

California State University, San Bernardino

CSUSB ScholarWorks

Theses Digitization Project

John M. Pfau Library

2007

Student nurse perceptions on commuting related to ontime arrival at clinical experiences

Paula Spencer

Follow this and additional works at: <https://scholarworks.lib.csusb.edu/etd-project>



Part of the [Nursing Commons](#)

Recommended Citation

Spencer, Paula, "Student nurse perceptions on commuting related to ontime arrival at clinical experiences" (2007). *Theses Digitization Project*. 3243.

<https://scholarworks.lib.csusb.edu/etd-project/3243>

This Thesis is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.

STUDENT NURSE PERCEPTIONS ON COMMUTING RELATED
TO ONTIME ARRIVAL AT CLINICAL EXPERIENCES

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Nursing

by
Paula Spencer

June 2007

STUDENT NURSE PERCEPTIONS ON COMMUTING RELATED
TO ONTIME ARRIVAL AT CLINICAL EXPERIENCES

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

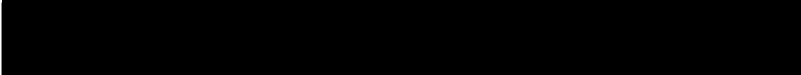
by
Paula Spencer
June 2007

Approved by:


Mary Molje, RN, PhD, APRN, BC, Chair, Nursing

Date


Donna Rane-Szostak, RN, EdD, APRN, BC


Marilyn Smith-Stoner, RN, PhD, CHPN

ABSTRACT

California State University San Bernardino is a commuter-based university, and with that commute comes unique challenges. Student nurses at CSUSB are drawn from many communities, many of them commuting long distances or times to attend school. Most drivers, including these nursing students, may encounter stressful situations during the commute such as delays in drive time, extended commuting distances, road hazards, or vehicular breakdown; this experience is becoming increasingly prevalent. Add to the daily experience of travel, the expectation by faculty of timely arrival by the students to the off-campus clinical sites, and the risk of elevated stress is further compounded. Using a purposive, convenience sample of seventy-two nursing students recruited from the undergraduate student nurse population at California State University San Bernardino, this descriptive, pilot study explores the perceptions of CSUSB student nurses related to their commuting and timely arrival at clinical sites. Using a mixed methods survey methodology, this study found that as students' commute time to clinical sites increased, their perceptions of the congestion increased, as did their perceived stress of the commute.

ACKNOWLEDGMENTS

I wish to thank the faculty and staff in the California State University San Bernardino Nursing Department. Each of you has taught me something of lasting significance that I will take with me, about the art and science of nursing education.

To my fellow MSN students: we have been through much these last two years together. I could never have made it without you.

To my committee: I give you my deepest appreciation and respect. Your countless hours of devotion to the student nurses do not go unnoticed. As fine professionals and examples, you could teach anywhere, but you choose to teach here at Cal State San Bernardino. For that I am immensely grateful.

I have soared with eagles.

To my sweetheart Owen, who has encouraged and supported me through this journey, and with whom I am learning to see into eternity. To my parents Doug and LaNae, who taught me to see the possibilities. To my children Benjamin, Jeremy, and Brittney, who are currently sharing the challenges of "college life", who remind me to see what is right in front of me. To my students who challenge me to add to all this, vision.

TABLE OF CONTENTS

ABSTRACT	iii
ACKNOWLEDGMENTS	iv
CHAPTER ONE: INTRODUCTION	1
Background	2
Statement of the Problem	8
Purpose of the Study	9
Theoretical Basis	10
Limitations	11
Definitions	12
CHAPTER TWO: LITERATURE REVIEW	17
Driver or Commuter Stress	19
Generalized Stress	32
Nursing Student Stress	34
CHAPTER THREE: METHODOLOGY	
Population of Sample	37
Data Collection and Instrumentation	39
CHAPTER FOUR: RESULTS AND DISCUSSION	42
Discussion of Findings	46
Summary	50
CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS	51
Limitations	52
Conclusions and Recommendations	53

APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL	59
APPENDIX B: INSTITUTIONAL REVIEW BOARD AMENDMENT	61
APPENDIX C: INFORMED CONSENT	63
APPENDIX D: RECRUITMENT LETTER	67
APPENDIX E: COMMUTE TO CLINICAL EXPERIENCES SURVEY ...	70
APPENDIX F: SPEARMAN'S RHO CORRELATION COEFFICIENTS FOR COMMUTER STRESS AMONG STUDENT NURSES	78
APPENDIX G: FREQUENCY DISTRIBUTION FOR COMMUTER STRESS SURVEY VARIABLES	80
APPENDIX H: RESPONSES TO OPEN-END QUESTIONS	82
REFERENCES	89

CHAPTER ONE
INTRODUCTION

Students who attend commuter-based universities encounter unique challenges related to commuting (Brown & Edelman, 2000; Clark, 2006; Lee & Loke, 2005; Murff, 2005). Nursing students and students of other clinical disciplines, at such universities, have an added challenge, the expectation by faculty of students arriving ontime to clinical sites (Dziegielewski, Turnage, & Roest-Marti, 2004). With the increase in the number of vehicles on the highways and freeways (Brockman, Sirotnik, & Ruiz, 2003; Koslowsky, Kluger, & Reich, 1995; Pisarski, 2006), these students continue to face new commuting challenges. Nursing students must anticipate a whole range of obstacles during each commute, to reach their goal of timely arrival. The anticipation of these unknown obstacles in the commute, combined with the expectation of timely arrival at clinical sites, may lead to elevated perceived stress above the stress which is typically perceived by other college students (Murff, 2005; Rasmussen & Knapp, 2000; Dziegielewski et al. (2004).

Background

Stress, in terms of structural construction, is the progress toward failure or the change of the state of the structure (Keil, 2004). The general usage of the word often connotes a negative emotional or mental response to a set of environmental, physical, or emotional factors (Lazarus, 1984). Even though the term stress is widely used in many disciplines, its concreteness is still elusive. Keil (2004) notes a lack of clarity of the definition and states that the definition of the term has changed meaning over the process of time. Selye (1978) even states that stress is difficult to define and a clear definition may not be a reasonable expectation. He goes on to describe many situations which can cause stress.

Stress may come from the commute. Most drivers encounter, or will at some point encounter, delays in drive time or extension in drive mileage in their commute (Pisarski, 2006). Pisarski notes that a delay may not occur daily for all drivers, but this experience is becoming increasingly prevalent. This increase, along with the increase in the average number of cars on the road and without the commensurate increase in freeways or other roads, has led to increased congestion on the roadways

(Pisarski, 2006). While there is a plethora of research into the subject of stress (Brown & Edelman 2000; Lazarus, 1984; Selye, 1978), there is difficulty in finding common ground as to the definition of the concept of commuter stress. Some of the ambiguity may be from the definition of the commuter; while other ambiguity may come from trying to understand stress.

There continues to be an increasing number of vehicles on the roadways (Brockman et al., 2003; Koslowsky, et al., 1995; Pisarski, 2006). This increase has not been matched with increased road capacity (Brockman, et al., 2003; Koslowsky, et al., 1995; Pisarski, 2006), leading to higher levels of congestion. The problem is further exacerbated by the general movement of population away from city centers into urban/rural areas (Brockman, et al., 2003; Koslowsky, et al., 1995) causing an increase in the number of employed who must commute to their places of employment and the length of time each vehicle spends on the roadways.

Despite local, state, and federally funded programs which have been developed in an effort to encourage ride-sharing or other forms of transportation such as public transportation, walking, and bicycling, most drivers ride alone to school or work (Pisarski, 2006). Most drivers

acknowledge the benefits of ridesharing and use of alternate transportation (Pisarski, 2006), yet despite their knowledge and understanding of the benefits of ridesharing, commuters have many reasons for choosing to typically ride alone. Reasons given seem to fall into three categories including independence, personal time management, and the perceived lack of timeliness of other riders (Koslowsky, et al., 1995; Pisarski, 2006).

The elevating levels of congestion have been found to increase commuter and driver stress (Gulian, Matthews, Glendon, & Davies, 1989; Gulian, Matthews, Glendon, & Debney, 1990; Hennessey & Wiesenthal, 1997, 1999; Koslowsky, 1995). This congestion has been reported to increase the physical and mental stress of the drivers (Novaco, Stokols, Campbell, & Stokols, 1979; Novaco, Stokols, & Milanese, 1990; Hennessey & Wiesenthal, 1997, 1999).

Commuter stress is the product of many variables which individually may produce only a minor inconvenience, but combined and multiplied by the pressure to arrive on time, may cause elevated levels of anxiety and stress (Gulian, et al., 1989; Hennessey & Wiesenthal, 1999). Antecedents to the stress perceived by commuters are increased drive time,

increased length of commute, traffic congestion, road construction, time limits, cost of fuel, location of residence to the location of the place of employment or education, other non-driving activities needing time and attention, unforeseen complications -accidents, vehicle breakdown, and weather (Koslowsky et al., 1995). One of most notable consequences of commuter stress is the influence this type of stress has on the work behavior of the commuter. Van Rooy (2006) noted in a study of the affective states and hiring decisions, that the person was deemed unqualified, in part, due to the commute experienced or the overall self-presentation that was made after a stressful commute.

Koslowsky (1995) found that commuting is now a fact of life in many parts of the world and also acknowledged a shortage of consistent and replicable empiric research in the realm of commuter stress. Koslowsky attempted to describe the need for telecommuting as well as online learning and meetings to reduce the one of the most severe sequelae of commuter stress, worker burnout.

Gulian, Matthews, Glendon, and Davies (1989), using the Driving Behavior Inventory-General (DBI-Gen.) tool noted that time urgency was the greatest factor in

predicting state driver stress during high traffic congestion experiences and non-congested traffic experiences. Similarly, Hennessey and Wiesenthal (1999) tested commuter subjects using a variation of the DBI-Gen and a newly developed State Driver Stress Inventory to evaluate the state stress perceived by the participants. The researchers compared the stress of male drivers as compared to female drivers, with no differences noted. Using the State Driving Checklist, Hennessey and Wiesenthal (1997) found that time urgency was the primary predictor of state stress of drivers when that urgency occurred during times of non-congested traffic. Aggression was found to be a more prevalent predictor of driver stress during instances of elevated congestion. In a similar study, Langdon and Glendon (2002) found that driver stress was increase with the extension of the time of the commute, the length of the commute,, the participant's perception of decreased leisure time due to the commute, and the level of difficulty of the commute.

On a similar note, van Rooy (2006) found that anticipatory anxiety was elicited when participants anticipated congestion or increased length of time of the commute. The negative effects of tardiness, fear,

frustration or anger, would influence a job applicant's perceived qualifications.

While there are limited amounts of medical or nursing research published concerning the terms commuter stress, commuting, and driver stress, there is a copious amount of literature on these topics within the transportation and psychology disciplines (van Rooy, 2006, Hennessey & Wiesenthal, 1999; Gulian et al., 1989; Koslowsky et al., 1995; Pisarski, 2006). Much of the empirical data concerning driver and commuter stress is dated, and there is an obvious gap in the literature on this topic within health and related fields of research.

Students share similar commuting frustrations and experiences with other drivers and commuters (Murff, 2005). Ontime attendance at classes is much like the expectation of timeliness in the work-a-day world. Tardiness is not only discouraged, but the chronically late are often met with distain by others.

As noted previously, there are copious amounts of literature about the perceived stress of the college student, and to a lesser degree, of the stress of nursing education, and the correlation between stresses and attrition (Brown & Edelman, 2000; Murff, 2005; Nicholl &

Timmons, 2005). Authors also note that there is little research related to the effective strategies which can be implemented to educate and empower student nurses to reduce the negative effects of the stress which is naturally encountered in nursing education (Deary, Watson, & Hogston, 2003; Nicholl & Timmons, 2005; Jones & Johnston, 2000). According to Jones and Johnston (2000), despite the many anecdotal and research articles written of student nurse stress, the evidence of appropriate and effective management interventions has not surfaced.

Statement of the Problem

There seems to be a trend toward greater numbers of cars on the highways, tending to more drivers, and more potential victims and causes of commuter stress, as stated by Koslowsky et al. (1995). Student nurses are expected to navigate through the daily barrage of traffic, to arrive at clinical sites ontime, regardless of expected or unforeseen circumstances, as a requirement for their clinical courses. The students make choices, strategies if you will, to deal with this expectation.

The problems this study addresses are:

- What is the perception of the student nurse concerning the commute to and from various clinical sites utilized by the CSUSB Nursing Department?
 - Does the length of the commute, whether time or distance, affect the student's level of concern?
- Since timeliness is not only an expectation of professionalism, but also incorporated into the student grade, is there a fear of tardiness due to the commute?
 - What strategies do students use to mitigate that fear?

Purpose of the Study

As a descriptive, pilot study utilizing an online survey, this study explores the perceptions of CSUSB student nurses related to their commute and ontime arrival at clinical sites, typically in the San Bernardino and Riverside Counties, and whether or not the commute is perceived as being stressful. The goal is to understand the commuting experience of the nursing student, the time issues and strategies involved in arriving to the various

clinical sites, and the perception of stress as it applies to that commute.

The objectives of this study are to identify the modes of transportation used by the students to arrive at their given clinical sites, to identify the distance and time students perceive spending in commuting, to clarify the level of concern or stress regarding the commute and how time, or more specifically ontime arrival, affects their commuting decisions and attendance.

Theoretical Basis

The concepts of commuter, driver, and student stress, as well as general stress were examined. The goal of this part of the analysis was to explore the current literature, in respect to stress and the stress encountered by those who commute, and determine a basic working understanding of the concepts, and to explore common attributes of the concept as listed in the literature. This was not an exhaustive analysis of every angle of the concept of commuter stress, but an initial attempt to clarify and congeal present knowledge on the subject as it pertains to the experiences of student nurses who commute.

Because Lazarus and Folkman (1984) developed the transactionist model of coping, along with a theory of stress that has been widely used in the search for understanding of stress and driver stress, their work will be mentioned here. Much of the current research on the various dimensions of stress has used this theory as a foundation. The transactionist stress model is one where the functional pathways of the model are bi-directional, more specifically, where stress affects the mind and brain and where the mind and brain each affect stress. Coping can replace stress on the model with similar results. This model is similar in style and use to the environmental model. The authors seek to define stress as a state where external demands exceed a person's adaptive capabilities. Despite their efforts, there is still a lack of precision in the definition of stress. The strength of this work is evident in the multidisciplinary use of it since its original publication.

Limitations

Student nurses are, by the nature of their progressive-track style of education, at different levels. Each level of nursing education has different educational

expectations, even in clinical settings. There is no assumption that the stress perceived in conjunction with the commute to clinicals is the only type of stress involved in student nurses, nor that there are not antecedent and concomitant stressors. This is an initial survey of the perceptions by the student nurses of their commute to clinical sites, and further studies will be needed to gain a more complete understanding of the full student perception and experience related to the commute.

Perceptions can be influenced by preceding events. Depending on the student's recent commuting experience their answers on the survey could be different from one test to another. The goal of this study is to get an overview of the student's perception of their commute to clinicals, a moment in time glimpse. Participants will be self-selected to participate in a survey, from the current nursing student population of CSUSB.

Definitions

Stress is a general term, a concept that is commonly used in medical and psychiatric practice, though it is difficult to be precise when referring to the term (Lazarus & Folkman, 1984; Selye, 1978). Stress is defined by

Merriam-Webster's Dictionary (2004) as a "constraining force or influence ... a physical, chemical, or emotional factor that causes bodily or mental tension...the emphasis...or the intensity...given to a speech sound, syllable, or word." The Oxford Dictionary (Thompson, 1993) describes stress as a type of strain, whether physical or mental.

Lazarus defines generalized stress as a state in which the external demands on a person's adaptive capabilities exceeds those capabilities (Lazarus and Folkman, 1984). Within the medical community, many disease and mental states have been proven to be exacerbated by stress, such as high blood pressure and stroke (Keil, 2004). Correlations have also been found between stress and various diseases, typically autoimmune diseases and syndromes such as fibromyalgia, chronic fatigue, and diabetes (Keil, 2004). The U.S. Department of Health's (2000) Healthy People 2010 has set stress as an important health problem to be addressed. Selye's (1978) early description of stress was based on the reaction of an organism to environmental factors, but through time stress has come to be accepted as a wide range of health or emotional phenomena (Keil 2004).

While there is a plethora of research into the subject of stress, it is difficult to find common ground as to the

definition of the concept of commuter stress. Some of the ambiguity may be from the definition of the commuter, while other ambiguity may come from trying to understand stress. And there is no clearly established understanding for the terms often used to describe the state or trait stresses experienced by drivers.

In various transportation, health, and psychology publications, the term "commuter" is used to describe a person who is a rider on public transportation to and from work or school (Hennessey & Wiesenthal), or one who lives in a suburb and drives into another city or suburb (Gulian et al., 1989, Gulian et al, 1990, Hennessey & Wiesenthal, 1999). Closely aligned with the terms of "commute" and "commuter", especially when considering the term of stress, is the term and role of "driver". Driver stress, as described by Langford and Glendon (2002), is frequently associated with an extended time of commute, extended length of commute, reduced leisure time, and the difficulty level of the commute. Gulian et al. (1989) states that driver stress is a response to perceived dangerous or demanding driving experiences and is related to the driver's own capabilities. Gulian does not take into account the role of time or distance in the definition of

stress. Part of the problem might be due to the laxness of the terminology used. Both "commuter" and "stress" can conjure up different meanings by different people, depending on a person's paradigm.

The concept of commuter stress may be best addressed by separating out the term commuter from stress, evaluating the efficacy of similar terms, and then coming to an understanding of the concept by the meshing the various components. According to the Merriam-Webster Dictionary (2004), the word commuter is loosely defined as one who commutes. Using the same dictionary, the term commute has many definitions, such as a change, a lessening of one's sentence or penalty, a type of monetary conversion, and a mathematical result that remains the same no matter the order of two mathematical elements (Merriam-Webster, 2004). In terms more consistent with this analysis, the dictionary also describes the term "commute" as the act of traveling back and forth on a regular basis between the suburbs and the city (Merriam-Webster, 2004). According to Koslowsky et al. (1995), commute is often referred to as a noun, the commute, and may also be referred to as a verb, to commute.

The defining attributes of commuter stress include the fear of being late or tardy, tenseness persisting after the

commute, escalating emotions of frustration and anger while driving and persisting afterward, increased absenteeism, and an increase in stress-related health issues (Gulian, 1989; Koslowsky et al., 1995; Langford & Glendon, 2002; Novaco et al., 1990; van Rooy, 2006).

Melding the most appropriate descriptions of the terms, commuter stress will be defined in this analysis as the physical, mental, and psychosocial responses of one who repeatedly drives between a suburb and a city or another suburb for employment or education, caused by the various driving conditions that are experienced or perceived.

For the purposes of this paper, Clark's (2006) definition of commuter campus will be accepted for our definition of commuter college or university. She describes a commuter college as one which enrolls more nonresidential students than residential ones (Clark, 2006).

CHAPTER TWO

LITERATURE REVIEW

Students share similar commuting frustrations and experiences with other drivers and commuters. Murff (2005) states that severe and prolonged stress may affect a person's ability to engage in effective behaviors. The goal of this analysis to explore the current literature, in respect to stress and the stress encountered by those who commute, to determine a basic understanding of the concepts, and to evaluate the strengths and weaknesses of the studies. This is not an exhaustive analysis of the literature on commuter stress, but an initial attempt to clarify and congeal the current ideas and knowledge on the subject.

A literature review was performed utilizing CINAHL, EBSCOhost, Google, and PUBMED searches. Limited amounts of medical or nursing research has been published concerning the terms commuter stress, commuting, and driver stress. Although there is a wide array of research on related topics on stress such as generalized stress (Lazarus & Folkman, 1984; Kiel, 2004; Selye, 1978), commuter stress (Clark, 2006; Koslowsky, Kluger, & Reich, 1995; Novaco,

Stokols, & Milanese, 1990; van Rooy, 2006), driver stress (Hennessey & Wiesenthal, 1999; Hennessey, Wiesenthal, 1997; Hennessey, Wiesenthal, & Kohn, 2000; Langford & Glendon, 2002; Rasmussen & Knapp, 2000; Zajacova, Lynch, & Epenshade, 2003), generalized stress experienced by nurses and student nurses (Brown & Edelmann, 2000; Gulian, Matthews, Glendon, & Davies, 1989; Gulian, Matthews, Glendon, Davies, & Debney, 1990; Jones & Johnston, 2000; Sharif & Armitage, 2004; Stark, Manning-Walsh, & Vliem, 2005), and college student stress (Clark, 2006; Dill & Henley 1998; Dziegielewski, Turnage, & Roest-Marti, 2004; Lee & Loke, 2005; Murff, 2005; Nicholl & Timmins, 2005; Nonis, Hudson, Logan & Ford, 1998; Rasmussen & Knapp, 2000; Ross & Neibling, 1999; Sarafino & Ewing, 1999; Zajacova et al., 2003), not to mention the closely aligned terms of anxiety and fear in the same general populations (Bay, 2002; Sharif & Armitage, 2004), there has been little research identified to date to identify the stress perceived by commuting students (Clark, 2006), and none noted concerning the commuting stress specifically associated with nursing students.

Driver or Commuter Stress

Most drivers and commuters encounter, or will at some point encounter, delays in drive time or extension in drive mileage in their commute (Koslowsky, Kluger, & Reich, 1995; Brockman, Sirotnik, & Ruiz, 2003; Gulian, Matthews, Glendon, & Davies, 1989; Hennessey, & Wiesenthal, 1999). This may not occur daily for all drivers and commuters, but this experience is becoming increasingly prevalent (Koslowsky, et al.; Brockman et al.; Gulian et al.). This increase, along with the increase in the average number of cars on the road and without the commensurate increase in freeways or other roads, has led to increased congestion on the roadways (Gulian et al.; Hennessey, & Wiesenthal, 1999; Pisarski, A. E. *Commuting in America III: The third national report on commuting patterns and trends*). According to Koslowsky et al. (1995), the marked changes in the workforce, the distances from home to work, and the number of cars on the road have all influenced the dynamics of traffic and commuting. Koslowsky et al. notes that the total number of vehicles on the road has increased by 90% between 1970 and 1989, but the traffic capacity on the roads has only increased by 4%.

When looking at the topic of commuting, there seems to be a trend toward greater number of cars on the highways, tending to more drivers, and more potential victims and causes of commuter stress, according to Koslowsky et al. (1995). The defining attributes of commuter stress include the fear of being late or tardy, tenseness persisting after the commute, escalating emotions of frustration and anger while driving and persisting afterward, increased absenteeism, and an increase in stress-related health issues (Gulian, 1989; Koslowsky et al., 1995; Langford & Glendon, 2002; Novaco et al., 1990; van Rooy, 2006).

Commuter stress is the product of many variables which, individually may produce only a minor inconvenience, but combined and multiplied by the pressure to arrive on time, may cause elevated levels of anxiety and stress (Gulian, et al., 1989; Hennessey & Wiesenthal, 1999). Antecedents to the stress perceived by commuters, as identified by the literature review, are increased drive time, increased length of commute, traffic congestion, road construction, time limits, cost of fuel, location of residence to the location of the place of employment or education, other non-driving activities needing time and

attention, unforeseen complications such as accidents, vehicle breakdown, and weather.

Van Rooy (2006) noted in a study of commuter affective states and hiring decisions, that the person was deemed unqualified during the interview process in part by the effects of the commute or the overall self-presentation that was made after a stressful commute.

As a great resource for researchers looking to identify the historical issues and changes in the demographics related to commuting and commuting stress, Koslowsky, Kluger, and Reich (1995) identify the causes and effects of commuter stress as well as address coping skills necessary to be used to counter the negative influences of that stress. The article states that commuting has become a fact of life in many parts of the world. The authors attempt to define commute from the perspective of the rider of public transportation, but later include terms to describe those who ride and drive in cars to and from work and school daily.

In the article, the Koslowsky et al. note a trend toward greater numbers of cars on the highways, tending to more drivers, and more potential victims and causes of commuter stress. The authors concede that there is a

shortage of empiric, replicable research regarding commuter stress. The article lists the direct effects of commuter stress and other traffic and distance issues that have influenced the dynamics of commuting. The authors attempt to build a case for telecommuting, online school courses, and meetings by assuming that the perceived commuter stress will also lead to worker burnout. The demographic data is somewhat dated, though it sheds light on the issue from a historical standpoint. This can help researchers extrapolate potential future changes of demographics.

An article by Gulian, Matthews, Glendon, and Davies (1990) describes the development and testing of the Driving Behavior Inventory-General (DBI-Gen). This tool was administered to two independent sets of participant drivers. In both studies, the drivers commuted daily, some having to drive as a requirement of the job. The DBI-Gen tool consisted of 16 items which assessed trait stress, or the susceptibility to driver stress. Time urgency was noted as the greatest factor to predict state driver stress levels during congested and non-congested traffic situations in this survey. This article defines the term commuter as one who lives in a suburb and drives into another city or suburb, and further clarifies driver stress

as the response to perceived dangerous or demanding driving experiences and is influenced by the driver's own driving experiences. Although the authors identify and clarify the susceptibility for driver stress using self-reporting of the driver's responses and personality, the authors do not take into account some of the most commonly occurring stressors of driver's- time and distance.

In a Canadian study, Hennessey and Wiesenthal (1999) recruited 60 participants from business men and women as well as university students who commuted daily along Highway 401 in Metropolitan Toronto, Canada. Thirty of the volunteers were female and thirty were male, with ages ranging from 21 to 60 years, the mean age being 28.8 years. The drivers were interviewed over their cell phones during high and low traffic congestion conditions, using a variation of the DBI-Gen. The State Driver Stress Inventory was developed to evaluate the "state" stress of the participant. Both tools were found to have a high validity in the predicting of driver stress in the participants. State driver stress was found to be greater in high-congestion conditions, and there were no significant differences between the stress levels of males and females during both types of congestion. The State Driving Behavior

Checklist was also utilized to identify what behaviors had been performed within the previous 5 minutes of the phone call interview. The study determined that in low-congestion circumstances, time-urgency was the main predictor of state driver stress. Aggression was found to be the predictor of driver stress in circumstances of high congestion. The fact that a participant viewed driving as generally stressful (trait stress) was an indicator or predictor of state driver stress. A weakness of the study was that the measures were taken during a single trip, no accounting for the variability of driver stress due to the variability's in the daily commute.

In another similar study, Hennessey, Wiesenthal, and Kohn (2003) attempted to duplicate much of the previous Hennessey and Wiesenthal study. They substituted a shortened version of the Survey of Recent Life Experiences (SRLE) for the State Driving Behavior Checklist which they used previously. They hypothesized that, as above, state driver stress is perceived to be greater in high traffic congestion areas over low congestion areas, and that time urgency was a major element in state driver stress. New to this study, they anticipated that in high congestion areas,

daily hassles would aggravate already elevated levels of commuter stress.

Similar to the previous study published by Hennessey and Wiesenthal, 54 participants were recruited by Hennessey, Wiesenthal, and Kohn from commuters who traveled along Toronto's Highway 401 to the New York region. The ages ranged from 19 to 55, averaging as 26.5 years. Cell phones were again used. Beside the two tools consistent with the previous study, the shortened SLRE consisted of 41 described accumulated hassles. Each participant indicated whether or not they each item had been part of their life within the last month. The study was accomplished during February and March of 1998, on mid-week days (Tuesday through Thursday) and avoided holidays.

Again it was determined by Hennessey, Wiesenthal, and Kohn that state driver stress was greater in high congestion areas than in lower congestion areas, and that there was not a significant difference in state driver stress according to gender. It was again demonstrated that time urgency was a predictor of greater state driver stress in both low and high congestion situations. The assumption that daily hassles would exacerbate the state driving stress in high congestion areas was validated and

confirmed. But surprisingly those ranking high in accumulated hassles tended to have decreased stress if the participant rated among the low or medium trait stress drivers. The authors speculate that this is due to greater successful adaptability.

The weakness of this study by Hennessey, Wiesenthal, and Kohn is much like the previous by Hennessey and Wiesenthal (1999) in that the evaluation was taken during a single commute, that further similar studies are needed to validate the conclusions. There is no mention as to whether each driver was driving singly or whether there were additional riders, which could increase or decrease the state stress of that commute. There are multiple environmental variables which have not been accounted for nor controlled, which could influence the state driver stress of any certain day. The fact that the authors are choosing to replicate the study and have found the results similar helps to strengthen the findings of the first study.

Westerman and Haigney (2000) presented a study of self-reported driver stress and driving behaviors. The sample contained 2806 participants, ages 18 through 91 (mean= 50 years), comprised of 2452 men and 354 women. The

average length of time each driver held a full license was 29.48 years. Participants were recruited by using a newspaper announcement about a competition, "Driver of the Year" conducted by Mitsubishi UK Ltd.

Two similar sounding, but distinctly different tools were utilized; the Driving Behavior Inventory (DBI) and the Driving Behavior Questionnaire (DBQ). The DBI appraises state driver stress (Gulian, Matthews, Glendon, and Davies, 1989), where DBQ assesses the frequency of negative driving behaviors of the participants (Westerman and Haigney, 2000). Respondents completed the DBI and the DBQ questionnaires and returned them to the researchers. Mitsubishi offered prizes for those who returned the forms.

The large size of the Westerman and Haigney study sample allowed for small correlations to be found statistically reliable. According to t-test results, gender differences were reported on the DBQ. Men tended to report fewer of their lapses than women and women reported more violations. Men self-reported greater urgency and aggression than women but women reported a greater dislike of driving. Women also reported greater stress due to situations than men. As noted in other studies listed above, there was no correlation between gender and

generalized stress as determined using the DBI, but there was a correlation between general stress and aggression and urgency in both genders. This study used two tools which had proved reliable and valid in the past with smaller samples. This study selected a larger sample to further validate or invalidate the previous findings. Because these were self-reported results, the results may be suspect since some individuals will knowingly under-report their driving difficulties.

Circadian rhythm, or the perceived physical preference of morning or evening, was studied in relation to extraversion-introversion, and neuroticism, and the influence these variables have upon driver stress by Langford and Glendon (2002). Age effects were also studied as a variable. This study was conducted using a convenience sample of participants who were administrative staff of an Australian university. Ranging in age from 22 to 60 years (mean age=36 years), 28 males and 73 females returned questionnaires with data that could be used.

Each of the 101 participants in the Langford and Glendon study completed the Eysenck Personality Questionnaire-Revised, and the Morningness-Eveningness Questionnaire. Each participant also completed a morning

and evening driving diary as a measure of state driver stress each weekday for one week. Researchers predicted that participants who preferred morningness would show better performance levels and lower driver stress in the morning hours as compared to the evening hours. Using multiple regression ANOVA, and after scoring using SPSS, the authors concluded that circadian rhythm as well as neuroticism and age predicted reported driver stress in the mornings, but age was the main predictor of evening driver stress. Circadian rhythm was found as influential in both morning and evening driver stress of individuals. Younger participants were found to have higher driver stress levels for both time preferences than older participants. Driver stress was associated with an extended time of commute, extended length of commute, reduced leisure time, and the difficulty level of the commute.

One of the weaknesses of the Langford and Glendon study was the initial judgment made by the participants as to whether they considered themselves a morning or evening person. There was no information in the article which described the parameters given for making of the choices. Some may not have had a preference, but chose one for the purposes of answering the questions of the investigators.

There was also a weakness, or maybe another study in the waiting, to identify if the assumptions that were made here are applicable to the commuter stress experienced by evening or night workers.

During a study conducted by van Rooy (2006), 136 undergraduate women were studied to determine the effect of the commute on affective states and subsequent hiring decisions. The women were randomly assigned to one of four groups based on the average level of congestion of the commute and the length of the commute. Using multivariate analyses, the researchers found that affective states of the participants were influenced differently depending on the congestion and length of travel. Anticipation of high congestion was associated with anticipatory anxiety. It was also noted in the study that the person was deemed unqualified in part by the commute that they drove, or more precisely, the overall self-presentation that was made after a stressful commute. The effects of fear of tardiness, frustration and anger, as well as subjective impedance, added to the ability to appear qualified for the chosen employment.

An obvious weakness to this study by Langford and Glendon would be the loss of possible employment and

subsequent effects on self-esteem as an unintended effect of the study. Had the participants anticipated challenges to the employment process due to the participation in the study? There is no information in the study to generalize that each of the participants were equally qualified for the employment that was offered. Later studies in this area could pre-evaluate or rank participants during a pre-employment interview and correlate those rankings with those of the hiring pool. As nurses seek employment, the commute will continue to be a factor in many employment decisions on both sides of the interview table.

While there are limited amounts of medical or nursing research published concerning the terms commuter stress, commuting, and driver stress, there is a copious amount of literature on these topics within the transportation and psychology disciplines; however, a large portion of that literature is not peer-reviewed. Stress, on the other hand has been addressed well in many disciplines, though its concrete definition in health is vague. Much of the empirical data is dated. There is an obvious gap of currency on this topic within health and related fields of research.

Generalized Stress

Stress, in terms of structural construction, is the progress toward failure or the change of the state of the structure (Keil, 2004). The general usage of the word often connotes a negative emotional or mental response to a set of environmental, physical, or emotional factors (**). The broad and all-inclusive term "stress" was employed for the purposes of this literature review, in an effort not to define, but to coalesce and include the multifaceted reasons for and the perceptions of stress in the commute to clinical by student nurses.

Because Lazarus and Folkman (1984) developed the transactionist model of coping, along with a sentinel theory on stress that has been widely used in the search for understanding of stress and driver stress, their work will be included here. As a sentinel article and research, much of the current research on the various dimensions of stress has used this theory as a foundation. The transactionist stress model is one where the pathways of the model are two-directional, more specifically, where stress affects the mind and brain and where they each affect stress. Coping can be interchangeably used on the model as a replacement for stress with similar results.

This model is similar in style and use to the environmental model. The authors seek to define stress as a state where external demands exceed a person's adaptive capabilities. They acknowledge the lack of precision in the definition of stress. For those who are familiar with the environmental model, the adaptability to this model is fairly easily achieved. Both models have been widely used, which gives them strength and validity.

An article by Keil (2004) identifies a current taxonomy of stress and coping, two concepts tightly bound to commuter stress. This article notes a universal lack of clarity in the definition of terms coping and stress. The author identified that the terms have changed meanings over time; the definitions being influenced by scholars who chose to use the words to define a specific state of being or a phenomenon of interest. The author distills the meanings through a thorough analysis of both words individually and connectedly. The author attempts to define stress and coping, and to create useful definitions of the terms. Yet, these terms remain broad in scope and can be interpreted to mean many things to many people. Despite the researcher's efforts, another dimension of understanding

the terms of stress and coping occurs, rather than clarifying and solidifying the definitions.

Nursing Student Stress

There are copious amounts of literature about the perceived stress of the college student, and to a lesser degree, of the stress of nursing education, and the correlation between stresses and attrition (Brown & Edelmann, 2000; Murff, 2005; Nicholl & Timmons, 2005). Various authors also note that there is little research related to the effective strategies which can be implemented to educate and empower student nurses to reduce the negative effects of the stress which they naturally encounter in nursing education (Deary, Watson, & Hogston, 2003; Nicholl & Timmons, 2005; Jones & Johnston, 2000).

Clark notes that commuter students often feel the need to "start over" each term, devising new strategies to adapt to each new course (Clark, 2006). With the cost of educating nurses being an expensive endeavor for a university, there is a critical need for nursing departments to maximize the opportunities given to those who are accepted into nursing programs in an effort to reduce attrition, improve academic successes, and improve

National Council Licensure Examination-Registered Nurse (NCLEX-RN) success rates.

Dziegielewski (2004) recognized that students who were being educated for caring professions had additional stressors that the typical college student did not encounter, specifically the practicum. The physiological and psychological stresses are perceived as a problem of equilibrium, similar to what Golde referred to as a feeling of isolation (2005).

Undergraduate nursing students learn to care for others, but often fail to care for themselves (Stark, Manning-Walsh, & Vliem, 2005). This lack of care often results in elevated levels of anxiety and stress which can lead to such overwhelming physical and psychological distress that the student may decide to withdraw from the nursing program (Jackson, 2004 ; Lee & Loke, 2005; Stark, Manning-Walsh, & Vliem, 2005). Many students are admitted into nursing programs with wellness "baggage" which, when added to the stress of school, can become overwhelming (Sharif & Armitage, 2004). These students and those who encounter more stress than they had expected, often find it difficult to keep up with the amount of work required, become anxious about their abilities, and as a result, fail

to achieve passing grades due to their inability to handle the stressors. Symes, Tart, Travis, and Toombs (2002) found that students stress levels could be managed and retention rates were increased by implementing a nursing student support program, reinforcing such topics as study and test taking skills, time and stress management, oral and written communication skills, and critical thinking.

From the available research, there appear to be many studies related to stress and the varied psychosocial reactions to stress, driver and commuter stress, and student stress, but few that deal specifically with the issues surrounding the student nurse as commuter. In an effort to make the education of nurses using "best practices" and evidence-based, there is a need to identify the nursing student as commuter issues, the typical nursing student commute, and whether these experiences are perceived as stressful to those experiencing them. As we identify these concerns, we may consider our current course and look to the technology of today to address some of the commuting issues.

CHAPTER THREE

METHODOLOGY

Population of Sample

The study used a purposive, convenience sample of seventy-two nursing students recruited from all the undergraduate student nurses (Coyote Nurses) at California State University San Bernardino. Recruitment was accomplished in two ways. After obtaining the appropriate approval from the CSUSB Institutional Review Board (see Appendices A and B) in regard to the protection of the human subjects of this study, the researcher was given permission by the teaching faculty of four of the six core nursing classes to give a brief description of the survey and the student's role in the study during the week prior to the start of the survey. Additionally, an announcement of recruitment for the study was posted on a frequently used site by the students, the Coyote Nurses Blackboard site, with directions as to how to participate (see Appendix D). Faculty were briefed about the survey, its intents, and time frame at a monthly staff meeting and individually.

Nursing students at CSUSB are diverse in relation to gender and race/ethnicity. To maintain the generalized focus and scope of this study, demographic information about participants was limited to knowing which of the core nursing classes the respondents were enrolled in currently. This allowed the researcher to identify the results by course aggregate only, identifying the overall experience of each course group and not the specific experience of each student.

This study used a convenience sample of seventy-two nursing students who were self-selected to take part in this survey. Due to this method of sample selection, each course was not equally distributed in the sample. Responses were obtained from students attending four of the six core courses, two courses having no participants. Forty-three participants were N200 students, being the largest percentage of participants in the study. Comparatively, N406 had 26 respondents, N334 had 2 participants, and N204 had 1 participant. Coincidentally, N200 also had the highest percent participation per class (55%) in this study.

As an interesting note, the two courses who had the largest percent of participation also had been two of the

four classes that the researcher had been invited to attend to explain the purpose of the study. Courses where faculty had not responded to requests by the researcher to explain the study had no responses.

Data Collection and Instrumentation

As a descriptive, pilot study utilizing an online survey, this study explores the perceptions of CSUSB student nurses related to their commuting and timely arrival at clinical sites. Data was gathered using a study-specific survey administered through Zoomerang, an online survey site (see Appendix E). Further descriptive analysis of the data was accomplished using Zoomerang, Microsoft Excel, and SPSS.

Participants were asked to describe their mode of transportation, time and distance in their commute to clinical sites, and their level of concern regarding commuting delays and on time arrival at clinical sites. The participants were told that a summary of the results would be shared with the students and available to the entire CSUSB Nursing faculty after completion of the thesis. The researcher was available to students and faculty for questions regarding the survey and its intents via email

and telephone for approximately one week prior to the start of the survey and during the survey process.

Zoomerang, an online survey site, was used by the students to access the survey. The survey site was able to maintain and store the data anonymously, while allowing each participant to take the survey only once. No student identifier information was maintained with the survey information or data on Blackboard, Zoomerang, or SPSS. The surveys were anonymous, and all electronic records were kept in a computer that was password protected.

The informed consent form was viewed by participants at the start of the survey (See Appendix C). Participants were expected to read the consent and consent was assumed when the participant began any part of the survey.

Participants were allowed to withdraw, or leave the survey incomplete, if they wished to do so without prejudice or penalty. While there were no foreseeable risks to the subjects of this study, and no immediate or direct benefits to the subjects, further understanding of the student's commuting experiences could be useful in assisting the Nursing Department with future departmental planning.

The survey instrument was developed to clarify the antecedent and associated issues surrounding the student

nurse perception of commuter stress experienced due to the commute to clinical sites. Participants responded to each question on the survey using either a five-point Likert-type scale, a Yes/no, or open ended questions, depending on the specific question. The first four questions of the survey were meant to gather information regarding the participant's current non-commuting-specific status, i.e. course enrolled, type of housing, mode of transportation used, and number of miles to clinical site.

The second four questions are related to the typical commute that the student nurse expects each clinical day. The third set of four questions is concerned with the confounding issues, such as family concerns and vehicular breakdown. The fourth group of questions reflects the student's perception's of the commute to clinical sites. Lastly, the two questions at the end of the survey are open-ended to allow the student to voice any concerns that were not addressed as fully as they would like in the survey.

CHAPTER FOUR

RESULTS AND DISCUSSION

An 18-question survey was accessed by the student nurses of CSUSB via an online survey site. Seventy two nursing students, out of the possible 358 currently enrolled, completed the survey. The survey was developed specifically for this study and included both direct and indirect questions. The first 16 questions were closed-end, yes/no, Likert-type, or multiple choice questions, and the last two items were open-end questions. Questions were developed from the researcher's personal experience with students who had stated various worries or concerns due to the commute, and from the commuter issues which were identified in the literature.

To measure the association between selected survey variables, Spearman's correlation coefficient (ρ) was used. Spearman's ρ was chosen as the test of association over Pearson's correlation because most of the variables were not normally distributed, causing dramatic skewing in the results. Spearman's ρ , a nonparametric method, is preferred over Pearson's for this study because, not only does it determine the strength of the relationship of two

variables, but can be used in studies without requiring the variable to have a normal distribution. One down-side to the use of Spearman's rho is that only ordinal, ratio, or interval data may be used. Descriptive analysis was used for the nominal data. Due to the size of the sample, a simple thematic review was used to evaluate the two open-ended questions at the conclusion of the survey.

Using the data from the 74 surveys (72 completed, 2 missing), Spearman's rho indicated a moderate positive correlation between distance and time to site, distance and minutes from site, distance and longest additional time needed to arrive at site, as well as distance and perceived congestion of the commute to the clinical site (see Appendix F). A statistically significant relationship was found between each of these sets of variables. Additionally, there was a statistically significant moderate association found between the perceived commute congestion and the occasional additional time needed to arrive at the clinical site, and the perceived enjoyment or stress of the commute. Weaker, yet still statistically significant associations were noted as well. Appendix F shows a summary of these correlations, analyzed using Spearman's rho. Spearman's rho values will range from -1 to

+1. Values found to be closest to +/-1 are the most highly correlated, and as the values approach zero, there is less of an association (Kuzma & Bohnenblust, 2005).

The descriptive analysis showed that eighty-nine percent of the respondents drove alone to clinicals (see Appendix G). Students were also more concerned about being delayed due to traffic congestion and personal matters than a delay due to their car malfunctioning. And, 75% of the participants answered the question, "How concerned or worried are you about arriving to their clinical site on time?" in the affirmative, as occasionally, frequently or always.

Using a focused thematic approach to analysis of the two open-end questions (see Appendix H), nine transportation related themes were isolated from 66 responses to the question: "What concerns do you have about arriving to your clinical site?" Weather, unfamiliarity with the local area, stress, and parking were recurrent issues, but the most frequent themes were related directly to traffic- accident, congestion, construction, and general traffic delays. Students were most concerned about areas in which they had little to no ability to change the outcome or events, areas which were out of their control.

In an attempt to identify differences in perception of the commute, comparing the responses of the newest of student nurses of N200 to the more experienced student nurses of N406, the responses three key questions were analyzed which asked about the student nurses perception of the commute to clinical sites but from different angles. The first question (see Appendix E, Question 13) asks the student to rate the level of congestion perceived during the commute. The second question (see Appendix E, Question 16) has the student identify how concerned or worried they were about arriving on time. The third question (see Appendix E, Question 17) has the student offer a short narrative of the concerns he or she has for the commute. No statistically significant relationships were found between the different courses of students and either the perceived congestion or the concern or worry they experienced concerning ontime arrival. Yet each group consistently identified theses same specific concerns in their personal narratives.

Sixty-nine responses were given to the open-end question: "What specific strategies do you use to ensure ontime arrival to your current clinical site?" After reviewing the responses, it was not surprising that the

responses were heavily weighted towards leaving early as the strategy most used for ontime arrival. This is also reflected in a similar question in the survey concerning a typical day and the number of minutes prior to the clinical start time the student arrives early. Forty-six percent of the participants reported arriving between 1-10 minutes early while 30% arrived 11-30 minutes early. Students may be leaving well early, but are not arriving that same amount of time early. This may be due to the amount of congestion each student encountered. Many of the students who chose to respond to the open-ended questions relate the need to leave early to ensure ontime arrival and reduced worry about being late.

Discussion of Findings

This survey was offered to all undergraduate nursing students at CSUSB through the commonly used "Coyote Nurses" blackboard announcement site. Most of the classes were personally visited by the researcher to encourage participation and entertain any questions by the student nurses. Most of the students, who volunteered as respondents, came from two of four classes where the researcher presented the recruitment information. It is

unclear as to whether peer-pressure, instructor reminders, or personal choice paid the largest role in increasing the participation of these two courses of students. Clearly, none of the students in the courses which were unvisited by the researcher participated in the survey, despite the announcement on the blackboard site.

This study further validates the University's assertion of being a commuter-based university. Only four percent of the respondents live in CSUSB housing, eighty-nine percent drive alone versus eleven percent who carpool (Appendix E). According to the survey, the most common range of miles driven to the clinical site was 11-20 miles. There was no question included in the survey related to the distance from the student's residence to the university because the focus of the survey was not on the travel to the university but to the various clinical sites.

As seen in Appendix F, there are correlations which validate intuitive assumptions such as the correlation between the distance to the clinical site and the time involved in, both to and from, that commute. Similarly, greater distances correlated with the perceived level of congestion on the commute by the student nurses. The table

also notes that the perceived level of stress related to both the distance and time the student typically commuted.

The most dramatic statistically significant results found in this study were in the correlations between the non-typical, additional time of the commute in arriving to the clinical site compared to their perception of the level of enjoyment or stress of the commute and the students perception of the congestion of their commute compared to their perceived enjoyment or stress of that commute (see Appendix F). As students encountered causes for an increase in the amount of time it would take to arrive at clinical, perceptions of the congestion increased, as did their perceived stress.

With that said, there was no statistical correlational significance found when any of the variables were compared with the students' perceived concern or worry about the arrival on time to clinical site (see Appendix F). Although the responses to the open-ended question (see Appendix E, Question 17) regarding the students concerns about the commute seem to indicate a strong concern about the ontime arrival, concern or worry did not increase relative to the length of time or distance of the commute, nor with the perceived congestion levels. Therefore, this perceived

stress of commuting may be due to another cause or it could be that the worry or concern is not truly related to the commute itself, which could be the basis for further studies.

The study found, similar to the results of Langdon and Glendon (2002), driver (or commuter) stress increased as time was extended for the commute, the length of the commute, and the perceived level of difficulty or congestion of the commute.

If it were possible to "see" the typical CSUSB nursing student using the measures of central tendency, according to the results of this survey, he or she would: live off-campus, between 11-20 miles from their clinical site. The student would typically drive alone to clinicals, and spend 11-30 minutes commuting to and from clinical. At some point in the winter quarter of 2007, this student had to take an additional 21-30 minutes at least once to get to clinicals, plans to arrive early, actually arrives 1-10 minutes early, yet is always concerned or worried about arriving on time to clinicals. This student is concerned about being delayed due to traffic congestion and family concerns, but is less concerned about the vehicle breaking down. The commute is considered to slightly congested and stressful. Given a

choice, this person would prefer driving on freeways. Their most frequent concern regarding their commute is traffic delays, and their most common strategy to avoid tardiness is pre-planning their day and rising or leaving early. Despite their strategies, they worry.

Summary

This study found that student nurses at CSUSB are concerned about the commute to their clinical sites. The typical concerns are based on being ontime; traffic, congestion, parking, and personal issues all come into play. Student nurses experience similar commuter stress to that of other commuters, but have worry or concern about on time arrival which is not associated with the distance or amount of time they commute. This concern may not be related to the commute, but possible other factors which may include their grade in the clinical course. No matter the reason, students find strategies to cope with the commuter stress or fear. Coping strategies identified by the students in this study included waking early, leaving early, setting multiple alarm clocks, and planning ahead the day prior.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

In an age of academic down-sizing due to budgetary constraints, we must be vigilant in our efforts to retain as many of the students who are capable of nursing competence as possible, assisting them in the acquisition of coping skills, identification of the stressors, and improving their body's ability to withstand the physical onslaught caused by stress. To address these issues, we must first seek to understand the phenomena of stressors from the perspective of the student. As in any disease state, early recognition and intervention is the key to successful diagnosis and treatment of the condition. This study explored the perceptions of CSUSB student nurses related to their commute and ontime arrival at clinical sites within the San Bernardino and Riverside Counties. The goal was to begin to understand the perceived commuting experience of the nursing student, the time issues and strategies involved, and the perception of commuter stress.

Objectives of this study were to identify the modes of transportation used, the distance and time students perceive spending in commuting, the level of concern or

stress regarding the commute, and how time, or more specifically ontime arrival, affected their commuting decisions. The research questions dealt with to what extent the length of time or distance of the commute to the clinical site affected the student's level of concern about the commute. The questions also addressed the students' concern about tardiness, and what strategies were used by student nurses to avoid it.

Limitations

One of the basic limitations of surveys is the inability of the researcher to have the participant clarify responses. Utilizing open-ended responses helped to clarify the issues surrounding the commute as it perceived by the student nurses. Further research is needed to validate these findings and clarify the meanings of the words, the most frequently used words in the survey being stress, commute, and concern. The term stress has changed over the years, and may not mean the same thing to all people. Future researchers would do well to use an interview style with thematic analysis to glean more precise data.

Another limitation was the obvious lack of participation in 4 of the 6 nursing courses. The students

in these groups may not have the same perceptions as the two dominant groups in the survey. Although the two prominent groups were the newest cohort and one of the ones nearest graduation, no assumption is made as to the ability to assume similar distribution of data within the other four courses. Because of the differences in each clinical site and makeup of cohorts, further testing to validate the findings of this survey is needed.

Conclusions and Recommendations

As a descriptive, pilot study using an online survey, this study explored the perceptions of CSUSB student nurses related to their commute and ontime arrival at clinical sites and whether or not the commute was perceived as being stressful. The goal was to understand the commuting experience of these nursing students, the time issues and strategies involved in arriving to the various clinical sites, and the students' perceptions of concern or stress as it applies to that commute.

It was the objectives of this study to identify the modes of transportation used by the students to arrive at their given clinical sites, to identify the distance and time students perceived spending in commuting, to clarify

the level of concern or stress regarding the commute and how time, or more specifically ontime arrival, affected the commuting decisions and attendance of the students.

The concepts of commuter, driver, and student stress, as well as general stress were examined. This study validated a common intuitive assumption, which was, as distance to the clinical site increased, so did the reported amount of time required to commute to and from the clinical site. Most importantly, the study also found that: (a) As distance of the commute increased, perception of the congestion of the commute increased, (b) as unanticipated additional time was needed for the commute, perception of the congestion of the commute increased, and (c) as the perception of the congestion increased, the perceived stress of the commute increased also.

Open ended questions on the survey reiterate and validate these findings. Seventy-five percent of the participants reported they were worried or concerned about ontime arrival at the clinical site. Clearly, the students are concerned but this did not show a significant correlation to any of the variables. This concern may be less about the commute and more about the grade. Further testing is needed to validate this assumption.

Nursing students at California State University San Bernardino (CSUSB) are a vulnerable population due to the potential for failure to care for themselves due to the myriad of stressors and time constraints consequent to their education. Before we can attempt to mitigate for the negative influences of stress inherent in the nursing education milieu, we must first seek to understand their importance from the student's point of view. What may seem most stressful, either as a positive stressor or a negative one, to an instructor, may not be perceived as such by a student. Similarly, each student will have his or her own perspective on each stressor.

Jackson (2004) noted that self care has not been valued or socialized into nursing environments. Jackson goes onto discuss the ongoing research concerning nursing, stress and exhaustion, and negative nurse/patient outcomes. Measures to correct these negative outcomes must consider the antecedent causes of the exhaustion and stress, such as the commuter stress perceived by the nurses. Student nurses face the same challenges, but also have the added concern of being graded by their instructors; one such grading parameter is timeliness. The question may be as much about the social environment of the nursing student as the

commute itself. Further research is needed to replicate this study and to consider other reasons why the students perceive high levels of concern and worry about ontime arrival.

In comparing the literature available concerning factors about the perceived stress, there is limited research concerning stress of the college student, and to a lesser degree, of the stress of nursing education, and the correlation between stresses and attrition (Brown & Edelmann, 2000; Murff, 2005; Nicholl & Timmons, 2005). Many authors also note that there is little research pertaining to the effective strategies which can be implemented to educate and empower student nurses to reduce the negative effects of the stress which they naturally encounter in nursing education (Deary, Watson, & Hogston, 2003; Nicholl & Timmons, 2005; Jones & Johnston, 2000).

There is still much room for clarification on the concept of commuter stress and its application in the literature and in physical and mental health settings. The gathering of additional data will assist community infrastructure planners, educators, and employers to the reality of commuter stress and the need to address these and other commuter issues. In nursing education, this

research is valid and useful in the consideration of on-campus versus hybrid or online courses, as a resource in the further research and study of stress, and to build upon and add to the current bank of nursing knowledge.

It is imperative that we see these students as commuters, experiencing the full range of experiences as other commuters, plus the added stress of timeliness in arrival at their clinical sites. The data from this study can be beneficial for the CSUSB nursing department, as they plan for future nursing cohorts. If nurses are stressed in similar ways to other commuters and with added stressors, as this study found, other teaching modalities could be considered and adopted within the nursing curriculum to address the issue of commuter stress as it relates directly to student nurses.

Now that the concept of commuter stress has begun to be explored, applied specifically to student nurses, further efforts may be made to gather additional phenomenological and empirical data. There is still much room for clarification on the concept and its application in the literature and in physical and mental health settings. There is room for epistemological and ontological clarification of the terminology.

Commuter stress is on the rise if we can assume that the number of cars on the road will continue to increase. At some point, research will need to identify the antecedents more clearly, explore options to reducing the congestion on the highways, and assist the commuter with the perceived stresses.

As nursing students identify ways to cope with or limit the negative influences of stress, they will avoid attrition, study and retain information better, improve their adaptability to outside stressors, and increase their grade point averages (Sharif & Armitage, 2004), and improve their ability to care for their patients.

It is imperative that we see these students as commuters, experiencing the full range of experiences as other commuters, plus the added stress of timeliness in arrival at their clinical sites. The data from this study can be beneficial for the CSUSB nursing department, as they plan for future nursing cohorts. If nurses are stressed in similar ways to other commuters and with added stressors, as this study found, other teaching modalities could be considered and adopted within the nursing curriculum to address the issue of commuter stress as it relates directly to student nurses.

APPENDIX A
INSTITUTIONAL REVIEW BOARD APPROVAL



**CALIFORNIA STATE UNIVERSITY
SAN BERNARDINO**

3500 University Parkway, San Bernardino, CA 92407-2397

SPONSORED PROGRAMS

Institutional Review Board

(909) 537-5027

Fax: (909) 537-7028

<http://irb.csusb.edu>

February 20, 2007

**CSUSB
INSTITUTIONAL
REVIEW BOARD
Exempt Review
IRB# 06061
Status:
APPROVED**

Ms. Paula Spencer
c/o: Prof. Mary Mollé
Department of Nursing
California State University
5500 University Parkway
San Bernardino, California 92407

Dear Ms. Spencer:

Your application to use human subjects, titled, "Student Nurse Perceptions On Commuting Related To-On-Time Arrival At Clinical Experiences" has been reviewed and approved by the Chair of the Institutional Review Board (IRB) of California State University, San Bernardino and concurs that your application meets the requirements for exemption from IRB review Federal requirements under 45 CFR 46. As the researcher under the exempt category you do not have to follow the requirements under 45 CFR 46 which requires annual renewal and documentation of written informed consent which are not required for exempt review category. However, exempt status still requires you to attain consent from participants before conducting your research.

Although exempt from federal regulatory requirements under 45 CFR 46, the CSUSB Federal Wide Assurance does commit all research conducted by members of CSUSB to adhere to the Belmont Commission's ethical principles of respect, beneficence and justice. You must, therefore, still assure that a process of informed consent takes place, that the benefits of doing the research outweigh the risks, that risks are minimized, and that the burden, risks, and benefits of your research have been justly distributed.

You are required to 1) notify the IRB if any substantive changes are made in your research prospectus/protocol, 2) if any adverse events/serious adverse events (AE's/SAE's) are experienced by subjects during your research, and 3) when your project has ended. Failure to notify the IRB of the above, emphasizing items 1 and 2, may result in administrative disciplinary action. You are required to keep copies of the informed consent forms and data for at least three years.

If you have any questions regarding the IRB decision, please contact Michael Gillespie, IRB Secretary. Mr. Michael Gillespie can be reached by phone at (909) 537-5027, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application identification number (above) in all correspondence.

Best of luck with your research.

Sincerely,

Samuel S. Kushner, Chair
Institutional Review Board

HL/mg

cc: Prof. Mary Mollé, Department of Nursing

The California State University
Adviserfeld • Channel Islands • Chico • Dominguez Hills • East Bay • Fresno • Fullerton • Humboldt • Long Beach • Los Angeles • Maritime Academy •
Ontario Bay • Northridge • Pomona • Sacramento • San Bernardino • San Diego • San Francisco • San Jose • San Luis Obispo • San Marcos • Sonoma • Stanislaus

APPENDIX B
INSTITUTIONAL REVIEW BOARD AMENDMENT

Michael Gillespie

From: Michael Gillespie
Sent: Friday, March 09, 2007 8:30 AM
To: 'spencerp@csusb.edu'
Subject: RE: Survey difficulty

Hello Ms. Spencer,

This is a minor change. Please proceed with your protocol.

Regards,

Michael

Michael L. Gillespie, B.S., M.P.A., C.I.P.
Administrative Support Coordinator II / Institutional Review Board Secretary / Office
Manager Research and Sponsored Programs California State University, San Bernardino 5500
University Parkway San Bernardino, California. 92407
Ph: (909) 537-3728 Fax: (909) 537-7028
e-mail: mgillesp@csusb.edu

-----Original Message-----

From: spencerp@csusb.edu [mailto:spencerp@csusb.edu]
Sent: Thursday, March 08, 2007 5:24 PM
To: Michael Gillespie
Subject: Survey difficulty

May I increase the length of time for the survey to include up to and including March 13th? (original dates 3/6 through 3/10)

In the process of sending out the information via email regarding the survey site (zoomerang) for the commuter survey, it was found that not all the nursing students had been included as users on the Coyote Nurses shell of Blackboard. I have made the department aware of this, since it is also one of our main sources of information dissemination. This is being rectified. A few other technical issues were also found with respect to administrative authority of the site and the fact that there are two similar sites, and I have been in contact with Brian Cupples here on campus concerning this. I have resubmitted the survey on Blackboard as an announcement, and have been assured that any student who is not listed on the Coyote Nurses site will be included as soon as they alert those with administrative privileges.

I am hopeful that all of the nursing students will now have the option to take the survey.

I await your decision.

Paula Spencer RN BSN
Clinical Instructor N407 / MSN student
California State University San Bernardino

APPENDIX C
INFORMED CONSENT

INFORMED CONSENT

All CSUSB undergraduate student nurses are invited to participate in a research study, designed to identify to the perceived experiences of student nurses involved in commuting to clinical sites. This study will be conducted by Paula Spencer RN BSN, a Master's of Nursing student at CSUSB, as part of her Master's thesis. The survey has been approved by the Institutional Review Board of California State University, San Bernardino. Results of the study will be available on the Coyote Nurses Blackboard site in June 2007.

An 18-question survey should take approximately 5-10 minutes to complete. The survey may be taken only once during the week it is offered. After the survey is completed, the data will be analyzed using SPSS. Blackboard was chosen as the method to administer this survey because it can capture the data from the survey without divulging any student or personal identifiers.

Participation in this study is voluntary, and there will be not be any negative repercussions or penalties for non-participation. Blackboard maintains the information as anonymous, so there will be not be any negative repercussions for a student discontinuing the survey once started. A pizza party will be provided to the class with the highest percentage of participation; the first question on the survey will ask which nursing class you are now attending to facilitate this.

There are no foreseeable risks to you as you describe your commute in this study. There are also no immediate, direct benefits to you, but a further understanding of your commuting experiences may assist the Nursing Department with future departmental planning. For any questions or concerns regarding the study, contact Paula Spencer RN BSN at (760) 245- 7389 or (760) 617-1528 or Mary Molle RN PhD (909) 537-7241. For any questions or concerns regarding your rights as a research subject or research-related injuries, contact California State University San Bernardino Institutional Review Board (IRB) at (909) 537-5027.

By choosing to complete this survey, you-

- acknowledge that you have been informed about the purpose of the study

- understand your rights and role as a participant

- you agree that by completing any part of the survey you acknowledge your consent to be a participant.

APPENDIX D
RECRUITMENT LETTER

CSUSB Nursing students,

You are invited to participate in an anonymous, short 18 question survey about your experiences in arriving to clinical sites. The survey is anticipated to take 5-10 minutes. It is found on the Coyote Nurses site of Blackboard. SURVEY BEGINS: March 6, 2007. ENDS: March 10, 2007.

This data collected on the survey will be used in my master's thesis about student commuting experiences to clinicals. The results will also be posted on this site after I complete my thesis, about June 2007. I will be sharing my results with the CSUSB Nursing Department when I defend my thesis around June of this year; let me know if you are interested in attending the defense. If you participate in the survey, you are very welcome to attend.

SPECIAL NOTE** The first question on the survey will ask which nursing course you are taking now, so that I may reward the class with the highest percent of participation

in this survey with a pizza party! Encourage your classmates to take this short survey and you may be the class with the PIZZA's! (Note- each of you may only take the survey once.)

Thank you so much for taking the time to do this. As a fellow student, I know that every spare moment is precious. Your time is valuable; your responses to this survey will be valuable for future nursing departmental clinical planning. If you have any questions, please feel free to contact me at spencerp@csusb.edu

Paula Spencer RN BSN

MSN student

APPENDIX E
COMMUTE TO CLINICAL EXPERIENCES SURVEY

COMMUTE TO CLINICAL EXPERIENCES SURVEY

Introduction and Directions

This 18-question survey will ask you to evaluate your own experiences concerning arriving to clinical sites on time.

Please answer the questions below. Your answers will remain anonymous. The only identifier you will be asked to give is which nursing course are in.

[Results are listed in parentheses-n= 74, 2 missing all data. (# of responses, percentage of responses)]

1. Which of these nursing courses are you currently attending?

1.	NSG 200	(43, 60%)
2.	NSG 204	(1, 1%)
3.	NSG 322	(0, 0%)
4.	NSG 332	(0, 0%)
5.	NSG 334	(2, 3%)
6.	NSG 406	(26, 36%)

2. Do you live in CSUSB housing?

1.	Yes	(3, 4%)
2.	No	(69, 96%)

3. How do you usually get to clinicals?

1.	Drive alone	(63, 89%)
2.	carpool	(8, 11%)
3.	Public Transportation	(0, 0%)
4.	Bicycle or walk	(0, 0%)
5.	Other	(0, 0%)

4. Approximately how many miles is your current clinical site from your residence?

1.	1-10	(12, 17%)
2.	11-20	(21, 30%)
3.	21-30	(19, 27%)
4.	31-40	(6, 8%)
5.	41-50	(8, 11%)
6.	51-60	(3, 4%)
7.	60+	(2, 3%)

5. How many minutes do you normally expect to spend commuting (drive time only) TO your clinical site each clinical day?

1.	1-10	(2, 3%)
2.	11-20	(18, 25%)
3.	21-30	(18, 25%)
4.	31-40	(14, 19%)
5.	41-50	(6, 8%)
6.	51-60	(4, 6%)
7.	60+	(10, 14%)

6. How many minutes do you normally expect to spend commuting (drive time only) FROM your clinical site each clinical day?

1.	1-10	(3, 4%)
2.	11-20	(17, 24%)
3.	21-30	(19, 26%)
4.	31-40	(12, 17%)
5.	41-50	(6, 8%)
6.	51-60	(6, 8%)
7.	60+	(9, 12%)

7. What is the longest additional time it has taken you to travel TO or FROM your clinical site this quarter? (in minutes)

1.	1-10	(13, 18%)
2.	11-20	(9, 12%)
3.	21-30	(18, 25%)
4.	31-40	(12, 17%)
5.	41-50	(7, 10%)
6.	51-60	(1, 1%)
7.	60+	(12, 17%)

8. On a typical clinical day, do you intentionally plan to arrive-

1.	Early	(53, 74%)
2.	On time	(19, 26%)
3.	Late	(0, 0%)

9. On a typical clinical day, how many minutes prior to your clinical start time do you arrive early?

1.	1-10	(33, 46%)
2.	11-20	(20, 28%)
3.	21-30	(10, 14%)
4.	31-40	(1, 1%)
5.	41-50	(1, 1%)
6.	51-60	(1, 1%)
7.	60+	(0, 0%)
8.	I do not arrive early	(6, 8%)

10. Are you concerned about being delayed due to traffic congestion?

1.	Yes	(63, 88%)
2.	No	(9, 12%)

11. Are you concerned about being delayed due to your car malfunctioning?

1.	Yes	(25, 36%)
2.	No	(44, 64%)

12. Are you concerned about being delayed due to your own personal life (family, missed alarm, etc.)?

- | | | |
|----|-----|-----------|
| 1. | Yes | (45, 62%) |
| 2. | No | (27, 38%) |

13. Do you consider the commute to your present clinical site-

- | | | |
|----|----------------------|-----------|
| 1. | Not congested | (14, 19%) |
| 2. | Slightly congested | (27, 38%) |
| 3. | Moderately congested | (24, 33%) |
| 4. | Very congested | (6, 8%) |
| 5. | Extremely congested | (1, 1%) |

14. Do you consider the commute to your present clinical site-

- | | | |
|----|---------------------------------|-----------|
| 1. | Enjoyable | (6, 8%) |
| 2. | Somewhat enjoyable | (9, 12%) |
| 3. | Neither enjoyable nor stressful | (37, 51%) |
| 4. | Somewhat stressful | (18, 25%) |
| 5. | Very Stressful | (2, 3%) |

15. If you could chose, would you prefer commuting to the clinical site using-

- | | | |
|----|-------------------|-----------|
| 1. | City streets | (14, 20%) |
| 2. | Highways/freeways | (57, 80%) |

16. How concerned or worried are you about arriving to your clinical site on time?

- | | | |
|----|--------------|-----------|
| 1. | Not at all | (5, 7%) |
| 2. | Rarely | (13, 18%) |
| 3. | Occasionally | (15, 21%) |
| 4. | Frequently | (19, 26%) |
| 5. | Always | (20, 28%) |

17. What concerns do you have about arriving to your clinical site?

(Responses by theme- accidents/traffic delays- 22, weather- 2, construction- 5, unfamiliar area- 5, parking- 10, unforeseen event-2, time of day-1, ontime arrival- 10, stress/worry- 4, distance of site- 2, negative outcomes with instructor/staff when late- 3, cost- 1, safety- 1, other - 4)

18. What specific strategies do you use to ensure ontime arrival to your current clinical site?

(Responses by theme- leave early-27, leave 5 minutes early-1, leave 10 minutes early-2, leave 15 minutes early- 1, leave 20 minutes early- 2, leave 30 minutes early- 5, leave 60+ minutes early-8, plan day/night before-26, avoid freeway- 2, speed-1, know area-1, other

APPENDIX F

SPEARMAN'S RHO CORRELATION COEFFICIENTS
FOR COMMUTER STRESS AMONG STUDENT NURSES

Spearman's Rho Correlation Coefficients for Commuter Stress Among Student Nurses

	Distance to clinical site	Minutes to site	Minutes from site	Addtl time needed	Early Arrival	Commute Congest.	Enjoy-stressful commute	Concern/worry about ontime arrival
Distance to clinical site	1.0	.788**	.771**	.394**	.057	.355**	.235*	.166
Minutes to site		1.0	.848**	.431**	.090	.415**	.278*	.193
Minutes from site			1.0	.386**	.101	.394**	.213	.220
Addtl time needed				1.0	-.65	.423**	.280*	.142
Early Arrival					1.0	.099	.021	.015
Commute Congestion						1.0	.520**	.219
Enjoyable-stressful							1.0	.292*
Concern/worry about ontime arrival								1.0

* p < .05, ** p < .01

APPENDIX G
FREQUENCY DISTRIBUTION FOR COMMUTER
STRESS SURVEY VARIABLES

Frequency Distribution for Commuter Stress Survey Variables

	Number of responses	Mean	Median	Mode
Courses	72	na	1	1 (Nsg 200)
Housing	72	1.96	2	2 (off campus)
Vehicle	71	1.11	1	1 (drive alone)
Distance	71	2.92	3	2 (11-20 miles)
Minutes to	72	3.78	3	2 (11-20 min.)*
Minutes from	72	3.76	3	3 (21-30min.)
Additional minutes	72	3.58	3	3 (21-30min.)
Plan to arrive early	72	1.26	1	1 (early)
Arrive early-minutes	72	2.31	2	1 (1-10 min.)
Concern- congestion	72	1.13	1	1 (yes)
Concern- breakdown	69	1.64	2	2 (no)
Concern- personal	72	1.38	1	1 (yes)
Congested commute	72	2.35	2	2 (sl. congest.)
Enjoyable/stressful	72	3.01	3	3 (stressful)
Street/ freeway	71	1.80	2	2 (hwy/freewy)
Concern/worry- ontime arrival	72	3.5	4	5 (always)

* = multiple modes exist

APPENDIX H
RESPONSES TO OPEN-END QUESTIONS

Responses to Open-end Questions

Question 17: "What concerns do you have about arriving to your clinical site?"

Theme	Quotes
Weather	I live in big bear so the thing that concerns me the most are weather conditions
Unfamiliarity with Local Area	I am new to this area and do not know side streets to arrive to my destination without using the freeways. Not knowing exactly how to get there the first time Getting lost if I haven't been there before
On time	I am always worried about being late, because I am not supposed to be late, in addition i always worry about being delayed in traffic jam no matter how early i am. I worry about arriving late and not having some place to park. Being their on time, getting stuck in traffic, feeling relaxed when I get there so I can communicate effectively with my instructor. Arriving late because of a flat tire or accident on the streets.
Parking	I have to leave very early so I can beat traffic to RCH as well as find parking in the limited staff parking area. If there is going to be parking in the parking

garage.

The ease of parking, it is usually hard to find or parking for students is far from the site.

Accidents Primarily unexpected traffic accidents that could potentially cause me to be late. I try to give myself 10 to 20 minutes extra when I can. I have never been late, but it is always a possibility because I take 4 freeways.

Unexpected incidents which could cause me to be delayed, car accidents, traffic, road-block.

Congestion I worry about traffic on the 91 freeway. It is always backed up at the 60 freeway interchange.

Traffic...you never know what traffic's going to be like on the 10 freeway...especially at the interchanges.

Construction I am concerned with unexpected traffic or freeway construction delays.

Construction work done on roads, or major accidents, both of which can severely impede the flow of traffic

Miscellaneous Traffic delays, weather, detours.

traffic Just that I wont be on time and there will be delays traffic.

Traffic, if there are any accidents that can delay.

I'm concerned about the traffic on the 91 freeway. As from next quarter, I will actually be sleeping

over at my friend's house that lives close to
RCH the nights before my clinicals.

Other

Some instructors take into consideration traffic and tardiness, others do not. Some students have complained that they were stuck in traffic (leaving the house early) resulting in being 10 min late, and the instructor sent them home from the hospital. I understand that promptness is very important, but if the student has called the instructor telling them the traffic situation, shouldn't the instructor be a little understanding? If tardiness does not have a valid excuse (not hearing alarm), that is a different story. But to turn a student away after 10 min, that's frustrating when they drove in traffic for over an hour.

Traffic, and danger of the neighborhood

Hospitals are scattered and sometimes very far away... and in the middle fo VERY congested areas.

I'm concerned that i'll be late due to traffic and the cost of driving back and forth in gas and maintenance is a major concern

No concerns other than the reliability of my car

Missing report and getting yelled at by instructors.

Did i leave my house too early. Do i have everything i need or did i forget my careplan, drug guide, badge, etc.

Question 18: "What specific strategies do you use to ensure ontime arrival to your current clinical site?"

Theme	Quotes
Leaving early	<p>I try to leave an hour and a half early to ensure that I will be on time with traffic, since traffic is so unpredictable. But when there is no traffic, I arrive at the hospital extremely early.</p> <p>Leave at least 30 minutes earlier additional to what it normally takes me to drive to and from clinicals.</p> <p>Leave early just in case there is traffic, and waste time waiting for it to start if there is not.</p> <p>I leave an hour and a half early so if I hit traffic I can be prepared and not feel rushed.</p> <p>Try to leave early but doesn't always mean i will be on time.</p>
Wake early	<p>Always wake up early to beat the traffic and once i arrive early try to nap in the car until clinicals begin.</p>

**Multiple
strategies**

I give myself extra time in case of an emergency.

I set 2 alarms to make sure that I get up
because I am not a very good morning person.

I wake up an hour earlier.

I check weather the night before my clinical for
possible rain, which could make me late due
to slowed traffic. I also check the traffic
before I leave so that I can avoid any
accidents that have already occurred and
take an alternate route. I try to give myself
extra time to allow for delays. I have all
my things ready the night before, such as
clothes ironed, lunch packed, books and
assignments in my backpack, and I take my
shower the night before.

I usually try to leave early, and have all my
materials and uniform ready, so all I have to
do is jump out of the door and into my car.

Waking up early, and giving myself good time. (e.g.

I live about 15 minutes from the clinical
site, so I leave 30 minutes a head of time)

I set four alarms, prep my clothes the night before,
and try to get at least five hrs of sleep

I usually speed, leave early, use detours, and
avoid 60/215 interchange whenever possible.

Other

Pray.

I use out of the way city streets which are usually
not dense with traffic

Getting to bed at a decent hour

REFERENCES

- Bay, E. J. (2002) Fear and anxiety: A simultaneous concept analysis. *Nursing Diagnosis, 10(3)*, 103-111.
- Brockman, S., Sirotnik, B., & Ruiz, C. (2003). Inland Empire Research consortium, *San Bernardino County Annual Survey 2003*.
- Brown, H., Edelman, R. (2000). Project 2000: A study of expected and experienced stressors and support reported by students and qualified nurses. *Journal of Advanced Nursing, 31(4)*, 857-864.
- Clark, M. R. (2006). Succeeding in the city: Challenges and best practices on urban commuter campuses. *About Campus, 11(3)*, 2-8.
- Dziegielewska, S. F., Turnage, B. & Roest-Marti, S. (2004). Addressing stress with social work students: A controlled evaluation. *Journal of Social Work Education, 40(1)*, 105-119.
- Golde, C. M. (2005). The role of the department and discipline in doctoral student attrition: lessons from four departments. *Journal of Higher Education, 76(6)*, 669-700.

- Gulian, E., Matthews, G., Glendon, A. I., & Davies, D. R. (1989). Dimensions of driver stress. *Ergonomics*, 32, 585-602.
- Gulian, E., Matthews, G., Glendon, A. I., Davies, D. R., & Debney, M. (1990). The stress of driving: a diary study. *Work and Stress*, 4, 7-16.
- Hennessey, D. A., & Wiesenthal, D. L. (1999). Traffic congestion, driver stress, and driver aggression. *Aggressive Behavior*, 25, 409-423.
- Hennessey, D. A., & Wiesenthal, D. L. (1997). The relationship between traffic congestion, driver stress and direct versus indirect coping behaviors. *Ergonomics*, 40(3), 348-361.
- Hennessey, D. A., Wiesenthal, D. L., Kohn, P. M. (2000) The influence of traffic congestion daily hassles and trait stress susceptibility on state driver stress: An interactive perspective. *Journal of Applied Biobehavioral Research*, 5(2), 162-179.
- Jackson, C. (2004). Healing ourselves, healing others- part 2. *Holistic Nursing Practice*, 18(3), 127-141.
- Jackson, C. (2004). Healing ourselves, healing others- part 3. *Holistic Nursing Practice*, 18(4), 199-210.

- Jones, M. C., Johnston, D.W. (2000). Evaluating the impact of a worksite stress management programme for distressed student nurses: A randomized controlled trial. *Psychology and Health, 15*, 689-706.
- Keil, R. M. K. (2004). Coping and stress: a conceptual analysis. *Journal of Advanced Nursing, 45*(6), 659-665.
- Koslowsky, M., Kluger, A., & Reich, M. (1995). *Commuting stress: Causes, effects and methods of coping*. New York: Plenum Press.
- Kuzma, J. W., & Bohnenblust, S. E. (2005). *Basic statistics for the health sciences*. New York: McGraw-Hill.
- Langford, C., & Glendon, A. I. (2002). Effects of neuroticism, extraversion, circadian type and age on reported driver stress. *Work and Stress, 16*(4), 316-334.
- Lazarus, R., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Lee, R. L. T., Loke, A. J. T. Y. (2005). Health-promoting behaviors and psychosocial well-being of university students in Hong Kong. *Public Health Nursing, 22*(3), 209-220.

Merriam-Webster, Inc. (2004). *Merriam-Webster Dictionary*.

Springfield, MA: Author.

Murff, S. H. (2005). The impact of stress on academic success in college students. *The ABNF Journal*, 16(5), 102-104.

Nicholl, H., Timmins, F. (2005). Programme-related stressors among part-time undergraduate nursing students. *Journal of Advanced Nursing*, 50(1), 93-100.

Nonis, S. A., Hudson, G. I., Logan, L. B., & Ford, C. W. (1998) Influence of perceived control over time on college students' stress and stress-related outcomes. *Research in Higher Education*, 39(5), 587-605.

Novaco, R.W., Stokols, D., Campbell, J., & Stokols, J. (1979). Transportation, stress, and community psychology. *American Journal of Community Psychology*, 7, 361-380.

Novaco, R.W., Stokols, D., Milanesi, L. (1990). Objective and subjective dimensions of travel impedance as determinants of commuting stress. *American Journal of Community Psychology*, 18, 231-257.

Oxford University. (2006). *Oxford English Dictionary*. Web site: <http://www.oed.com>

- Pisarski, A. E. Commuting in America III: The third national report on commuting patterns and trends. Report 550 National Cooperative Highway Research Program and TCRP Report 110 Transit Cooperative Research Program. Retrieved on 3/1/07 from <http://onlinepubs.trb.org/onlinepubs/nchrp/CIAIII.pdf>
- Sarafino, E. P., Ewing, M. (1999). The hassles assessment scale for students in college: Measuring the frequency and unpleasantness of and dwelling on stressful events. *Journal of College Health, 48(2), 75-83.*
- Selye, H. (1978). *The stress of life*. Columbus: McGraw-Hill Education.
- Sharif, F., Armitage, P. (2004). The effect of psychological and educational counseling in reducing anxiety in nursing students. *Journal of Psychiatric and Mental Health Nursing, 11(4), 386-392.*
- Stark, M. A., Manning-Walsh, J., & Vliem, S. (2005). Caring for self while learning to care for others: A challenge for nursing students. *Journal of Nursing Education, 44(6), 266-270.*

- U.S. Department of Health and Human Services. (2000).
Healthy people 2010. Washington D.C.: United States
Printing Office.
- van Rooy, D. L. (2006). Effects of automobile commute
characteristics on affect and job candidate
evaluations: A field experiment. *Environment &
Behavior, 38*(5), 626-655.
- Walker, L. O., & Avant, K. C. (1995). Concept analysis. In
L. Walker & K. Avant (3rd ed.), *Strategies for theory
construction in nursing* (pp. 37-54). Norwalk, CT:
Appleton and Lange.
- Westerman, S. J., & Haigney, D. (2000). Individual
differences in driver stress, error and violation.
Personality and Individual Differences, 29, 981-998.
- Zajacova, A., Lynch, S.M., Espenshade, T. J. (2003). Self-
efficacy, stress, and academic success in college.
Research in Higher Education, 46(6), 677-706.