported here are higher for both emotional exhaustion and depersonalization than in previously reported regression models. The overall failure of the remaining variables from both the WLS and HRS to achieve



statistical significance lends support for the need for further research, to explain the potentially complex interactions among home, work, burnout, and caring efficacy.

**Table 23**

*Summary of Multiple Regression Analysis of Three Sub-scales of MBI on the HRS and WLS Variables (N=80)*

Variable	B	SE B	$\beta$
<u>Emotional Exhaustion</u>			
Workload (WLS)	-6.77	1.47	-0.511***
Value (WLS)	-7.09	2.01	-0.410***
Workload (HRS)	-0.15	0.06	-0.241*
$R^2 = 0.570$ ; Adjusted $R^2 = 0.470$			
<u>Depersonalization</u>			
Workload (WLS)	-2.04	0.91	-0.280*
Value (WLS)	-4.43	1.24	-0.466***
$R^2 = 0.456$ ; Adjusted $R^2 = 0.328$			
<u>Personal Accomplishment*</u>		N/S	

\* Note no variables were statistically significant in this analysis.

$R^2 = 0.228$ ; Adjusted  $R^2 = 0.048$ ; \* $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , N/S= non-significant

### ***Ad Hoc Analysis***

An additional regression analysis was undertaken to explore the concept of spillover described by Leiter (1997). Although the interaction between the home and work environments was not part of the research questions, it appeared that several attenuating effects were occurring when both the home and work environments were regressed with burnout and caring efficacy. With this in mind, as well as a consideration

for the limitations of the data set, two regression models were undertaken: firstly, using the total score of the Home Responsibility Survey (HRS) as the dependent variable within a regression model with the individual Work Life Survey (WLS) scores as the independent variables; secondly, running the total WLS score as the dependent variable with the individual HRS scores as the independent variables. These findings are reported in Tables 24 and 25 respectively. One caveat in relation to the interpretation of these regression analyses is that the HRS contained missing data and therefore must be considered with caution.

**Table 24**

*Summary of Multiple Regression Analysis Total Home Score on the WLS variables  
(N=80)*

Variable	B	SE (B)	$\beta$
Workload	-0.89	2.57	0.731
Control	-1.74	2.47	-0.096
Reward	2.00	2.09	0.129
Community	2.10	2.98	0.098
Fairness	-0.35	3.38	-0.016
Value	-1.20	3.18	-0.051

$R^2 = 0.031$ ; Adjusted  $R^2 = -0.049$

**Table 25**

*Summary of Multiple Regression Analysis Total WLS on the HRS variables (N=80)*

variable	B	SE(B)	$\beta$
Workload (home)	-0.0524	0.097	-0.065
Control (home)	6.800	3.358	0.295*
Reward (home)	7.442	3.470	0.259*
Relationship	-2.095	2.296	-0.125
Concern	-7.751	3.560	-0.305*

$R^2 = 0.274$ ; Adjusted  $R^2 = 0.205$ ; \*  $p < .05$

Although the total scores from both the WLS and HRS survey's were used in these analyses, these total scores were not used during the previous analysis as this approach was not supported by the survey authors. The results from these two regression analyses were inconsistent with previous research. Although the methods and purpose of Leiter's study differed, he reported that work life had a greater impact on home life overall. By contrast, this first regression model was intended to assess the relationship between the total home environment score and the measures of the work environment variables (see Table 24). Findings indicated that there were no statistical association present (variance was  $\leq 4\%$ ). In other words, the home life score was not explained by the work environment variables. The second regression model (see Table 25), explained more of the variance ( $R^2 = 27\%$ ). Several variables within the home environment, namely control, concern, and reward were statistically significant beyond the established 0.05 level alpha, although the magnitude of the influences of these three variables is

relatively low.

In both regression analyses the workload variable was not predictive of work or home-life overall. This finding although not completely surprising, may be related to several limitations in instrumentation as well as sample size. Although these findings were not part of the intended research study, they were thought to be significant enough to include here.

### *Summary*

The purpose of this chapter was to present the findings of the research questions which were developed to examine the association of home and work environmental stressors with the phenomena of burnout and caring efficacy. Various statistical approaches were undertaken to achieve this goal, including the use of both descriptive, correlational, and regression procedures. Although the main focus of the analysis was to explore the potential relationships using regression analysis, descriptive uni-variate techniques were completed to describe the variables within the sample. Pearson's  $r$ , a correlation technique, was used to examine the associations among the variables in terms of strength, direction, and statistical significance. The baseline level of significance established for this study was 0.05.

Overall, the distribution of demographic variables of the study population were similar to those reported for nurses currently employed in Manitoba. Although males appeared under represented in the sample, this result was not considered significant, as sex was not variable of interest in this study.

Because of the exploratory nature of this study, the various correlation and regression analyses undertaken addressed an assortment of possible associations. An examination of the burnout phenomenon, which was a central component to the study, was captured using the MBI. Overall, the level of each of the burnout components on average, was found to be at moderate levels within the respondent sample. By exploring burnout within smaller, more specific respondent samples, several patterns appeared, which potentially have clinical implications for nurses working in clinical settings. Although the differences in mean scores were not statistically significant, several findings were noteworthy. These include: nurses employed in the emergency department reported the highest, and the maternal/ child nurses reported the lowest depersonalization scores. In addition, burnout appeared to be associated with the years of experience of the nurse. Furthermore, higher depersonalization scores were also reported by those nurses working a rotating shift pattern in comparison to those working a permanent shift pattern.

An analysis of the concept of caring efficacy indicated that caring efficacy was generally higher among the more experienced nurses. Although lower levels of caring efficacy were reported among emergency nurses, several other areas of nursing reported higher levels of caring efficacy. The association of caring efficacy with the burnout subscales indicated that depersonalization and personal accomplishment have significant predictive power for caring efficacy.

When comparing the work environment variables(WLS), with home environment variables (HRS) as predictors of caring efficacy, the WLS variables had greater predictive value than the HRS variables. The WLS variables were also significantly related to the

burnout sub-scales. The workload variable of the HRS had only marginally predictive power on the emotional exhaustion sub-scale of the MBI.

In summary, this chapter reported the findings of the study which examined the association of the home and work environments as sources of stressors, with the concepts of burnout and caring efficacy. The exploratory nature of this study identified a variety of associations between the study variables. These findings will be discussed in the following chapter.

## CHAPTER 6

### Discussion

#### *Introduction*

In this study, the relationship of home and work environment stressors with the phenomenon of burnout and caring efficacy was explored in a random sample of eighty general duty nurses, using a cross-sectional descriptive design. The nurses were employed in a variety of clinical settings in one of the six main hospitals in Winnipeg, Manitoba. This chapter will discuss the findings of the study.

The results will be discussed within the context of relevant literature and will focus on the application of the conceptual model, and the specific research questions that directed the inquiry. An overview of the application of the conceptual model will be provided and the limitations of the study will be identified. The implications for clinical practice will be proposed and future research recommendations will be made.

Overall, given the lack of previous empirical research specifically directed at examining the relationship between burnout and caring efficacy, this study has contributed a clearer understanding of this association and the factors influencing this cohort of Manitoba nurses. The current nurse retention and recruitment crisis in the health care system in Manitoba underscores the study's importance and timeliness.

## *Discussion of Findings*

### *Burnout*

The phenomenon of burnout within the healthcare services is not a new topic for scientific inquiry. As indicated by the review of the literature in Chapter 3, burnout has been explored from several perspectives, generally focusing on how burnout develops, as well as the negative outcomes of the burnout concept. However, the examination of the burnout phenomenon in Manitoba nurses has not been previously undertaken. Therefore, as stated previously, the purpose of the study was to explore the phenomenon of burnout in this cohort using a variety of descriptive techniques. To accomplish this task, several research questions were proposed. The discussion of the findings related to these research questions follows.

#### ***Research Question 1. What is the prevalence and level of the burnout characteristics in the study population?***

This research question was developed to examine the burnout phenomenon in a cohort of nurses employed in hospital settings in Winnipeg. Conceptually, the burnout phenomenon which replaced mood within the original Stewart and Barling model (1996), was seen as the central feature of the study, as well as being the main point of interest to the researcher. The findings from this research question serves as an important contribution to burnout research due to the limited research specifically on Canadian nurses.

The prevalence of burnout in this cohort of nurses was determined through



individual sub-scale scores on the Maslach Burnout Inventory (MBI) and by comparing these results with the standard scores for the MBI provided by Maslach. On average, the respondent sample reported moderate levels of burnout across all 3 sub-scales of the MBI. An examination of each sub-scale score indicates that although emotional exhaustion and personal accomplishment are firmly embedded at the moderate level, the depersonalization score is near the cut-point described by Maslach as the low category. According to Maslach's definition, all three components play a role in the burnout phenomenon, as an individual does not require significant levels on all three sub-scales to be considered *burnt out*.

The importance of these reported burnout levels in relation to nurses working in clinical practice may indicate that despite a moderate feeling of being emotionally exhausted, and having a sense of poor personal accomplishment, nurses do not report dramatically increased levels of depersonalization. This depersonalization, which reflects the unfeeling and impersonal response to the treatment of clients, may be seen to impact specifically on professional practice. However, these findings only represent a moment in time and do not reflect changes which might be occurring in the levels of burnout. In addition, these levels do not inform us about the potential negative outcomes of burnout. Although the sample represents a small portion of the nursing population in Manitoba, the results support the anecdotal reporting of burnout among Manitoba nurses. Moreover, although the current study was confined to nurses in Winnipeg, the subjects were working in a variety of clinical settings and therefore the findings may have wider implications for nursing practice throughout the province.

The moderate degree of burnout within the current respondent sample corresponds to the findings of others who have explored burnout within different nursing populations in Canada and abroad (Grunfeld, Whelan, Zitzelberger, Willan, Montesanto, & Evans, 2000; Howard, 1997; Kalliath, O'Driscoll & Gillespie, 1998; Van Servellen & Leake, 1993; Walsh, Dolan & Lewis, 1998). In each of these studies, moderate to high levels of burnout were found within the nursing populations. Although the purpose of the various studies differed, the overall results were congruent enough to warrant further research into the burnout phenomenon with a goal to reducing its impact on nurses and patients and improving clinical practice.

Although limited research into burnout has been performed on Canadian nurses, the work of Grunfeld et al. (2000) and Howard (1997), has focused specifically on the experience of nurses in Canada. The findings of these two studies are important to the current study, as they allow one to postulate that Canada's universal system of health care tends to produce similar working conditions throughout the country. That is, stressors within the Canadian healthcare system are likely to be similar throughout the regions of Canada.

In the current study, 26.3% of the respondent sample ( $n = 21$ ) indicated that they were contemplating leaving nursing. Although there was no statistically significant correlation between burnout and the intent to leave nursing in the current study, the importance of this finding for the recruitment and retention of nurses indicates the need for further research in this area. The Grunfeld et al. (2000) study reported that higher burnout scores were found to be associated with an increased intent to leave the area of cancer

care and 37% of respondents indicated a desire or contemplation to leave the nursing profession. Together these findings may indicate that burnout can impact on one's job or career satisfaction to a point where the effects of burnout are intolerable, thus the desire to leave the profession.

The patterns of burnout reported by Kalliath, O'Driscoll, and Gillespie (1998) in the United States, and by Walsh, Dolan, and Lewis (1998) in Europe, are comparable to the individual sub-scales scores of the current study. In each of these studies moderate to high depersonalization and emotional exhaustion scores, as well as moderate levels of lack of personal accomplishment were reported. The similarities between results support the hypothesis that the development of burnout follows a similar pattern across the profession and across geographic locations and may be related to the quality of the work environment. While Walsh et al. (1998) examined stress and fatigue in relation to the development of burnout, and Kalliath et al. (1998) examined organizational commitment and burnout, both studies indicated a clear need to identify and address the problem of burnout within the nursing profession.

Several studies found the effects of moderate levels of burnout to be significantly associated with a reduction in job satisfaction and job performance (Kalliath, O'Driscoll, Gillespie, & Bluedorn, 2000; Um & Harrison, 1998). Although the current study did not examine these factors as outcomes, the concept of caring efficacy may be associated with job satisfaction and performance which will be discussed in research question 4.

***Research Question 2. What is the relationship between age, employment characteristics, and the level of burnout in the respondent sample?***

This research question was developed to explore the relationship between personal and work-related characteristics and the burnout phenomenon. This research approach was congruent with the majority of burnout literature outlined in Chapter 3. The present study examined the phenomenon of burnout in the sample population according to variables of: age, nursing experience, employment status, shift type and length, and area of expertise. Although the majority of findings in the current study were found not to be statistically significant, several interesting trends emerged from the data analysis.

In regards to the variable of age, there were no differences noted in burnout scores between younger and older nurses, based on the median split age of 38 years. However, there appeared to be a decreasing trend in emotional exhaustion scores from younger nurses to about 45 years of age. Beyond 45 years of age, the emotional exhaustion scores increased near the cut-off point for the high category of emotional exhaustion. Although it may be difficult to ascertain the exact cause of this trend, one might speculate that the 41-45 year category represents nurses returning to the workforce as their children reach school age. The lower emotional exhaustion may be reflective of a renewed purpose in ones life. This proposition was not explored in the current study, but may serve as an important future research topic.

The relatively high levels of emotional exhaustion in younger nurses may be attributed to the fundamental changes which have occurred in healthcare over the last decade, which may impact on younger nurses differently, as older nurses have *grown-up*

with healthcare reform. Today, because of the nursing shortage, younger nurses are expected to integrate into the highly acute work place. Historically younger nurses were mentored more during the early phases of their careers. The high emotional exhaustion scores in older nurses ( $> 45$  years) may be explained by the physiologic changes related to aging, as well as a cumulative effect of the stressful work environment.

A similar, but less dramatic trend in the depersonalization scores was also seen within the results. Congruent with the emotional exhaustion score, the 41-45 year category reported the lowest depersonalization score, which might support the return to work proposition. As one examines the older age categories, it is interesting to note that the subtle increasing trend in depersonalization scores also exists here. Overall, the age-related findings lead one to speculate that older nurses are the most affected by burnout.

In comparison, Robinson et al. (1991) found that age was a significant predictor of burnout, specifically with younger nurses reporting higher depersonalization scores. Robinson et al. proposed that the lower depersonalization scores in older nurses reflected the satisfaction of the personal involvement with patients that developed over the course of a career.

In relation to the experience of the nurse and burnout scores, the current study revealed a similar downward trend in regards to emotional exhaustion and depersonalization scores. Although not statistically significant, these trends were supportive of the exploratory nature of the study. The level of emotional exhaustion for less experienced nurses ( $<5$  years) was centered within the moderate level of burnout. On the other hand, nurses with 21-25 years of experience were near the lower end of this

moderate category. A similar trend appeared evident in the depersonalization scores based on years of experience. According to the standardized scores, the depersonalization score for the 21-25 year cohort actually equates to a low level of burnout. Beyond 25 years of experience a complete reversal occurs in respondent scores for emotional exhaustion and depersonalization. In this case, emotional exhaustion scores are at the upper end of the moderate category, while the depersonalization score are at the moderate level.

One possible explanation for these trends again points toward the influence of the fast paced, depersonalized work environments that exist within the current healthcare system. Experienced nurses may have learned to cope with increased workload and changing work environments over time, while younger nurses have not. These findings also concur with Benner's *Novice to Expert* theory, whereby the nursing professional evolves through experience and skill acquisition over time, with younger nurses having yet to achieve expert status. The reported high levels of burnout in the most experienced nurses may be the result of older nurses being physically and emotionally incapable of coping with the demands of the work environment today. These findings require further examination in future studies.

Burnout scores related to the areas of employment revealed several interesting patterns. On average, emergency nurses reported significantly higher depersonalization scores, in addition to low personal accomplishment scores and emotional exhaustion score near the cut-off point for the highest category. In contrast, low levels of depersonalization, lower emotional exhaustion, and higher personal accomplishment

scores were reported by the maternal/child nurses. The lower reported burnout scores for the maternal/child nurses were congruent with the work of Pines (2000) which she attributed to the self-fulfilment benefits of working with expectant mothers. This proposition may also explain why burnout scores are lower in the maternal/child nurses in the current study.

The variation in burnout scores between the emergency and maternal/child areas may also be related to differences in the quality of the work environment in these two clinical areas. Anecdotally, the reports of bed shortages and hallway medicine highlights the stressful nature of emergency rooms. Stress in the work environment was shown in Chapter 3 to be a precursor to the development of burnout. Additionally, the personal experience of the researcher in regards to these clinical areas confirms that significant differences do exist in the actual stressors between these areas. Clients in emergency rooms are often perceived to be sicker in comparison to the maternal/child population. Nurses in emergency area are constantly bombarded with a variety of stimuli, whereas the maternal/child nurses can usually focus their attention on one patient at a time through primary nursing. The task orientated, fast turnover nature of the emergency room may create stress and anxiety, which also may have a detrimental effect on individual nurses.

The current study also explored burnout within the context of the work-related factors of work status and shift patterns. Although the study did not produce any significant statistical findings, higher depersonalization scores were noted in part-time employees in comparison to their full-time counterparts. Also, nurses who worked a rotating shift pattern reported higher depersonalization scores. These findings may be

explained by the effects of shift work and the circadian disruptions which were outlined in the literature review.

The findings of this study in regard to research question 2 are supported by several research studies reviewed in Chapter 3. Van Servellen and Leake (1993) explored burnout scores within a variety of hospital care areas. They found that there were generally no statistical differences in the burnout scores in the various clinical areas. While most burnout scores reported in the Van Servellen and Leake study were similar to the burnout scores within the current study, the emergency and maternal/child areas were not considered in their study. It is interesting to note that although no statistical comparison could be made to the current study, burnout scores from critical care areas in the Van Servellen and Leake study were generally lower.

Although Van Servellen and Leake (1993) did not include emergency room nurses in their study, a European study by Walsh, Dolan, and Lewis (1998) did examine burnout and stress in this cohort. Burnout scores of emergency nurses in the Walsh et al. study were similar to those reported within the current study. Specifically, depersonalization scores were almost the same. The high levels of depersonalization, as well as moderate scores on emotional exhaustion and personal accomplishment, of the emergency room cohort were similar to the current study. The main causes of burnout, according to Walsh and associates, are related to work environment factors, such as, staffing shortages, patient issues, lack of resources [beds], and management support. Similar work-place issues were also identified as a concern to Manitoba nurses (Worklife Task Force Report, 2001).



Although moderate to high levels of burnout scores were reported by Walsh, Dolan, and Lewis (1998), Van Servellen and Leake (1993), as well as in this study, interpretation of these results must be viewed with caution. All three studies are cross-sectional in design representing a specific point in time. One cannot, therefore, establish the direction to the burnout phenomenon in terms of increasing or decreasing levels. Furthermore, beyond establishing a current level of burnout, no outward effects of burnout were examined in the three studies.

In summary, research questions 1 and 2 determined that the burnout phenomenon was found to be present at moderate levels within the respondent sample. Several trends were identified in relation to personal and work-related characteristics, the implication of which will be discussed within the context of nursing implications. The findings of the study are congruent with the results of other studies in Canada, the United States, and Europe. Although the findings represent a small portion of the nursing population in Manitoba, they do, verify that burnout is present at significant levels in Winnipeg nurses. A further exploration of burnout beyond the explorative nature of this study should to be undertaken in order to fully comprehend the dynamics and impact of the burnout phenomenon in the nursing population. In addition, understanding the impact of burnout on professional practice can assists with interventions designed to treat burnout. The proposed link between burnout and caring efficacy was outlined in conceptual framework outlined in Chapter 2. The following section will review the findings related to caring efficacy.

### *Caring Efficacy*

The concept of caring efficacy (a belief in one's ability to care) is a relatively new theoretical approach in the study of caring by nurses. Specifically, caring efficacy was developed as an extension of caring theory which historically centered on the behaviours associated with caring by nurses. What sets caring efficacy apart from previous caring theory is that it focuses on the individuals' beliefs in their own caring abilities. This distinctiveness is what prompted caring efficacy to be explored in this research study. Therefore as outlined in Chapter 1, the study's purpose was to explore caring efficacy in the respondent sample. The lack of research in regards to caring efficacy noted in Chapter 3, makes this exploration important because it represents a new undertaking in examining caring within nursing and contributes to the study of caring efficacy initiated by the originator of the concept.

#### ***Research Question 3. What is the prevalence of caring efficacy in the study participants?***

This research question was developed to explore the concept of caring efficacy in a cohort of nurses employed in various hospital settings in Winnipeg. The concept of caring efficacy was substituted for interpersonal job performance within the Stewart and Barling model (1996) as it appeared to represent similar features. The lack of empirical testing of caring efficacy theory made this research question central to the expansion and acceptance of caring efficacy theory.

Caring efficacy, was operationalized within the Caring Efficacy Scale (CES).

According to Coates (1997), caring efficacy is reflected by an individual's own belief in his/her ability to form a therapeutic nurse/client relationship. This is a different approach from previous research that measured the *caring behaviours* of nurses. No standardized levels of caring efficacy exist (ie. low, medium, or high), like those defined for the MBI. Coates, did, however, indicate that higher caring efficacy was reflected by higher scores on the CES (C. Coates, personal communication via e-mail, January 21, 2001).

Examination of the entire sample CES scores for caring efficacy indicated that, on average, respondents report a high level of caring efficacy. This is comparable to results obtained by Coates (1997) in the development of the CES; in which a score of 6 would represent the maximum level of caring efficacy achievable. However, the lack of a standard score or levels for caring efficacy made the overall interpretation of a full sample score rather limited, yet the average score supports a high level of caring efficacy in the current study cohort. This finding is encouraging, because it suggests that nurses in the respondent sample believe in their ability to form caring relationships with clients - a finding which supports Coates' Caring Efficacy Theory. To further explore the concept of caring efficacy in the respondent sample, various demographic and work-related characteristics were examined. This expanded approach was not explored in the Coates study.

Although the results of the CES did not reveal any statistically significant differences in mean scores based on age, nursing experience, and area of employment, several interesting trends were uncovered. The level of caring efficacy, based on age, appears to have an increasing trend between 30 and 50 years of age. At this point, caring

efficacy scores level off near the average score for the full sample. However, it is also interesting to note that nurses in the 31-35 year category report lower caring efficacy scores than the under 30 category. Although it is difficult to fully understand why this variation exists, one might propose that younger nurses (<30 years of age) represent newer nurses to the profession, who perhaps have high expectations about their caring abilities. As the nurse grows slightly older her attentions may be focused elsewhere, for example, on family or caring for children at home. On the other hand, the realities of work-life may impact on the convictions which attracted the nurse to the profession. These include the stressful nature of the work environment and the effects of healthcare reforms. These suggestions may result in the decline in caring efficacy seen within the 31-35 year group. It is then possible that over time nurses will regain belief in their caring abilities as they learn to do more with less in their clinical practice. This proposition is supported by the findings as beyond the 31-35 year cohort, an increasing trend is seen in the caring efficacy scores.

A similar increasing trend is seen in caring efficacy scores based on the experience of the nurse up to 25 years of nursing experience. Specifically, nurses with less than 5 years of nursing experience had lower, yet not statistically different, mean scores than those of their more experienced counterparts. Paradoxically, nurses with  $\geq 26$  years of experience reported lower mean caring efficacy scores than all other by experience categories. This finding may be explained by possible end of career issues related to retirement or the fact that the most experienced nurses often have less patient contact because they are relegated to charge positions. In addition, one might assume that after

25 years of nursing, individuals may not have the stamina to maintain high levels of caring efficacy as a result of being *burnt-out*. These issues, however, were not examined within this respondent sample.

It may also be hypothesized that the lower caring efficacy scores in the less experienced nurses is related to the lack of maturation which normally occurs over the course of one's professional career. The focus of inexperienced nurses often is on learning the skills of the job, with little focus on the caring nature of nursing. Anecdotally, it has been suggested that individuals do not feel completely comfortable in the nursing role until approximately the fifth year of their professional careers, and therefore, may not yet have developed enhanced caring efficacy.

This hypothesis concurs with Benner's novice to expert theory of nursing. According to Benner, nurses evolve through a series of stages in which they learn the skills and competencies to become expert practitioners. Each successful transition is based on the acquisition of knowledge and clinical experiences. This process is thought to be achieved over the period of about five years, at which time the nurse reaches the expert status. Thus, the expert nurse has an ability to recognize the needs of the patient or client based on extensive experiential background. This evolving expertise may also encompass caring efficacy as the expert nurse can respond to any challenging situation in nursing.

Consistent with the findings of Coates' (1997) developmental study, level of nursing experience was associated with caring efficacy. These findings must be viewed with some caution, however, as the definition of level of experience varied between the current study and the work of Coates. Experience, in the current study, was based on

years of experience, while Coates used educational attainment to distinguish experience levels. Overall, Coates found that caring efficacy developed with increasing levels of education.

An interesting finding in caring efficacy scores was seen in the area of employment. Lower caring efficacy scores were found in emergency nurses compared to the other clinical areas examined. The highest level of caring efficacy was reported by the *other* category. It is difficult to speculate on the reported score for the *other* category as this grouping is a combination of several small cohorts made up of oncology, psychiatric, and geriatric nurses. On the other hand, the maternal/child group reported the second highest level of caring efficacy. These findings, although not statistically significant, may have clinical implications for nursing practice.

The lower caring efficacy scores in emergency room nurses may be partially explained by the task-orientated focus associated with emergency departments. Nurses are called upon to provide care to an ever-changing client population. This fact often prevents a holistic approach to client care, as patient contact is usually brief, with little time available to develop nurse/client rapport. In addition, nurses in the emergency room are subjected to potentially greater stresses related to over-crowding, bed shortages, and hallway medicine. These situations may impede a nurse's belief in his/her caring ability, which therefore may be responsible for the lower caring efficacy scores.

By contrast, nurses in the maternal/child clinical setting had the second highest mean caring efficacy scores. It could be suggested that the dynamics of this area, in addition to participating in the birthing process, enhances the opportunity for these nurses

to develop a special bond with parents and the newborn. In addition, many birthing centers are using a primary care model which suggests that maternal/child area may be better staffed in comparison to their emergency counterparts. The maternal/child area, like other areas within hospitals can close beds during staffing shortages, however, the emergency room on the other hand cannot. In relation to nurse/client staffing ratios, while many hospital wards also have a fixed number of beds, the emergency room never closes its doors to admissions. Furthermore, it may be proposed that the primary care model and development of alternative birthing centers in some hospitals enhances the development of the nurse/client relationship compared to busy emergency wards. These propositions may indicate that the dynamics or quality of the work environment may influence an individual's caring efficacy. The lack of comparative research however, makes these propositions only speculative and therefore would require further, more in-depth examinations.

The importance of the act of caring to the nursing profession, as well as to the clients receiving care, has been established through research principally concerned with the overall patient satisfaction. Because the data obtained by the current study does not include patient satisfaction scores, further research is needed to provide insight into the relationship between the caring efficacy in nurses and the satisfaction of clients. The caring efficacy scores obtained in this study can serve as a guide to pinpoint specific areas of nursing, like the emergency department, where caring efficacy needs to be promoted. Therefore, as initiated in Coates' (1999) study, future research should continue to explore ways to ameliorate caring efficacy such as the implementation of caring efficacy programs.

In summary, caring efficacy scores reported by the current study were consistent with the caring efficacy scores reported by Coates (1997). However, the caring efficacy scores recorded by the CES in the current study only reflect a *snapshot* of the perception of caring efficacy in a sample of nurses in Winnipeg. The findings are also limited, because they do not reflect the patients' perception of the care received. Therefore, further research, with a longitudinal design would be beneficial.

### ***Burnout and Caring Efficacy***

An examination of the association between burnout and caring efficacy is an original hypothesis without previous empirical testing. Although burnout has been linked to a reduction in patient satisfaction with the care of nurses, the relationship between burnout and caring efficacy was unknown. Burnout theory suggests that it can impact on an individual's physical and emotional psyche, therefore, a primary purpose of the study was to examine the relationship between burnout and caring efficacy. As well, the conceptual model proposed an association between these two concepts. Therefore research question 4 was developed to fulfill the aim of the study.

### ***Research Question 4. Is there a relationship between burnout and caring efficacy?***

The conceptual model proposes that there is an association between the burnout phenomenon and caring efficacy. As stated previously, the cross-sectional design of this study does not permit establishment of a causal, or directional relationship between



burnout and caring efficacy. In order to explore the association between burnout and caring efficacy, correlational and multiple regression analyses were undertaken. The findings of the correlational analysis indicated there is a statistical association between the three MBI sub-scales of personal accomplishment, depersonalization, and emotional exhaustion with caring efficacy. These associations support the basic tenet of the proposed conceptual model.

Overall, these findings suggest that an individual's inability to care may be associated with the negative effects of burnout. Maslach, as early as 1980, suggested that the burnout phenomenon can potentially lead to a deterioration in the quality of care or in services provided. The negative correlations found between emotional exhaustion, depersonalization, and caring efficacy in the current study support this proposition. As an individual's emotional exhaustion increases, there is a measurable decrease in the degree of their caring efficacy. Although this reduction in caring efficacy was not explored from the client's perspective, the implications of these results on healthcare delivery are important to consider. Potentially, a reduction in burnout may improve the quality of care provided as nurses may experience enhanced caring efficacy. As well, the positive correlation between the personal accomplishment sub-scale and caring efficacy suggests the importance of promoting autonomy and job satisfaction as a means to increase an individual's caring efficacy. In this regard, caring efficacy [a belief in one's caring ability] is a reflection of an individual's personal accomplishment within his/her professional career.

The results of the multiple regression analysis also suggest that two of the

individual sub-scales of burnout, namely personal accomplishment and depersonalization, were predictors of caring efficacy. The overall association between burnout and caring efficacy, which was the central focus of the conceptual model, was statistically significant. The failure of the emotional exhaustion sub-scale to demonstrate statistical significance in relation to caring efficacy may be explained by the proposition that nurses are able to separate their emotional exhaustion from the work that they do. This would substantiate the idea that emotional exhaustion is a personal attribute and that caring efficacy, as a professional attribute, may be independent of it. This proposition is contradictory to the work of Koivula, Paunonen and Laippala (1998) and Leiter, Harvie, and Frizzell (1998), in which emotional exhaustion was inversely associated with professional efficacy. They identified the importance of reducing emotional exhaustion as a prerequisite for the improvement of quality and professional efficacy within nursing.

Although there is no empirical literature which directly links burnout with caring efficacy theory, several studies have indicated that burnout is associated with a reduction in job satisfaction and job performance. If one assumes that personal accomplishment reflects one's job satisfaction, and caring efficacy is related to one's job performance, the proposition that an association between burnout and caring efficacy exists may be supported by previous research (Kangas, Kee, & McKee-Waddle, 1999; Um & Harrison, 1998). This association was also alluded to within Chapter 3, in regards to the study conducted by Coates in 1999. Both the CES and the MBI instruments were used to measure the outcomes of a professional development training program designed to enhance communication skills and clinical performance. Her longitudinal study attempted

to detect changes in caring efficacy and burnout as a result of a hospital training program. The overall results indicated that the training program did, in fact, improve caring efficacy scores, in addition to reducing burnout scores. The implications from Coates' study indirectly supports the hypotheses that a reduction in burnout may equate with an increase in caring efficacy and that increasing caring efficacy may also reduce burnout.

In examining the trends discussed earlier in research questions 2 and 3, the MBI sub-scale of depersonalization, which was shown to be statistically significant for emergency nurses, corresponded with a reduced caring efficacy score in the same cohort. In contrast, the *maternal/child* and *other* category of employment had lower depersonalization scores and higher caring efficacy scores. These results support the inverse association between burnout and caring efficacy proposed by the modified conceptual model.

Although the current study did not explore the effects of burnout and caring efficacy on patient satisfaction, it is important to note that in an exploratory review done at one Winnipeg hospital, patient satisfaction scores indicated that patients admitted to hospital through the emergency department perceived the care that they received in that department to be of a lower quality compared to care received in other areas of the hospital (SBGH, March, 2001). Conversely, patient satisfaction scores of the overall care received during their admission in the maternal/child units were reportedly higher than those scores reported by emergency room patients. The high depersonalization and the low caring efficacy scores in the emergency population of nurses in this study may account for the patient's perception of care and may be reflective of the impact that burnout and

low caring efficacy in nurses has on client care.

In the research conducted by Leiter (1992) and Leiter, Harvie, and Frizzell (1998), similar associations were found between burnout, patient satisfaction, and professional efficacy. In these studies, the moderate to strong associations between these variables supported the notion that burnout and caring efficacy are, in fact, related. Although Leiter et al. used the term professional efficacy, which they defined as "a sense of professional competence and accomplishment" (p.1612), this definition is congruent with Bandura's (1977) of self-efficacy, on which Coates' caring efficacy work is based. Specifically, Leiter et al. (1998) found that high levels of emotional exhaustion were associated with reduced professional efficacy and low levels of patient satisfaction with care. The clinical implications here are clearly visible and also indicate a need for further research in this area.

In summary, the burnout phenomenon and caring efficacy were associated in the correlational and regression analyses. The cross-sectional design allowed for the current burnout and caring efficacy levels to be measured. Burnout scores, on average, were reported in the moderate to high level category which suggests that nurses may be subjected to recurrent stress significant enough to cause burnout. Although causality cannot be established, one might propose that the emotional exhaustion associated with burnout, in addition to a lack of personal accomplishment and increasing depersonalization, impacts on one's caring efficacy. This association is predominantly seen in the emergency room where nurses report less than average mean caring efficacy scores and increased depersonalization scores. Because previous researchers have found

an association between burnout, professional efficacy, and patient satisfaction, further research related to caring efficacy, burnout, and patient satisfaction is needed. Overall these findings appear significant enough to warrant a further longitudinal examination to determine if these results translate into reduced caring behaviors by nurses. In order to identify the antecedent factors associated with burnout and caring efficacy, an examination of both home and work environments was also undertaken; a discussion of the findings are recorded here.

### ***Burnout, Stress, and Caring Efficacy***

Previous research as outlined in Chapter 3, has established the association between stress and the development of burnout. Although the influences of both home and work environments have been examined under the term of *spillover*, there has been limited research literature considering burnout as an outcome of both home and work stress. As the overall purpose of the current study was to examine the relationship between stressors from both the home and work environments with burnout and caring efficacy, research question 5 was developed. The goal here was to further explore the antecedent objective factors related to burnout and caring efficacy, highlighted in the conceptual model.

### ***Research Question 5. What are the associations between home and work environmental stressors and burnout and caring efficacy?***

This research question was developed to examine the association between specific factors from the home and work environments, and their relationship with burnout and

caring efficacy. A major assumption in the undertaking of this study was that stress is a precursor to the development of burnout. According to the modified S-D S-P model, objective stressors (factors associated with the home and work environments) are subjectively experienced as stress by individuals. This interaction is what Lazarus and Folkman (1982) described as the process of cognition, perception, and transaction. In this study the effect of standardized stressors from each environment on burnout and caring efficacy were considered. It was hypothesized that the association of these stressors with burnout and caring efficacy would be congruent with the S-D S-P framework.

The findings of the current study indicated that the recorded level of work environment stressor scores measured by the Worklife Survey (WLS) were similar to the normative scores of the WLS. Of the six work-life variables measured by the WLS, none were significantly higher than the normative scores provided. There was, however, some difficulty in the interpretation of these results. As with the CES, there is a gap in the literature with regards to empirical testing of the WLS. Besides the normative data provided by the author, no other comparative research exists to draw parallels from.

In addition, while Leiter (1997) designed the WLS to assess a single work environment, the respondents in the current study were drawn from six work environments. Although the Winnipeg cohort could be assumed to be a homogeneous work-place environment, in reality, variations exist between tertiary and community hospitals as well as between individual units. Therefore, the current study's findings indicate an average score from across sites, thus it is impossible to determine if a specific work environment is experiencing higher than normal stressors. Due to the confidentiality

and anonymity criteria, individual hospital scores were not available. It is encouraging, however, to note that the average experience of Winnipeg nurses was similar to Leiter's normative pooled results.

It is also important to note that the WLS scores, in addition to the reported burnout scores in the respondent sample, supports the previous work of Leiter and Maslach (1997). As described in Chapter 4, Leiter proposes that burnout develops when the demands of a person's job exceeds their capabilities to perform his/her assigned workload. In other words, a mismatch is occurring between the person and their work environment which creates increased stress for the individual. These mismatches are what Leiter and Maslach (1997) describe as the root cause in the development of burnout. Leiter and Maslach's (1997) organizational theory of burnout is therefore supported by the findings of the current study. In addition, the anecdotal reports of poor working conditions and increased stress described by nurses, the media, and professional organizations in Winnipeg are verified.

In comparing the correlational findings of the WLS variables with the variables of burnout and caring efficacy, numerous statistical associations were found between the WLS variables and the MBI sub-scales. These associations support the study's conceptual framework which proposes that the work environment is a source of objective stressors that can impact on the development of burnout. In addition, these results verify the work of Leiter and Maslach (1997) in which they propose that the organizational factors measured by the WLS are antecedents in the development of burnout.

On the other hand, the same correlational analysis revealed that only the variables

of *value* and *control*, as work stressors from the WLS, were associated with the caring efficacy concept. *Value*, which was described by Leiter (1997) as “an indication of one’s relationship with the work that they do, and encompasses the ideals which attracted them to their profession (p. 482),” may be seen to be related to the underpinnings of caring efficacy. Nurses often perceive caring as having value and benefit, not only for themselves, but for the clients they care for. Overall, nurses want to believe that they are making a difference in clients lives, which then gives value to the work that they do (Mills & Blaesing, 2000). Therefore, if a nurse is unable to meet or achieve the expectations of care, this may be interpreted as a threat to the value that a nurse places on the work he/she performs and may manifest itself as stress, eventually leading to burnout. It is interesting to note that both the emergency and maternal/child respondents did report *value* scores above the normative score provided by Leiter, while the critical care area was slightly less.

Control was reported by all respondent groups to be lower than the normative value, with the emergency area reporting the overall lowest score. The variable of *control*, is closely related to an individual’s participation in the decision making process, as well as a reflection of one’s autonomy in the work-place (Leiter, 1997).

Howard (1997), and Maslach, Schaufeli, and Leiter (2001), indicated that a lack of control may decrease a nurses’ professional satisfaction and may ultimately lead to the burnout phenomenon. It may therefore be suggested, that a perceived lack of control may create a feeling of self-doubt for nurses, and may threaten an individual’s belief in their caring ability, in addition to added stress.

The lack of statistical association of the remaining WLS variables with caring



efficacy may be attributed to the fact that these factors relate more to organizational values than personal ones. This finding may also indicate that nurses are able to isolate their caring efficacy from the effects of increased workloads as well as other perceived organizational factors within the workplace. In addition, the lack of associations may be related to the WLS's inability to capture work environment factors which may impact on an individual's caring efficacy. These suggestions may be indirectly supported given the fact that the caring efficacy average scores for the entire sample population were high, despite the recorded burnout scores, and anecdotal reports of workplace stress, increased workloads, and difficult working conditions. However, this proposition is not supported by the analysis of the results uncovered within question 4, where several interesting trends between burnout and caring efficacy scores of emergency and maternal/child nurses were shown.

The findings of the regression analysis, which examined the prediction of the work environment variables and the burnout sub-scales on caring efficacy, produced a moderate variance of 43%. Consistent with the correlational findings between the work environment, burnout, and caring efficacy variables, the MBI variables were more predictive of caring efficacy than the WLS variables. The WLS variables failed to demonstrate any significant predictive ability of caring efficacy overall. One explanation for this finding is that caring efficacy is a reflection of one's personal beliefs, and may not be influenced by work environment factors as previously proposed. In addition, the standards to which a nurse holds herself, may override the effects of poor working conditions as nurses try to do their best, despite the added stress that the current work

environment imposes upon them. Despite these suggestions, the correlations between the work environment variables and the burnout sub-scales must be considered to be important findings, which are worthy of further exploration.

The conceptual model also proposes that stressors derived from the home environment are associated with burnout and caring efficacy. This association was examined using a similar statistical approach to that of the work environment, using the Home Responsibility Survey (HRS). This analyses was problematic due, in part, to missing data and a lack of empirical testing of this instrument in the literature. In addition, there were no normative scores with which the current study findings could be compared, making it difficult to evaluate the results.

Based on the inter-item correlations of the HRS, a limited number of the home environment variables were associated with one another. Specifically, the variable of *relationship* (a measure of one's social-support) was correlated with the variable of *control* and inversely with the variable of *concern* at home. These findings are not surprising as an individual's overall stress from the home environment may be buffered by a strong supportive relationship. On the other hand, lack of a supportive relationship at home may also create added stress for individuals.

The variable of *control*, which was derived by measuring an individual's perceived autonomy, in addition to control over financial issues at home, can be seen as being associated with one's relationships or social-support network - a finding supported by the previous correlations. A supportive relationship may foster autonomy, therefore enhancing the overall sense of control at home. The importance of family [*relationship*]

as a support network was identified in several studies which examined the combined roles of women as nurse and mother (Barnett & Marshall, 1992; Gottlieb, Kelloway, & Martin-Mathews, 1996; Ross, Rideout, & Carson, 1994). Social-support or relationship was an important underpinning to understanding how women deal with the dual roles of career and family. Specifically, family was seen as a buffer to the daily stressors of work and to some extent home life. Therefore it may be of benefit to examine specifically the issues of *control* and *concern* in different nursing populations in future studies.

Other variables from the HRS, specifically *workload* (at home), was shown to be statistically associated with *reward*. However, these two variables failed to show significant associations with the other home variables within the HRS. The association between *workload* and *reward* may be attributed to the satisfaction one receives from being with family and the work performed at home. In addition, work at home may be a distraction from the stressors associated with working in the contemporary healthcare environment. This proposition is supported in part by the research conducted by Leiter and Durup (1996). The amount of work or workload at home was shown to be directly associated with the quality or reward of the individual's home and work life.

The failure of the *workload* variable from the HRS to show other significant correlations within the study was somewhat surprising, but may be attributed to instrumentation and application rather than the conceptual design. It should be noted that the *workload* variable at home was calculated by the number of hours of homemaking, in addition to caring for dependents, and that great variations existed in the reported scores of this variable. Further statistical analyses of the HRS variables with personal and work

characteristics did not provide any useful insights into the home life of the cohort of nurses in Winnipeg making useful propositions impossible.

An examination of the correlations of the HRS variables with the MBI and caring efficacy scales indicated that the HRS was not associated with caring efficacy. This finding may also be a function of instrumentation, as well as a small sample size. However, one might propose that caring efficacy is not affected by the home environment, since nurses may be able to separate their personal lives from their professional ones. The work environment may be a place of refuge from an overly stressful homelife - thus the lack of statistical associations. The deficiency of findings between the HRS variables and caring efficacy prevents meaningful speculations to be made here.

On the other hand, as reported in Chapter 5, the HRS variable of *concern* was associated with the emotional exhaustion and depersonalization sub-scales of burnout, and the HRS variable of *reward* correlated with personal accomplishment. In the latter case, one might assume that personal accomplishment is a reflection of the reward one receives from one's personal life. On the contrary, the stresses [*concerns*] at home may contribute to the emotional exhaustion and depersonalization of burnout. These interpretations must be viewed with caution as there is no supportive literature with which to substantiate these speculations.

There was limited predictive power for caring efficacy based on the regression analysis of the HRS and the MBI sub-scales with the caring efficacy scores. Although a variance of 28% was reported, only the depersonalization sub-scale was predictive of caring efficacy. These lack of associations generally verify the overall weakness of the

HRS instrument as a predictor of burnout and caring efficacy. However, the small sample size and the rather large number of variables within the regression model could have been responsible for reducing the predictive power of the independent variables of the HRS.

This interpretation was supported by the regression analysis of the MBI sub-scales without including the HRS variables, in this case the reported variance was higher.

The overall conceptual framework proposes that both home and work environments are associated with the concepts of burnout and caring efficacy. This association was explored by examining the findings from the full regression model reported in Chapter 5. Overall, when both home and work environments, in addition to the MBI sub-scales are regressed with caring efficacy, only the depersonalization variable again indicates an ability to predict caring efficacy. Although the variance is higher, there are still a lack of significant predictors of caring efficacy. This finding may be directly related to the small sample size and the number of independent variables. In addition, the amount of missing data for the HRS variables may have impacted on the results by increasing the amount of error in the regression. Although the variance remained constant at approximately 40%, the lack of meaningful associations suggests that instrumentation may be the cause of this finding.

In an attempt to understand the associations between the home and work environment variables and burnout, without consideration of caring efficacy, several other regressions were performed. These findings indicated that *workload* from both environments, in addition to *value* from the work environment, were associated with emotional exhaustion and depersonalization variables. These associations were also

shown in the correlations discussed earlier, and point toward possible implications for nursing practice. The variable of *value*, may be an important factor which potentially can assist with the reduction and prevention of burnout. *Workload*, on the other hand, may be more problematic to deal with, given the current state of healthcare in Manitoba. As alluded to in Chapter 1, issues related to hallway medicine, waiting lists, and staff shortages are not easily resolved. However, giving value to the work of nurses may assist them to deal with other workplace issues, such as increased stress. Personal accomplishment, although not shown to be influenced by the WLS and HRS variables, may be enhanced by merely reducing emotional exhaustion and depersonalization. This proposition is supported by the significant association which exist between the MBI variables reported in Chapter 5.

In summary, the influences of the work environment stressors were more closely associated with burnout and caring efficacy than home environment variables. These findings are not surprising as the MBI and WLS instruments focus more on capturing the influence of the work experience rather than homelife. In addition, while the WLS was designed specifically to assess the work environment, the HRS was adapted from a larger survey designed to predict explore health-related issues concerning both home and work factors. Furthermore, the lack of empirical testing of both the WLS and the HRS prevented an opportunity to compare the current study with other research results. It could also be suggested that home environment stressor may overlap with work environment stressors so that significant differences can be discerned.

Several important factors were identified which may be associated with the

concepts of burnout and caring efficacy. Although further research is required, the issues of *control, reward, concern, workload, and social-support* were shown to be correlated with several features of both the home and work environments. The key component which connects these variables to that burnout and caring efficacy is the issue of stress. Ultimately, although individuals will continue to experience stress in their daily lives, the goal should be to enhance an individual's ability to cope with daily stressors, such as those identified above.

Although further study is required, the proposed relationship of burnout and caring efficacy with home and work environmental factors have been supportive in this exploratory study. Nursing implications from the findings will be explored in a subsequent section. The following is a brief discussion of the conceptual model, within the context of the current study, and its potential as a conceptual framework in future research.

### ***Applying the Modified Same-Day Stress-Performance Model to the Relationship of Burnout and Caring Efficacy***

As outlined in Chapter 2, the study's conceptual framework was based on the Same-Day Stress-Performance (S-D S-P) model proposed by Stewart and Barling (1996). Chapter 2 presented the theoretical framework and the modifications to the model necessary to encompass the variables associated with this study. In the original work by Stewart and Barling (1996), the focus of the research was on work-place stress, without consideration of the home environment as a source of objective stressors. Therefore, it was decided to integrate home stressors into the model, to capture the overall essence of

the working nurse's life. In this way, stressors arising from either the home or work environment can be accounted for and examined within the context of burnout and caring efficacy.

Mood, as a central component to the original S-D S-P model, is identified as the concept being altered by subjective stress. This association appeared to parallel the intent of the current study, as mood could be related to the psychological components of the burnout phenomenon. It was therefore felt that burnout was an appropriate replacement for mood.

As nursing is an interpersonal process, caring (a component of one's professional nursing career), and caring efficacy (a belief in one's caring abilities), seemed to be congruent with the concept of interpersonal job performance within the Stewart and Barling model. The linear structure of the modified S-D S-P model remains unchanged. Although simplistic in design, the overall structure of the conceptual framework was adequate for the purpose of undertaking this exploratory research study.

The overall performance of the modified model was satisfactory in assisting this researcher to explore the concepts of burnout and caring efficacy. The findings reported in Chapter 5 are generally supportive of the proposed model, as several interesting trends and patterns were uncovered. Although the limitations of the study will follow, it may be noted that the lack of statistical associations identified throughout may be attributed to instrumentation, rather than conceptual design. Overall, although further testing of the modified S-D S-P model is required, given the choice, this researcher would probably use the same conceptual framework to undertake the study.



In summary, the conceptual framework proposed that stressors from both home and work environments may impact on the development of burnout (by way of subjective stress), and subsequently affects an individual's caring efficacy. However, the cross-sectional design of the study provided only a *snapshot* of the current levels of the examined variables. In addition, the proposed conceptual framework does not provide a mechanism to examine or explain how caring efficacy develops or changes over time. This deficiency would require a further modification and examination of the proposed model. The current form of the proposed conceptual framework however, has some promising features which would support its future application in the examination of burnout and caring efficacy.

### ***Implications for Nursing Practice***

The cost of burnout is high as it impacts not only on the individual nurse, but the healthcare organization, and potentially the recipients of care. An awareness to this increasing problem may facilitate the early recognition and the development of interventions necessary to prevent its occurrence. In order to accomplish this task, the research literature has generally focused its attention on two fronts. Firstly, the individual approach, which attempts to identify strategies to strengthen the individual's personal resources or work related behaviors. And secondly, an organizational approach, which attempts to address and modify work environment factors, which may be responsible for the development of burnout. In reality, the individual approach is the predominant focus, as it may be assumed that it is less costly to change people rather than the offending

environment.

The following discussion of the implications for nursing practice will focus on the solutions necessary to address the issues of burnout and caring efficacy in the respondent sample. The cross-sectional design of this research study makes these recommendations tentative, as the findings only represent a small sample of the nursing population employed in the province of Manitoba.

The study's main purpose was to determine if the burnout phenomenon was present in the respondent sample. A secondary aim of the study was to explore the association between burnout and an individual's caring efficacy. As indicated by the study findings, a moderate to high level of burnout was found in the respondent sample. Several other important trends were uncovered which may also have clinical implications related to the caring of nurses. Given these moderate burnout levels in Manitoba nurses, Maslach, a leading authority on burnout, would suggest that subjective stress must be present at significant levels for this level of burnout to develop. Since an assumption of the study is that nursing is a stressful profession, objective stressors were explored to determine the root cause of this subjective stress.

According to the research literature, several consistent factors have been identified as being associated with the development of burnout. Fong (1993) and Janssen, De Jonge, and Bakker (1999), indicated that *workload* and *social support* were predictors of burnout. These factors, which were also shown to be correlated to the phenomenon of burnout in the current study, point towards the importance of reducing workloads and improving social support for nurses as a preventative strategy. Specifically, Fong (1993)

recommends that the goal for the prevention of burnout includes joint participation in the decision-making process of work assignments by setting realistic workloads for staff, as well as the improvement of communication by administration. An improvement in communication would allow for positive feedback and constructive criticism, thus enhancing the support and communication between individuals. These approaches could benefit nurses in Manitoba, and on the surface, would appear to cost very little to implement. This proposition can also be seen as having some indirect benefits to caring by nurses, as it may promote supportive environments which foster the caring behaviors of nurses.

The specific issue of workload for nurses may be more difficult to address. The reported issues of overcrowding, waiting lists, hallway medicine, and nursing shortages identified in Chapter 1, have far more significance if workloads are linked to burnout and caring. The workplace issues identified in Manitoba have not gone unnoticed, as recommendations made within the Work Life Task Force report (2001) calls for specific staffing guidelines to be maintained, an increase in the flexibility of scheduling, and the distribution of non-nursing duties to the appropriate individuals, in an attempt to reduce workloads for nurses. Although these are only recommendations, the pressure is clearly on the government and healthcare centers to implement these changes. This researcher believes these recommendations are valid and worthy of implementation because they may equate with a reduction in burnout.

Janssen, De Jonge, and Bakker (1999), recommend the promotion of social support and coping mechanisms, through enhanced education and training, to enable

individuals to better handle stressful situations and thus prevent burnout. This approach, which may benefit nurses in Manitoba, should be explored more fully. However, programs such as the Employee Assistance Program (EAP), are available for nurses who may currently need some form of support network.

Um and Harrison (1998) recommend worker-supervisor sessions, in addition to support groups as a means to enhance an individuals ability to identify and manage stressors in the workplace. Although many nurses belong to various professional groups in Manitoba, the focus of these organizations generally do not address workplace issues. Therefore one might consider developing a support group for nurses, whereby they can develop strategies to assist nurses at risk and lobby for organizational change.

Several other work environment factors evolved from the study which can have implications for nursing practice. The issue of *control* was found to be correlated with both burnout and caring efficacy in the current study and may have important implications for nurses. Lowe (2001) identified control as an important issue to be addressed in improving the quality of the work environment. The issue of control was also found to be related to the "valuing of nurses" in the Work Life Task Force report (2001, p. 34). A lack of control may contribute to increased stress which eventually leads to the burnout phenomenon. In relation to caring efficacy, *control* can be seen as having some benefit in the promotion of the nurse/client relationship, as it may enable the nurse to have more flexibility in caring for clients.

One approach to the advancement of control for nurses may be enhanced through promotion of the roles and responsibilities of nurses in their clinical practice. This can be

accomplished by utilizing nurse practitioners in the clinical setting, as well as giving nurses a greater voice in the clinical decision making process. This approach would better utilize the individual nurse's critical thinking skills therefore making the nurse feel more valued in the clinical setting. In addition, developing protocols which the nurse can implement in conjunction with the care provided by medical staff, may enhance control and value for nurses.

*Control*, which is a reflection of one's autonomy, may be enhanced through fundamental changes in the work environment. Howard (1997) suggests that control can be enhanced through the promotion of professionalism, whereby individuals are mentored and supported by staff. In addition, Howard suggests that courses in psychology, personal development, death and dying, interpersonal communications, stress management, and assertiveness training be prerequisites in nursing educational programs. These approaches, although practical, require the support from all parties, including organizational, educational, and professional bodies. Enhancing the perceived control of nurses may not only reduce burnout, but may improve the quality of care provided to clients. Overall enhancing the participation of nurses in the decision making process can also be seen as a means to promote autonomy and control for nurses.

The issues of *value* and *reward*, which were found to be associated to several features of burnout and caring efficacy in the current study also have implications for nursing practice. Although they appear closely related, each represent important characteristics of nursing. Similar to the issues of control, workload, and social support, stress produced from a lack of *value* for nursing, and the *lack of rewards* obtained from

nursing, may contribute to the development of burnout. The resultant burnout may be reflected in a reduction in job satisfaction and job performance thus leading to substandard care.

The Work Life Task Force report (2001) recommends that nurses deserve better recognition for the roles they play in healthcare delivery, and that more autonomy and a greater voice in healthcare issues be provided. This enhanced recognition may address the issues of value, reward, and control for nurses, by promoting the image of nursing. This may be accomplished by the lobbying efforts of the professional organization, whereby the nurses role in the primary health care of Manitobans can be enhanced. Nurses potentially can independently coordinate the care of clients by using the nursing process of assessment, planning, implementation, and evaluation of the treatments necessary to maintain the health of individuals. Although this would require the medical profession to agree to this transfer of function, nurses can easily practice under the supervision of the governing body. In relation to clinical settings, nurses should be included in hospital practice committees to ensure the voice of the grassroots nurse is being heard. The findings from the current study would support the implementation of these recommendations.

Although the study did not determine what effect increased burnout might have on nursing practice, the study did demonstrate a link between burnout and reduction in caring efficacy. This association is indirectly supported by research which links burnout to a decline in the quality of patient care (Leiter, 1992 & Leiter, Harvie, and Frizzell, 1998). The reported trends in burnout and caring efficacy scores in the current study may have

clinical implications for all nurses. The younger, less experienced nurses, upon entering the profession are often burdened with the task of learning the job, rather than focusing on all the nuances of the nursing profession. According to the Work Life Task Force report (2001), the previous decline in the number of nursing graduates in addition to the reported stress and fatigue of older nurses, has contributed to the stress of younger nurses. There may also be a perception that older nurses have a reduced tolerance for the learning needs of inexperienced nurses. Therefore, a renewed commitment to the education of all staff, including strategies which focus on the orientation of newly graduated nurses as well as mentoring and preceptor programs for more experienced nurses may be one approach. A similar proposition is also outlined by the Work Life Task Force report, however their recommendations include reducing workloads of nurses who participate in this mentoring process. Although this workload reduction may be difficult to implement for logistical reasons, it is an important ideal to strive for.

In regards to nursing education, nursing programs and prospective employers must work together to re-evaluate the organizational structure of the education process of students, in an attempt to reduce the culture shock of newly graduated nurses. Students must be informed of the reality that not all nurses are employed in a community setting, and that nurses are still required to perform shift-work related duties in hospitals. Furthermore, more clinical experience is necessary to address for the learning needs of nursing students. The underlying proposition here is that the student nurses would become more integrated into the role of the clinical nurse, thus gaining confidence and clinical experience. This could be augmented through the establishment of a mentoring

process.

One of the most interesting findings gleaned from this study were the high depersonalization scores and reduced caring efficacy levels in emergency nurses. These findings have significant departmental and practice implications for nurses, clients, and healthcare organizations. The issue of public image, which is often reported as a concern for healthcare organizations, is of particular interest, as the emergency department is often the first point of contact that clients have during their hospitalization. The perception that nurses or nursing departments do not care, is not only a problem for the individual nurse, but for the overall image of the organization itself. Therefore, a commitment from all parties involved, including the government, in addressing the issues of workplace stress and the effects of burnout must be made, not only for emergency departments, but for all areas of nursing.

In relation to the healthcare reforms which have been around for the last 10 years, these reforms must be reevaluated in terms of the impact they have on current nursing practice. The general perception is that the quality of the work environment has dramatically deteriorated since the implementation of these reforms. The reported burnout and caring efficacy levels in the emergency department only verifies that the quality of the work environment is at a critical point. In addition, the burnout and caring efficacy levels in the current study also serves to confirm the media reports and this researchers own personal work experience with these healthcare reforms. An assessment of what works the best, and what does not, would facilitate further refinements to clinical practice units in an attempt to make them the best they can be.



In terms of the caring efficacy of nurses, which is a reflection of one's caring beliefs, it may be indirectly enhanced through the reduction of burnout. Although the current study cannot prove a causal relationship between burnout and caring efficacy, the findings do support some form of relationship. In comparing the findings of the emergency cohort with the maternal/child cohort, one might consider the methods by which care is delivered as impacting on the nurse/client relationship. The task-orientated nature of emergency nursing, in comparison to the primary care model in maternal/child, needs further exploration. Vlerick (1996) found that task-orientated care was associated with increased burnout levels. This finding supports the proposition that the task-orientated nature of emergency nurses contributes to burnout, and may also answer the question why maternal/child nurses reportedly experience less burnout.

In relation to caring efficacy specifically, primary care may foster the nurse/client relationship, while task-orientated care may not. In addition, the lower burnout scores and higher caring efficacy scores in maternal/child nurses, may be directly related to staffing issues, and the nuances of this type of nursing. The key issue for nursing practice would be to understand why there is a difference between areas, and exploit the positive aspects in an attempt to improve the overall nursing environment.

Based on the findings of Vlerick (1996), it may be suggested that the primary care model be implemented throughout hospital settings. Although it may not be realistic for an emergency department, admitted patients staying longer than 24 hours, could be treated under a primary care model. According to Vlerick, this would require several key factors including; the development of a multi-disciplinary change guidance team, the support and

participation of all employees, and an ongoing evaluation process. This researcher concurs with these recommendations, however prior to implementation specific strategies would need to be developed for Canadian nurses, as the dynamics of the European healthcare system is unknown.

There were several other patterns related to the recorded burnout levels and work characteristics in the respondent sample which may have implications for nursing practice. In particular, full-time employees reported lower burnout scores compared to part-time employees. However, one caveat that must be mentioned here is that the level of part-time status was not determined by the study. Therefore, one cannot determine the true association between part-time work and the development of burnout. Indirectly one might propose that nurses should work full-time, as this would keep nurses more abreast of what is occurring in their clinical area, as well as providing them an opportunity to develop enhanced nurse/client relationships.

Shift pattern and burnout also suggests that nurses work a permanent shift, rather than rotating back and forth, as burnout scores were reportedly lower in the permanent shift population. This finding supports the work of Coffey, Skipper, and Jung (1988), and Skipper, Jung, and Coffey (1990) where shift-work was associated with increased stress and health related issues. Recommendations made by both studies indicate that further research is needed to fully understand the true impact of shift-work. It would be beneficial for nurses to be given some choice in the decision making process in regards to work schedules. This recommendation concurs with the Work Life Task Force report (2001) and this researcher, in that the flexibility of scheduling of shifts for nurses be addressed.

This would include considerations for self-scheduling and job-sharing.

In relation to addressing the current increased levels of burnout in the respondent sample, the recommendations made within the research literature are aimed specifically at treating the causes of burnout. Burnout has been shown to be caused by recurrent stress. One study by Kivisto and Couture (1997) outlined a process which would enable nurses to manage stress in their daily lives. The processes described by Kivisto and Couture are applicable to dealing with acute stress, as well as to the burnout that develops in response to chronic stressful events.

Specifically, they identified three levels of intervention strategies to assist individuals in coping with the stress response. Firstly, beginning with a basic level of health promotion and enhancing one's own social support, an individual may learn to use their own coping skills more efficiently. Secondly, the individual experiencing increased levels of stress would be provided with more informed methods to deal with stress. These would include; self-help books and participation in self-help groups. The final approach is reserved for the most severe cases where the individual is directed to professional help. These approaches may currently be in place in Manitoba, but without the individual nurse recognizing that they are at risk for experiencing increased stress and burnout, these approaches would be of little benefit.

Two other approaches to addressing burnout may be of some benefit to nursing practice. These include the issue of organizational commitment and enhancing the characteristic of hardiness in nursing. Kalliath, O'Driscoll, and Gillespie (1998) proposed that by increasing an individuals organizational commitment, burnout can be directly

diminished. Specifically, Kalliath et al. believed commitment induces positive work attitudes and a desire to work hard for the organization. This work ethic potentially shields individuals from the effects of stress and burnout. Although Kalliath and associates do not speculate on how to improve organizational commitment, one might propose that an individual may become more committed to an organization which is supportive of its employees, promotes team work, and places importance on addressing workplace issues.

Hardiness, which was described in Chapter 3 as a potential buffer to stress and the development of burnout, is an issue with potential nursing implications as well. Findings from the work of McCranie, Lambert, and Lambert (1987); Sawatzky (1993); Simoni and Patterson (1997); and Wright, Blache, Ralph, and Luterman (1992), indicated that the characteristic of hardiness should be enhanced as a means to reduce the impact of stress and burnout on individuals. Specifically, it is suggested that the promotion of hardiness through education, administration, and research needs to be undertaken to fulfill this goal. It should be noted that besides the work of Sawatzky (1993), the hardiness concept as a means to reduce stress in Manitoba nurses has not been extensively researched. This approach may be worthy of further exploration as an intervention to reduce the impact of burnout.

Although the majority of the nursing implications have focused on addressing the nursing issues surrounding burnout with only minimal consideration of caring efficacy, this issue is nonetheless an essential component of this research study. The working hypothesis for the study was that burnout would impact on an individual's caring efficacy.

Therefore, many of the underpinnings to addressing burnout can ultimately impact on caring efficacy. The cross-sectional data obtained in the study however, does not tell us if burnout truly affects caring efficacy or if caring efficacy is impacting on burnout. In this regard, further research is required.

From the data, it has been identified that the caring efficacy of individuals may require time to develop, as the findings from the study did indicate an increasing trend in caring efficacy based on experience. It may be important to propose that this trend may reflect the normal maturation which occurs over one's career, which as previously described reflects Benner's Novice to Expert theory. In addition, we do not know if lower caring efficacy scores actually reflect reduced caring by nurses. However, research has shown that if burnout can impact on patient satisfaction with care, nurses experiencing increased burnout and lower caring efficacy potentially may have the same outcome. This assumption was not explored by the current study, although may be an important area for future research.

Another nursing implication gleaned from the study relates to the area of employment and caring efficacy. The reported variations in caring efficacy within various areas of nursing requires a more in-depth examination in an attempt to uncover why maternal/child nurses reportedly have higher caring efficacy, then, for example, emergency nurses. It may be proposed that caring efficacy actually is a reflection of the quality of the environment, whereby nurses with high caring efficacy practice in less stressful, uncrowded, and well-staffed environments. This idea is supported indirectly by this researchers working experience in a variety of clinical settings including maternal/child and

emergency areas.

It is important to note that it is reportedly possible for caring efficacy to be enhanced. Coates (1999), was able to show improvements in the caring efficacy of nurses by providing educational sessions to enhance professional development. The approach was to empower healthcare providers to develop an awareness of how their presence influences and impacts on clients and other staff members. This approach may have some benefit for nurses in Manitoba, in that it would attempt to empower all nurses to be the best they can be. The goal would be to bring all nurses up to an established level of caring efficacy faster than what would normally occur over time. Although team building workshops are often provided to staff, the focus is generally not to address workplace issues, but rather to enhance communication within and between units.

In summary, the implications for nursing practice outlined here can impact on all nurses currently working in the healthcare system in Manitoba. However, these implications are not limited to only those nurses experiencing increased burnout and reduced caring efficacy. The reported scores for both burnout and caring efficacy requires the attention of healthcare providers, organizations, and governments if improvements are to be made, and the recruitment and retention issue for nurses is to be resolved. Several recommendations regarding interventions have been made and the task will be to evaluate which ones will provide the most benefit for Manitoba nurses. The potential issue of who should pay for such programs has yet to be settled, but given the costs associated with increased sick time, absenteeism, and overtime, the responsibility clearly lies in the hands of the government and healthcare organizations.

To conclude, the strategies outlined are based primarily on the assumption that nursing is a stressful profession, and that the negative outcome of recurrent stress is the development of burnout. Burnout leads to incapacitation of the nurse which may have significant negative implications for nursing care and client outcomes. The overall commitment to care must extend beyond the individual care of clients to include the nursing profession.

### ***Limitations of the Study***

Overall, the limitations of the study are primarily related to the methodology and the conceptual framework. An exploratory descriptive study design was undertaken since variables within the conceptual framework lacked empirical testing, and the fact that no specific conceptual framework was found which could serve as a template for the study. For this purpose the original components of the conceptual framework had to be modified to encompass the concepts being explored. This modification was a new endeavour, with substantial risk due to the originality of the study's conceptual design. Although several favourable results were shown, the conceptual framework cannot be ruled out as a limitation to the overall study.

The small sample size was a significant limitation of the study as it limits the ability to generalize the findings. In addition, the cross-sectional design indicated only a *snapshot* of the current levels of the burnout phenomenon and caring efficacy. Therefore, findings from the study could not determine if changes were occurring in the levels of the two phenomenon. To gain a better understanding of what is happening to Canadian nurses in

general, and Manitoba nurses in particular, further longitudinal research with a larger sample is required.

Another limitation to this study was related to the response rate of 40%. Although this response rate is larger than the norm for mailed surveys, the absolute number of respondents was small. According to Bourque and Fielder (1995), "low response rates are the greatest disadvantage to mail surveys" (p.14). The response rate could be explained, in part, by the timing of the questionnaire mail-out. The mail-out occurred over the summer months when potential respondents may have been on vacation. In one instance the researcher was contacted by an anonymous respondent and informed that they did not fill out the survey specifically because of the holiday issue. In addition, the unobtrusive, plain brown envelope used for the mail-out cannot be discounted as a limitation to the study, since the survey may have been confused with *junk mail*.

The length of survey instruments included in the study package may have also contributed to the response rate. Four instruments, in addition to a demographic sheet, were provided to the potential respondents. In total, the survey was made up of more than 150 questions which made the survey rather lengthy. As well, it required 30-40 minutes of the participants time. Anecdotally, a potential respondent informed the researcher that they felt the survey was too long and that they did not wish to spend an inordinate amount of time to complete it.

Missing data on questionnaires also contributed to the study's limitation in terms of the statistical analysis. Interestingly, all of the questions not responded to were from the HRS section, which was the last survey in the package. This finding supports the idea



that the length of the survey may have contributed to the response rate. As well, the HRS contained the most questions and several questions repeated themselves from a variety of perspectives. However, one cannot rule out the fact that nurses may have been just too tired or *burnt-out* to complete it.

The issue of workplace stress and the concept of burnout are not new phenomena within the nursing population. Therefore, one might assume that individuals who were not sensitive to the issue of burnout chose not to participate. On the other hand, one might presume that extremely *burnt-out* nurses also chose not to participate. The sensitization issue may be a source of bias which impacted on the study results. In addition, the Worklife Task Force survey, which had been distributed to nurses in Manitoba in the months prior to this study's survey, may have also contributed to non-response. In this regard, it is impossible to know whether the non-respondents were sensitized to the research topic at hand or perhaps did not find the topic interesting enough to motivate participation. The true answer to this question cannot be determined due to the anonymity and confidentiality issues associated with the study protocol. Regardless of the reasons, the response rates make generalization of findings to the entire population of nurses in Winnipeg problematic.

Finally, the selection of survey instruments may be a major contributing factor to the overall lack of significant findings. In general, the reliability and validity of all instruments selected for this study appeared adequate, however the HRS, WLS, and CES instruments lacked extensive empirical testing, which created the greatest obstacle to the study. The proposed conceptual model and the selected survey instruments in this study

appeared legitimate in design, but ultimately may have been flawed in their application.

The HRS, which was the most problematic survey, was adapted from a study which examined both the home and work environments as predictors of health problems. Although it appeared congruent with the purpose of the study, its ability to measure objective stressors in the home environment is limited. The overall failure of the HRS to show significant associations between many of the study variables may be a function of this application. In other words, the home portion of the survey may not perform as well in isolation from the full survey.

In summary, several limitations have been identified in this study. Although researchers strive to control for limitations, it is often difficult to foresee all potential limitations which may impact on the results of the study.

### ***Recommendations for Future Research***

Future research on burnout and caring efficacy is required. The majority of this future research is based on the recommendations made in the discussion of the implications for nursing practice. In addition, a vast majority of researchers have identified the fact that the issue of burnout for the nursing profession will continue to be an ongoing problem, therefore a continuous evaluative process is required. According to Maslach and Leiter (1997) "...simply having the tools is not enough. You also need a great deal of patience and a commitment to keep the process on track" (p. 154).

The truth of this issue is that there are no simple solutions to the complex phenomenon of burnout. Consequently, future research should focus on reducing the

precursors to its development. In other words, future research should evaluate the effects of reducing workloads for nurses, in addition to promoting the key features of the work environment, including value, rewards, control, and social-support for nurses. The goal here will be to assess which are the most important features of the work environment, which can then be incorporated into educational programs to better prepare future nursing professionals.

In relation to the overall findings of the current study, the recorded levels of caring efficacy and burnout represent a *snapshot* of the current work environment, which provides baseline for future research. Accordingly, future research should examine the levels of burnout and caring efficacy, in different populations, throughout the province, after interventions aimed at prevention and promotion are implemented. This approach would include longitudinal studies where changes or trends may be detected after the interventions.

Subsequent research should also focus on uncovering specific stress factors within the specialized areas of nursing. This approach would aid in pinpointing the major sources of stressors associated with the development of burnout. This would include examining and comparing individual nursing units, to uncover strategies which will reduce burnout and enhance caring efficacy in specific areas. As well, research should also focus on high risk groups, such as emergency nurses, and explore the benefits of potential prevention and treatment programs for burnout, in addition to professional development programs designed to enhance caring efficacy.

Future research should also explore both the personal and work related

characteristics in both larger samples and longitudinally to examine if the subtle trends uncovered by the study findings are related to other yet undiscovered factors. In addition, a qualitative approach may be of benefit in an attempt to record the personal experiences of nurses working in healthcare today.

As it was not the intent of the current study to measure the outcomes of burnout and caring efficacy in terms of client care, further research is needed in this area as well. Research should examine if burnout directly impacts on the quality of care within hospital settings. The Caring Efficacy Scale (CES), which was a major contributor to the study should be included in any future research which examines patient satisfaction. The promising features of the CES could examine for congruence between the perception of care being provided by the nurses, with the recipients of care. Overall, the performance of the CES exceeded expectations, and would be used again by this researcher.

In relation to the other instruments utilized within the study, the Maslach Burnout Inventory (MBI) continues to perform in the way it was designed. Although there may be other instruments which can conceivably capture the essence of burnout in nursing, the proven track record of the MBI would be difficult to ignore in future research. In regards to the Work Life Survey (WLS), the study has contributed to its empirical usage which will ultimately strengthen its future as a reliable and valid tool in the assessment of the work environment. Alone or in combination with other instruments, future research into the work environment should include the WLS.

The lone disappointment in instrumentation for the study was in relation to the Home Responsibility Survey (HRS). It did not perform as well in relation to the other

tools, which may be the result of its inability to capture the nuances of the home environment necessary to operationalize the conceptual framework. Future research should reevaluate the HRS, in an attempt to refine its overall usefulness as a measurement tool.

In regards to the conceptual framework, further research is also required. Overall, the conceptual model was able to show several important associations between the study concepts. Further testing however, should include larger samples in an attempt to reduce the potential statistical errors from a small sample size. In addition, longitudinal research would assist in determining if a causal relationship exists within the conceptual design.

### ***Conclusion***

The examination of the phenomenon of burnout in relation to the concept of caring efficacy was a unique study without previous empirical testing. Although several iterations of ideas preceded the formulation of the research topic of this thesis, the final product was deemed well worth the time and effort. The study achieved the objectives outlined in Chapter 1 and substantiated the researcher's experience in his own clinical practice, and the anecdotal reports of others that nurses are feeling *burnt-out*.

This study explored the phenomenon of burnout and caring efficacy in a sample of nurses working in Winnipeg. The majority of respondents reported moderate levels of burnout across all sub-scales of the MBI, in addition to several important trends in the level of caring efficacy. The association between burnout and caring efficacy was confirmed by the statistical analyses. The multiple regression analysis indicated that

approximately 40 % of the variance in caring efficacy could be explained by the individual burnout sub-scales. Despite this finding, most respondents reported above average levels of caring efficacy, although the high level of caring efficacy may not truly reflect the care that clients actually received.

The overall findings were shown to have potential significant clinical implications for all parties, including nurses, healthcare organizations, and governments. The study also provided a unique insight into the complex world of healthcare in Winnipeg which has never been explored from this perspective. Several important work and home environment factors were identified in the course of this research study. While further longitudinal research is required, the results to date identified relevant strategies for nurses at risk which would need to be evaluated to determine the overall benefits for the nurses of Manitoba.

The conceptual model which was designed by modifying an existing model, served as a framework for the study. It performed well above expectations, although further testing of this adapted model is required. The study also contributed to the empirical testing of three instruments, with limited documented use. In regards to the Caring Efficacy Scale (CES), this study was only the second time outside of its developmental work that it had been used in a research study. In addition, this was the first time the CES was utilized in a cohort of Canadian nurses.

The personal benefits of undertaking this research study has provided me with an opportunity to learn the process of nursing research. In addition, I have a renewed appreciation for those nurse researchers who have gone before me and to those who are to

come.

In conclusion, it is suggested that by bringing an awareness of the association between burnout and caring efficacy to the forefront, the likelihood of interventional strategies, such as improving the work environment and promoting healthy home environments could ultimately reduce burnout and enhance the caring relationship between nurse and client. The ultimate goal of the nursing profession should be to maintain the caring ideals that remain the ultimate hallmark of the nursing profession.

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## **APPENDIX A**

### **THE CARING INSTRUMENT MATRIX**

**By: Jean Watson & Colleagues**

**Center for Human Caring**

**School of Nursing**

**University of Colorado**

**1997**

July 8, 1997 (revised)

Instrument Year Developed	Author Address Source Title	Year Journal	Developed to Measure	Instrument Description	Participants	Reported Reliability/ Validity	Watson's Theory /Carative Factors
Caring Assessment Instrument (Care-Q) (1984)	Patricia Larson DNSc, RN School of Nursing Dept. of Physiological Nursing,N611Y-Box 0610 San Francisco, CA 94143-0610  Important Nurse Caring Behaviors Perceived by Patients with Cancer	1984  Oncology Nursing Forum  11(6) 46-50	Identifies perceptions of nurse caring behaviors	Q-Sort 50 cards into 7 piles/ 7 pt. scale to prioritize perceptions of nurse caring behaviors	Patients (oncology) n=57	Expert panel test-retest  Content and face validity	Discussed in background of study
Care-Q	Patricia Larson DNSc, RN  Cancer Nurses' Perceptions of Caring	1986  Cancer Nursing  9(2) 86-91	Perceptions of nurse caring behaviors	Q-Sort	Nurses (oncology) n=57	See Larson 1984	
Care-Q	Patricia Larson DNSc, RN  Comparison of Cancer Patients & Professional Nurses' Perceptions of Important Nurse Caring Behaviors	1987  Heart & Lung  16(2) 187-192	Identifies nurse caring behaviors	Q-Sort	Nurses (oncology) n= 57  Patients (oncology) n=57	See Larson 1984	
Care-Q replication	D. Mayer MSN, RN Clin. Specialist, Mass. Gen. Hospital.  Oncology Nurses' Versus Cancer Patients' Perceptions of Nurse Caring Behaviors: A Replication Study	1987  Oncology Nursing Forum  14(3) 48-52	Evaluate nurse caring behaviors	Q-Sort	Nurses (oncology) n=28  Patients (oncology) n=54	Content and face validity  Test-retest reliability	Caring process

Instrument Year Developed	Author Address Source Title	Year Journal	Developed to Measure	Instrument Description	Participants	Reported Reliability/ Validity	Watson's Theory /Carative Factors
Care-Q	Nori Komorita PhD, RN Kathleen Doehring MS, RN Phyllis Hirschert, MS, RN Urbana Regional Program, College of Nursing, U. of Illinois, Urbana Perceptions of Caring by Nurse Educators	1991 Journal of Nursing Education 30(1) 23-29	Nurse educators' perceptions of caring behaviors	Q-Sort	Nurse Educators  n= 110	See Larson 1984	Refers to caring in nursing education
Care-Q	Antonia Mangold MSN, RN Oncology Clinical. Staff Nurse Thomas Jefferson University Hospital. Philadelphia, PA  Senior Nursing Students' & Professional Nurses' Perceptions of Effective Caring Behaviors: A Comparative Study	1991 Journal of Nursing Education  30(3) 134-139	Identifies and compares nsg students and RN's perception of caring behaviors	Q-Sort	Nursing Students n=30  Nurses n=30	See Larson 1984  Rest-retest reliability	Refers to Watson's 10 carative factors
Care-Q	Louise von Essen MS, Psychology Per-Olow Sjöden, PhD  Center for Caring Sciences, Uppsala University Akademiska Hospital, S- 751 85 Uppsala, Sweden  The Importance of Nurse Caring Behaviors as Perceived by Swedish Hospital Patients and Nursing Staff	1991  Internation al Journal of Nursing Studies  28(3) 267-281	Nurse caring behaviors as perceived by nurses and patients	Q-Sort  (Swedish Version)	Oncology, General Surgery, Orthopedic Patients n=81  Nurses n=105	No reliability or validity for Swedish version  See Larson 1981	Affective components of care and a caring relationship

Instrument Year Developed	Author Address Source Title	Year Journal	Developed to Measure	Instrument Description	Participants	Reported Reliability/ Validity	Watson's Theory /Carative Factors
Care-Q	Louise von Essen, MS, PhD Per-Olow Sjöden, PhD Center for Caring Sciences, Uppsala University Akademiska Hospital, S- 751 85 Uppsala, Sweden Patient & Staff Perceptions of Caring: Review & Replication	1991 Journal of Advanced Nursing 16 (11) 1363-1374	Perceived caring behaviors by nurses and patients	Q-Sort or same items on 7 point scale (Swedish Version)Replication of 1991 study Questionnaires with same items as Q-Sort	Nurses n=73  Medical/ pts.n=86	See von Essen & Sjoden 1991	Caring relationship
Care-Q	Kathryn Rosenthal, MS, RN University of Colorado Coronary Care Patients' & Nurses' Perceptions of important Nurse Caring Behaviors	1992 Heart & Lung  21(6) 536-539	Examines the relationship of patient- perceived and nurse- perceived caring behaviors	Q-Sort	Coronary nurses n=30 Coronary Pts. n=30	See Larson 1984 , 1987	Watson et al 1979 study mentioned in background
Care-Q	Louise von Essen Per-Olow Sjöden, Uppsala University, Sweden Perceived Importance of Caring Behaviors to Swedish Psychiatric Inpatients & Staff with Comparisons to Somatically-ill Samples	1993 Research in Nursing & Health 16 293-303	Nurse caring behaviors as perceived by psychiatric patients and staff with comparisons to somatically- ill patients	Q-Sort  Comparative study with Med/Surg Pts.  (Swedish Version) Modified (used free response format) for Psych. Pts.- meaning of items same	Mental Health Nurses n=63 (RN's, Psych.N, & Students)  Mental health patients n=61	Discussion of difficulty in reliability checks due to forced distribution characteristics  Discusses internal consistency using a free response format Content validity	

Instrument Year Developed	Author Address Source Title	Year Journal	Developed to Measure	Instrument Description	Participants	Reported Reliability/ Validity	Watson's Theory /Carative Factors
Caring Satisfaction (CARE/SAT) (1993)	Patricia Larson DNSc, RN School of Nursing Dept. of Physiological Nursing, N611Y-Box 0610 San Francisco, CA 94143-0610  Patients' Satisfaction With Nurses' Caring During Hospitalization	1993  Western Jrl. Of Nursing Res. 15(6)  690-707	Patients' perceptions of their nursing care	Revised CARE-Q: original 50 items incorporated into visual analog scale; add'l. 21 items added to measure patient satisfaction	Patients n=268	Cronbach's alpha: .94  Construct validity: Pearson correlation coefficient (significant at p=.05) between CARE/SAT and Risser Patient Questionnaire (r=.80, n=40)	Caring Process  See Larson, 1984
Caring Behaviors Inventory (CBI) (1981 & 83)	Zane Wolf PhD School of Nursing LaSalle University 1900 West Olney Ave. Philadelphia, PA 19141  The Caring Concept & Nurse Identified Caring Behaviors	1986  TCN  8(2)  84-93	Words evident in caring situations (actions and attitudes)	75 caring words/phrases ranked  4 point Likert	Nurses n=97	Content validity	Strongly influenced by Watson's Theory  Refers to 10 carative factors
CBI revised	Zane Wolf  E.R. Giardino  P.A. Osborne  M.S. Ambrose  Dimensions of Nurse Caring	1994  Image  26(2)  107-111	Process of caring	Exploratory factor analysis  5 factors  43 items  4 point Likert Suggests using 6 pt. Likert	Nurses n=278  Patients n=263	Test-retest =.96 (nurse)  int.=.96 (nurse & patient)  Content and construct validity	Influenced by Watson's Theory  Refers to 10 carative factors

Instrument Year Developed	Author Address Source Title	Year Journal	Developed to Measure	Instrument Description	Participants	Reported Reliability/ Validity	Watson's Theory /Carative Factors
CBA (revised)	Kathleen Huggins MSN, RN William Gandy EdD Catherine Kohut  Baptist Memorial Hospital, Memphis, TN  Emergency Department Patient Perceptions of Nurse Caring Behaviors	1993 Heart & Lung  22(4)  356-364	Patient's perceptions of nurse caring behaviors	Modified for phone survey & emergency patients  65 items 4 point ordinal 6 subscales	Emergency Patients n=288	See Cronin & Harrison 1988	9 carative factors
Professional Caring Behaviors	Sharon D. Horner, PhD, RN  University of Texas at Austin  1700 Red River  Austin TX 78701-1499	1989  1991	Perceptions of nurse caring behaviors	4 open ended questions  28 items	Patients  n=356	Test Re-test .81  Cronbach's alpha: .92 and .94  Pearson R .001  Dissatisfied with forced choice	Knowledge of theory
Professional Caring Behaviors  (Form A & B)  (1989)	Elizabeth Harrison MS, RN Staff Nurse IV Department of Nursing St. Joseph's Hospital Milwaukee, Wisconsin  Nurse caring and the new health care paradigm	1995  Journal of Nursing Care Quality   9(4)  14-23	Perceptions of nurse caring behaviors by families of inpatient hospice clients	28 item   4 point Likert	Nurses (inpatient Hospice) n=16   Family members of hospice patients  n=15	Content Validity   Test-retest reliability Cronbach's alpha	Knowledge of theory:  Caring as a fundamental value - a guide to nursing actions and decision-making

Instrument Year Developed	Author Address Source Title	Year Journal	Developed to Measure	Instrument Description	Participants	Reported Reliability/ Validity	Watson's Theory /Carative Factors
Caring Assessment Tool (CAT)	J.R. Duffy DNSc.  The Impact of Nurse Caring on Patient Outcomes  chapter in Gaut, <u>The Presence of Caring in Nursing</u>	1992 in Gaut  NLN  113-136	Patient's perceptions of nurse caring behaviors	100 items  5 point Likert	Med/Surg Pts.  N=86S	Content validity  Test-retest reliability	Based on Watson's Theory
CAT-A  (administrator form)  (1992)	Joanne R. Duffy DNSc  Apache Medical Systems, Inc. 1650 Tyson Blvd, Suite 300 McLean, VA 22102-3915  Caring Behaviors of Nurse Managers: Relationship to Staff Nurse Satisfaction & Retention. In Gaut, <u>A Global Agenda for Caring</u>	1993 in Gaut  NLN  365-378	CAT-A  Modified for nurses perception of nurse managers' caring behaviors and relation-ship between these behaviors and staff nurse satisfaction and turnover	94 items  5 point Likert	Nurses  n=56	Cronbach's alpha	Based on Watson's Theory/Carative Factors
Peer Group Caring Interaction Scale (PGCIS) (1993)	Linda Hughes, PhD, RN  Wichita State University School of Nursing 1845 N. Fairmont Wichita, KS 67260  Peer Group Interactions and the Student-perceived Climate for Caring	1993  Journal of Nursing Education  32(2) 78-83	Climate of caring perceived among student peer group	16 items  6 point Likert  2 subscales 216	N=873 BSN students at 87 schools	Cronbach's alpha  Factor analysis  Convergent & divergent validity	Mentions caring and nursing practice



Instrument Year Developed	Author Address Source Title	Year Journal	Developed to Measure	Instrument Description	Participants	Reported Reliability/ Validity	Watson's Theory /Carative Factors
Care/Satisfaction Questionnaire (Castre - SAT)  (1993) remake of Care-Q	Patricia Larson DNSc, RN  Sandra Ferketich PhD, RN College of Nursing, University of Arizona, Tucson, AZ  Patients' Satisfaction with Nurses' Caring During Hospitalization	1993  Western Journal of Nursing Research 15(6) 690-707	Patient satisfaction of nursing care	Descriptive correlational study  Visual analog scale (VAS)  100 cm.  (anchored 1-10)  29 items	Patients  N=268	Cronbach's alpha  Construct and concurrent validity  Factor analysis	
Caring Efficacy Scale  long version  (1994, original in 1992)	Carole Coates PhD  1441 Snowmass Ct. Boulder, CO 80303 Phone/FAX (303) 499-5756	1995 Report to NLN	Caring Attitudes, Skills, Behaviors	Original had 46 items  Long Version (A&B has 30 items)  Short Version (supervisor form 12 items)  6 pt Likert	Students, Preceptors, Supervisors, Alumni	Cronbach's alpha = .85 Version A, .88 Version B Short form alpha .84-.87  Factor analysis  Additional FA and correlation matrix in progress	Influenced by Watson's Theory

Jean Watson & Colleagues, CHC  
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Health Sciences Center  
University of Colorado

## APPENDIX B

### WATSON'S CARATIVE FACTORS

1. Forming and acting from a humanistic-altruistic system of values;
2. Enabling and sustaining faith-hope;
3. Sensitivity to self and others;
4. Developing helping-trusting, caring relationships (seeking transpersonal connection);
5. Promoting and accepting the expression of positive and negative feelings and emotions;
6. Engaging in creative, individualized, problem-solving caring process;
7. Promoting transpersonal teaching-learning;
8. Attending to supportive, protective, and or corrective, mental, physical, societal, and spiritual environment;
9. Assisting with gratification of basic human needs, while preserving human dignity and wholeness;
10. Allowing for, being open to, existential-phenomenological and spiritual dimensions of caring and healing which cannot be fully explained through the western mind of modern society.

## **APPENDIX C**

### **SURVEY PACKAGE**

Christina Maslach • Susan E. Jackson

## MBI Human Services Survey

The purpose of this survey is to discover how various persons in the human services or helping professions view their jobs and the people with whom they work closely. Because persons in a wide variety of occupations will answer this survey, it uses the term *recipients* to refer to the people for whom you provide your service, care, treatment, or instruction. When answering this survey please think of these people as recipients of the service you provide, even though you may use another term in your work.

On the following page there are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way *about your job*. If you have *never* had this feeling, write a "0" (zero) before the statement. If you have had this feeling, indicate *how often* you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. An example is shown below.

### Example:

HOW OFTEN:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

### HOW OFTEN

0 - 6

Statement:

\_\_\_\_\_ I feel depressed at work.

If you *never* feel depressed at work, you would write the number "0" (zero) under the heading "HOW OFTEN." If you *rarely* feel depressed at work (a few times a year or less), you would write the number "1." If your feelings of depression are fairly frequent (a few times a week, but not daily) you would write a "5."



**Consulting Psychologists Press, Inc.**

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## ***MBI Human Services Survey***

HOW OFTEN:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

**HOW OFTEN**  
0 - 6

Statements:

1. \_\_\_\_\_ I feel emotionally drained from my work.
2. \_\_\_\_\_ I feel used up at the end of the workday.
3. \_\_\_\_\_ I feel fatigued when I get up in the morning and have to face another day on the job.
4. \_\_\_\_\_ I can easily understand how my recipients feel about things.
5. \_\_\_\_\_ I feel I treat some recipients as if they were impersonal objects.
6. \_\_\_\_\_ Working with people all day is really a strain for me.
7. \_\_\_\_\_ I deal very effectively with the problems of my recipients.
8. \_\_\_\_\_ I feel burned out from my work.
9. \_\_\_\_\_ I feel I'm positively influencing other people's lives through my work.
10. \_\_\_\_\_ I've become more callous toward people since I took this job.
11. \_\_\_\_\_ I worry that this job is hardening me emotionally.
12. \_\_\_\_\_ I feel very energetic.
13. \_\_\_\_\_ I feel frustrated by my job.
14. \_\_\_\_\_ I feel I'm working too hard on my job.
15. \_\_\_\_\_ I don't really care what happens to some recipients.
16. \_\_\_\_\_ Working with people directly puts too much stress on me.
17. \_\_\_\_\_ I can easily create a relaxed atmosphere with my recipients.
18. \_\_\_\_\_ I feel exhilarated after working closely with my recipients.
19. \_\_\_\_\_ I have accomplished many worthwhile things in this job.
20. \_\_\_\_\_ I feel like I'm at the end of my rope.
21. \_\_\_\_\_ In my work, I deal with emotional problems very calmly.
22. \_\_\_\_\_ I feel recipients blame me for some of their problems.

(Administrative use only)

cat.

cat.

cat.

EE: \_\_\_\_\_ DP: \_\_\_\_\_ PA: \_\_\_\_\_

## SECTION B

**Instructions:** When completing these items, think of your work in clinical settings with clients. Complete the following scale based on your work with clients or patients. Please indicate your degree of agreement with each item. (Circle the number which best expresses your opinion.) If the item does not apply, mark NA in the margin. 241

### Rating Scale:

-3 strongly disagree	+1 slightly agree
-2 moderately disagree	+2 moderately agree
-1 slightly disagree	+1 strongly agree

		strongly disagree				strongly agree	
1.	I do not feel confident in my ability to express a sense of caring to my clients/patients.	-3	-2	-1	+1	+2	+3
2.	If I am not relating well to a client/patient, I try to analyze what I can do to reach him/her.	-3	-2	-1	+1	+2	+3
3.	I feel comfortable in touching my clients/patients in the course of care giving.	-3	-2	-1	+1	+2	+3
4.	I convey a sense of personal strength to my clients/patients.	-3	-2	-1	+1	+2	+3
5.	Clients/patients can tell me most anything and I won't be shocked.	-3	-2	-1	+1	+2	+3
6.	I have an ability to introduce a sense of normalcy in stressful conditions.	-3	-2	-1	+1	+2	+3
7.	It is easy for me to consider the multi-facets of a client's/patient's care, at the same time as I am listening to them.	-3	-2	-1	+1	+2	+3
8.	I have difficulty in suspending my personal beliefs and biases in order to hear and accept a client/patient as a person.	-3	-2	-1	+1	+2	+3
9.	I can walk into a room with a presence of serenity and energy that makes clients/patients feel better.	-3	-2	-1	+1	+2	+3
10.	I am able to tune into a particular client/patient and forget my personal concerns.	-3	-2	-1	+1	+2	+3
11.	I can usually create some way to relate to most any client/patient.	-3	-2	-1	+1	+2	+3
12.	I lack confidence in my ability to talk to clients/patients from backgrounds different from my own.	-3	-2	-1	+1	+2	+3
13.	I feel if I talk to clients/patients on an individual, personal basis, things might get out of control.	-3	-2	-1	+1	+2	+3

		strongly disagree					strongly agree
		-3	-2	-1	+1	+2	+3
14.	I use what I learn in conversations with clients/patients to provide more individualized care.						
15.	I don't feel strong enough to listen to the fears and concerns of my clients/patients.	-3	-2	-1	+1	+2	+3
16.	Even when I'm feeling self-confident about most things, I still seem to be unable to relate to clients/patients.	-3	-2	-1	+1	+2	+3
17.	I seem to have trouble relating to clients/patients.	-3	-2	-1	+1	+2	+3
18.	I can usually establish a close relationship with my clients/patients.	-3	-2	-1	+1	+2	+3
19.	I can usually get patients/clients to like me.	-3	-2	-1	+1	+2	+3
20.	I often find it hard to get my point of view across to patients/clients when I need to.	-3	-2	-1	+1	+2	+3
21.	When trying to resolve a conflict with a client/patient, I usually make it worse.	-3	-2	-1	+1	+2	+3
22.	If I think a client/patient is uneasy or may need some help, I approach that person.	-3	-2	-1	+1	+2	+3
23.	If I find it hard to relate to a client/patient, I'll stop trying to work with that person.	-3	-2	-1	+1	+2	+3
24.	I often find it hard to relate to clients/patients from a different culture than mine.	-3	-2	-1	+1	+2	+3
25.	I have helped many clients/patients through my ability to develop close, meaningful relationships.	-3	-2	-1	+1	+2	+3
26.	I often find it difficult to express empathy with clients/patients.	-3	-2	-1	+1	+2	+3
27.	I often become overwhelmed by the nature of the problems clients/patients are experiencing.	-3	-2	-1	+1	+2	+3
28.	When a client/patient is having difficulty communicating with me, I am able to adjust to his/her level.	-3	-2	-1	+1	+2	+3
29.	Even when I really try, I can't get through to difficult clients/patients.	-3	-2	-1	+1	+2	+3
30.	I don't use creative or unusual ways to express caring to my clients/patients.	-3	-2	-1	+1	+2	+3

## Section C

Thinking of your primary place of employment please use the following rating scale to indicate the extent to which you agree with the following statements.

Strong Disagree 1	Disagree 2	Hard to Decide 3	Agree 4	Strongly Agree 5
-------------------------	---------------	------------------------	------------	------------------------

1.	I do not have time to do the work that must be done.	1	2	3	4	5
2.	I work intensely for prolonged periods of time.	1	2	3	4	5
3.	After work I come home too tired to do the things I like to do.	1	2	3	4	5
4.	I have so much work to do on the job that it takes me away from my personal interests.	1	2	3	4	5
5.	I have enough time to do what's important in my job.	1	2	3	4	5
6.	I leave work behind when I go home at the end of the workday.	1	2	3	4	5
7.	I have control over how I do my work.	1	2	3	4	5
8.	I can influence management to obtain the equipment and space I need for my work.	1	2	3	4	5
9.	I have professional autonomy/independence in my work.	1	2	3	4	5
10.	I receive recognition from others for my work.	1	2	3	4	5
11.	My work is appreciated.	1	2	3	4	5
12.	My efforts usually go unnoticed.	1	2	3	4	5
13.	I do not get recognized for all the things I contribute.	1	2	3	4	5
14.	People trust one another to fulfill their roles.	1	2	3	4	5
15.	I am a member of a supportive work group.	1	2	3	4	5
16.	Members of my work group cooperate with one another.	1	2	3	4	5
17.	Members of my work group communicate openly.	1	2	3	4	5
18.	I don't feel close to my colleagues.	1	2	3	4	5
19.	Resources are allocated fairly here.	1	2	3	4	5
20.	Opportunities are decided solely on merit.	1	2	3	4	5
21.	There are effective appeal procedures available when I question the fairness of a decision.	1	2	3	4	5



## Section C - Continued

	Strong Disagree 1	Disagree 2	Hard to Decide 3	Agree 4	Strongly Agree 5
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					

**SECTION D**

The following questions will consider your home experiences, it is important to answer all questions as accurately as possible. Additional comments can be added on a separate piece of paper.

- 1) Do you feel your home life affects your work?  
No \_\_\_ Yes \_\_\_ if yes in what ways ? \_\_\_\_\_

- 2) Thinking of an **AVERAGE WEEK**, to what extent do you perform the following **HOMEMAKING** activities? (Enter the number which best applies to each of your responses).

NONE/ ALMOST NONE	ABOUT ONE QUARTER	ABOUT ONE HALF	ABOUT THREE QUARTERS	ALL / ALMOST ALL	N/A
1	2	3	4	5	0

- A. Meal preparation \_\_\_\_\_
- B. Home improvements \_\_\_\_\_
- C. Planning household budget \_\_\_\_\_
- D. Paying bills \_\_\_\_\_
- E. Caring for children \_\_\_\_\_
- F. Caring for dependant adults \_\_\_\_\_
- G. Supervising school work \_\_\_\_\_
- H. Grocery shopping \_\_\_\_\_
- I. Taking out the garbage \_\_\_\_\_
- J. Dish washing \_\_\_\_\_
- K. Laundry \_\_\_\_\_
- L. Ironing \_\_\_\_\_
- M. Indoor cleaning \_\_\_\_\_
- N. Outdoor jobs \_\_\_\_\_
- O. Maintaining/ repairs to car \_\_\_\_\_
- P. House/apartment repairs and maintenance \_\_\_\_\_

- 3) **ON AVERAGE** how many hours per week do you spend on home making activities? \_\_\_\_\_ hrs per week.
- 4) In an **AVERAGE WEEK** when you are not sleeping , working, doing chores around the house, etc., how much time do you have left to do as you please? \_\_\_\_\_ hrs per week.

- 5) **IN THINKING ABOUT YOUR HOME LIFE**, to what extent, if any, do you experience **CONTROL** over the following: (Enter the number which best applies to your response)

NONE/HARDLY ANY 1	SOME 2	A LOT 3	ALMOST COMPLETE 4	DOES NOT APPLY 0
-------------------------	-----------	---------------	-------------------------	------------------------

- A. Use of household income \_\_\_\_  
 B. Use of your time \_\_\_\_  
 C. Setting your own goals \_\_\_\_  
 D. Managing competing demands \_\_\_\_

- 6) In thinking about your **HOME RESPONSIBILITIES**, to what extent, if any, is each of the following a **CONCERN**: (Enter the number which best applies to each of your responses)

NOT AT ALL A CONCERN 1	SOMEWHAT A CONCERN 2	A CONSIDERABLE CONCERN 3	AN EXTREME CONCERN 4	DOES NOT APPLY 0
------------------------------	----------------------------	--------------------------------	----------------------------	------------------------

- A. Not enough free time for family \_\_\_\_  
 B. Not enough free time for yourself \_\_\_\_  
 C. Having to structure or plan your time \_\_\_\_  
 D. Disliking housework \_\_\_\_  
 E. A lack of challenge \_\_\_\_  
 F. Not being able to set your own goals \_\_\_\_  
 G. Having little control over the family budget \_\_\_\_  
 H. Lack of appreciation of all the work you do \_\_\_\_  
 I. Having to divide yourself up in pieces and juggle things \_\_\_\_  
 J. Not contributing enough to the family income \_\_\_\_  
 K. Being too available to other people \_\_\_\_

- 7) In thinking about your **HOME RESPONSIBILITIES**, to what extent, if any, is each of the following **REWARDING**: (Enter the number which best applies to your response)

NOT AT ALL REWARDING 1	SOMEWHAT REWARDING 2	CONSIDERABLY REWARDING 3	EXTREMELY REWARDING 4	DOES NOT APPLY 0
------------------------------	----------------------------	--------------------------------	-----------------------------	------------------------

- A. Being free to make your own schedule \_\_\_\_  
 B. Having enough time and energy to enjoy your children/partner \_\_\_\_  
 C. Doing creative things around the house \_\_\_\_  
 D. Having the amount of responsibilities you can handle \_\_\_\_  
 E. Keeping the house looking nice and cared for \_\_\_\_  
 F. The appreciation you get from your family \_\_\_\_  
 G. A sense of competence, of being good at what you do \_\_\_\_  
 H. Being able to pursue your interests \_\_\_\_  
 I. Having other people enjoy your home \_\_\_\_  
 J. Being available to do things for others \_\_\_\_

- 8) Taking all things into account, **HOW STRESSFUL** do you consider your life to be?  
(Please circle the number of your answer.)

VERY STRESSFUL	1	2	3	4	5	NOT AT ALL STRESSFUL
----------------	---	---	---	---	---	----------------------

Why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Instruction: If you have a partner or spouse, please answer question 9, otherwise, go to question 10.**

- 9) In thinking about your relationship with your partner or spouse, please answer the following questions:  
(Please circle the number of your answer.)

A. To what extent do you talk to him/her about things that worry you?

NOT AT ALL	1	2	3	4	5	VERY OFTEN
------------	---	---	---	---	---	------------

B. To what extent do you feel you can talk to him/her quite easily?

NOT AT ALL EASILY	1	2	3	4	5	VERY EASILY
-------------------	---	---	---	---	---	-------------

C. To what extent does he/she understand the demands of your work?

NOT AT ALL UNDERSTANDING	1	2	3	4	5	VERY UNDERSTANDING
-----------------------------	---	---	---	---	---	-----------------------

D. How well do you and your partner/spouse get along in general?

NOT AT ALL WELL	1	2	3	4	5	VERY WELL
-----------------	---	---	---	---	---	-----------

E. To what extent do you wish you could confide in him/her?

NOT AT ALL	1	2	3	4	5	VERY MUCH SO
------------	---	---	---	---	---	--------------

- 10) Do you have someone **OTHER THAN A PARTNER** in whom you can confide (e.g. friend, relative, etc.)? (Circle response)

NO YES

**Instruction: If YES, please answer the following questions 11- 14. If no go to question 15**

- 11) To what extent do you talk to him/her about things that worry you?

NOT AT ALL	1	2	3	4	5	VERY OFTEN
------------	---	---	---	---	---	------------

- 12) To what extent does he/she understand the demands of your work?

NOT AT ALL						VERY
UNDERSTANDING	1	2	3	4	5	UNDERSTANDING

- 13) Is this person : (Circle response).

- A. A friend at work?  
 B. A friend outside work?  
 C. A relative?  
 D. Other? (Please specify). \_\_\_\_\_

- 14) Is this person male or female? (Circle response).

- A. Male  
 B. Female

- 15) Do you expect to make any of the following changes in the near future?

(Please enter the number in the column that best applies to you.)

- A. Getting married or living with a partner \_\_\_\_  
 B. Becoming a parent \_\_\_\_  
 C. Going back to school \_\_\_\_  
 D. Changing your job within nursing \_\_\_\_  
 E. Leaving nursing for another job \_\_\_\_  
 F. Stopping / retiring from work \_\_\_\_  
 G. Getting divorce /leaving partner \_\_\_\_  
 H. Changing the numbers of hours a week you work \_\_\_\_

NO	YES	UNDECIDED
1	2	3

This completes section D of the survey. The following questions will consider basic demographic information about yourself.

### SECTION E Demographics

- 1) What is your age? \_\_\_\_-in years
- 2) Gender. Male\_\_\_\_ Female\_\_\_\_
- 3) Marital status?
1. Single\_\_\_\_
  2. Married or common law\_\_\_\_
  3. Separated\_\_\_\_
  4. Divorced\_\_\_\_
  5. Widowed\_\_\_\_
- 4) Do you have dependants whom you are responsible for? Yes\_\_\_\_ No\_\_\_\_
- If yes, how many living with you? \_\_\_\_ how many living out side home \_\_\_\_
- 5) How long have you been nursing? \_\_\_\_-in years

- 6) What type of Nursing is your main / primary area of expertise?
1. Emergency \_\_\_\_\_
  2. Medical / Surgical \_\_\_\_\_
  3. Critical care/ ICU \_\_\_\_\_
  4. Geriatrics \_\_\_\_\_
  5. Mat/child \_\_\_\_\_
  6. Rehab \_\_\_\_\_
  7. Other \_\_\_\_\_
- 7) What type of shift pattern do you most frequently work?
1. Straight days \_\_\_\_\_
  2. Straight evenings \_\_\_\_\_
  3. Straight nights \_\_\_\_\_
  4. Days / nights \_\_\_\_\_
  5. Days / evenings \_\_\_\_\_
  6. Other: Please describe \_\_\_\_\_
- 8) What position do you work / hold?
1. Full time \_\_\_\_\_
  2. Part time \_\_\_\_\_
  3. Casual \_\_\_\_\_ if Casual do you work in more than one place?  
Yes \_\_\_\_\_ No \_\_\_\_\_  
If yes, how many \_\_\_\_\_ ( record number)
  4. Other: please specify. \_\_\_\_\_
- 9) What type of shift do you work? 8 hour \_\_\_\_\_ 12 hour \_\_\_\_\_ other \_\_\_\_\_
- 10) How long have you worked at your present institution?(circle your response)
- |        |        |       |       |       |       |       |           |
|--------|--------|-------|-------|-------|-------|-------|-----------|
| 0-6    | 7-11   | 1-2   | 3-5   | 6-10  | 11-15 | 16-20 | 21+ years |
| months | months | years | years | years | years | years |           |
- 11) How long have you worked in your present job?(circle your response)
- |        |        |       |       |       |       |       |           |
|--------|--------|-------|-------|-------|-------|-------|-----------|
| 0-6    | 7-11   | 1-2   | 3-5   | 6-10  | 11-15 | 16-20 | 21+ years |
| months | months | years | years | years | years | years |           |

Thank you for your participation, this completes the Survey. Please check over your answers carefully to ensure that you have not missed any questions as your views are extremely important to this research study. Place the completed survey in the self addressed envelope which has been provided for you . If you are interested in a summary copy of the results of this study please record your mailing address only at the bottom of this form.

☐ yes I am interested in a copy of the results. Address \_\_\_\_\_  
City / Town \_\_\_\_\_  
Postal code \_\_\_\_\_

## APPENDIX D

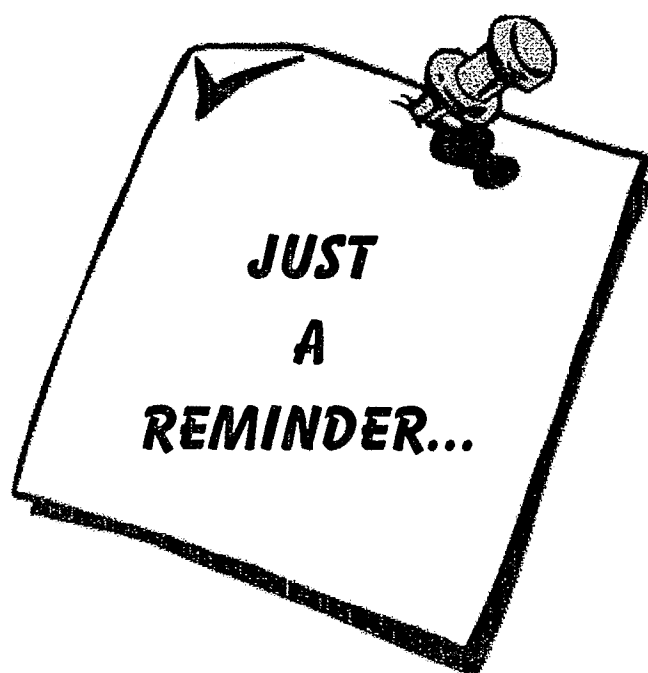
### THE REMINDER POSTCARD

Dear Colleague,

You recently received a survey package from myself. JUST A REMINDER that your experience is important to the survey results. Please submit your completed surveys by (date here).

Thank you for your participation.

If you have any questions or concerns please call:  
Marshall Lawrence @



## APPENDIX E

## THE APPROVAL CERTIFICATE



UNIVERSITY  
OF MANITOBA

Office of the President

Office of Research Services  
244 Engineering Building  
Winnipeg, MB R3T 5V6  
Canada  
Telephone: (204) 474-8418  
Fax: (204) 261-0325

## APPROVAL CERTIFICATE

03 July 2001

**TO:** Marshall Lawrence  
Principal Investigator

**FROM:** Lorna Guse, Chair  
Education/Nursing Research Ethics Board (ENREB)

**Re:** Protocol #E2001:051  
"An Exploratory Study of the Relationship between Burnout and  
Caring Efficacy in Nurses working in an Urban Setting"

Please be advised that your above-referenced protocol has received human ethics approval by the **Education/Nursing Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.



## **APPENDIX F**

### **COVER LETTER**

Dear Colleague

My name is Marshall Lawrence. I am a registered nurse with over fifteen years of experience working as a nurse in Manitoba. I am currently a graduate student in the Masters of Nursing program at the University of Manitoba. I will be undertaking a thesis as partial fulfilment of the requirements of the Graduate Program. The purpose of the thesis is to study the impact of the work environment and nursing care provided by nurses working in Winnipeg hospitals.

You have been randomly selected by the Manitoba Association of Registered Nurses to participate in this important research study, and your participation will be a valuable contribution to the study. It is my goal to survey, a random sample of nurses from across the city. MARN has undertaken to mail this survey to you, I will not be aware of who has been sent this package. Your responses to this survey will be completely anonymous. It is my desire, as a result of this research, to understand more thoroughly the impact that nursing in Winnipeg has on nurses as a collective group.

The study will involve completing four short questionnaires which will take approximately 30 - 45 minutes of your time. In addition some basic demographic questions will follow asking you to describe where you are employed, years of experience, and type of nursing you perform. Your answers will be kept completely confidential and as mentioned above, your identity will not be disclosed to me the principle investigator. At no time can your identity be linked to the response surveys. Simply complete the survey and return it in the self addressed envelope provided with the survey package.

Participation in this study is completely voluntary, but I believe this study is an important issue for all nurses in Winnipeg and this province. Consent to participate will be assumed by you returning the completed survey. The results and data collected will be

kept for a period of seven years at which time data sheets will be shredded. Access to the data will be limited to myself, the principle investigator, the statistician working on the project, and my thesis committee.

My committee consists of Dr. Barbara Naimark (Associate Professor, University of Manitoba), Dr. Joanne Sawatzky (Assistant Professor, University of Manitoba), and Dr. John Walker (St. Boniface General Hospital).

The final results will be published and arrangements can be made for you to receive a summary copy if you so desire. Please complete the request on the last page of the survey or contact myself or the thesis chair at the provided addresses. Please mail your completed survey to myself by August 15<sup>th</sup> 2001. Anyone wishing additional information can contact the principle investigator at the address provided below, or the Chair of my Thesis Committee, Dr. Barbara Naimark at 474-7467.

**This research has been approved by the Education Nursing Research Ethics Board. If you have any concerns or complaints about this project, you may contact the Human Ethics Secretariat at 474-7122.**

Thank you in advance for your participation,

Marshall Lawrence