UNIVERSITAS INDONESIA

RELATIONSHIP BETWEEN QUALITY OF LIFE AND PERCEIVED SOCIAL SUPPORT IN YOUNG ADULT PRIVATE CAR DRIVERS WHO DAILY COMMUTE TO JAKARTA

(Hubungan antara Kualitas Hidup dan Perceived Social Support pada Pengemudi Mobil Pribadi Usia Dewasa Muda yang Melakukan Komuter ke Jakarta)

SKRIPSI

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FAKULTAS PSIKOLOGI
PROGRAM SARJANA REGULER
DEPOK
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Diajukan sebagai salah satu syarat untuk memperoleh gelar Sarjana Psikologi

ANASTASIA TANNUDJAJA
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JUNI 2012

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Depok, 18 June 2012

Anastasia Tannudjaja

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ABSTRACT

Name : Anastasia Tannudjaja
Study Program : Sarjana Regular
Title : Relationship between Quality of Life and Perceived Social Support in Young Adult Private Car Drivers who Daily Commute to Jakarta.

The study was conducted to establish the relationship between quality of life and perceived social support from passenger and telephone conversation partner in drivers who commute to Jakarta on work days. A total of 43 participants, who lived in Tangerang and drove to Jakarta through Karang Tengah tollway, completed the WHOQOL-BREF and the SPS. The study found that all quality of life domains were positively correlated with perceived social support. However, there was no significant difference in quality of life and in perceived social support between drivers who were accompanied by passenger and those who talked to telephone conversation partner.

Keywords: quality of life, social support, driver, commuter, traffic congestion

ABSTRAK

Nama : Anastasia Tannudjaja
Program Studi : Sarjana Reguler
Judul : Hubungan antara Kualitas Hidup dan *Perceived Social Support* pada Pengemudi Mobil Pribadi Usia Dewasa Muda yang Melakukan Komuter ke Jakarta.

Penelitian ini bertujuan untuk melihat hubungan antara kualitas hidup dan *perceived social support* dari penumpang dan lawan bicara di telepon pada pengemudi yang melakukan komuter ke Jakarta setiap hari kerja. Dalam penelitian ini, 43 partisipan yang tinggal di Tangerang dan mengemudi ke Jakarta melalui tol Karang Tengah mengisi alat ukur WHOQOL-BREF dan *Social Provisions Scale* (SPS). Dari penelitian, ditemukan bahwa seluruh domain dari kualitas hidup memiliki korelasi yang positif dengan *perceived social support.* Namun, tidak ada perbedaan yang signifikan dalam kualitas hidup maupun *perceived social support* antara pengemudi yang didampingi penumpang dan pengemudi yang berbicara dengan orang lain melalui telepon.

Kata kunci: kualitas hidup, *perceived social support*, pengemudi, komuter, kemacetan

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CHAPTER 1
INTRODUCTION

1.1 Background of Study

Traffic congestion is a salient international issue in metropolitan areas. According to Jones (cited in Novaco & Gonzalez 2009), traffic congestion in Southeast Asia is one of the worst as it takes normally two hours to get to work, and thus is associated with poor productivity and quality of life. This also applies to Jakarta, one of Southeast Asia's — if not the world's — most populous city. Reportedly, approximately 9.1 million people live in Jakarta, which is ranked as the 19th most populated city in the world (United Nations, 2007). Since the city's population has grown massively, the number of motor vehicles has also increased rapidly. According to the Jakarta Metropolitan Police (2010), the number of motor vehicles registered has increased from approximately 3.5 million in 2001 to 11.3 million in 2010. A large number of motor vehicles in metropolitan cities may be caused by substantial growth in the number of jobs, productive age group, and women in the work force (Novaco & Gonzales, 2009). However, this high volume of motor vehicles is not balanced with the capacity of existing roads. It is reported that while car ownership is escalating by about 9.5 percent per year, Jakarta's road is growing by only 0.01 percent per year (Susantono, 2008). Consequently, traffic congestion becomes one of Jakarta's major issues.

Traffic congestion in Jakarta is also exacerbated by high growth rate of commuters (Asril & Soebijoto, 2011). Commuter refers to a person who travel some distance between home to work/school on a regular basis, as from a suburb to city and back (Oxford English Online Dictionary, 2011). According to the Jakarta Metro Highway Patrol, in an interview with Warta Kota (2010) approximately 80% of two-wheeled motor vehicles and 20% of four-wheeled motor vehicles in Jakarta are owned by people residing outside Jakarta. This is not an unusual case in the contemporary urban societies. Since the availability of affordable housing is limited in the city, people have to live outside the core city and endure commute traffic (Novaco & Gonzalez, 2009). Therefore, commuter areas are common around capital city like Jakarta. To illustrate, Tangerang is one

of the residences of commuters to Jakarta. Tangerang is located 25 kilometers outside Jakarta and resided by nearly 2.8 million people (Statistics of Banten Province, 2010). Similar to the Jakarta's traffic situation, the ratio between volume of motor vehicles and length of roads in Tangerang is also not balanced. According to the head of the Tangerang Police traffic division, Pramudji, in an interview with Seputar Indonesia (2012), the number of four-wheeled motor vehicles in Tangerang reached 87.027 units, whereas the total length of roads in Tangerang was only 555.36 kilometers. Therefore, it is not surprising that the traffic intensity in Tangerang is also high. Furthermore, the fact that there is rarely highway or transit systems designed for suburb-to-suburb commuting causes people who live in suburbs to endure more commute traffic (Novaco & Gonzalez 2009).

As Jakarta and Tangerang are two congested areas, people who commute from Tangerang to Jakarta tend to experience a high level of road traffic. This issue cannot be ignored as higher level of traffic may lead to stressful consequences. Prior researches have supported the notion and established the negative effects of traffic congestion. As the traffic congestion increases, the travel time on roads also increases (Susantono, 2008). Having had to drive for quite a long period of time might have harmful effects on the drivers. Pietri, Leclerc, Boitel, Chastang, Morcet, and Blondet (1992) demonstrated that prolonged sitting posture, resulting from driving more than four hours a day, is associated with the occurrence of low-back pain. Hence, since traffic congestion might have adverse health effects on the drivers, a high rate of traffic congestion contributes to the decrease of quality of life. This is also supported by Novaco and Gonzalez (2009), who found that traffic congestion might lead to constraints on opportunities and resources, deterioration in personal health, loss in productivity, and impairments to quality of life.

According to the World Health Organization (WHO) (1998), quality of life refers to subjective individual's evaluation of their position in a cultural, social, and environmental context. Quality of life is a wide ranging construct that is affected by multiple domains — physical, psychological, social relationships, and environment (the WHOQOL group, 1998). Since environment is one of

important domains of quality of life, it is not surprising that traffic congestion has an effect on one's quality of life. Botteldooren, Dekoninck, and Gillis (2011) stated that the number of motor vehicles on roads can be a strong predictor of quality of life. That is, the noise produced by a high number of motor vehicles is an important contributor to the general satisfaction with the quality of life.

Traffic congestion also plays an important role in decreasing quality of life by causing deterioration of individuals' health (Cheung cited in van Kamp, Leidelmeijer, Marsman, & de Hollander 2003). An extensive amount of studies has supported the notion that exposure to traffic congestion causes various adverse health-related quality of life effects. A study conducted by Dratva, Zemp, Felber Dietrich, Bridevaux, Rochat, Schindler, and Gerbase (2010) has indicated that traffic noise annoyance resulting from traffic density was related to a significant reduction of health-related quality of life. In addition, traffic-related noise was also found to be associated with insomnia and decrease in general mental health (Stansfeld; Kageyama, Kabuto, Nitta, Kurokawa, Taira, & Suzuki cited in Yamazaki, Sokejima, Nitta, Nakayama, & Fukuhara 2005). Furthermore, a research conducted by Song, Gee, Fan, Takeuchi (2007) demonstrated that higher exposure to traffic congestion reduced general health and worsened depressive symptoms. Therefore, since physical as well as mental health are two of important domains of quality of life (WHO, 1998), if traffic congestion has a negative effect on one's health, it is likely that it will have such effect on one's quality of life.

Besides physical and psychological health, the WHO (1998) also highlights that social relationships is one of quality of life domains. This domain refers to individual's perspective on their personal relationship with familiar others, sexual activities, and social support. Therefore, it is clear that one of important factors assumed to have a positive effect on quality of life is social support. The term 'social support' refers to the availability of interpersonal resources, involving emotional, instrumental, informational, and appraisal assistance (House cited in Dunkel-Schetter, Folkman & Lazar 1987). It is important to study social support because it might buffer the negative effects of traffic congestion on quality of life, hence individuals' quality of life can be

sustained or even improved. Prior studies have indicated that social support has a positive effect on individual's quality of life. Gallicchio, Hoffman, and Helzlsouer (2007) found that there was a positive association between the number of friends and the quality of life.

Dunkel-Schetter and Bennett (cited in Thoits, 1995) as well as Wethington and Kessler (1986) stated that believing that social support is available is a stronger predictor of mental health than receiving support itself. This belief is often referred to as perceived social support, which can be defined as "perception or experience that one is loved and cared for, esteemed and valued, and part of social network of mutual assistance and obligations"(Willis cited in Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan 2004, p. 354). Previous studies have demonstrated that perceived social support is positively related to general health (Cohen, 1988), mental health (Dalgard, Bjork, & Tambs, 1995; Dunkel-Schetter & Bennett cited in Thoits, 1995; Wethington & Kessler, 1986), and satisfaction with individual's environment (Cohen & Hoberman, 1983; Suchet & Barling; Kirk & Dorfman cited in Treistman 2004). As mentioned earlier, physical health, mental health, and satisfaction with environment are important correlates of quality of life (WHO, 1998). Therefore, if social support has positive relationships with those domains, social support will also have a positive correlation with the overall quality of life. In addition since social support is a part of social relationships, which is one of quality of life domains (WHO, 1998), it is expected that social support will have a direct relation to quality of life.

In a traffic situation, social support can be obtained from various sources, one of which is from passenger in the car. Vollrath, Meilinger, Kruger (2002) argued that the presence of passenger can be critical for those who often experience road traffic. Vollrath et al (2002) argued that passenger helps relieving drivers' impatience and fatigue during traffic congestion. Therefore, the presence of passenger is found to have a protective effect on driving. Lee & Abdel-Aty (2008) found that the presence of passenger have a positive effect on driving behaviour, such that drivers display safer driving behaviour (e.g. using seat-belt, driving slower, etc.) in the presence of passenger than while driving alone. Thus, it has also been found that the presence of passenger reduces accident risk

(Vollrath et al., 2002; Lee & Abdel-Aty, 2008). Besides from passenger, drivers can also receive social support from their friends and relatives via mobile phone. People may call their friends to relieve boredom during traffic congestion. However, telephoning and driving with passenger is different. The assistance that can be offered via telephone is quite limited because the partner of the telephone conversation is not present in the car, thus cannot directly help the driver to detect and solve problems in traffic situation (Vollrath et al., 2002).

It is important to note that this study only focused on support from two sources, passenger and telephone conversation partner, because there is a need for two-way communication so that drivers feel being supported by others. According to Weiss (cited in Rizwan & Syed 2010; cited in Rook & Schuster 2006), one of the social provisions that are essential for people so that they feel being supported by others is opportunity for nurturance. This means that people who receive support from others must also have an opportunity to provide support to others, and therefore experiencing a sense of being needed. Thus, being able to interact and exchange support with others is important in perceived social support. Therefore, this study did not measure support from other sources, such as radio or music. It may be true that drivers' impatience and fatigue can also be relieved by listening to radio, or listening to music. However, listening to radio/music is not an example of two-way communication, and therefore cannot provide an opportunity for nurturance that is important in perceived social support. Furthermore, the fact that drivers only receive support from passenger or telephone conversation partner in the car for approximately 2 hours per day is not an issue. Cohen and Syme (1985) stated that social network can function well in providing short-term assistance. In addition, the drivers receive support from passenger or telephone conversation partner every work day, implying that they receive consistent support. Sustained and prolonged support has been known to have an important role in helping people to deal with daily hassle and long-term stress, which then can lead to the improvement in quality of life (Cohen & Syme, 1985).

However, it should be noted that in terms of traffic situation, situational factor and the age of driver and passenger play an important role in determining

whether passenger support is beneficial (Vollrath et al., 2002; Lee & Abdel-Aty, 2008). Furthermore, being in contact with relatives does not always enhance quality of life because some social contacts might be a source of conflict or stress for some people (Bowling, Farquhar, & Browne; Veenstra cited in Wiggins, Higgs, Hyde, and Blane 2004). Indeed, Veenstra (cited in Wiggins et al. 2004) found that the frequency of contacts with familiar others was negatively correlated with health. Therefore, it is argued that the quantity of social contacts should not always be perceived as beneficial. Instead, the quality of support as well as the closeness one feels to one's social network is more important (Wiggins et al. 2004).

Despite the positive effect of passenger presence is clearly established, there were not many studies that have attempted to investigate whether such positive effect was caused by passenger support. Thus, there is a lack of study exploring the association between quality of life and social support in a traffic situation. It is important to address this issue because traffic congestion is one of daily hassles that are highly potential to cause stress on individuals (Thoits, 1995), and therefore can diminish quality of life. Thus, it is essential to find factors that might reduce stress on drivers while driving, and therefore improve their quality of life. A study by Song et al. (2007) indicated that traffic congestion is, indeed, one form of stressor. The study found that social support alleviated the effect of traffic congestion on quality of life, such that the presence of social support weakened the negative impact of traffic congestion on individuals' physical and psychological health.

Therefore, this present study attempted to investigate the association between quality of life and social support in drivers who commute from Tangerang to Jakarta. The participants of this study were young adult drivers aged 20-40 (Papalia, Olds, and Feldman, 2007). There are several abilities reaching their peak in young adulthood that are exceptionally important for driving, such as visual acuity, simple perceptual motor task performance, divided attention skills, and motor control (Papalia et al., 2007; Santrock, 1999; McDowd & Craik cited in Santrock 1999; Hole, 2007). Presumably, because people aged 20-40 are in the productive age group (Central Statistics Agency Jakarta, 2010), they have various

activities (e.g. work, school, etc.), and thus have a need to be in several places in one day. As a result, they tend to be in a rush, and therefore perceive traffic congestion as a daily hassle. Indeed, time urgency is related to driving stress (Hennessy & Weisenthal; Hennessy, Weisenthal, & Kohn cited in Novaco & Gonzalez 2009). This study did not use older age group because it is assumed that this group tends to be less productive than young adults. Herzog et al. (cited in Glass, Seeman, Herzog, Kahn, & Berkman 1994) found that as age increases, productive activity decreases. In addition, a study conducted by Verhaegen da Salthouse (cited in Skirbekk, 2003) found that cognitive skills start to deteriorate before the age of 50.

For the purpose of controlling what participants may experience on the road, this study set the commuter route that all drivers must travel through. It was decided that participants must drive from Tangerang to Jakarta through Karang Tengah toll road and Kebon Jeruk toll road on work days. In short, this correlational study measured the relationship between quality of life and social support from passenger and telephone conversation partner in car drivers who daily commute to Jakarta. In addition, this was a quantitative study because a range of statistical techniques was used to analyze data.

1.2 Research Questions

The research questions that are proposed in this study are as follows:

1. How is the quality of life of individuals who drive from Tangerang to Jakarta on work days?
2. Is there any association between multiple domains of quality of life and perceived social support in a traffic situation in individuals who drive from Tangerang to Jakarta on work days?
3. Is there any difference in multiple domains of quality of life between drivers who are accompanied by passenger and those who talk to telephone conversation partner?
4. Is there any difference in perceived social support between drivers who are accompanied by passenger and those who talk to telephone conversation partner?

1.3 Objectives of Study

The objectives of present study are:

1. To explore the quality of life of individuals who routinely drive from Tangerang to Jakarta.
2. To investigate the potential relationship between multiple domains of quality of life and perceived social support in individuals who routinely drive from Tangerang to Jakarta.
3. To investigate whether there is a difference in quality of life domains between drivers who are accompanied by passenger and those who talk to telephone conversation partner.
4. To investigate whether passenger support and telephone partner support is perceived as equivalent.

1.4 Significance of Study

1.4.1 Theoretical Contribution

The study is expected to contribute to the development of traffic psychology and the study of quality of life in Indonesia. In addition, the study extends previous research findings by exploring the association between quality of life and social support from passenger and telephone conversation partner in drivers in Jakarta and Tangerang.

1.4.2 Practical Contribution

The study provides a description of quality of life of drivers who routinely experience traffic congestion in Jakarta and Tangerang. Moreover, by establishing the relationship between perceived social support and quality of life, the study can propose whether increasing social support is an effective intervention strategy to enhance quality of life in individuals who often face road traffic.

1.5 Outline

The present study consists of five chapters, which are as follows:

- Chapter I: Introduction

  This chapter includes the background as well as the overview of the study. In addition, it also comprises the research questions and the aims of the study. Moreover, the theoretical and practical contributions that this study may provide are also included. Furthermore, the outline of the report is also presented in this chapter.

- Chapter II: Literature Review

  In this chapter, relevant theories that support this study are presented, including the definition of quality of life, domains of quality of life, and the factors that affect quality of life. In addition, theories of social support, consisting of definition, types, benefits, perceived social support and received social support, are also included. Moreover, the relationship between quality of life and social support is discussed. Lastly, theories of young adult driver are also included in this chapter.

- Chapter III: Research Questions, Hypotheses, and Variables

  This chapter consists of research questions, including both conceptual and operational research questions. In addition, both null and alternative hypotheses are included. Moreover, conceptual and operational definitions of the research variables are also highlighted in this chapter.

- Chapter IV: Method

  In general, this chapter consists of participants, research design, instruments, and procedure. The reliability and validity analyses of all instruments were provided in this chapter. Furthermore, the procedure of both pilot study and present study were also explained.

- Chapter V: Results

  This chapter provides the results of the study. In this chapter, a series of statistical analysis were conducted and presented. Then, the findings were interpreted.

- Chapter VI: Conclusion

  In this chapter, the results of the study is summarised and discussed. In addition, this chapter also provides methodological suggestions for future studies on the quality of life, social support, and traffic psychology, as well as practical suggestions for drivers.

CHAPTER 2
LITERATURE REVIEW

Theories that are related to the research questions are discussed in this chapter. Specifically, this chapter is divided into four subchapters — theories of quality of life, theories of social support, the relationship between quality of life and social support, and theories of young adult driver.

2.1 Quality of Life

2.1.1 Definition of Quality of Life

There have been a number of definitions offered for quality of life. However, these definitions may differ depending on the context in which they use. In general, the concept of 'quality of life' can be used as a tool to evaluate one's life. According to Lehman (cited in Basu 2004), quality of life refers to how an individual perceives what they have (access to resources and opportunities), how they are doing (functional status), and how their life circumstances are. In addition, Lehman (cited in Basu 2004) also proposed that quality of life encompasses individuals' sense of well-being.

The commonalities of most definitions of quality of life are that they identify quality of life as a broad-ranging concept, incorporating in a complex way numerous factors in individual's life. According to Orley and Kuyken (cited in Power, Harper, Bulinger, and the World Health Organization Quality of Life Group, 1999), quality of life can be defined as a multidimensional construct, which includes an evaluation of three essential life aspects — emotional well-being, physical state, and social functioning. In addition, RIVM (cited in van Kamp et al. 2003) also agrees that quality of life is a broad-ranging construct which is characterised by health, living environment, equity, work, significant others, etc.

Although there are various definitions of quality of life, this paper focused on the definition proposed by the World Health Organization (WHO) because it is the most comprehensive as well as the most commonly used among others (The

WHOQOL Group; Orley & Kuyken, cited in Power et al. 1999). According to the WHO perspective (1994), quality of life refers to:

> An individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is abroad ranging concept affected in a complex way by the persons' physical health, psychological state, level of independence, social relationships and their relationship to salient features of their environment. (p. 94)

Shortly, this definition supports the notion that quality of life is, indeed, a multidimensional construct. In addition, this definition also highlights quality of life as a subjective evaluation of various important aspects of individuals' life, including themselves, social relations, and physical environment.

2.1.2 Domains of Quality of Life

According to the WHO (1998), there are four domains of quality of life, which are as follows:

a. Physical health

   This domain explains how an individual perceives his own physical state. In addition, this domain also incorporates whether an individual has dependence on medical substance and assistance, experiences pain or discomfort, feels fatigue, and experiences sleeplessness or restlessness. Moreover, mobility is also included in this domain since it is critical for people to be able to access social and health resources and to participate in daily activities. Furthermore, this domain also highlights how active an individual in his daily life and how sufficient his working capacity is.

b. Psychological

   This domain illustrates individual's perception of his own cognitive and affective state. This domain is also related to positive as well as negative feelings that an individual experiences. In addition, this domain also consists of self-esteem, spirituality, religion, personal

beliefs, and cognitive ability (e.g. thinking, learning, memory, and concentration).

c. Social relationships

It is noted that social relationships with others affects one's quality of life. Specifically, this domain focuses on individual's perspective on how good their social relations are and how important their role in the particular social interaction is. Briefly, this domain describes individual's relationship with others, including personal relationship with familiar others, sexual activities, and social support.

d. Environment

The home environment where one lives affects his quality of life. Indeed, quality of life is affected by physical environment, including air pollution, nuisance, traffic, and climate. In addition, this domain also highlights how an access to learning (e.g. attaining information and skills), health and social care, transportation, recreation and leisure is also important for quality of life. Furthermore, individual's perception on how much freedom, physical safety, security, and financial resources they have also affects their quality of life.

2.1.3 Factors that Affect Quality of Life

Previous studies have indicated that some factors, such as personality, stress, coping strategy, and social support, affect a person's quality of life (Hart, Wearing, & Headey cited in Evans, 1997). Personality (e.g. extraversion and locus of control) combined with other factors such as individuals' early experiences, mental state, and expectations (Orley, Saxena, & Herrman cited in Basu 2004), as well as hardiness, self-esteem, optimism are important correlates of quality of life (Stokols, 1992). Furthermore, Lehman (cited in Basu 2004) also suggests that objective aspects of life (e.g. income level), and subjective aspects of life (e.g. satisfaction with income) affect one's quality of life. Wiggins et al. (2004) also support the notion that quality of life is associated with age, such that quality of life deteriorates with age. This might be related by the fact that as people grow older, they reported higher prevalence of chronic condition and lower functional

capacity (e.g. balance and walking ability) (Orfila, Ferrer, Lamarca, Tebe, Domingo-Salvany, & Alonso, 2006).

An extensive amount of studies has also indicated that traffic congestion has an impact on one's quality of life (Dratva et al., 2010). A decreased level of quality of life is mainly due to the adverse health effects (e.g. insomnia, asthma, and worsened general health) from traffic (Song et al., 2007; Cheung cited in van Kamp et al. 2003; Stansfeld; Kageyama et al. cited in Yamazaki et al. 2005). As mentioned earlier, physical health is one of the main domains of individual's quality of life. Consequently, if traffic has a negative effect on one's health, it will also have such effect on one's quality of life. Furthermore, according to the WHO perspective, environment is also one of quality of life's domains. Hence, since traffic noise and air pollution caused by traffic congestion is a part of environment, it is greatly possible that traffic congestion has a direct effect on quality of life.

Furthermore, one of the factors shown to influence quality of life is social support. There is a growing evidence that social networks and social support have an effect on individual's quality of life (Hinkikka et al. cited in Wiggins et al. 2004). Studies have consistently demonstrated that poor social networks and social support exacerbated mental functioning domains of health-related quality of life, as well as associated with life dissatisfaction and poor well-being (Gallicchio et al., 2007).

2.2 Social Support

2.2.1 Definition of Social Support

Generally, the term 'social support' refers to the availability of interpersonal resources, involving emotional, instrumental, informational, and appraisal assistance (House cited in Dunkel-Schetter et al. 1987). Moreover, according to Thoits (1995), social support is defined as a source from which people gain assistance when handling stressors. Furthermore, Willis (cited in Taylor et al. 2004, p. 354) defines social support as "perception or experience that one is loved and cared for, esteemed and valued, and part of social network of mutual assistance and obligations".

All of the above definitions highlight different aspects of social support. House's (cited in Dunkel-Schetter et al. 1987) definitions focuses on the availability of support. Moreover, Thoits (1995) emphasizes social support as a fund from which people may draw when handling stressors. However, since this study focused on the effects of perceived support availability, this paper will use the definition proposed by Willis (cited in Taylor et al. 2004), which highlights how people perceive the support they receive from others.

2.2.2 Types of Social Support

According to House (cited in Dunkel-Schetter et al. 1987), there are four types of social support, which are:

a. Emotional support

   Emotional support involves providing empathy, love, warmth, nurturance, trust, and caring. It is also associated with reassuring others that they feel worthy of love and care.

b. Instrumental support

   Instrumental support involves providing tangible aid that directly assists others in need. Instrumental support includes offering specific goods, services, and financial assistance.

c. Informational support

   Informational support involves providing advice, suggestions, and information to others. Thus, people can understand the problem perfectly and choose the appropriate coping resources and strategies.

d. Appraisal support

   Appraisal support involves providing information relevant to self-evaluation, such as constructive feedback, affirmation, and social comparison.

2.2.3 Benefits of Social Support

Social support has been known to have a number of benefits, including:

a. Having an important role in coping mechanism by buffering against the negative effects of stress.

It has been suggested that high social support protects individuals from the negative effects of stressors (House; LaRocco, House, & French cited in Thoits 1995). A study by Dalgard et al. (1995) on 503 participants found that individuals with high social support are more protected from the development of mental disorder while they are exposed to stressors. This might be partly due to the fact that social support may reduce the possibility that the person perceives his role (e.g. job and status) as a source of stress (Carlson & Perrewe, 1999). For instance, if an individual with high support from co-workers experiences job stress, the negative effect of the stress will not be as harmful to them as it is to individual with no support (Carlson & Perrewe, 1999).

b. Increasing one's satisfaction with their environment.

   For instance, a support network may provide emotional comfort, helpful information, and self-affirmation – all may reduce the job dissatisfaction of employees (Cohen & Hoberman, 1983). Thus, the availability of social support may influence individuals to enjoy their jobs more. Furthermore, Suchet and Barling (cited in Treistman 2004) indicated that spouse support was a strong predictor of marital satisfaction because it moderated the negative effects of conflict on marital satisfaction. In addition, Kirk and Dorfman (cited in Treistman 2004) also found that social support strongly predicted undergraduates' satisfaction with their student role.

c. Improving psychological and physical health.

   Dalgard et al. (1995) found that social support has a positive effect on mental health by buffering the risk of developing psychological disorder, such as anxiety, depression, and somatization. In addition to mental health, there is also a positive relationship between social support and physical health. Cohen (1988) demonstrated that social support is positively related to neuroendocrine, immune, and cardiovascular functions.

2.2.4 Received Social Support and Perceived Social Support

Previous studies made a distinction between received social support and perceived social support (Young, 2006). Received support refers to the actual support received from others, whereas perceived support is defined as the support that people believe are available for them (Young, 2006). Perceived support may be more important than received support for people who usually cope on their own or have to rely only to a limited degree on others under everyday circumstances (Schwarzer & Leppin, 1991). Perceived support refers to "the subjective perception of the extent to which social network members are available to provide social support" (Cohen and McKay cited in Coventry, Gillespie, Heath, & Martin 2004 p. 626). Moreover, perceived social support is also defined as "cognitive appraisals of availability and adequacy of support from social others" (Holahan & Moos; Procidano & Heller cited in Cheng 1997 p. 813). Taken together, these definitions highlight perceived social support as a subjective perception or evaluation of whether support from others is available when needed.

The reason why this study chose to focus on perceived social support was that it had more benefits than the actual receipt of social support. Indeed, Wethington and Kessler (1986) found that compared to received social support, perceived social support was a major determinant of an individual's adjustment to stressful life events. In addition, Kazarian and McCabe (cited in Young 2006) evidenced that perceived support has a stronger correlation with life satisfaction than received support. Moreover, perceived support is also more strongly positively related to mental health (Dunkel-Schetter & Bennett cited in Thoits, 1995; Wethington & Kessler, 1986). Furthermore, received social support is found to be less reliable in alleviating the adverse psychological health effects of life stress (Cohen and Wills; Kessler cited in Coventry et al. 2004), as well as a weak predictor of health and well-being (Kessler & McLeod; Turner; Vaux cited in Coventry et al. 2004).

Those above findings might be due to several reasons. First, social support may be overly intrusive, and thus exacerbate stress (Shumaker & Hill cited in Taylor et al. 2004). Second, stress can also be worsened by support seeking behavior itself. A study conducted by Bolger, Zuckerman, and Kessler (cited in

Taylor et al. 2004) found that support seeking can be stressful because people feel that they disturb others, as well as perceive that expressing their needs to others is esteem reducing. Third, people may perceive others' efforts to provide support to them as controlling and interfering (Lewis & Rook cited in Taylor et al. 2004). Fourth, the actual support provided by others may not match the needs of the recipient (Thoits; Cohen & McKay; Cohen & Will cited in Taylor et al. 2004). Shortly, these findings taken together suggest that perceiving that there are others who provide support during times of stress is more beneficial than receiving the support itself.

2.2.5 Domains of Perceived Social Support

Weiss (cited in Rizwan & Syed 2010; cited in Rook & Schuster 2006) proposed six different social provisions that are essential for people so that they feel being adequately supported by others as well as being socially functioning in the society. The six social provisions are:

a. Guidance, which refers to the availability of others to give advice or information. Guidance is provided by others who are trusted and are able to assist in times of stress. For instance, in a traffic situation, a passenger or a telephone conversation partner can give guidance by helping the driver to find a route or to detect critical situation.
b. Reliable alliance, which refers to assurance that others can be relied on in times of stress. Reliable alliance develops from receiving consistent assistances, services, and resources. For instance, in a traffic situation, reliable alliance can develop from receiving consistent support from passenger or telephone conversation partner in the car every work day.
c. Reassurance of worth, which refers to the availability of others who recognize one's competences. Social interaction gives people information about their competences so that they can estimate their value through others' opinions. To illustrate, in a traffic situation, a passenger or telephone conversation partner can provide reassurance of worth by believing and encouraging the driver that he can manage problems on the road.

d. Opportunity for nurturance, which refers to providing assistance to others, and therefore experiencing a sense of being needed. To illustrate, in a traffic situation, the driver is responsible for passenger's safety, thus he also provides support to passenger to some extent. Therefore he experiences a sense of being need.
e. Attachment, which refers to the emotional closeness to others who provide a sense of security. When a person feels attached to others, he will be able to display emotions, and thus he feels connected with others.
f. Social integration, which refers to a sense of belonging to one's social network in which one can share information, ideas, and experiences. For instance, the driver should be able to communicate well with the passenger. However, the passenger should be aware of when he should chat with the driver. If he notices the driver facing a difficult situation in traffic, he will tend not to continue the conversation but wait until the driver has successfully managed the problem (Vollrath et al., 2002).

2.3 Young Adult Driver

According to Papalia et al. (2007), a young adult is typically in the age range of 20 to 40. Young adults are at their peak of sexual maturity, physical health, strength, energy, endurance, and sensory and motor functioning (Papalia et al., 2007; Santrock, 1999). In addition, young adults' cognitive capacity has fully developed, and thus they are able to acquire advanced thinking ability (Papalia et al., 2007; Santrock, 1999). Although Piaget proposed that the highest cognitive developmental stage was the formal operational stage, research and theoretical work suggested that it was not the case (Arlin; Labouvie-Vief; Labouvie-Vief & Hakim-Larson; Sinnott cited in Papalia et al., 2007). They proposed a higher stage of adult cognition, called post formal thought (Papalia et al., 2007). Post formal thought refers to "the mature type of thinking that relies on subjective experience and intuition as well as logic and is useful in dealing with ambiguity, uncertainty, inconsistency, contradiction, imperfection, and compromise" (Papalia et al., 2007,

p. 489). Post formal thought is flexible, open, adaptive, and individualistic (Papalia et al., 2007).

There are several abilities reaching their peak in young adulthood, which are exceptionally important for driving. First, visual acuity, which is at its peak from about age 20 to age 40, is one of the abilities that is important for driving. Several studies have indicated that decline in vision tends to occur in late adulthood, and is associated with difficulty in night driving (Papalia et al., 2007). Second, perceptual speed, which refers to the ability to perform simple perceptual motor task (e.g. step on the brakes when a car stops in front of the driver), also reaches its peak in early adulthood, and declines in late adulthood (Santrock, 1999). Third, young adults are more able to perform more than one difficult task at a time than older adults (McDowd & Craik cited in Santrock 1999). This ability is called divided attention skill (Santrock 1999). This skill is essential for driving because a driver should be able to both drive and do other tasks (e.g. turning the radio, talking to a passenger, etc.). Fourth, as mentioned earlier, young adults are at their peak of motor functioning (Papalia et al., 2007). Thus, they are able to perform motor control (Hole, 2007). For instance, in a traffic situation, a driver has to control the vehicle while simultaneously making decisions about the traffic situation (Hole, 2007).

Furthermore, according to Erikson's psychosocial developmental stage (cited in Papalia et al., 2007), the major issue of young adulthood is intimacy versus isolation. That is, young adults either create intimate relationships with others or face a possible sense of isolation (Papalia et al., 2007). Since finding intimacy is important for people particularly at this stage, young adults will tend to create more social connections to others, and thus it is expected that they will also receive more social support compared to older adults.

2.4 Relationship between Quality of Life and Perceived Social Support

In terms of the relationship between quality of life and social support, there are two hypotheses proposed — the buffer hypothesis and the main effect hypothesis. According to the buffer hypothesis, social support acts as a moderator in the relationship between stress and mental health, such that people with high

social support have better health than those with low social support only while under exposure to stressors (Dalgard et al., 1995). In other words, high social support protects individuals from the negative effects of stressors (House; LaRocco, House, & French cited in Thoits 1995). According to the main effect hypothesis, social support has a direct link to mental health, such that people with high social support have better health than those with low social support (Dalgard et al., 1995).

Past studies have found evidences for both hypotheses. Some favour the buffer effect hypothesis. Brown, Bhrolchain, and Harris (cited in Cohen & Mckay 1984) conducted a study in which they investigated the role of social support in the relationship between life change stress and mental disorder in a large sample of women aged 18 to 65. Women who reported having a significant other (e.g. husband or boyfriend) to whom she could talk about her problems was considered to have strong social support, whereas women who reported no such person was considered to have weak social support. The results indicated that in the low level of social support, stressed women showed a substantial increase in their degree of mental disturbance compared to non-stressed women. However, women who experienced severe life events but had strong social support did not show deterioration in their mental health. Hence, the study confirmed the buffer hypothesis, which states that social support moderates the relationship between stressors and mental health.

On the other hand, some prior researches favour the main effect hypothesis. El-Bassel, Guterman, Bargal, and Su (1998) conducted a study on a large sample of Israeli professional social worker. In this study, only social supports from co-workers and supervisors were measured. The result of the study was consistent with the main effect hypothesis. That is, social workers with high level of perceived support from co-workers and supervisors reported less health-related strain (e.g. stress, depression, anxiety, irritability, somatic symptoms) than those with low level of perceived support from co-workers and supervisors. Interestingly, the study did not find any evidence of the buffer hypothesis.

Both hypotheses are important for the present study of quality of life. As mentioned earlier, mental health and well-being are important correlates of quality

of life (WHO, 1998). Thus, if social support positively affects both variables, it is most likely that social support will also have such effect on quality of life. However, this present study focused only on the main effect hypothesis instead of the buffer hypothesis. Indeed, this study chose to explore a direct link between perceived social support and quality of life. This is caused by the fact that social support is one of quality of life's main domains (WHO, 1998), and thus it is assumed that social support will have a direct relation to quality of life. Moreover, although prior studies have evidenced the buffering effect of social support on stress-health relationship, they did not indicate any buffering effect of social support on the relationship between stress and other quality of life domains, such as social relationships and environment. Instead, the relationship between annoyance and stress resulting from traffic congestion and quality of life is a direct one, not relying on underlying hidden variables (Botteldooren et al., 2011). In addition, a number of studies have indicated a positive direct relationship between social support and quality of life. Gallicchio et al. (2007) found that social support is positively associated with quality of life, such that having ten or more close friends is associated with better quality of life compared to having only two or less close friends. Generally, social relationships have positive effects on individual health, which is not exclusively due to their buffering effect (House, Landis, & Umberson cited in Uchino, Cacioppo, & Kiecolt-Glaser, 1996).

However, it should be noted that the relationship between perceived social support and quality of life is inconsistent (Bowling, Farquhar, & Browne cited in Wiggins et al. 2004). To illustrate, Wiggins et al. (2004) evidenced that being in contact with friends and family does not always enhance quality of life. In accordance with Wiggins et al. (2004), Veenstra (cited in Wiggins et al. 2004) also found that the frequency of contacts with friends and family was negatively correlated with health because some social contacts might be a source of conflict or stress for some people. Therefore, it is argued that the quantity of social contacts should not always be perceived as beneficial. Instead, the quality of support as well as the closeness one feels to one's social network is more important (Wiggins et al. 2004).

2.4.1 Relationships between Four Domains of Quality of Life and Perceived Social Support

a. Physical Domain and Perceived Social Support

Previous studies have evidenced that physical health and perceived social support are highly correlated. Johnson and Hall (1988) conducted a study to explore the effect of work-related social support on the relationship between job strain and cardiovascular disease. The results found that workers with low social support had higher rates of cardiovascular prevalence than those with high social support. This might be accounted for by the fact that social contact is a correlate of physiological mechanism. Such that, social contacts stimulate the release of human growth hormone and inhibit the activation of sympathetic nervous system, which plays an important role in cardiovascular regulation (Uchino et al., 1996). Moreover, a meta-analysis conducted by Uchino et al (1996) revealed that social support is positively correlated with immune system functioning. A meta-analysis by Trost, Owen, Bauman, Sallis, and Brown (2002) also supports the notion that social support is associated with health promoting behavior, such as physical activity and exercise. Others can also provide information about proper health care and coping with illness, which in turn can improve individual's health promoting behavior (Cohen & Syme, 1985).

b. Psychological Domain and Perceived Social Support

Dalgard et al. (1995) conducted a large sample study in which they administered social support and mental health questionnaires to 503 participants. The results showed that social support buffers the effect of negative life events on mental disorder, namely depression. Consistent with Dalgard et al. (1995), a study by Repetti (1987) on social environment at workplace also supported the positive relationship between social support and psychological functioning. That is, the quality of social environment at work significantly explained over 30% of variance in depression and anxiety, and

approximately 10% of variance in self-esteem. Sarason, Levine, Basham, and Sarason (1983) also support the notion that higher perceived social support leads to higher self-esteem and more optimistic life perspective. The association between psychological domain and perceived social support might be related to the physical-support relationship. The perception that others are willing to provide support may increase individual's positive affect and self-esteem, which in turn enhances physical health by improving neuroendocrine and immune system functioning or by promoting healthy behaviors (Cohen & Syme, 1985).

c. Social Relations Domain and Perceived Social Support

Several evidences suggest that social relationship is positively associated with perceived support. For instance, marital status is often correlated with support. Such that, people with high quality marriage reported higher perceived support compared to those with low quality marital relationship (Coyne and DeLongis, 1986). This might be accounted for by the notion that high support improves individual's coping ability. To illustrate, for a couple who often engaged in an argument, low support may deteriorates the ability of how they cope with disagreements (Coyne and DeLongis, 1986).

d. Environment Domain and Perceived Social Support

Social support increases one's satisfaction with their environment. The notion was that a source of support may provide emotional, informational, and appraisal support, which moderate the negative effects of conflict in the environment and improve environment satisfaction (Cohen & Hoberman, 1983; Suchet & Barling cited in Treistman 2004). A study conducted by Cohen and Hoberman (1983) demonstrated that employees were more satisfied with their job and work environment in the presence of social support. In addition, social support may also increase satisfaction with marriage and satisfaction with college environment (Suchet & Barling; Kirk & Dorfman cited in Treistman 2004).

2.5 Relationship between Quality of Life and Social Support in Traffic Situation

Traffic congestion is a part of environment, which is one of the main domains of quality of life (WHO, 1998). Thus, traffic congestion has a role in shaping people's satisfaction with their living environment. A survey conducted by Botteldooren et al. (2011) found that traffic has a negative impact on satisfaction with neighborhood. Moreover, Guski (cited in Dratva et al. 2010) found that pollution and noise annoyance resulting from traffic congestion causes both acute (e. g. irritability, sleep disturbance, and increased stress hormones) and long-term health effects (e.g. hypertension, heart attack, and loss of concentration).

Traffic congestion also plays an important role in decreasing quality of life by causing deterioration of individuals' health (WHO, 1994; Cheung cited in van Kamp et al. 2003). A study conducted by Wieringa, Vermeire, Van Bever, Nelen, and Weyler (2001) provided evidence of the potential long-term effect of traffic congestion. This study used a large sample of participants from urban and suburban areas. Participants aged 5-15 were considered children, participants aged 20-44 were considered young adults, and participants aged 45-75 were considered older adults. The results of the study indicated that there was higher occurrence of asthma-related symptoms in an urban area than in a suburban area in both young adults and older adults. Wieringa et al. (2001) argued that this might be accounted for by a progressive effect of long-term exposure to urban environment. This study also concluded that traffic congestion is high in urban area, and thus it is possible that asthma-related symptoms are caused by prolonged exposure to traffic-related air pollution.

In addition to physical health, numerous prior studies have also found that traffic congestion deteriorate one's psychological health. Kageyama et al. (cited in Yamazaki et al. 2005) indicated that traffic-related noise was associated with decrease in general mental health. In addition, Song et al. (2007) demonstrated that exposure to traffic congestion has a negative effect on depressive symptoms. Furthermore, a study conducted by Dratva et al. (2010) has evidenced that traffic-related noise annoyance is negatively related to health-related quality of life.

Specifically, the study found that traffic-related noise annoyance has significant, negative associations with physical functioning, vitality, social functioning, and mental health.

Considering the negative effect of traffic congestion on quality of life, it is important to have social support that has a positive effect on quality of life so although people experience traffic congestion everyday, their quality of life would not be very low. In a traffic situation, social support can be obtained from various sources, one of which is from passenger in the car. Studies conducted by Vollrath et al. (2002) and Lee & Abdel-Aty (2008) found that passenger decreases accident risk. This might be due to the fact that drivers accompanied by passenger display safer driving behaviour (e.g. using seat-belt, driving slower, etc.). Furthermore, the presence of passenger was found to be important for those who often experience road traffic because they help relieve drivers' impatience and fatigue during traffic congestion (Vollrath et al., 2002). It is also indicated that passenger provides social support to the driver. For instance, a passenger can give informational assistance, such as helping the driver to detect critical situation on the road (Vollrath et al., 2002). By doing this, a passenger also provides guidance and reassurance of worth to the driver.

However, several prior researches have demonstrated that passenger presence does not always have positive effects on individual. The presence of passenger may also increase accident risk (Vollrath et al., 2002; Lee & Abdel-Aty, 2008). Thus, since severe accidents may have extreme consequences for individual's health and daily functioning, the availability of passenger may also decrease quality of life. Vollrath et al. (2002) indicated that the protective effect of passenger depends on several factors. First, from the situational factor, passenger is less protective during darkness and in slow moving and standing traffic. Second, age also buffers the effect of passenger on accident risk. Passenger decreases accident risk more strongly for drivers aged 25-49 than for older drivers (Vollrath et al., 2002). The smallest protective effect of passenger occurs in young drivers aged 18-24 (Vollrath et al., 2002). This might be due to the fact that young drivers are less experienced in driving, and thus need more undivided attention (Vollrath et al., 2002). Beside the driver's age, the age of the passenger also has

an effect on accident risk. Lee & Abdel-Aty (2008) found that younger passenger tends to distract young drivers and to influence them to take risk to show off in front of young peers, and therefore increase accident risk.

Besides passenger, being in contact with family and friends via telephone can also be a source of social support. Indeed, a driver can receive support from a relative he talks to via telephone. For instance, a telephone conversation partner can give emotional, informational, and appraisal support to the driver. However, telephoning and driving with passenger is different. Since the partner of the telephone conversation is not present in the car, he cannot react to the driving situation, and thus the assistance that can be offered is limited (Vollrath et al., 2002). For instance, a telephone conversation partner cannot provide instrumental support or tangible assistance. On the other hand, if the partner of the conversation is present in the car, social support that can be provided is more various. Furthermore, since the passenger is in the car, he will be aware of when he should chat with the driver. If he notices the driver facing a difficult situation in traffic, he will tend not to continue the conversation but wait until the driver has successfully managed the problem (Vollrath et al., 2002). This kind of assistance cannot be given by others via phone.

There is a lack of study on the effect of mobile use on quality of life. This might be due to the fact that mobile use is often highly correlated with accident risk. Indeed, driver's perception and awareness of the road situation is reduced while simultaneously using mobile phone (Treffner & Barrett, 2004). Hence, most studies only investigated the negative effect of mobile use. However, a study conducted by Briem and Hedman (1995) demonstrated that mobile phone use might not be always associated with negative effect. The study investigated the association between telephone conversation and performance on a driving simulated task. There were two kinds of telephone conversation, simple and difficult. In a simple telephone conversation, participants had to engage in a conversation with an operator about a current topic. The conversation followed a normal pattern, such as greetings, small talk, conclusions, and farewells. In a difficult telephone conversation, besides engaging in a conversation, participants must also perform a test of working memory span. The results found that

participants' performance on a driving simulated task deteriorated during a difficult telephone conversation, whereas the performance remained stable or even improved during an easy telephone conversation. Briem and Hedman (1995) argued that in the difficult conversation, participants required a great amount of attention to concentrate on the conversation, while in the easy conversation, they only required little attention. Therefore, participants' attention will be divided during a difficult conversation, and thus deteriorating their driving performance.

CHAPTER 3
RESEARCH QUESTIONS, HYPOTHESES, AND VARIABLES

This chapter consists of information regarding research questions, hypotheses, and research variables.

3.1 Research Questions

3.1.1 Conceptual Research Questions

1. "How is the quality of life of individuals who drive from Tangerang to Jakarta on work days?"
2. "Is there any association between multiple domains of quality of life and perceived social support in a traffic situation in individuals who drive from Tangerang to Jakarta on work days?"
    a. "Is there any association between physical domain of quality of life and perceived social support in a traffic situation?"
    b. "Is there any association between psychological domain of quality of life and perceived social support in a traffic situation?"
    c. "Is there any association between social relations domain of quality of life and perceived social support in a traffic situation?"
    d. "Is there any association between environment domain of quality of life and perceived social support in a traffic situation?"
3. "Is there any difference in multiple domains of quality of life between drivers who are accompanied by passenger and drivers who talk to a telephone conversation partner?"
4. "Is there any difference in perceived social support between drivers who are accompanied by passenger and drivers who talk to a telephone conversation partner?"

3.1.2 Operational Research Questions

1. "How are the domain scores on the abbreviated version of the World Health Organization Quality of Life Assessment (WHOQOL-BREF) of individuals who drive from Tangerang to Jakarta on work days?"
2. "Is there any significant correlation between domain scores on the WHOQOL-BREF and scores on the Social Provision Scale (SPS) in individuals who drive from Tangerang to Jakarta on work days?"
    a. "Is there any significant correlation between scores on the physical domain of the WHOQOL-BREF and scores on the SPS?"
    b. "Is there any significant correlation between scores on the psychological domain of the WHOQOL-BREF and scores on the SPS?"
    c. "Is there any significant correlation between scores on the social relations domain of the WHOQOL-BREF and scores on the SPS?"
    d. "Is there any significant correlation between scores on the environment domain of the WHOQOL-BREF and scores on the SPS?"
3. "Is there any significant difference in the WHOQOL-BREF domain scores between drivers who are accompanied by a passenger and drivers who talk to a telephone conversation partner?"
4. "Is there any significant difference in the SPS scores between drivers who are accompanied by a passenger and drivers who talk to a telephone conversation partner?"

3.2 Hypotheses

3.2.1 Alternative Hypotheses

1. There are significant relationships between domains of quality of life and social support.
    a. There is a significant relationship between physical domain of quality of life and social support.

   b. There is a significant relationship between psychological domain of quality of life and social support.
   c. There is a significant relationship between social relations domain of quality of life and social support.
   d. There is a significant relationship between environment domain of quality of life and social support.
2. Quality of life domains differ significantly between drivers who are accompanied by passenger and drivers who talk to a telephone conversation partner.
3. Perceived social support differs significantly between drivers who are accompanied by passenger and drivers who talk to a telephone conversation partner.

3.2.2 Null Hypotheses

1. There is no significant relationship between domains of quality of life and social support.
   a. There is no significant relationship between physical domain of quality of life and social support.
   b. There is no significant relationship between psychological domain of quality of life and social support.
   c. There is no significant relationship between social relations domain of quality of life and social support.
   d. There is no significant relationship between environment domain of quality of life and social support.
2. Quality of life domains do not differ significantly between drivers who are accompanied by passenger and drivers who talk to a telephone conversation partner.
3. Perceived social support do not differ significantly between drivers who are accompanied by passenger and drivers who talk to a telephone conversation partner.

3.3. Research Variables

3.3.1 Quality of Life

Conceptually, according to the WHOQOL group (1994), quality of life is defined as:

> An individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is abroad ranging concept affected in a complex way by the persons' physical health, psychological state, level of independence, social relationships and their relationship to salient features of their environment. (p. 24)

As mentioned earlier, according to the WHO perspective, quality of life consists of four domains — physical health, psychological, social relationships, and environment. The operational definition of quality of life is the domain scores on each domain of the WHOQOL-BREF. These domain scores cannot be summed to create a composite score. Each domain score has different meanings. A higher physical domain score implies that the person perceives that he has better physical health. A higher psychological domain score indicates higher perceived psychological functioning. A higher social relationships domain score shows that the person believes that he has better and more important social relationships. A higher environment domain score implies that the person feels that he has a better quality of living environment.

3.3.2 Perceived Social Support

Perceived social support is conceptually defined as "perception or experience that one is loved and cared for, esteemed and valued, and part of social network of mutual assistance and obligations" (Willis cited in Taylor et al. 2004, p. 354).

The operational definition of perceived social support is the total score, which is the sum of six dimension scores, on the Social Provisions Scale. The six dimensions are guidance, reliable alliance, reassurance of worth, opportunity for nurturance, attachment, and social integration (Weiss cited in Rizwan & Syed 2010; cited in Rook & Schuster 2006). A higher total score indicates greater perceived social support.

3.3.2.1 Passenger

According to the Oxford English Online Dictionary (2011), passenger is "a traveler on a public or private conveyance other than the driver, pilot, or crew". Thus, in this study, the operational definition of passenger is a person who is not driving, but is physically present in the car while the driver is driving.

3.3.2.2 Telephone Conversation Partner

According to the Oxford English Online Dictionary (2011), the word 'conversation' is defined as "a talk, especially an informal one, between two or more people, in which news and ideas are exchanged". The verb 'talk' refers to "converse or communicate by spoken words". Thus, in this study, telephone conversation partner refers to an individual with whom the driver verbally and orally engages in a two-way communication on the phone.

CHAPTER 4
METHOD

This chapter consists of information regarding participants, research design, instruments, and procedure.

4.1 Participants

4.1.1 Characteristics of Participants

The study population was commuters who drove to Jakarta on work days. The specific characteristics of participants in this study were as follows:

1. Young adults aged 20-40.

   This study used young adults aged 20-40 for the purpose of controlling several abilities that are important for driving, such as visual acuity, simple perceptual motor task performance, divided attention skills, and motor control (Papalia et al., 2007; Santrock, 1999; McDowd & Craik cited in Santrock 1999; Hole, 2007), and for the purpose of controlling productive activity.
2. Lived in Tangerang area.
3. Drove their own car, and travelled to Jakarta on work days.
4. Were accompanied by passenger or usually talked to others on the phone while driving on work days.

4.1.2 The Number of Participants

According to Gravetter and Forzano (2009), the minimum sample size which is required to increase the similarity between values obtained from the sample and the actual values for the population, and thus to accurately represent the population is around 30. Thus, it was expected that 60 people would participate in this study.

In this study, a total of 67 people completed the questionnaire. However, 7 people did not match the study criteria, and 17 others indicated that they were solo drivers and reported no telephone conversation partner, and therefore their social support in traffic situation cannot be measured. Overall, the participants consisted

of 43 young adults (26 females, 17 males, M_{age} = 28.51 years, *SD* = 7.65, range = 20-40 years) who met the criteria for study participants.

4.1.3 Sampling Technique

This present study used non-probability sampling, which refers to the fact that each individual in the study population does not have an equal chance of being selected as a subject for the study (Kumar, 1996). A large population of drivers in Tangerang and Jakarta causes the researcher not to be able to estimate an exact number of drivers as well as to identify them individually. Particularly, accidental sampling was used, indicating that the researcher obtained sufficient participants because they were easily accessible to the researcher.

4.2 Research Types and Designs

From the perspective of the type of information sought through research activity, this study was a quantitative research because the information was gathered using quantitative variables, and then statistics were used to quantify the magnitude of a relationship between variables (Kumar, 1996). Based on the nature of the investigation, this study was non-experimental because this study did not manipulate or control any independent variables (Kumar, 1996). This study was correlational because it aimed to establish the existence of a relationship between two variables (Kumar, 1996).

4.3 Statistical Methods

All statistical tests were conducted using SPSS version 16. Statistical methods that were used to summarise and analyse the collection of data are as follows:

a. Reliability

   Cronbach's alpha was used to assess how closely related a set of items were as a group (Anastasi & Urbina, 1997). This method was used because all instruments were only assessed in a pilot study once and this study did not compare them with other equivalent instruments. Generally, a Cronbach's Alpha of at least .60 is considered to be acceptable (Nunally & Bernstein, 1994).

b. Validity

This study assessed internal consistency as an evidence of construct validity, which refers to how well the scores on a test reflect the construct that it is supposed to be measuring (Anastasi & Urbina, 1997). Construct validity was assessed because both instruments in this study were adapted from other country, and thus it was important to assess whether the instruments were applicable to examine the same constructs in different ethnic group in different settings. Correlations between item score and total/domain score were reported as evidence of homogeneity, indicating that the test measured a single construct (Anastasi & Urbina, 1997). Overall, a coefficient of at least .30 is considered as the minimum acceptable size of a validity coefficient (Field, 2005).

c. Descriptive statistics

Descriptive statistics was conducted to provide summaries about participants' demographic characteristics. In addition, descriptive statistics also provided overall summaries about quality of life and perceived social support.

d. Pearson correlation

Pearson correlation was conducted to test the relationship between quality of life and perceived social support.

e. Independent-groups *t*-test

Independent-groups *t*-test was conducted to compare quality of life and perceived social support means between drivers who were often accompanied by passenger and drivers who often talked to telephone conversation partner.

4.4 Instruments

4.4.1 Demographic Information

Before proceeding to the main questionnaire, the participants completed their demographic information, including age, gender, occupation, residence, perceived stress level while facing traffic congestion, time spent driving, whether

they felt that they received social support while facing traffic congestion, their sources of support, and the social support providers' age and gender.

4.4.2 Quality of Life

The World Health Organization Quality of Life (WHOQOL-BREF; WHO, 1998) was used to measure quality of life. The WHOQOL-BREF is an abbreviated 26-item version of the WHOQOL-100, which is more convenient for use (The WHOQOL Group, 1998). Correlations between domain scores on the WHOQOL-BREF and domain scores on the WHOQOL-100 were significant and in the range of .89 to .95, indicating good validity (The WHOQOL Group, 1998). Cronbach alpha values for all domains ranged from .66 to .84, indicating acceptable to good reliability (The WHOQOL Group, 1998).

In this study, a validated Indonesian version of WHOQOL-BREF was used. The WHOQOL-BREF was translated into Indonesian by Dr. Risa Sarasvita and Dr. Satya Joewana for the purpose of their study on drug use (Wardhani, 2006). However, this instrument had not been validated yet. Thus, Wardhani (2006) conducted a study on young adults to establish the reliability and the validity of the WHOQOL-BREF. In the study, item-to-domain correlations were calculated to assess whether each item measures the same domain. The study found that the item-to-domain correlations were in the range of 0.41 to 0.85 indicating that the instrument was valid. In addition, the study also demonstrated that the WHOQOL-BREF had high internal consistency (α = .88). Thus, the WHOQOL-BREF is a valid and reliable instrument for measuring quality of life.

As shown in Table 4.1, the WHOQOL-BREF comprised 26 items, with four domains, physical health (7 items), psychological (6 items), social relationships (3 items), and environment (8 items). The scale contained two additional items (items 1 and 2) from the general facet on overall quality of life and general health. For instance, "*How would you rate your quality of life?*" (Indonesian version: "*Bagaimana menurut anda kualitas hidup anda?*"). These items from general facet were not included in the scoring. Three items, i.e. items 3, 4, and 26, were reverse scored items, including the example statement, "*To what extent do you feel that physical pain prevents you from doing what you need*

to do?" (Indonesian version: "*Seberapa jauh rasa sakit fisik anda mencegah anda dalam beraktivitas sesuai kebutuhan anda?*").

Table 4.1

The WHOQOL-BREF Domains

No.	Domains	Items number
1	Physical	3, 4, 10, 15, 16, 17, 18
2	Psychological	5, 6, 7, 11, 19, 26
3	Social Relationships	20, 21, 22
4	Environment	8, 9, 12, 13, 14, 23, 24, 25

Items inquire 'how much', 'how completely', how often', 'how good' or 'how satisfied' the participant felt in the last 4 weeks. Responses were made on 5-point Likert-type scale (see Table 4.2).

Table 4.2

Likert-type Scale in the WHOQOL-BREF

No.	Likert-type Scale (Original English Version)	Likert-type Scale (Indonesian Version)	Items number
1	*Very poor* (1) to *very good* (5)	*sangat buruk* (1) to *sangat baik* (5)	1, 14, 15
2	*Very dissatisfied* (1) to *very satisfied* (5)	*sangat tidak puas* (1) to *sangat puas* (5)	2, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25
3	*Not at all* (1) to *an extreme amount* (5)	*tidak sama sekali* (1) to *sangat berlebihan* (5)	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
4	*Never* (1) to *always* (5)	*tidak pernah* (1) to *selalu* (5)	26

The WHOQOL-BREF does not produce a composite score, which is a combined total of all domain scores. Instead, the WHOQOL-BREF only produces domain scores. After reversal of negatively worded items, all items in each domain were summed to obtain a domain score. Then, domain scores for the WHOQOL-BREEF were transformed to a 4-20 scale using Statistical Package for Social Science (SPSS) version 16.00. Afterwards, domain scores (DOM1, DOM2, DOM3, DOM4) for the WHOQOL-BREF were transformed to a 0-100 scale using the following formula so these scores were directly comparable with scores derived from the WHOQOL-100:

Transformed Score = (DOM1 – 4) x (100 / 16)

4.4.3 Perceived Social Support

The Social Provisions Scale (SPS; Cutrona & Russell, 1987) was used to assess participants' perceived social support. The SPS is based on the conceptual model outlined by Weiss (cited in Rizwan & Syed 2010; cited in Rook and Schuster 1996), in which social support is viewed as a multidimensional construct that includes six social provisions. In the present study, items were translated into Indonesian, and reworded from the original version to reflect a traffic setting. All items were modified so that the questionnaire only measured social support from passenger or telephone conversation partner in the car.

The scale consisted of 24 items, with four items associated with each of the six subscales, guidance, reliable alliance, reassurance of worth, opportunity for nurturance, attachment, and social integration (see Table 4.3). Half of the items were reverse scored, including the example statement, "*I feel that I do not have close personal relationships with other people* (Indonesian version: *Saya merasa tidak mempunyai hubungan personal yang dekat dengan 'orang lain'*)".

Perceived social support was judged on a 4-point Likert-type scale ranging from 1 ("*strongly disagree*"*;* "*sangat tidak setuju*") to 4 ("*strongly agree*"; "*sangat setuju*"). After reversal of negatively worded items, a total score was

obtained by summing all items. A higher total score indicated a greater degree of perceived support.

Table 4.3

The Social Provisions Scale Domains

No.	Subscales	Positively worded items	Negatively worded items
1	Guidance	11, 17	2, 21
2	Reliable alliance	5, 8	14, 22
3	Reassurance of worth	13, 20	6, 9
4	Opportunity for nurturance	1, 23	10, 18
5	Attachment	12, 16	3, 19
6	Social Integration	4, 7	5, 24

4.4.4 Reliability and Validity

4.4.4.1 Pilot Study

A pilot study was conducted to test the reliability and the validity of two main scales — the WHOQOL-BREF and the SPS. A total of 31 participants who met the criteria for study participants were enrolled in this pilot study. Reliability and validity analysis was conducted using SPSS.

The reliability and the validity analysis were conducted for each domain of the WHOQOL-BREF. As seen in Table 4.4, Cronbach's alpha values for all domains ranged from .32 to .68, indicating low to acceptable reliability (Nunally & Bernstein, 1994). Then, correlations between item score and total/domain score were reported as evidence of validity (Anastasi & Urbina, 1997). Item-to-domain correlations for the WHOQOL-BREF domains were presented in Table 4.5. There were eight items on the WHOQOL-BREF that were required to be revised because they had item-to-domain correlations below .30 (Field, 2005). Those items were item 7, 11, 12, 13, 14, 15, 19, and 26.

Table 4.4

Reliability Analysis of Four Domains of the WHOQOL-BREF (Pilot Study)

	Physical	Psychological	Social relationships	Environment
Cronbach's Alpha	.67	.32	.47	.68

Table 4.5

Validity Analysis of Four Domains of the WHOQOL-BREF (Pilot Study)

	Physical	Psychological	Social relationships	Environment
Ranges of item-to-domain correlations	.24 - .60	-.03 - .27	.27 - .33	-.02 - .70

The SPS were indicated to have good reliability (α = .88), according to the criteria set by Nunally and Bernstein (1994). Corrected item-to-total correlations on the SPS ranged from .02 to .75. Twenty-one items had item-to-total correlations greater than .30, indicating that those items were valid to measure perceived social support (Field, 2005). However, three items (i.e. item 1, 13, 22) had item-to-total correlations below .30, and thus needed to be revised. All items that were needed to be revised were reworded so that the sentences were clearer, more specific, and more understandable to avoid ambiguity.

4.4.4.2 Present Study

Reliability and validity analysis was conducted using SPSS version 16.00. All domains on the WHOQOL-BREF were indicated to have acceptable to good reliability. Indeed, physical domain, psychological domain, social relationships domain, and environment domain had good reliability indexes (α = .83, .79, .75, and .78, respectively), according to the criteria set by Nunally and Bernstein (1994). Validity coefficients for physical, psychological, social relationships, and environment domain were illustrated in Table 4.6. None of the WHOQOL-BREF

items had corrected item-to-domain correlations below .30, indicating that all items were valid (Field, 2005). Thus, it was clear that all items on the WHOQOL-BREF were valid to assess quality of life.

Table 4.6

Validity Analysis of Four Domains of the WHOQOL-BREF (Present Study)

	Physical	Psychological	Social Relations	Environment
Ranges of item-to-domain correlations	.37 - .70	.43 - .66	.54 - .63	.38 - .66

Furthermore, the coefficient alpha for the SPS was .92, indicating that the scale had good reliability (Nunally & Bernstein, 1994). The validity analysis found that all items on the SPS, except item 23, had corrected item-total correlations greater than .30, indicating that the scale were valid to measure perceived social support (Field, 2005). Overall, corrected item-total correlations were in the range of .03 to .81.

4.5 Procedure

4.5.1 Preparation

The researcher and fellow undergraduate students participated in a thesis project supervised by Dr. Guritnaningsih A. Santoso. This project interest was in quality of life of people who experience road traffic in Jakarta. In this project, we all measured quality of life, but had to find another different variable to assess. Then, the researcher read and analyzed many academic articles to find the appropriate variable. The researcher found that passenger presence often had a positive effect on the driver. Thus, the researcher decided to study whether such positive effect was caused by social support provided by passenger. As a result, social support in a traffic situation was chosen as the second variable. Then, the researcher decided that only two sources of social support (i.e. passenger and

telephone conversation partner) were measured in order to maintain the simplicity of the study designs and methodology.

Then, the researcher with the thesis supervisor and fellow undergraduates began to search for the appropriate measure of quality of life. The researcher, thesis supervisor, and fellow undergraduates agreed that the WHOQOL-BREF was the most suitable instrument because it was the most commonly used among others (The WHOQOL Group; Orley & Kuyken, cited in Power et al. 1999), as well as the most comprehensive scale because it measured various domains of quality of life. Moreover, the researcher also decided to use the SPS to measure social support because it measured perceived social support, instead of received support. In addition, previous researches had adopted the scale into specific environment, indicating that the scale was able to be applied to different settings (Watson, 2004).

Afterwards, the researcher discussed with the thesis supervisor and the fellow undergraduates about the criteria for study participants. Then, it was decided that the participants must live in Tangerang because commuters would spend more time on the road while travelling to the city and thus experience more traffic congestion. Furthermore, it was decided that the participants must drive to Jakarta through Karang Tengah and Kebon Jeruk toll roads. This may allow the researcher to control what the participants experience on the road. In addition, these toll roads were chosen because they were the main route from Tangerang to Jakarta as well as one of Jakarta's most congested areas.

4.5.2 Pilot study

Pilot study was conducted in February 2012. First, the researcher created and distributed online questionnaire. Then, the researcher put an announcement on social media websites (e.g. Facebook, Twitter, Yahoo! Groups) regarding the questionnaire so that people would help to complete or distribute the questionnaire. A total of 21 people filled and submitted the online questionnaire.

Furthermore, the researcher also asked family members and friends whether they knew people who met the criteria for participants. Then, the researcher's family members and friends distributed paper-based questionnaires to

those people. A total of 30 paper-based questionnaires were distributed. However, only 10 questionnaires were completed and returned.

In short, a total of 31 participants submitted the questionnaire. Then, the data was analysed to assess the reliability and the validity of the WHOQOL-BREF and the SPS.

4.5.3 Present study

To begin with, the researcher asked PT. Jasa Marga Tangerang branch for permission to distribute questionnaires at Karang Tengah toll gate. After obtaining permission letter, the researcher took the letter to PT. Jasa Marga's office located at Karang Tengah toll gate. Then, the researcher distributed 750 flyers containing online questionnaire link to drivers who travelled through Karang Tengah toll gate on March 30th, 2012 from 7:00 to 8:00 a.m. Specifically, the researcher stood at the toll gate, then the researcher handed the flyers to drivers after they paid tickets for entering the toll road. The researcher decided to distribute the flyers starting at 7:00 a.m. because according to a representative of PT. Jasa Marga, this time period was the morning rush hour. Furthermore, the researcher also distributed the online questionnaires to yahoogroups of BSD, Alam Sutera, and Tangerang residents. Finally, a total of 67 questionnaires were collected.

Seven questionnaires were not used because the participants did not match the criteria. Thus, only 60 questionnaires could be used to analyse the reliability and the validity of the WHOQOL-BREF. However, as mentioned earlier, 17 people reported that they neither drove with passenger nor talked to a telephone conversation partner. Thus, since the researcher could not assess their perceived social support in a traffic situation, those people were not included in the statistical analysis to test the research hypotheses. Hence, the total number of participants was 43. Then, all data was analysed and interpreted.

CHAPTER 5
RESULTS

This chapter provides the results of the present study, which would be divided into several subchapters — demographic characteristics, descriptive analysis of quality of life and perceived social support, relationship between quality of life and perceived social support, differences in quality of life and perceived social support between drivers who were accompanied by passenger and those who talked to a telephone conversation partner.

5.1 Demographic Characteristics

Overall, the sample consisted of 26 males and 17 females who ranged in age from 20 to 40. They all met the criteria for study participants. That is, they lived in Tangerang, held a valid driving license, and drove from Tangerang to Jakarta during work days. A total of 74.4% of participants reported that they were employees in a private or public company, while 25.6% were still university students. Participants' demographic characteristics were illustrated in Table 5.1.

Table 5.1

Demographic Characteristics (N = 43)

		Frequency	Percentage
Gender	Male	26	60.5
	Female	17	39.5
Occupation	Employee	32	74.4
	Students	11	25.6
The number of years of driving experience	≤ 5	20	46.5
	6 – 10	11	25.6
	11 – 15	5	11.6
	16 – 20	4	9.3
	21 – 25	2	4.7
	≥ 26	1	2.3

As illustrated in Table 5.2, the participants were also asked to report the amount of time they spent driving every work day (in the morning, during the day, in the afternoon, and at night). Most people reported that they spent approximately 1-2 hours driving in the morning, in the afternoon, and at night. In addition, most people indicated that they did not drive during the day. Few people who drove during the day reported that they spent less than 1 hour driving during this time.

Table 5.2

The Numbers of Hours the Participants Spent Driving on Monday to Friday

		Frequency	Percentage
In the morning	< 1 hour	7	16.3
	1-2 hours	34	79.1
	2-3 hours	1	2.3
	Not specified / Not driving during the time	1	2.3
During the day	< 1 hour	10	23.3
	1-2 hours	8	18.6
	2-3 hours	1	2.3
	Not specified / Not driving during the time	24	55.8
In the afternoon	< 1 hour	5	11.6
	1-2 hours	20	46.5
	2-3 hours	3	7.0
	Not specified / Not driving during the time	15	34.9
At night	< 1 hour	14	32.6
	1-2 hours	21	38.8
	2-3 hours	1	2.3
	Not specified / Not driving during the time	7	16.3

Participants also reported their perceived level of stress while driving during work days. Out of 43 people, 17 people reported a 'neutral' response and 17 others indicated that they felt stressful while driving in the morning or during the day (see Figure 5.1). In addition, most participants (19 people) also reported a neutral level of stress while driving in the afternoon or at night (see Figure 5.2).

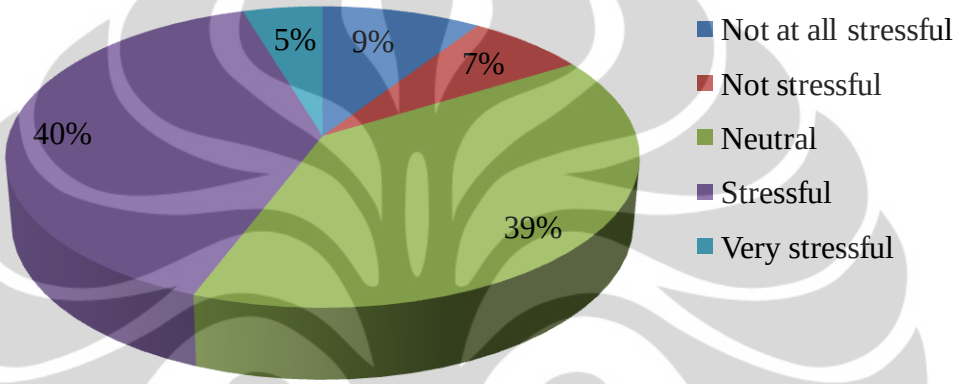

Figure 5.1. Pie chart of the Perceived Level of Stress while Driving in the Morning.

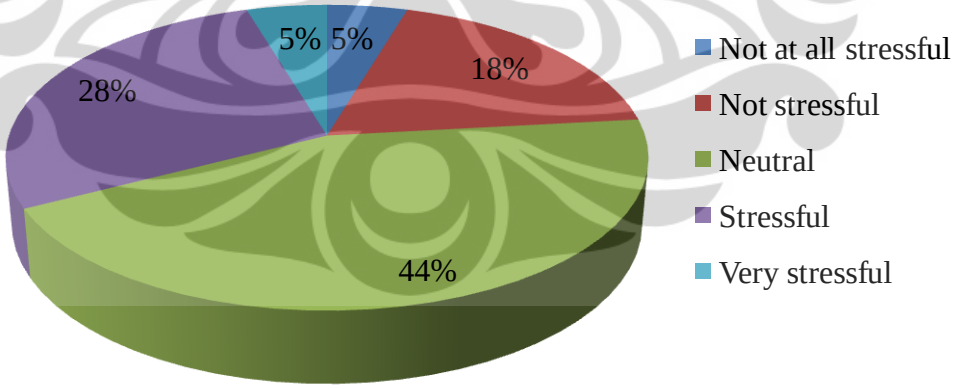

Figure 5.2. Pie chart of the Perceived Level of Stress while Driving at Night.

5.2 Descriptive Analysis of Quality of Life

Descriptive statistics of the WHOQOL-BREF was conducted. Domain scores for the WHOQOL-BREF were transformed to a 0-100 scale so these scores were directly comparable with scores derived from the WHOQOL-100. As showed in Table 5.3, the mean, standard deviation, the highest and the lowest score were calculated for each domain. The mean score on the item 1 and 2 on the WHOQOL-BREF was 3.47 and 3.49, respectively. These two items were from the general facet on overall quality of life and general health (not included in the scoring).

Table 5.3

A Descriptive Analysis of the Quality of Life

Domain	*M*	*SD*	Minimum	Maximum
	(Scale 0-100)			
Physical	65.12	15.82	21.43	92.86
Psychological	58.82	13.15	29.17	83.33
Social Relationships	63.37	16.48	16.67	100.00
Environment	60.54	13.59	28.12	87.50

5.3 Descriptive Analysis of Perceived Social Support

Descriptive statistics of the SPS was conducted to describe perceived social support in a traffic situation. The mean perceived social support score was 3.00 (*SD* = 0.45). The highest composite score among all participants was 3.96, while the lowest score was 1.38.

Participants were divided into two groups based on their main sources of support — passenger and telephone conversation partner. Out of 43 participants, 51.2% reported passenger as their source of support, while 48.8% indicated telephone conversation partner as their source of support. As show in Table 5.4, the number of passenger was in the range of 1 to 4, and the age of passenger was in the range of 20-50. In addition, the number of telephone conversation partners ranged from 1 to 5, and the age of telephone conversation partner ranged from 6

to 40 (see Table 5.5). Furthermore, participants were also asked to report the gender of their sources of support.

Table 5.4

Passenger' Demographic Characteristics

		Frequency	Percentage
The number of passenger	1	15	68.2
	2	4	18.2
	3	2	9.1
	4	1	4.5
Age	20 – 30	13	59.1
	31 – 40	8	36.4
	41 – 50	1	4.5
Gender	Male	9	40.9
	Female	13	59.1

Table 5.5

Telephone Conversation Partners' Demographic Characteristics

		Frequency	Percentage
The numbers of telephone	1	15	71.4
conversation partners	2	4	19.0
	3	1	4.8
	5	1	4.8
Age	< 20	2	9.5
	20 - 30	17	81.0
	31 - 40	2	9.5
Gender	Male	10	47.6
	Female	11	52.4

5.4 Relationship between Quality of Life and Perceived Social Support

A series of correlations were conducted to identify the relationships between four domains of quality of life and perceived social support. Prior to the correlations, an analysis of the normality and the linear-relationship assumptions was performed. According to Field (2005), in small samples, the normality assumption is tenable if the ratio of the skewness to the standard error of the skew ranges from -2.58 to +2.58. For quality of life domains, all ratios were in the range of -2.12 to -0.61, indicating normal distribution. Furthermore, the line graphs showed that all relationships between quality of life domains and social support were linear. Therefore, the normality and the linear-relationship criteria were met.

Overall, Pearson correlation found that perceived social support was positively and significantly correlated with all quality of life domains (see Table 5.6). That is, people with high social support reported higher score on physical domain, psychological domain, social relationships domain, and environment domain

Table 5.6

Correlations between Physical, Psychological, Social Relations, Environment Domains, and Perceived Social Support

Variable	Physical	Psychological	Social Relationships	Environment
Perceived Social Support	.38*	.38*	.33*	.57**

*$p < .05$. ** $p < .001$.

5.5 Quality of Life in Drivers who were Accompanied by Passenger and Drivers who Talked to a Telephone Conversation Partner

A series of independent-groups *t*-tests were conducted to compare quality of life between two groups of drivers. Drivers who were accompanied by

passenger were coded 1, and drivers who talked to others on the phone were coded 0. Prior to the *t*-tests, an analysis of the normality and the homogeneity-of-variance assumptions was performed. According to Field (2005), in small samples, the normality assumption is tenable if the ratio of the skewness to the standard error of the skew ranges from -2.58 to +2.58. As seen in Table 5.7, for those who were accompanied by passenger, all ratios were in the range of -2.44 to 0.65, indicating normal distribution. For those who talked to a telephone conversation partner, all ratios were in the range of -1.56 to 0.69, indicating normal distribution. Furthermore, Levene's test revealed that no *p* value is less than .05, indicating that the homogeneity-of-variance assumption is fully met for all domains.

After performing assumptions analysis, independent-groups *t*-tests were conducted. No significant results were found. Indeed, there was no significant difference in the physical domain between drivers who were accompanied by passenger (M = 63.15) and those who talked to a telephone conversation partner (M = 67.18), $t(41) = -0.83$, ns. No significant difference in psychological domain was found between drivers who were accompanied by passenger (M = 56.63) and those who talked to a telephone conversation partner (M = 61.11), $t(41) = -1.12$, ns. Scores on social relationships domain did not differ between drivers who were accompanied by passenger (M = 61.36) and those who talked to a telephone conversation partner (M = 65.48), $t(41) = -0.82$, ns. There was also no significant difference in environment domain between drivers who were accompanied by passenger (M = 58.10) and those who talked to a telephone conversation partner (M = 63.10), $t(41) = -1.21$, ns.

5.6 Perceived Social Support in Drivers who were Accompanied by Passenger and Drivers who Talked to a Telephone Conversation Partner

First, the researcher performed an analysis of the normality and the homogeneity-of-variance assumptions. For passenger and telephone groups, the ratios of the skewness to the standard error of the skew were -2.30 and 1.35, respectively, indicating normal distribution according to criteria set by Field

(2005). Furthermore, Levene's test was not significant, indicating that the homogeneity-of-variance assumption was met.

Afterwards, an independent-groups *t*-test was conducted. Drivers who were accompanied by passenger were coded 1, and drivers who talked to others on the phone were coded 0. The results revealed that there was no significant difference in perceived social support between drivers who were accompanied by passenger (M = 3.06) and those who talked to a telephone conversation partner (M = 2.93), $t(41) = .34$, ns. Such that, social support from passenger and social support from telephone conversation partners was not perceived differently.

CHAPTER 6
CONCLUSION

This chapter consists of summary of research findings, discussion, and suggestion for future study and commuter drivers in Jakarta.

6.1 Summary of Results

Having conducted a series of statistical analyses, there are four important research findings that could be summarised and discussed:

1. People who drove from Tangerang to Jakarta on work days had a considerably medium level of quality of life. This applied to all domains — physical, psychological, social relations, and environment.
2. Perceived social support in a traffic situation, specifically from a passenger or a telephone conversation partner, has significant and positive relationships with all domains of quality of life. Such that, people with greater perceived social support had higher scores on physical, psychological, social relationships, and environment domains than those low in social support.
3. Quality of life did not differ between those who were accompanied by passenger and those who talked to a telephone conversation partner. This applied to all domains of quality of life.
4. Perceived social support did not differ between those who were accompanied by passenger and those who talked to a telephone conversation partner. In other words, support from passenger and support from telephone conversation partner was not perceived differently.

6.2 Discussion

Overall, quality of life of drivers who daily commute from Tangerang to Jakarta was considered to be in the medium level. That is, individuals' perception of how good their physical and psychological functioning, social relations, and environment were in the medium level, neither low nor high. Specifically, a

medium level of physical domain implies that individual's perception of their dependence on medical substance and assistance, pain or discomfort, fatigue, sleeplessness, mobility, activity, and working capacity is moderate. In addition, a medium level of psychological domain implies that individual's perception of their cognitive and affective state, self-esteem, spirituality, religion, personal beliefs, and cognitive ability (e.g. thinking, learning, memory, and concentration) is moderate. Moreover, a medium level of social relationships domain implies that individual's perception of their personal relationship with familiar others, sexual activities, and social support is moderate. Furthermore, a medium level of environment domain implies that individual's perception of their physical environment, access to learning, health, social care, transportation, recreation and leisure, freedom, physical safety, security, and financial resources is moderate.

This result was unexpected considering a high level of traffic congestion in Jakarta and Tangerang. Presumably, the reason why the participants tended to have a medium level of quality of life was because there were many other factors that affect quality of life. According to Bowling (cited in Carr, Higginson, & Robinson, 2003), individual's quality of life was also influenced by access to public transportation. It is a common knowledge that Jakarta's public transportation is in bad condition, and thus Jakarta residents and commuters are uncomfortable to use public transport to travel (Andromeda, 2012). Therefore, commuters tend to choose private vehicles as their main transport to travel because of psychosocial benefits of private transportation, such as prestige, protection, skills, self-esteem, and freedom (Gardner & Abraham; Mann & Abraham cited in Novaco & Gonzales 2009). Furthermore, the fact that participants travelled to Jakarta through toll roads every work day might also explain the participants' medium level of quality of life. Since motorcycles are not allowed in toll roads, the traffic is less crowded than normal main roads. As a result, people may feel more comfortable to travel on toll roads. Therefore, this notion might explain why this study found that private car drivers' quality of life was not very low regardless of the traffic congestion.

As expected, it was found that perceived social support was significantly and positively correlated with all domains of quality of life. This result implied

that people who perceived greater social support in a traffic situation had a tendency to perceive that they have healthier physical state, better psychological functioning (including more positive affects, higher self-esteem, and better cognitive ability), better personal and sexual relationships, and better living environment (including more satisfaction with access to learning, health care, transportation, recreation, freedom, safety, security, and financial resources) compared to those who perceived that received less support. This result was consistent with prior studies, which have demonstrated that social support in a specific setting is related to less physical and psychological health related strain (Johnson & Hall, 1988; El-Bassel et al., 1988), more positive psychological aspect (such as positive affect, self-esteem, and optimistic view) (Sarason et al., 1983; Cohen & Syne, 1985) and more satisfaction with environment (Cohen & Hoberman, 1983; Suchet & Barling cited in Treistman 2004). Furthermore, according to the study results, most participants reported that they felt stressful while driving during the day and night. Thus, in addition to the direct effect, social support might also have a buffering effect, such that it alleviated the negative effect of stress on quality of life. Prior studies have indicated that those in high social support would not experience the negative effect of stress as harmful as it is to those with no support (House; LaRocco, House, & French cited in Thoits 1995; Carlson & Perrewe, 1999). Further research should be conducted to confirm the buffering effect.

The present study also found that physical, psychological, social relationships, and environment domains of quality of life did not differ between those who were accompanied by passenger and those who talked to a telephone conversation partner. There were two arguments proposed to explain this result. First, both groups were exposed to the same amount of traffic congestion. Traffic congestion has been known to exacerbate quality of life by deteriorating physical and mental health (Guski cited in Dratva et al. 2010; Wieringa et al., 2001; Kageyama et al. cited in Yamazaki et al. 2005; Song et al., 2007) or decreasing one's satisfaction with living environment (Botteldooren et al., 2011). Therefore, if traffic congestion has a negative effect on quality of life, all participants will experience this effect, and have approximately the same level of quality of life.

Second, the non-significant result might also be due to the fact that social support from passenger and from telephone conversation partner was not perceived differently. Thus, their effects on quality of life would also be equivalent. Indeed, the study found that social support from passenger and support from telephone conversation partner was not perceived differently. Vollrath et al. (2002) diverges in this regard. They stated that passenger should provide more various tangible assistances (e.g. detect critical situation on the road) than telephone partner because they are present in the car. However, it should be noted that Vollrath et al. (2002) talked about received social support, while this present study measured perceived support. It might be true that drivers received more various support from passenger than telephone partner, yet they might not perceived it. Prior studies supported that perceived support is more important predictor of adjustment to negative events (Wethington & Kessler, 1986), life satisfaction (Kazarian and McCabe, cited in Young 2006), mental health (Dunkel-Schetter & Bennett cited in Thoits, 1995; Wethington & Kessler, 1986) and well-being (Kessler & McLeod; Turner; Vaux cited in Coventry et al. 2004) than received support.

There are two possible reasons why drivers did not perceive passenger support and telephone partner support differently. First, although Vollrath et al. (2002) argued that passenger can offer more tangible assistances (e.g. detect critical situation on the road) than telephone partner because of their presence in the car, items on the Social Provisions Scale (SPS) might not really focus on measuring concrete assistance. Instead, the SPS emphasizes social provisions, such as guidance, reassurance of worth, reliable alliance, opportunity for nurturance, attachment, and social integration, so that people perceive that they are supported by others (Weiss cited in Rizwan & Syed 2010; cited in Rooks & Schuster 2006). Thus, the way people perceive social support depends on whether requirement for social provisions is fully met, and not on how tangible the support is. Therefore, the SPS might not comprehensively assess the tangible support that can only be offered by passenger, and not by telephone conversation partner.

Second, in both groups, drivers might not have a close and meaningful relationship with the support provider. Gallicchio et al.'s (2007) study found that

the number of close friends and the frequency of meeting familiar others was associated to higher quality of life. People tend to have a meaningful relationship with others who they called "close friends", and thus they perceive support from those people as high quality support. The quality of support is often considered as an essential correlate of quality of life (Wiggins et al., 2004; Veenstra cited in Wiggins et al. 2004). However, it should be noted that this present study only explored the association between passenger/telephone conversation partner and quality of life. This study did not investigate how close the relationship between drivers and passenger/telephone conversation partner. Thus, they all might not have intimate relationships with passenger or telephone conversation partner, which then explain the non-significant difference in quality of life and perceived social support between two groups.

In conclusion, the study evidenced the significant relationship between quality of life and perceived social support in a traffic setting. In addition, the study also demonstrated that quality of life did not differ by sources of support. The strength of the present study is that it contributes to quality of life research by establishing the relationship between quality of life and perceived social support from passenger and telephone conversation partner. However, it should be noted that this study also had several limitations. First, the SPS did not put emphasis on tangible support, and therefore did not comprehensively assess all kinds of support a passenger can offer. Second, this study did not measure the direct effect of perception of traffic congestion on quality of life, thus the argument that the participants' quality of life was not so high due to exposure to traffic could not be fully verified. Third, the study did not control how close the relationship between participants and passenger/telephone conversation partner. Fourth, the study did not control the possibility that drivers might obtain supports from sources other than passenger and telephone conversation partner, such as listening to music, radio, and texting. Furthermore, the study also did not control the possibility that drivers might receive supports from both passenger and telephone partner.

6.3 Suggestion

6.3.1 Methodological Suggestion

According to the present study's results and limitations, there are several methodological suggestion that can be proposed:

1. Future study may revise the WHOQOL-BREF so that the items and the scale will be more understandable and more appropriate to use in traffic context.
2. Future study may revise the SPS or use other social support scale so it thoroughly measures all kinds of support (e.g. emotional, instrumental, informational, and appraisal).
3. Future study should explore further the effect of traffic congestion on quality of life. For instance, future study should measure the perception of traffic congestion or the amount of time spent on traffic so that the negative effect of traffic on quality of life can be fully confirmed.
4. Future study should investigate both the direct effect and the buffering effect of social support. Thus, the study can confirm the nature of the relationships among stress, quality of life, and social support.
5. Future study may also use an experimental design so that the study can rule out the possibility that drivers receive support from other sources. Furthermore, an experimental study can allow the researcher to investigate quality of life among those who received (1) passenger support only, (2) telephone partner support only, (3) both passenger and telephone partner support, and (4) no support. In addition, it also allows the researcher to ensure that all drivers had the same level of closeness with their passenger/telephone partner. Moreover, the duration and the content of telephone conversation can be controlled in experimental study. Thus, the effect of quality of support on quality of life can be fully established.

6.3.2 Practical Suggestion

Considering that a significant correlation between perceived social support in a traffic situation and quality of life was found, the present study suggests that

improving social support is an effective intervention strategy to enhance quality of life of drivers who daily commute to Jakarta. For instance, solo drivers can ask their relatives and friends to be passenger in their car. In addition, solo drivers can also call their familiar others while facing traffic congestion. However, this particular suggestion should be considered with caution since mobile phone use whilst driving has been known to have a negative effect on driving performance. It should be emphasized that the researcher does not suggest people to phone others while driving on normal or even slow moving traffic. However, while solo drivers are stuck in non-moving traffic, it may be helpful for them to talk to others on the phone so that their frustration and stress caused by traffic congestion will be eased.

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Appendix A — Sample Items from the WHOQOL-BREF (Indonesian version)

No.	Domains	Example Statements (Indonesian version)
1	Physical	"*Seberapa jauh anda membutuhkan terapi medis untuk dapat menjalankan aktivitas dalam kehidupan sehari-hari?*"
2	Psychological	"*Seberapa sering anda memiliki perasaan negative seperti 'feeling blu' (kesepian), putus asa, cemas, dan depresi?*"
3	Social Relations	"*Seberapa puaskah anda dengan dukungan yang anda peroleh dari teman anda?*"
4	Environment	"*Seberapa jauh anda merasa aman dalam kehidupan anda sehari-hari?*"

Appendix B — Sample Items from the SPS (Indonesian version)

No.	Subscales	Example Statements (Indonesian version)
1	Guidance	*"Tidak ada orang yang dapat dapat membimbing saya atau memberikan saya petunjuk ketika saya merasa stress di jalan."*
2	Reliable alliance	*"Saya dapat mengandalkan 'orang lain' dalam situasi darurat di jalan."*
3	Reassurance of worth	*"'Orang lain' mengagumi keahlian mengemudi saya."*
4	Opportunity for nurturance	*"Ada 'orang lain' yang mengandalkan saya untuk membantunya selama di jalan."*
5	Attachment	*"Saya merasakan ikatan emosional yang kuat dengan 'orang lain'."*
6	Social Integration	*"Saya merasa sebagai bagian dari 'orang lain', dengan siapa saya dapat menyampaikan sikap dan pikiran saya."*

Appendix C — Reliability and Validity of the WHOQOL-BREF (Pilot Study)

Physical Domain

Case Processing Summary

		N	%
Cases	Valid	31	100.0
	Excluded[a]	0	.0
	Total	31	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.665	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item3	21.6774	8.026	.414	.620
Item4	21.3226	7.426	.334	.650
Item10	22.2581	8.465	.333	.641
Item15	21.9032	9.024	.236	.663
Item16	22.8065	6.628	.426	.621
Item17	22.4839	7.858	.598	.583
Item18	22.3871	8.112	.390	.626

Appendix C (cont.)

Psychological Domain

Case Processing Summary

		N	%
Cases	Valid	31	100.0
	Excluded[a]	0	.0
	Total	31	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.316	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item5	17.9677	2.566	.273	.193
Item6	17.8710	2.183	.270	.160
Item7	17.9677	3.032	.015	.355
Item11	18.1290	2.916	-.031	.416
Item19	17.7097	2.680	.139	.280
Item26	17.4516	2.656	.241	.218

Appendix C (cont.)

Social Relationships Domain

Case Processing Summary

		N	%
Cases	Valid	31	100.0
	Excluded[a]	0	.0
	Total	31	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.474	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item20	7.1613	1.606	.327	.361
Item21	7.3548	1.170	.320	.331
Item22	7.0323	1.232	.267	.436

Appendix C (cont.)

Environment Domain

Case Processing Summary

		N	%
Cases	Valid	31	100.0
	Excluded[a]	0	.0
	Total	31	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.675	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item8	23.7419	10.798	.310	.657
Item9	23.8387	9.340	.504	.609
Item12	23.3548	12.303	-.018	.715
Item13	23.9032	11.624	.135	.689
Item14	23.6774	11.226	.208	.677
Item23	23.5484	8.323	.698	.550
Item24	23.9677	9.366	.531	.603
Item25	24.3226	7.959	.518	.602

Appendix D — Reliability and Validity of the SPS (Pilot Study)

Case Processing Summary

		N	%
Cases	Valid	31	100.0
	Excluded[a]	0	.0
	Total	31	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.838	26

Appendix D (cont.)

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
item1	88.87	71.085	.267	.835
item2	89.07	67.168	.542	.826
item3	88.40	69.972	.301	.835
item4	88.00	65.793	.472	.828
item5	89.10	72.714	.119	.839
item6	89.00	70.828	.211	.838
item7	89.07	73.306	.057	.841
item8	89.10	68.852	.433	.830
item9	89.20	64.855	.634	.821
item10	88.97	68.654	.451	.830
item11	89.27	70.616	.243	.837
item12	88.70	73.459	.028	.843
item13	89.20	70.993	.277	.835
item14	89.00	71.655	.179	.838
item15	88.60	71.834	.204	.837
item16	89.50	65.638	.413	.832
item17	89.20	69.407	.437	.830
item18	89.10	69.197	.368	.832
item19	88.80	70.579	.298	.835
item20	88.87	69.637	.540	.829
item21	89.13	65.223	.632	.822
item22	88.80	67.752	.422	.830
item23	88.93	64.478	.654	.820
item24	89.30	66.631	.516	.826
item25	89.60	63.972	.505	.827
item26	88.57	70.668	.344	.833

Appendix E — Reliability and Validity of the WHOQOL-BREF (Present Study)

Physical Domain

Case Processing Summary

		N	%
Cases	Valid	60	100.0
	Excluded[a]	0	.0
	Total	60	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.832	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item3	21.3500	13.486	.617	.803
Item4	20.8833	13.868	.611	.804
Item10	21.9500	15.031	.648	.805
Item15	21.7167	14.681	.589	.809
Item16	22.3333	14.531	.368	.853
Item17	22.0833	13.806	.700	.791
Item18	22.1833	13.576	.645	.798

Appendix E (cont.)

Psychological Domain

Case Processing Summary

		N	%
Cases	Valid	60	100.0
	Excluded[a]	0	.0
	Total	60	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.786	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item5	17.0333	7.795	.560	.749
Item6	16.9667	7.016	.656	.723
Item7	17.0667	8.572	.430	.777
Item11	17.0167	7.440	.532	.755
Item19	16.8000	7.417	.598	.739
Item26	16.6167	7.461	.464	.776

Appendix E (cont.)

Social Relationships Domain

Case Processing Summary

		N	%
Cases	Valid	60	100.0
	Excluded[a]	0	.0
	Total	60	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.749	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item20	6.9000	2.193	.630	.603
Item21	7.3500	2.367	.561	.684
Item22	7.0167	2.254	.542	.708

Appendix E (cont.)

Environment Domain

Case Processing Summary

		N	%
Cases	Valid	60	100.0
	Excluded[a]	0	.0
	Total	60	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.775	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item8	24.2833	16.240	.467	.753
Item9	24.2000	14.603	.659	.719
Item12	24.0667	16.979	.379	.766
Item13	24.4667	16.219	.435	.758
Item14	24.0167	15.813	.479	.751
Item23	23.7833	15.562	.411	.764
Item24	23.8833	16.715	.456	.756
Item25	24.6167	13.461	.569	.736

Appendix F — Reliability and Validity of the SPS (Present Study)

Case Processing Summary

		N	%
Cases	Valid	43	100.0
	Excluded[a]	0	.0
	Total	43	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.932	24

Appendix F (cont.)

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item1	69.1860	109.822	.431	.931
Item2	68.7209	104.301	.757	.926
Item3	68.9302	109.733	.476	.931
Item4	69.1395	108.694	.530	.930
Item5	69.0465	109.045	.488	.931
Item6	68.7674	108.040	.547	.930
Item7	68.7907	105.455	.595	.929
Item8	69.0000	104.381	.686	.927
Item9	68.7907	107.360	.575	.929
Item10	68.8372	106.044	.627	.929
Item11	69.0930	104.086	.716	.927
Item12	68.8140	106.917	.652	.928
Item13	68.7674	106.421	.663	.928
Item14	68.9767	109.452	.533	.930
Item15	68.9302	107.590	.543	.930
Item16	69.0233	106.928	.622	.929
Item17	69.0000	105.238	.689	.927
Item18	68.9767	103.309	.802	.926
Item19	68.9535	106.045	.700	.927
Item20	69.1395	108.647	.534	.930
Item21	68.6279	106.239	.628	.929
Item22	69.6047	115.388	.032	.938
Item23	68.9767	109.166	.520	.930
Item24	68.8372	106.568	.621	.929

Appendix G — Descriptive Statistics of Demographic Characteristics

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	3	7.0	7.0	7.0
	21	3	7.0	7.0	14.0
	22	5	11.6	11.6	25.6
	23	6	14.0	14.0	39.5
	24	5	11.6	11.6	51.2
	25	3	7.0	7.0	58.1
	26	1	2.3	2.3	60.5
	29	2	4.7	4.7	65.1
	34	2	4.7	4.7	69.8
	37	3	7.0	7.0	76.7
	38	1	2.3	2.3	79.1
	39	1	2.3	2.3	81.4
	40	8	18.6	18.6	100.0
	Total	43	100.0	100.0	

Age

	N	Minimum	Maximum	Mean	Std. Deviation
Age	43	20.00	40.00	28.5116	7.65124
Valid N (listwise)	43				

Appendix G (cont.)

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pria	26	60.5	60.5	60.5
	Wani	17	39.5	39.5	100.0
	Total	43	100.0	100.0	

Appendix G (cont.)

Job

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Banker	1	2.3	2.3	2.3
	bunker trader	1	2.3	2.3	4.7
	Designer	1	2.3	2.3	7.0
	Graphic Designe	1	2.3	2.3	9.3
	karyawan	9	20.9	20.9	30.2
	Karyawan	4	9.3	9.3	39.5
	karyawan swasta	7	16.3	16.3	55.8
	Karyawan swasta	1	2.3	2.3	58.1
	karyawati	1	2.3	2.3	60.5
	Karyawati	1	2.3	2.3	62.8
	KEUANGAN	1	2.3	2.3	65.1
	mahasiswa	3	7.0	7.0	72.1
	Mahasiswa	3	7.0	7.0	79.1
	mahasiswa, 3d a	1	2.3	2.3	81.4
	mahasiswi	2	4.7	4.7	86.0
	Mahasiswi	2	4.7	4.7	90.7
	Management Trai	1	2.3	2.3	93.0
	Peg Swasta	1	2.3	2.3	95.3
	pegawai swasta	1	2.3	2.3	97.7
	trainee	1	2.3	2.3	100.0
	Total	43	100.0	100.0	

Appendix G (cont.)

Driving Experiences

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	9.3	9.3	9.3
	2	6	14.0	14.0	23.3
	3	1	2.3	2.3	25.6
	4	5	11.6	11.6	37.2
	5	4	9.3	9.3	46.5
	6	2	4.7	4.7	51.2
	7	1	2.3	2.3	53.5
	8	5	11.6	11.6	65.1
	10	3	7.0	7.0	72.1
	11	1	2.3	2.3	74.4
	12	3	7.0	7.0	81.4
	15	1	2.3	2.3	83.7
	16	1	2.3	2.3	86.0
	18	1	2.3	2.3	88.4
	20	2	4.7	4.7	93.0
	23	1	2.3	2.3	95.3
	24	1	2.3	2.3	97.7
	27	1	2.3	2.3	100.0
	Total	43	100.0	100.0	

Appendix G (cont.)

Time spent driving in the morning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	2.3	2.3	2.3
	< 1 hour	7	16.3	16.3	18.6
	1 - 2 hours	34	79.1	79.1	97.7
	2 - 3 hours	1	2.3	2.3	100.0
	Total	43	100.0	100.0	

Time spent driving during the day

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		24	55.8	55.8	55.8
	< 1 hour	10	23.3	23.3	79.1
	1 - 2 hours	8	18.6	18.6	97.7
	2 - 3 hours	1	2.3	2.3	100.0
	Total	43	100.0	100.0	

Time spent driving in the afternoon

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		15	34.9	34.9	34.9
	< 1 jam	5	11.6	11.6	46.5
	1 - 2 jam	20	46.5	46.5	93.0
	2 - 3 jam	3	7.0	7.0	100.0
	Total	43	100.0	100.0	

Appendix G (cont.)

Time spent driving at night

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	16.3	16.3	16.3
	< 1 jam	14	32.6	32.6	48.8
	1 - 2 j	21	48.8	48.8	97.7
	2 - 3 j	1	2.3	2.3	100.0
	Total	43	100.0	100.0	

Perceived driving stress level in the morning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	9.3	9.3	9.3
	2	3	7.0	7.0	16.3
	3	17	39.5	39.5	55.8
	4	17	39.5	39.5	95.3
	5	2	4.7	4.7	100.0
	Total	43	100.0	100.0	

Perceived driving stress level in the evening

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	4.7	4.7	4.7
	2	8	18.6	18.6	23.3
	3	19	44.2	44.2	67.4
	4	12	27.9	27.9	95.3
	5	2	4.7	4.7	100.0
	Total	43	100.0	100.0	

Appendix H — Descriptive Statistics of the WHOQOL-BREF

Descriptive Statistics (Scale 1-5)

	N	Minimum	Maximum	Mean	Std. Deviation
Physical	43	1.86	4.71	3.6047	.63264
Psychological	43	2.17	4.33	3.3527	.52605
Social Relationships	43	1.67	5.00	3.5349	.65924
Environment	43	2.12	4.50	3.4215	.54351
Valid N (listwise)	43				

Descriptive Statistics (Scale 4-20)

	N	Minimum	Maximum	Mean	Std. Deviation
Physical	43	7.43	18.86	14.4186	2.53055
Psychological	43	8.67	17.33	13.4109	2.10421
Social Relationships	43	6.67	20.00	14.1395	2.63697
Environment	43	8.50	18.00	13.6860	2.17404
Valid N (listwise)	43				

Descriptive Statistics (Scale 0-100)

	N	Minimum	Maximum	Mean	Std. Deviation
Physical	43	21.43	92.86	65.1163	15.81594
Psychological	43	29.17	83.33	58.8178	13.15133
Social Relationships	43	16.67	100.00	63.3721	16.48106
Environment	43	28.12	87.50	60.5378	13.58778
Valid N (listwise)	43				

Appendix I — Descriptive Statistics of the SPS

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Social Support	43	1.38	3.96	2.9981	.44968
Valid N (listwise)	43				

Number of Passengers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	15	34.9	68.2	68.2
	2	4	9.3	18.2	86.4
	3	2	4.7	9.1	95.5
	4	1	2.3	4.5	100.0
	Total	22	51.2	100.0	
Missing	System	21	48.8		
Total		43	100.0		

Appendix I (cont.)

Passenger's Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20	2	4.7	9.1	9.1
	21	2	4.7	9.1	18.2
	22	1	2.3	4.5	22.7
	23	4	9.3	18.2	40.9
	24	1	2.3	4.5	45.5
	25	1	2.3	4.5	50.0
	29	1	2.3	4.5	54.5
	30	1	2.3	4.5	59.1
	35	2	4.7	9.1	68.2
	37	3	7.0	13.6	81.8
	38	2	4.7	9.1	90.9
	40	1	2.3	4.5	95.5
	50	1	2.3	4.5	100.0
	Total	22	51.2	100.0	
Missing	System	21	48.8		
Total		43	100.0		

Passengers' Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		21	48.8	48.8	48.8
	Male	9	20.9	20.9	69.8
	Female	13	30.2	30.2	100.0
	Total	43	100.0	100.0	

Appendix I (cont.)

Number of Telephone Conversation Partners

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	15	34.9	71.4	71.4
	2	4	9.3	19.0	90.5
	3	1	2.3	4.8	95.2
	5	1	2.3	4.8	100.0
	Total	21	48.8	100.0	
Missing	System	22	51.2		
Total		43	100.0		

Telephone Partners' Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6	1	2.3	4.8	4.8
	19	1	2.3	4.8	9.5
	20	4	9.3	19.0	28.6
	21	2	4.7	9.5	38.1
	22	1	2.3	4.8	42.9
	23	2	4.7	9.5	52.4
	24	1	2.3	4.8	57.1
	25	3	7.0	14.3	71.4
	26	1	2.3	4.8	76.2
	27	1	2.3	4.8	81.0
	30	2	4.7	9.5	90.5
	38	1	2.3	4.8	95.2
	40	1	2.3	4.8	100.0
	Total	21	48.8	100.0	
Missing	System	22	51.2		
Total		43	100.0		

Appendix I (cont.)

Telephone Partners' Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		22	51.2	51.2	51.2
	Male	10	23.3	23.3	74.4
	Female	11	25.6	25.6	100.0
	Total	43	100.0	100.0	

Appendix J — Normality Assumption Tests prior to Correlation Analysis

SPSS Output for Skewness and Kurtosis

Descriptive Statistics

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Physical	43	-.766	.361	.530	.709
Psychological	43	-.388	.361	-.095	.709
Social Relationships	43	-.521	.361	1.363	.709
Environment	43	-.219	.361	.075	.709
Social Support	43	-.695	.361	3.218	.709
Valid N (listwise)	43				

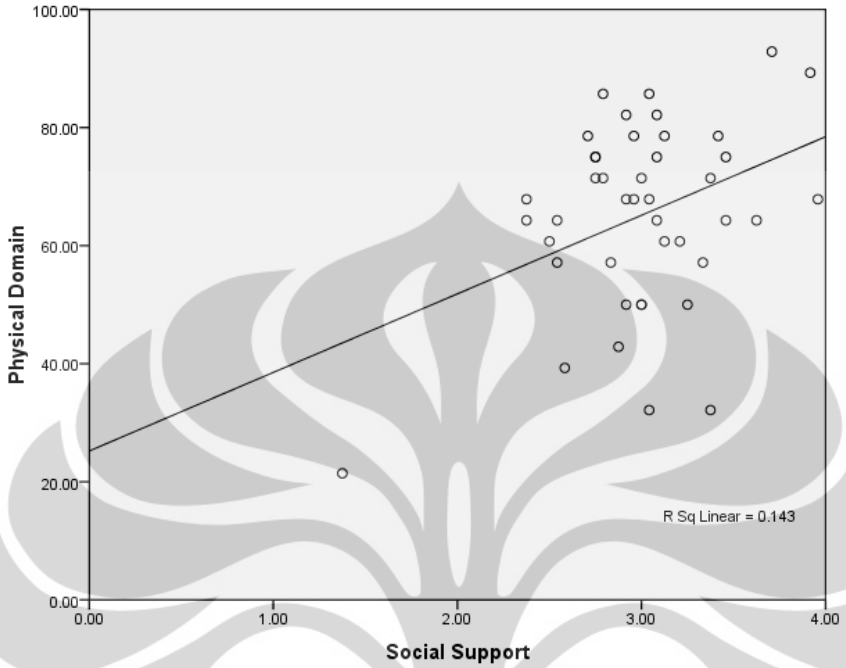
Normality Test Results

Variable	Skewness	Standard Error (SE)	Ratio (Skewness/SE)
Physical	-.77	.36	-2.12*
Psychological	-.39	.36	-1.07*
Social relationships	-.52	.36	-1.44*
Environment	-.22	.36	-0.61*
Social support	-.70	.36	-1.93*

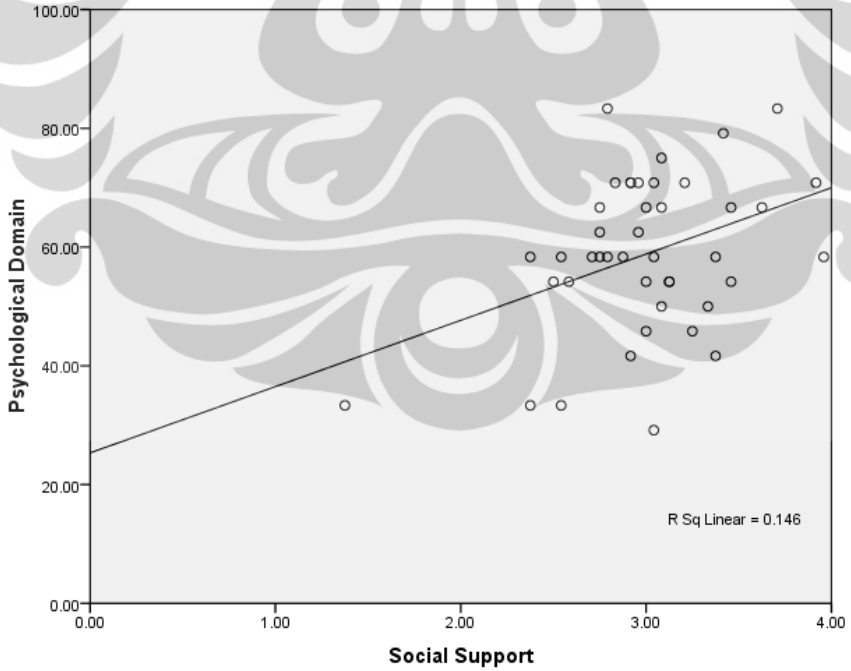
*Value is in the range of -2.58 to +2.58, indicating normal distribution (Field, 2009)

Appendix K — Line Graphs for Linear-Relationship Assumption Tests

Relationship between Physical Domain and Social Support

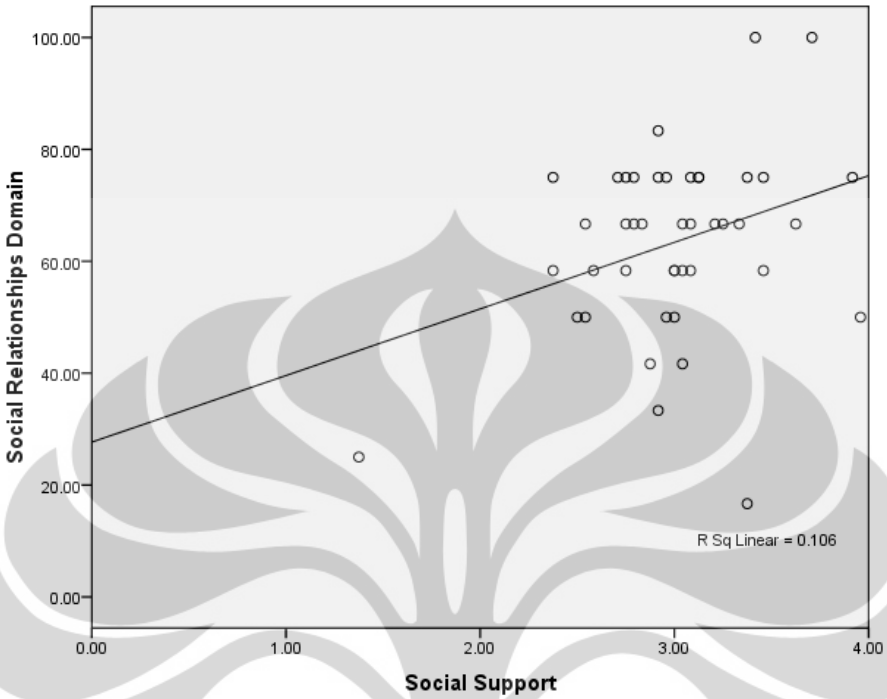


Relationship between Psychological Domain and Social Support

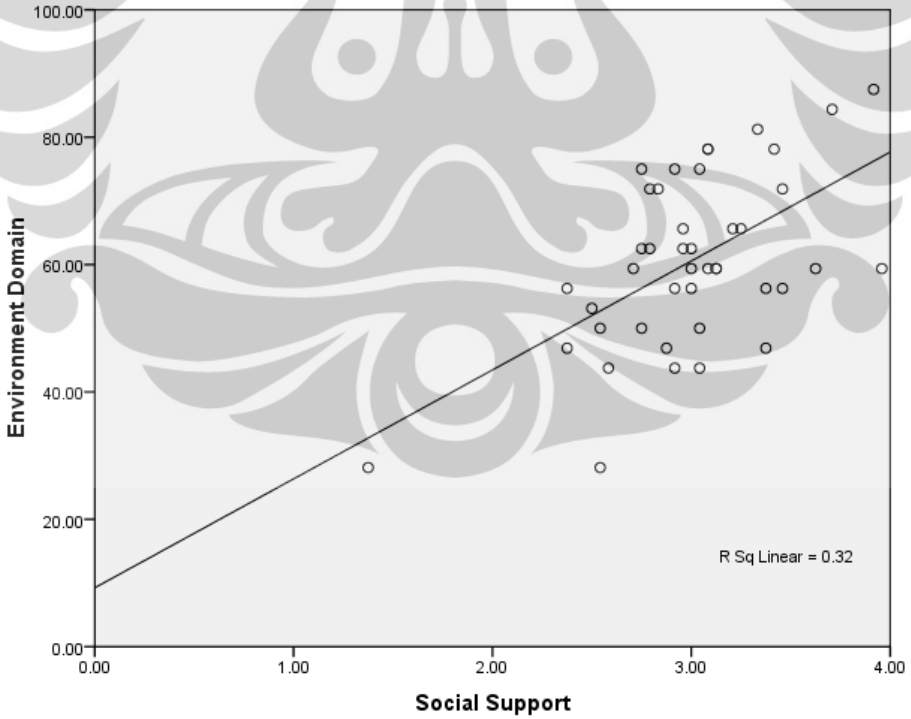


Appendix K (cont.)

Relationship between Social Relationships Domain and Social Support



Relationship between Environment Domain and Social Support



Appendix L — Correlations between Quality of Life and Social Support

Correlations

		Physical	Psychological	Social Relationships	Environment	Social Support
Physical	Pearson Correlation	1	.695**	.769**	.706**	.378*
	Sig. (2-tailed)		.000	.000	.000	.012
	N	43	43	43	43	43
Psychological	Pearson Correlation	.695**	1	.694**	.712**	.382*
	Sig. (2-tailed)	.000		.000	.000	.012
	N	43	43	43	43	43
Social Relationships	Pearson Correlation	.769**	.694**	1	.640**	.325*
	Sig. (2-tailed)	.000	.000		.000	.034
	N	43	43	43	43	43
Environment	Pearson Correlation	.706**	.712**	.640**	1	.566**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	43	43	43	43	43
Social Support	Pearson Correlation	.378*	.382*	.325*	.566**	1
	Sig. (2-tailed)	.012	.012	.034	.000	
	N	43	43	43	43	43

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix M — Normality Assumption Tests (Var: Quality of Life)

For Passenger Group

Descriptive Statistics

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Physical	22	-.899	.491	1.044	.953
Psychological	22	-.762	.491	.275	.953
Social relationships	22	-1.196	.491	1.868	.953
Environment	22	.318	.491	1.220	.953
Valid N (listwise)	22				

Normality tests results

The WHOQOL-BREF Domains	Skewness	Standard Error (SE)	Ratio (Skewness/SE)
Physical	-.90	.49	-1.83*
Psychological	-.76	.49	-1.55*
Social relationships	-1.2	.49	-2.44*
Environment	.32	.49	0.65*

*Value is in the range of -2.58 to +2.58, indicating normal distribution (Field, 2009)

Appendix M (cont.)

For Telephone Group

Descriptive Statistics

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Physical	21	-.652	.501	.110	.972
Psychological	21	-.516	.501	-.280	.972
Social relationships	21	.346	.501	.540	.972
Environment	21	-.784	.501	.392	.972
Valid N (listwise)	21				

Normality tests results

The WHOQOL-BREF Domains	Skewness	Standard Error (SE)	Ratio (Skewness/SE)
Physical	-0.65	0.50	-1.30*
Psychological	-0.52	0.50	-1.03*
Social relationships	0.35	0.50	0.69*
Environment	-0.78	0.50	-1.56*

**Value is in the range of -2.58 to +2.58, indicating normal distribution (Field, 2009)

Appendix N — Homogeneity-of-Variance and *t*-tests (Var: Quality of Life)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Physical	Equal variances assumed	.006	.941	-.832	41	.410	-4.02752	4.84294	-13.80803	5.75299
	Equal variances not assumed			-.833	40.995	.410	-4.02752	4.83612	-13.79430	5.73926
Psychological	Equal variances assumed	2.949	.093	-1.121	41	.269	-4.48232	4.00005	-12.56058	3.59593
	Equal variances not assumed			-1.112	36.041	.274	-4.48232	4.03122	-12.65769	3.69305
Social Relationships	Equal variances assumed	.002	.965	-.815	41	.420	-4.11255	5.04829	-14.30779	6.08268
	Equal variances not assumed			-.815	40.920	.420	-4.11255	5.04786	-14.30752	6.08241
Environment	Equal variances assumed	.360	.552	-1.213	41	.232	-4.99865	4.12234	-13.32387	3.32658
	Equal variances not assumed			-1.210	40.160	.233	-4.99865	4.13189	-13.34847	3.35117

Appendix O — Normality Assumption Tests (Var: Perceived Social Support)

SPSS Output for Passenger Groups

Descriptive Statistics (Passenger)

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Social Support	22	-1.130	.491	2.948	.953
Valid N (listwise)	22				

SPSS Output for Telephone Groups

Descriptive Statistics (Telephone Conversation Partner)

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
SS_MEAN	21	.677	.501	1.473	.972
Valid N (listwise)	21				

Normality Tests Results

Groups	Skewness	Standard Error (SE)	Ratio (Skewness/SE)
Passenger	-1.13	0.49	-2.30*
Telephone	0.68	0.50	1.35*

*Value is in the range of -2.58 to +2.58, indicating normal distribution (Field, 2009)

Appendix P — Homogeneity-of-Variance and *t*-tests (Var: Perceived Social Support)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Social Support	Equal variances assumed	3.432	.071	-.961	41	.342	-.13194	.13731	-.40925	.14537
	Equal variances not assumed			-.974	32.257	.337	-.13194	.13549	-.40784	.14396

Appendix Q — Questionnaire Flyer