

Thesis
LB
2322
.A9x
T-596

COMMUTING, STRESS, AND ABSENTEEISM IN THE WORKPLACE

ANTHONY J. MEDURE

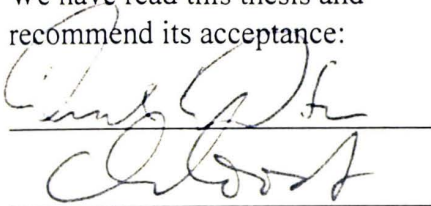
To the Graduate Council:

I am submitting herewith a thesis written by Anthony J. Medure entitled "Commuting, Stress, and Absenteeism in the Workplace." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology and a concentration in Industrial/Organizational Psychology.



Dr. Thomas Timmerman, Major Professor

We have read this thesis and
recommend its acceptance:



Accepted for the Council:



Dean of the Graduate School

STATEMENT OF PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a Master's degree at Austin Peay State University, I agree that the Library shall make it available to borrowers under rules of the Library. Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of the source is made.

Permission for extensive quotation from or reproduction of this thesis may be granted by my major professor, or in his absence, by the Head of Interlibrary Services when, in the opinion of either, the proposed use of the material is for scholarly purposes. Any copying or use of the material in this thesis for financial gain shall not be allowed without my written permission.

Signature



Date

6-8-00

COMMUTING, STRESS, AND ABSENTEEISM IN THE WORKPLACE

A Thesis

Presented for the

Master of Arts

Degree

Austin Peay State University

Anthony J. Medure

August, 2000

DEDICATION

This thesis is dedicated to my parents

Jim and Patty Medure

who have given me the support and ambition
to pursue all of my educational endeavors.

ACKNOWLEDGMENTS

I would like to thank my major professor, Dr. Thomas Timmerman, for his time, guidance, and support over the past two years. I would also like to thank my other committee members, Dr. David Denton and Dr. Barrie Woods, for their assistance and suggestions. I would like to express my thanks to my parents for helping me reach my goals, and providing encouragement along the way. Finally, I would like to thank Erica for lending me her love and support when I needed it most.

ABSTRACT

The purpose of the study was to investigate the relationship among commuting, stress, and absenteeism in a workplace environment. Hypotheses included: 1) Individuals who experience a longer commute will perceive their commute as more stressful than those who have a shorter commute, 2) The relationship between length of commute and level of perceived stress will be affected by one's mode of transportation. Specifically, individuals using a form of private transportation should perceive their commute as more stressful than those using a form of public transportation, 3) Individuals who perceive a higher level of commuting stress will also experience a greater number of absences, and 4) The relationship between the level of perceived commuting stress and absenteeism will be affected by gender. More specifically, women will perceive the commute as more stressful than will men. As a result, women will have a higher rate of absenteeism than will men.

A questionnaire was developed to assess perceptions of commuting stress. The questionnaire was converted to an HTML format and posted on the World Wide Web, or internet. Participants were recruited from various companies around the world, as well as through online research forums. A sample ($N = 190$) was used in the current study. Statistical analyses were performed on the data.

In this study, length of commute, in terms of mileage or time, was significantly related to level of perceived commuting stress. Also, those who utilized private transportation indicated a higher level of perceived commuting stress. It appears that

the relationship between length of commute and level of perceived commuting stress is stronger for women than it is for men. A significant relationship between level of perceived commuting stress and an estimate of future absences existed for females, but not for males.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
II. METHODS	8
Participants	8
Materials	9
Procedure	9
III. RESULTS	11
Table 1	11
Table 2	12
Table 3	13
Table 4	13
Table 5	14
IV. DISCUSSION	15
BIBLIOGRAPHY	19
APPENDICES	24
A. Informed Consent Form	24
B. Commuting Stress Questionnaire	27
C. Letter to Human Resources Directors	31
VITA	33

CHAPTER I

INTRODUCTION

Today, if a person was asked to conceptualize the term *stress*, he or she would probably respond by saying something to the effect that, “stress is a force that causes some sort of physical, mental, or emotional discomfort” (Webster’s Dictionary, 1997, p. 1275). In the English language of today, that may be true, but stress did not always have its current connotation. The term stress has Latin roots as a verb where by it means “to injure, molest, or constrain” (Kahn & Byosiére, 1992, p. 573). Stress can also be traced to 18th and 19th century physics. Here, stress refers to the internal resting force of an object. In the early 1900s, medical and biological communities borrowed the term stress and incorporated it into their work. However, this new usage of stress was imprecise. People could not distinguish whether stress was used to indicate an “external condition or force imposed on an organism, or some presumably universalistic response of organisms to such external demands” (Kahn & Byosiére, 1992, p. 573). Overall, the different contributions made by these diverse disciplines could not produce one all-encompassing definition, nor could they resolve all of the conceptual differences. Shortly after World War II, stress began to make its way into the explorations of organizational psychologists (Kahn & Byosiére, 1992).

Kahn and Byosiére (1992) have developed a theoretical framework for studying stress in organizations. This framework has been developed around various main topics, which include the following: organizational antecedents to stress; stressors in organizational life; perception and cognition (the appraisal process); responses to stress (physiological, psychological, and behavioral); ramifying consequences of stress (health

and illness, organizational effectiveness, and performance in other life roles); properties of the person as stress mediators; properties of the situation as stress mediators; and prevention and intervention. Each of the previously mentioned topics has provided fruitful areas for research.

Each component of Kahn and Byosiére's (1992) model has become a popular area for research. Organizational antecedents is one of these areas. Organizational antecedents include subjects such as organizational size, economic factors, and employee work schedules, as well as many others not mentioned here (Kahn & Byosiére, 1992; Koslowsky, Kluger, & Reich, 1995). The current study attempts to unravel the relationship among commuting, stress, and absenteeism. However, the commute cannot be viewed as a true organizational antecedent. Even though the commuting experience is an antecedent, it does not fit cleanly into the organizational antecedent category. As previously mentioned, organizational antecedents are factors derived directly from the organization. So where does the commute fit into the model proposed by Kahn and Byosiére (1992)? Maybe it would fit into the *Properties of the Person as Stress Mediators* more appropriately. Once again, this is not a perfect fit. Perhaps the best explanation is that the commute is some extraneous, environmental factor that does not fit into a specific category within the model, but is composed of different parts of the model. In turn, this is an area that poses many questions. How does commuting stress affect performance, job satisfaction, organizational commitment, or absenteeism? Are there factors that alleviate commuting stress for particular individuals? Does the type of transportation have any benefits or consequences? Does commuting stress affect men

and women differently? The current study will attempt to provide answers to these questions, as well as create new questions and avenues for future research.

According to the United States Department of Transportation (USDOT) (1997), commuters travel an average of 4.6 trillion miles per year. Surprisingly, the average person makes 4.3 local trips daily and drives an average of 39 miles per day. This translates to 1,568 trips annually at an average of 14,115 miles annually per person (USDOT, 1995). In order to get from place to place, commuters utilize 3,920,958 miles of public roadway along with 162,840 miles of bus, trolley, and rail routes (USDOT, 1997, 1998). The number of passenger cars has increased from 89,243,557 in 1970 to 129,748,704 in 1997. The number of buses and commuter rail cars has also increased over the past three decades (USDOT, 1999). As you can see, the number of commuters is growing at an alarming rate. Research questions need to be asked. What role does crowding play in the daily commute? How does stress affect worker performance, role, and mood? Does the stress of commuting affect men and women differently? Can ridesharing help alleviate some of the negative consequences of commuting? Previous researchers have attempted to answer these questions. However, Koslowsky et al. (1995) summed it up best when they said, "although various consequences of commuting have been studied, the findings are generally inconsistent" (p. 4).

In general, the relationship between stress and commuting has been difficult to study. This is largely due to individual differences. Different people will react to situations in vastly different ways. Also, the commute will vary in terms of where one lives, time and distance of commute, and ease of getting to and from work (Burke, 1995).

For example, Burke (1995) found that women and men working in large offices located in large cities spent more time commuting. He also determined that women spent more time commuting than did men. Individuals in lower organizational levels also spent a greater amount of time commuting than their higher level counterparts. Women and men who spent more time commuting viewed the organization's work and family policies and programs as less supportive. Those who engaged in longer commutes also expressed greater intention to leave the organization.

Commuting has also been linked to psychological, behavioral, and physiological problems. Research has shown that employees who live farther away from work tend to be more tense and nervous than those who live closer (Koslowsky et al., 1995). Commuting has also been associated with higher levels of anxiety, aggravation, and tension. It has also been shown that employees who live far away from their jobs were absent, late, and quit their jobs more often than those who lived closer to work. In turn, these factors have a direct effect on employee effectiveness and productivity (Koslowsky, 1998; Koslowsky et al., 1995). Data have also shown commuting to be related to a variety of health issues, such as increased heart rate and blood pressure, back pain, cardiovascular problems, gastric disorders, visual impairment, as well as vehicular accidents (Koslowsky et al., 1995).

Other factors have also been shown to have an effect on the commuting experience. Aiello, DeRisi, Epstein, and Karlin (1977) found that crowding, which involves close physical proximity, produced greater physiological reactivity, as well as lowered creativity levels. However, these outcomes were mediated by participants'

individual differences and personal space preference. For those who preferred to interact at greater distances, crowding acted as a stressor. Aiello et al. (1977) also indicated that regardless of interpersonal distance preference, participants in the crowded conditions showed lower levels of creativity. Along similar lines, Evans and Carrere (1991) have suggested that traffic congestion is a detrimental aspect of the job environment. More specifically, traffic congestion may have a direct link to high levels of occupational stress and health risk among urban bus drivers.

Two factors that may also contribute to commuting stress are impedance and control. Commuting impedance includes, “obstacles or behavioral constraints on movement or goal attainment...impedance consists of stimuli that frustrate the commuter from achieving a goal” (Koslowky, 1998, p. 521). Novaco, Stokols, Campbell, and Stokols (1979) have demonstrated that impedance affects commuters’ perceptions of congestion, physiological arousal, task performance, and mood on arrival to work. The researchers also stated that these effects were mediated by personality and dimensions of personal control. In a related study, Novaco, Stokols, and Milanesi (1990) looked at both physical and perceptual conditions of travel impedance. Results of the study indicated that physical impedance had negative effects on physical health and job satisfaction, while subjective impedance was associated with evening home mood. These results were examined and validated in another study (Koslowky, 1997; Novaco, Kliewer, & Broquet, 1991).

Control has also been linked to commuting stress. Schaeffer, Street, Singer, and Baum (1988) determined that control over one’s car environment was a predictor of stress

effects related to commuting. More specifically, having multiple routes to work seemed to be more stressful than having only one route, due to the fact that a driver could choose the “wrong” route instead of only having one choice. Kluger (1998) found a lack of choice and commute variability to be correlated with strain. These results lend support to control being seen as an additive stressor.

As one can see from the research studies reviewed previously, individual differences come into play while studying commuting stress. More specifically, Koslowsky and Krausz (1993) stated that, “it is possible that the commute is stressful only for some subjects. Thus, only those who perceive stress may actually be negatively affected. Commuting may be an objective cause of stress, but only if the individual subjectively evaluates it as such will outcome change occur” (p. 491). Therefore, this issue will be addressed in the current study.

Hypothesis 1: Individuals who experience a longer commute will perceive their commute as more stressful than those who have a shorter commute.

Mode of transportation (public vs. private) may also be a key point in understanding how commuting stress affects employees. As Koslowsky and Krausz (1993) point out, car drivers may experience frustration and stress due to congestion and lack of control during the commute. Therefore, mode of transportation may have a moderating effect on the stress experienced by commuters.

Hypothesis 2: The relationship between length of commute and level of perceived stress will be affected by mode of transportation. Specifically, individuals using a form of private transportation should perceive their commute as more stressful than those using a form of public transportation.

From the prior review, it is seen that commuting stress has an effect on employee

behavior such as absenteeism, turnover, and productivity. A study by Jacobson et al. (1995) found a significant relationship between stress and absenteeism. More specifically, the higher level of perceived stress a person experienced, the greater number of absences that person had in a specified period of time. In the same study, evidence was found that women expressed higher levels of perceived stress than did men. Jacobson et al. (1995) stated that this may be due to the fact that women often experienced dual roles, breadwinner and homemaker. Johns (1997) also provides support that the “dynamics of absenteeism seem to differ for men and women...” (p. 128).

Hypothesis 3: Individuals who perceive a higher level of commuting stress will also experience a greater number of absences.

Hypothesis 4: The relationship between the level of perceived commuting stress and absenteeism will be affected by gender. More specifically, women will perceive the commute as more stressful than will men. As a result, women will have a higher absenteeism rate than men.

CHAPTER II

METHODS

Participants

The sample for the current study consisted of 190 respondents from the United States, Canada, the United Kingdom, South Africa, and Israel. Females composed 50.5% of the sample while males made up the remaining 49.5%. Participants' ages ranged from 18 to over 60 with approximately 48% of the participants falling between the ages of 25 and 38. Eighty-eight percent of the sample was White/Caucasian. African Americans, Hispanics, Asians, and Pacific Islanders composed the remaining 12% of the sample. The mean annual-household income of the sample was \$40,001-60,000. Approximately 74% of the respondents indicated they had completed college or had experienced some college education.

In terms of the commute to and from work, almost 9% of the participants utilized a form of public transportation, such as a city bus or train. The remaining 90.5% of the sample used some form of private transportation. These included personal automobiles, carpools, walking, rollerblading, and bicycling. Participants' overall commuting distances ranged from .1 to 100 miles with an average of 19.5 miles ($SD = 16.8$). The commute to work was slightly shorter, in terms of time, than the commute home. Respondents' commuting times to work ranged from 1 to 90 minutes with a mean travel time of 29.8 minutes ($SD = 18.0$). The commute home ranged from 1 to 100 minutes with an average of 32.2 minutes ($SD = 19.2$). Participants were treated in accordance with the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 1992).

Materials

A 44-item questionnaire was developed for the current study (Cronbach's $\alpha = .98$). The questionnaire was based on the work of Koslowsky and Krausz (1993) and included questions about individuals' commute to and from work. Demographic questions were also included. The questionnaire was converted to an HTML (hypertext markup language) format using a Compaq Presario 5240, Microsoft Word 2000, and Microsoft Front Page Express 2.0.

Procedure

The survey used in the study was first developed in a paper-based format. After that, the questionnaire was converted to an HTML format and posted on the World Wide Web. More specifically, it was uploaded to Dr. Thomas Timmerman's Austin Peay State University Web site. Once this had been done, all aspects of the questionnaire were checked for clarity and correct operation. After determining that the questionnaire is functioning properly, participants were recruited and directed to the survey.

Participants were recruited with two different methods. In the first method, a formal letter was sent to the human resources (HR) directors of various companies throughout the United States, Canada, England, and Japan. The letter stated the purpose of the study, how the study could benefit the company, as well as a URL (Web site address) that directed participants to the online survey. The HR directors were asked to forward this information to the employees of the companies and asked them to access the survey and complete the questionnaire. In the second method, participants were recruited through online research forums and search engines. Dr. John Krantz, from the American

Psychological Society (APS), was contacted about posting a link from the APS online research website to the questionnaire posted on Dr. Timmerman's Web site. Along similar lines, Dr. Scott Plous was contacted and asked to post a link from the Social Psychology Network online research Web site to the site used in the current study. Two respondents also posted the URL to the online bulletin boards of the companies they worked for. A link entitled "Commuting, Stress, and Absenteeism in the Workplace" was also registered with the following online search engines: Yahoo!, Excite, Lycos, and AltaVista. All of the links, as well as the online survey, were kept active for approximately four weeks. Responses were recorded by an e-mail forwarding system created by Dr. Timmerman. The responses were then downloaded, printed, and entered into a statistical software package. After all responses were recorded, statistical analyses were performed on the data. As a means of compensation for participating in the study, all respondents and HR directors were offered a copy of the final results.

Scoring

Responses to the first 28 items on the questionnaire were based on a 7-point, Likert-type scale ranging from 1 = strongly disagree to 7 = strongly agree. The responses provided by the participants, were added and averaged to create a Commuter Stress Index (CSI) for each participant. A larger CSI indicated a greater level of perceived commuting stress. Responses to the other items, including demographic information, were coded accordingly. For example, female = 0 and male = 1.

CHAPTER III

RESULTS

The current study investigated four hypotheses. An alpha level of .05 was utilized for all statistical analyses. To examine the relationships stated by each of the hypotheses, a correlation matrix with Bonferoni correction was used. Overall, support was found for the first hypothesis. As shown in Table 1, a significant relationship exists between the length of commute, in terms of mileage and time, and level of perceived commuting

Table 1

Relationship Between Commute and Stress

	Mean	SD	To Work	From Work	Length	CSI
To work	29.85	17.99	1.000			
From Work	32.21	19.21	.914**	1.000		
Length	19.55	16.79	.822**	.781**	1.000	
CSI	2.85	1.43	.352**	.376**	.273**	1.000

(*N* = 185)

Note: **Correlation is significant at the .01 level

stress.

The second hypothesis looked into an individual's mode of transportation and the effect it has on the relationship between one's commute and level of perceived commuting stress. According to the data, a significant relationship exists between length of commute, in terms of mileage and time, and level of perceived commuting stress (Table 2). However, this relationship is only extended to individuals that use a form of private transportation. As a result, support was established for the second hypothesis.

The third hypothesis stated that individuals who perceived a higher level of

Table 2

Transportation: Public vs. Private

Public						
	Mean	SD	To Work	From Work	Length	CSI
To Work	31.74	21.22	1.000			
From Work	34.58	22.57	.988**	1.000		
Length	13.54	16.63	.746**	.683**	1.000	
CSI	2.36	1.03	-.089	.039	.299	1.000
(N = 17)						

Private						
	Mean	SD	To Work	From Work	Length	CSI
To Work	29.66	17.70	1.000			
From Work	31.96	18.88	.905**	1.000		
Length	20.15	16.74	.864**	.804**	1.000	
CSI	2.90	1.45	.398**	.416**	.265**	1.000
(N = 169)						

Note: **Correlation is significant at the .01 level

commuting stress would also experience a greater number of absences. No significant relationship was found between stress level and past or present absences. However, a significant relationship between stress level and an estimate of future absences was found (Table 3). This finding lends partial support to the study's third hypothesis.

The final hypothesis was an extension of the third. It stated that women should perceive their commute as more stressful than will men, and as a result will have a higher rate of absenteeism. The data in Table 4 indicate that a significant relationship exists between level of perceived commuting stress and an estimate of future absences, not past or present. The relationship between stress level and absenteeism was not significant for

men. This finding lends partial support to the fourth hypothesis.

Table 3
Relationship Between Stress and Absence

	Mean	SD	Absence	Future Absence	CSI
Absence	5.95	12.03	1.000		
Future Absence	4.07	4.61	.413**	1.000	
CSI	2.84	1.43	.135	.201**	1.000

(N = 181)

Note: **Correlation is significant at the .01 level

Table 4
Gender and Absence: Male vs. Female

Male					
	Mean	SD	Absence	Future Absence	CSI
Absence	3.73	6.28	1.000		
Future Absence	3.07	4.73	.534**	1.000	
CSI	2.81	1.40	.134	.028	1.000

(N = 90)

Female					
	Mean	SD	Absence	Future Absence	CSI
Absence	8.19	15.57	1.000		
Future Absence	5.07	4.29	.389**	1.000	
CSI	2.89	1.46	.150	.370**	1.000

(N = 91)

Note: **Correlation is significant at the .01 level

A Principle Component Factor Analysis with Varimax rotation was performed on the data. Results of the factor analysis are presented in Table 5. Three components, or

factors, were extracted through the analysis. Values less than .40 were excluded from the analysis, as well as the table presented here.

Table 5
Rotated Component Matrix

	Component		
	1	2	3
Q8	.786		
Q7	.778		
Q13	.766	.437	
Q15	.765		
Q18	.715		.420
Q24	.714	.502	
Q1	.712		
Q20	.707		.412
Q21	.682		
Q6	.660	.540	
Q4	.650		
Q22	.598	.454	
Q5	.597	.547	
Q25	.593	.473	
Q28	.565	.538	
Q9	.495	.471	.438
Q26		.844	
Q27		.771	
Q14		.752	
Q23	.476	.741	
Q12		.675	.474
Q16	.501	.646	
Q3	.485	.623	
Q17			.766
Q2			.751
Q19	.581		.628
Q10	.514	.435	.589
Q11		.478	.577

Extraction Method: Principle Component Analysis
Rotation Method: Varimax with Kaiser Normalization

CHAPTER IV

DISCUSSION

Koslowsky et al. (1995) report that the findings of previous commuting studies are generally inconsistent. Hopefully the study at hand can shed some light on the subject. The purpose of this study was to investigate the relationship among commuting, stress, and absenteeism in a working environment. The results from the data analysis indicated that a significant relationship existed between length of commute (e.g., mileage or time) and level of perceived commuting stress. The mode of transportation (i.e., public vs. private) an individual uses appears to have an effect on the level of commuting stress he or she experiences. Specifically, those using a form of private transportation tend to indicate a higher level of perceived commuting stress. In general, females were absent from work more often than males. However, a significant relationship only existed between level of stress and future absences for females, not males.

Findings in the current study are consistent with those of Koslowsky and Krausz (1993) as they relate to mode of transportation. The relationship between length of commute and level of stress was stronger, as well as significant, for those who used a form of private transportation, such as a personal automobile. Koslowsky and Krausz (1993) point out that this factor may be due to the congestion and lack of control experienced by car drivers.

The current study also lends some support to previous work by Jacobson et al. (1995). The researchers found a significant relationship between stress and absenteeism. Specifically, the higher level of perceived stress a person experienced, the greater number of absences that person exhibited in a given period of time. However, in the present

study, this relationship was somewhat different. Here, the level of perceived stress was significantly related to future absences, but not past or present absences. This relationship held true for females, but not for males. It appears that women may use the commute as a predictor of how often they may be absent from work in the future. However, this relationship may also be due to the fact that women often exhibit dual roles, breadwinner and homemaker (Jacobson, et al., 1995). Johns (1997) also states that the reasons for absenteeism differ for men and women.

Although the current study provided significant results, it was not without weaknesses. First, the questionnaire itself. Was it really measuring commuting stress? Or was it actually measuring some other factor or factors? A factor analysis revealed three major factors. Even though many of the questions loaded on the first factor, there was some level of overlap between all three of the factors. In actuality, the questionnaire was not only measuring commuting stress, but two other dimensions as well. Looking back over some of the questions and their wording, they could have easily been measuring depression, anxiety, or even some unknown dimension. Also, no distinction had been made between illness-related absence and other work-related absences, such as vacation. This caused confusion for some of the participants. Some individuals indicated illness and vacation absences separately, some combined them, and others opted not to provide a response. These are both areas that can be easily dealt with in future studies.

A second weakness involved the method of recording the responses from the participants. A "glitch" was discovered after the first series of responses had been submitted. Questions 2 through 6 would allow a participant to provide two responses to

the question. Also, if a particular response was chosen, other responses were automatically deleted from one or more of these five questions. This problem resulted in a loss of data. However, this problem was brought to the researchers attention and was taken care of promptly.

Another weakness was the lack of representation of those who used public transportation. Perhaps the results of the study may have evolved differently if more of the respondents utilized a form of public transportation. In all actuality, given the commuting statistics presented previously, a majority of people drive themselves to work on a daily basis. Perhaps this may be different in other countries where people are not as dependent on the automobile. This would also be an excellent area for future research.

A final area can be viewed as both a strength and a weakness. Since the questionnaire was presented in an online format, participants needed to have access to the World Wide Web. Not all individuals have online access, or even a computer. Therefore, potential respondents were excluded from the study. However, collecting data via the internet allows access to an extremely large, far-reaching sample, as evidenced by the present study. A majority of the participants were located in the United States, but responses were recorded from a variety of other countries which included Canada, the United Kingdom, South Africa, and Israel. This was a great strength of the study at hand. Research has shown the internet to be a viable source for data collection (Stanton, 1998).

As shown by the data, the current study provides both practical and research-oriented implications. For example, organizations may want to encourage employees to utilize a form of public transportation, such as a city bus or train. Using a form of public

transportation may lead to a decreased level of commuting stress, which in turn will benefit the organization. A decrease in the level of commuting stress may also lead to a reduced rate of absenteeism. The data suggest that individuals, women in particular, may use the level of commuting stress they experience to predict how often they will be absent in the future.

Even though the current study adds to the pool of commuting research, much more needs to be done. Some previous research findings were supported, while entirely new areas were discovered. This study provides avenues for future research. As Koslowsky et al. (1995) point out, the findings of many commuting studies are generally inconsistent. Therefore, a myriad of questions need to be asked, and new areas need to be explored.

BIBLIOGRAPHY

BIBLIOGRAPHY

American Psychological Association. (1994). Publication manual of the American Psychological Association (4th ed.). Washington, DC: American Psychological Association.

Aiello, J. R., DeRisi, D. T., Epstein, Y. M., & Karlin, R. A. (1977). Crowding and the role of interpersonal distance preference. Sociometry, 40 (3), 271-282.

Bloomfield, A. V., & Harris, R. (1997). The journey to work: A historical methodology. Historical Methods, 30 (2), 97-110.

Burke, M. J., Brief, A. P., & George, J. M. (1993). The role of negative affectivity in understanding relations between self-reports of stressor and strains: A comment on the applied psychology literature. Journal of Applied Psychology, 78 (3), 402-412.

Burke, R. J. (1995). Commuting to work. Perceptual and Motor Skills, 80, 49-50.

Evans, G. W., & Carrere, S. (1991). Traffic congestion, perceived control, and psychophysiological stress among urban bus drivers. Journal of Applied Psychology, 76 (5), 658-663.

Frankel, M. S., & Siang, S. (1999). Ethical and legal aspects of human subjects research on the internet [On-line]. Available:

<http://www.aaas.org/spp/dspp/sfrr/projects/intres/main.htm>

Jacobson, B. H., Aldana, S. G., Goetzel, R. Z., Vardell, K. D., Adams, T. B., & Pietras, R. J. (1996). The relationship between perceived stress and self-reported illness-related absenteeism. American Journal of Health Promotion, 11 (1), 54-61.

Johns, G. (1997). Contemporary research on absence from work: Correlates,

causes and consequences. In C. L. Cooper & I. T. Robertson (Eds.), International review of industrial and organizational psychology (pp. 115-173). New York: John Wiley & Sons Ltd.

Kahn, R. L., & Byosiére, P. (1992). Stress in organizations. In M. D. Dunnette & L. M. Hough (Eds.), Handbook of industrial and organizational psychology (pp. 571-650). Palo Alto, CA: Consulting Psychologists Press, Inc.

Kluger, A. N. (1998). Commute variability and strain. Journal of Organizational Behavior, 19, 147-165.

Koslowsky, M. (1998). Commuting and mental health. In H. S. Friedman (Ed.), Encyclopedia of mental health (pp. 521-529). San Diego, CA: Academic Press.

Koslowsky, M. (1997). Commuting stress: Problems, of definition and variable identification. Applied Psychology: An International Review, 46 (2), 153-173.

Koslowsky, M., Kluger, A. N., & Reich, M. (1995). Commuting stress: Causes, effects, and methods of coping. New York: Plenum Press.

Koslowsky, M., & Krausz, M. (1993). On the relationship between commuting, stress symptoms, and attitudinal measures: A LISREL application. Journal of Applied Behavioral Science, 29 (4), 485-492.

Koslowsky, M., Sagie, A., Krausz, M., & Singer, A. D. (1997). Correlates of employee lateness: Some theoretical considerations. Journal of Applied Psychology, 82 (1), 79-88.

Leigh, J. P., & Lust, J. (1988). Determinants of employee tardiness. Work and Occupations, 15 (1), 78-95.

Novaco, R. W., & Collier, C. (1994). Commuting stress, ridesharing, and gender: Analyses from 1993 state of the commute study in southern California. (Transportation Research Record 1433). Los Angeles, CA: Commuter Transportation Services, Inc.

Novaco, R. W., Kliever, W., & Broquet, A. (1991). Home environmental consequences of commute travel impedance. American Journal of Community Psychology, 19 (6), 881-909.

Novaco, R. W., & Sandeen, B. A. (1992, November). Mitigating the Stress of Commuting to Work: Ridesharing and the Interactional Effects of Gender. Paper presented at the APA/NIOSH Conference on Stress in the 90's: A Changing Workforce in a Changing Workplace, Washington, DC.

Novaco, R. W., Stokols, D., Campbell, J., & Stokols, J. (1979). Transportation, stress, and community psychology. American Journal of Community Psychology, 7 (4), 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 (2), 231-258.

Random House-Webster's college dictionary (2nd ed.). (1997). New York: Random House, Inc.

Schaeffer, M. H., Street, S. W., Singer, J. E., & Baum, A. (1988). Effects of control on the stress reactions of commuters. Journal of Applied Social Psychology, 18 (11), 944-957.

Stanton, J. M. (1998). An empirical assessment of data collection using the

internet. Personnel Psychology, 51, 709-725.

Taylor, P. J., & Pocock, S. J. (1972). Commuter travel and sickness absence of London office workers. British Journal of Preventive and Social Medicine, 26, 165-172.

U. S. Department of Transportation. (1997). Nationwide personal transportation survey: Our nation's travel. Washington, DC: Federal Highway Administration.

VandenHeuvel, A., & Wooden, M. (1995). Do explanations of absenteeism differ for men and women. Human Relations, 48 (11), 1309-1329.

White, S. M., & Rotton, J. (1998). Type of commute, behavioral aftereffects, and cardiovascular activity: A field experiment. Environment and Behavior, 30 (6), 763-781.

APPENDIX A

Consent to Participate in a Research Study Austin Peay State University

You are being asked to participate in an online research project to study commuting, stress, and absenteeism. This form will provide you with information about the project. You may contact the researchers listed below about the project, or you may contact the Office of Grants and Sponsored Research, Box 4517, Austin Peay State University, Clarksville, TN 37044, (931) 221-7881 with any questions about the rights of research participants.

1. Commuting, Stress, and Absenteeism in the Workplace

2. Principal Investigator

Anthony Medure, Graduate Student, Department of Psychology, Austin Peay State University
Dr. Thomas Timmerman, Faculty Supervisor, Department of Psychology, Austin Peay State University

3. Purpose of the Research

The purpose of the study is to investigate the relationship between commuting, stress, and absenteeism in the workplace. In order to accomplish this goal, you will be asked to fill out a questionnaire. A second purpose of the project is to fulfill the thesis requirement for the Master of Arts degree from Austin Peay State University.

4. Procedures for Research

You will be asked to fill out a questionnaire that deals with commuting and absenteeism. You will also be asked to provide answers demographic questions. **Data from these questionnaires will be kept confidential to the extent provided by law.** The data collected from the questionnaires will be presented as a group overall, it will impossible to distinguish any one person's identity. The questionnaire will take approximately 15 minutes to complete.

5. Potential Risks or Benefits to You

The information you provide is completely voluntary. Your employer WILL NOT be able to tell whether or not you participated in this study. **You do not have to answer any question you do not wish to answer.** For your time and participation, you may request a copy of the final results from the investigator.

6. Informed Consent Statement

I have read the above material and understand what the study is about, why it is being done, and any risks or benefits involved.

I understand that I do not have to take part in this study, and my refusal to do so will involve no penalty or loss of rights.

I agree to participate in this study and understand that by agreeing to participate, I have not given up any of my human rights.

I understand that I have the right to withdraw my participation at any time, and the data provided by me will be destroyed. If I choose to withdraw MY participation, the data provided by ME will be destroyed.

If I choose to withdraw, that choice WILL BE respected and I WILL NOT be penalized, nor will I be coerced to continue by my employer.

I have read the procedure described above, and I voluntarily agree to participate in the study.

If you **AGREE** with, and understand, the above statements, please click on the “**I agree**” statement.

If you do not agree with the statements posted above, please click on the “I do not agree” link.

I agree to participate

I do NOT agree to participate

Please print a copy of this form before you continue to the next section.

If you have any questions about this study, please contact Anthony Medure (graduate student, Psychology Department) at 931-648-3312 or Dr. Thomas Timmerman (faculty supervisor, Psychology Department) at 931-221-1248.

APPENDIX B

Commuting, Stress, and Absenteeism in the Workplace

The following questions address perceptions of commuting, stress, and absenteeism. Please read each statement and indicate to what extent you agree or disagree with that statement as it applies to your commute to and from work.

1=strongly disagree 2=somewhat disagree 3=disagree 4=neutral 5=agree 6=somewhat agree 7=strongly agree

1. Overall, I am satisfied with my commute to work 1 2 3 4 5 6 7
2. I feel tired upon arriving to work 1 2 3 4 5 6 7
3. Commuting to work makes me worried 1 2 3 4 5 6 7
4. When I think of my commute to work, I feel angry 1 2 3 4 5 6 7
5. After commuting home from work, I feel mentally exhausted 1 2 3 4 5 6 7
6. Commuting home makes me moody 1 2 3 4 5 6 7
7. My commute home makes me feel on edge 1 2 3 4 5 6 7
8. I feel calm after commuting home from work 1 2 3 4 5 6 7
9. Commuting to work makes me feel somewhat depressed 1 2 3 4 5 6 7
10. Upon arriving to work, I feel physically drained 1 2 3 4 5 6 7
11. My commute to work makes me feel empty 1 2 3 4 5 6 7
12. When I arrive to work, I feel guilty 1 2 3 4 5 6 7
13. Commuting home from work makes me feel frustrated 1 2 3 4 5 6 7
14. I am sad when commuting home after work 1 2 3 4 5 6 7
15. My commute home makes me feel satisfied 1 2 3 4 5 6 7
16. I feel worried commuting home from work 1 2 3 4 5 6 7
17. When I commute to work, I feel sad 1 2 3 4 5 6 7
18. Commuting to work makes me frustrated 1 2 3 4 5 6 7
19. I feel moody after commuting to work 1 2 3 4 5 6 7
20. The commute to work makes me feel on edge 1 2 3 4 5 6 7
21. I am calm after commuting to work 1 2 3 4 5 6 7

- | | | | | | | | |
|--|---|---|---|---|---|---|---|
| 22. My commute to work makes me feel mentally exhausted . . . | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. I feel somewhat depressed commuting home from work | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. My commute home from work makes me angry | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. I feel tired after the commute home from work | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. Commuting home from work makes me feel guilty | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. When commuting home, I feel empty | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. After commuting home, I feel physically drained | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

On average, how long does it take you to get to work _____ (in minutes)?

On average, how long does it take you to get home from work _____ (in minutes)?

What is the length of your commute one way _____ (in miles)?

Do you use **public** (bus, taxi, etc.) or **private** transportation (personal car, carpool, etc.) more often _____?

Which method of transportation do you use most often (bus, car, trolley, bike, walk, etc.) _____?

How many days of work did you miss last year _____ (number of days)?

How many days of work do you think you will miss this year _____ (number of days)?

What is your gender? _____ male _____ female

Place a check by the category corresponding to your current age? ☐ 18-24 ☐ 25-31 ☐ 32-38
☐ 39-45 ☐ 46-52 ☐ 53-59 ☐ 60 +

What is your racial background? ☐ White/Caucasian ☐ African American ☐ Hispanic
☐ Asian ☐ Native American ☐ Other

If you chose other, please specify _____

What is your annual household income? ☐ less than \$20,000 ☐ \$20,001-40,000 ☐ \$40,001-60,000
☐ \$60,001-80,000 ☐ \$80,001-100,000 ☐ over \$100,000

What is the highest educational level you have completed? ☐ High School ☐ Some College
☐ College ☐ Advanced Degree (M.A., M.B.A., Ph.D.) ☐ Other

If you chose other, please specify _____

In what industry do you work? _____

In what country do you currently live? _____

In what state do you currently live? _____

In what city do you currently live? _____

In what city do you currently work? _____

SUBMIT RESET

THANK YOU FOR YOUR TIME AND PARTICIPATION

APPENDIX C

March xx, 2000

HR Director
XYZ Company
Anywhere, USA 11111

Dear xxx:

Your company has been selected to participate in a study being conducted by researchers at Austin Peay State University. We are studying the relationship between commuting stress and absenteeism and would greatly appreciate your cooperation. At the conclusion of the study, you will receive a summary of the results at no charge.

Our primary questions in this study include:

- Is absence from work related to the stress employees encounter from their commute to work?
- Is this relationship affected by the mode of transportation (e.g., public vs. private) employees use?

As you can see, the results of this study may have important practical implications for your company. To make the survey accessible to a wide audience and easy for your employees to participate, we have posted it on the Internet. If you choose to participate, you simply need to ask your employees to visit the following website:

<http://www.apsu.edu/timmermant/commute>

Obviously, the more respondents we have the better, so the best way to ask your employees to participate is by e-mailing this web address to as many employees as possible. The survey takes about 15 minutes to complete and a hard copy is included for your perusal. The survey is available online immediately and we will continue to receive responses until May 1, 2000.

Please note that employees cannot be forced to participate and all of their individual data will remain confidential to the extent provided by law. It should also be noted that participation cannot be linked to any form of employee evaluation or job performance. In addition, to preserve anonymity and confidentiality at the company level, we are not asking respondents to indicate which company they work for. Therefore, the results you receive will pertain to all respondents and not those of a particular company. We will, however, be able to distinguish between employees who work in large cities from those who work in smaller cities.

If you have any questions or concerns, please feel free to contact me by phone (931-221-1248) or e-mail (timmermant@apsu.edu). Thank you for considering this project and I hope that the results will be of use to you and your company.

Sincerely,

Thomas A. Timmerman, Ph.D.
Assistant Professor

VITA

Anthony James Medure was born in Virginia, Minnesota on December 1, 1974. He attended elementary and junior high schools in the Mt. Iron Area School District and graduated from Virginia High School in June, 1993. The following September he entered Mesabi Community College and in May, 1995 received an Associate of Arts degree. The following September he entered the University of Minnesota, Duluth and in May, 1998 he received the degree of Bachelor of Arts with a double-major in Psychology and Sociology. In August, 1998 he entered Austin Peay State University and in August, 2000 he received a Master of Arts degree in Psychology with a concentration in Industrial/Organizational Psychology. He is presently seeking employment in the Nashville, Tennessee area. He is also planning to pursue a Ph.D. in the near future.