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QUALITY OF LIFE AND POST TRAUMATIC STRESS DISORDERS (PTSD)AMONG YOUTH ROAD TRAFFIC CRASH SURVIVORS IN SELANGOR

BY
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FPSK4 2012 52

ACKNOWLEDGEMENT

In the name of Allah, the Most Gracious and the Most Merciful. Alhamdulillah, all praises to Allah for the strengths and His blessing in completing this thesis. Special appreciation goes to my supervisor; Dr Kulanthayan K.C Mani and co-Supervisor; Prof. Dr. Sherina Mohd Sidik, for their supervision and constant support. They invaluable help of constructive comments and suggestions throughout the experimental and thesis works have contributed to the success of this research.

I would like to express my deeply grateful and highest appreciation to Mr. Ang Kim Liong from CRC hospital Serdang, staffs in Kajang and Serdang Hospital Rehabilitation Center for their cooperation and determination while doing the data collecting.

Sincere thanks to all my friends Mohd Afiq, Maisarah, Chemoh, Baihaqi, Adiran (UTeM), roommate; Syazwani and housemates for their kindness and moral support during my study. Thanks for the friendship and memories.

Last but not least, my deepest gratitude goes to my beloved parents; Wan Rusli and Che Rutnawatie, siblings; Wan Muhd Ilham, Wan Nur Anis, Wan Muhd Izwan Hakim and Wan Muhd Izham Shauki and also my soul mate; Ikhwan Nasir Ibrahim for their endless love, prayers and encouragement. To those who indirectly contributed in this research, your kindness means a lot to me. Thank you very much.

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ABSTRACT

QUALITY OF LIFE AND POST TRAUMATIC STRESS DISORDERS (PTSD) AMONG YOUTH ROAD TRAFFIC CRASH SURVIVOR IN SELANGOR

WAN NUR SHAHIDA BINTI WAN RUSLI

Road traffic crashes (RTCs) is one of the major death contributors in Malaysia and all around the world. The survivors also suffer from different types of injuries and disabilities including Post Traumatic Stress Disorders (PTSD) which can affect their quality of life. Aim of this study is to determine the association between Quality of Life and PTSD among youth that had involved in road traffic crashes. The samples were chosen using non probability sampling which is purposive sampling. The youth were selected from Rehabilitation Center from age 17 until 24 years old and involved in road traffic crash. The instrument used in this study were respondents socio demographic, Assessment of Quality of Life 8D Instrument (AQoL-8D) and PTSD checklist (PCL-C). One hundred and thirteen patients were recruited. The results shows majority of the patients were male (76.1%). More than three-quarters of respondents were Malay (90.3%) and single (89.4%). There was a significant association between education with PTSD (x^2 7.18 and p-value is 0.03). Next, there was a significant association between employment and PTSD (x^2 6.36 and p-value is 0.01). There was no significant association between respondents socio demographic with quality of life. There was a significant association between the quality of life with PTSD symptoms among respondents (x^2 5.60 and p-value 0.02). Based on this finding, the road traffic crashes were found to be a leading cause of post traumatic stress disorder (PTSD) because more half respondents had develop PTSD. Besides, there were a significant association between PTSD and quality of life. It means that PTSD is affected the victim's quality of life status.

Keywords: Road traffic crash, Quality of life, PTSD

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ABSTRAK

KUALITI HIDUP DAN GANGGUAN TEKANAN SELEPAS TRAUMA DI KALANGAN BELIA MANGSA KEMALANGAN JALAN RAYA DI SELANGOR

WAN NUR SHAHIDA BINTI WAN RUSLI

Kemalangan jalan raya merupakan salah satu daripada penyumbang utama kematian di Malaysia dan seluruh dunia. Mangsa kemalangan yang terselamat juga mengalami pelbagai jenis kecederaan dan kecatatan termasuk gangguan tekanan selepas trauma (PTSD) yang boleh menjejaskan kualiti hidup mereka. Tujuan kajian ini adalah untuk menentukan samada terdapat perkaitan antara kualiti hidup dan PTSD di kalangan belia yang telah terlibat dalam kemalangan jalan raya. Sampel telah dipilih menggunakan persampelan bukan kebarangkalian yang persampelan bertujuan. Belia telah dipilih dari Pusat Pemulihan dari usia 17 hingga 24 tahun dan terlibat dalam kemalangan jalan raya. Instrumen yang digunakan dalam kajian ini adalah responden demografi sosio, Instrumen Penilaian Kualiti Hidup (AQoL-8D) dan senarai semak PTSD (PCL-C). Sebanyak seratus tiga belas orang pesakit telah dipilih untuk mengambil bahagian dalam kajian. Hasil kajian menunjukkan majoriti pesakit adalah lelaki (76.1%). Lebih daripada tiga perempat daripada responden adalah Melayu (90.3%) dan satu (89.4%). Terdapat hubungan yang signifikan antara pendidikan dengan PTSD (x^2 7.18 and p-value is 0.03). Seterusnya, terdapat perkaitan yang signifikan di antara pekerjaan dan PTSD (x^2 6.36 and p-value is 0.01). Manakala, tiada terdapat hubungan yang signifikan antara responden demografi sosio dengan kualiti hidup. Terdapat perkaitan yang signifikan di antara kualiti hidup dengan PTSD gejala di kalangan responden (x^2 5,60 dan p-nilai 0.02). Berdasarkan penemuan ini, kemalangan jalan raya telah didapati menjadi punca utama gangguan tekanan selepas trauma (PTSD) kerana lebih setengah daripada responden telah mendapat PTSD. Selain itu, terdapat hubungan yang signifikan antara PTSD dan kualiti hidup. Ini bermakna bahawa PTSD menjejaskan kualiti mangsa taraf kehidupan.

Kata-kata kunci: Kemalangan jalan raya, Kualiti hidup, PTSD

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LIST OF ACRONYMS AND ABBREVIATIONS

<	Less than
>	More than
=	Equal to
%	Percent
N	Sample size
x^2	x square
SD	Standard deviation
et al.	And others
WHO	World Health Organization
RTC	Road traffic crash
PTSD	Post Traumatic Stress Disorder
QoL	Quality of Life

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CHAPTER 1

INTRODUCTION

1.1 Background

Road traffic crashes (RTCs) are globally acknowledged as a major cause of injury-related deaths and hospitalisations. Worldwide, traffic crashes kill 1.2 million people and injure 50 million people per year. Millions of others sustain injuries, with some suffering permanent disabilities. No country is spared this toll in lives and suffering, which strikes the young particularly. Enormous human potential is being destroyed, with also grave social and economic consequences (World Health Organization 2004). In Malaysia, road traffic crashes increase

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year by year. Statistic from Malaysia Royal Police in 2010 showed the case of road crashes was 414,421 cases (PDRM, 2011).

Road traffic injuries are a growing public health issue, disproportionately affecting vulnerable groups of road users, including the poor. More than half of the people killed in traffic crashes are young adults aged between 15 and 44 years – often the breadwinners in a family. Furthermore, road traffic injuries cost low income and middle-income countries between 1% and 2% of their gross national product – more than the total development aid received by these countries (World Health Organization 2004). Traffic crashes in the prime years of people's lives obviously affect their everyday lives, but also their productivity. These crashes not only cause direct physical injuries, but can also affect mental function, social function and work capabilities, indirectly. Although physical injuries can be treated through medical care and rehabilitation, the psychosocial impact can last for several weeks, months, years, or even throughout life.

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One study concluded that high levels of distress during and immediately after an crash are associated with severe post traumatic stress symptoms. These symptoms can be intense fears, helplessness, and loss of control (Gallo *et al.* 1997). Survivors also suffered from different types of injuries and disabilities which can affect their quality of life. Road traffic crashes affect youth worldwide physically, psychologically, their families and countries (Hassan, 2010).

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1.2 Problem Statement

In Malaysia, according to the *PDRM* (2011), indicated the number of crashes cases is increasing each year shown in Table 1.

Table 1: General Road Crash Data from year 2001 until 2010 in Malaysia

Year	Number of registered vehicles	Vehicles involved in road crash	Total number of road crash
2001	11 302 545	483 351	265 175
2002	12 068 144	507 995	279 711
2003	12 819 248	555 634	298 653
2004	13 764 837	596 533	326 264
2005	14 733 585	581 136	328 264
2006	15 790 732	635 024	341 252
2007	16 813 943	666 027	363 319
2008	17 733 084	671 078	373 071
2009	18 933 237	705 623	397 330
2010	20 006 953	760 433	414 421

(PDRM,2011)

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Road traffic crashes are leading cause of death by injuries an the tenth leading factors of all deaths globally and made up a significant portion of world-wide burden of ill health (Worley, 2006). As estimated about 1.2 million people were killed in road crashes each year, and more than 50 million were injured, occupying 30 to 70 percents of orthopaedic beds in developing countries hospitals (Worley, 2006). In Malaysia, the number of death people caused by RTCs is increasing from year by year and an estimated 18 people died everyday to road crashes (PDRM, 2011).

Currently, road traffic crashes are considered one of the most serious issues facing youth worldwide. According to the WHO, Over 50% of deaths are among young adults in the age range of 15–44 years. Beside that, from the PDRM (2010) shown in Table 2 that youth range age group is the higher number drivers involved in road crash compare to other age group.

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Table 2: Number drivers involved in road crash by age group

Age of driver	Fatal	Serious	Minor	Total
6-10	0	0	0	0
11-15	260	376	581	1217
16-20	1336	1641	2949	5926
21-25	1464	1585	2798	5847
26-30	1235	1265	2190	4690
31-35	954	934	1600	3488
36-40	921	927	1531	3379

(PDRM, 2011)

A study showed that one- third of young survivors experience a psychological disorder in the early stages and about 25% manifest symptoms for up to 1 year later (Blanchard *et al*. 2001). In other words, young children may have mental problems after road traffic crashes.

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There are several different types of disorders. The common disorders are Acute Stress Disorder (ASD), Post-Traumatic Stress Disorders (PTSD), anxiety disorders, depression and mood disorders (Blanchard & Veazey, 2001). It can happened in early or in later stages. The severity of symptoms can vary during and after the crash. A study concluded that high levels of distress during and immediately after an crash are associated with severe post traumatic stress symptoms. These symptoms can be intense fears, helplessness, and loss of control (Gallo *et al*. 1997). Victims can lose their meaning of life and lose attachment to their surrounding environment which is reducing their quality of life.

The WHO believes that the majority of RTA victims are young. Therefore, the issue needs more attention because youth group is the precious treasure of any developing nation. One of the most important influences is on the youth of these countries. Imagine if these countries lost all their young people; they would become aged nations. With all due respect to older people, in reality, the young generation is important to prolonging the life of nations. There is a necessity to have the youth healthy and capable of functioning efficiently (Hassan, 2010).

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1.2 Justification of Study

This study was conducted to determine the quality of life and Post-Traumatic Stress Disorders (PTSD) among road traffic crashes survivors in Selangor. As much as researcher aware off , there was limited baseline study conducted related to the quality of life and Post-Traumatic Stress Disorders (PTSD) espeacially for youth age group. In order to respond towards the issues, the study aim to gain a proper understanding of the association effects youth involved with road traffic crashes in PTSD and their quality of life. Lastly, through this research study, the recommendations for rehabilitation can give relative references and reliable guideline to road traffic crashes patients in Malaysia.

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1.4 Conceptual Framework

Figure 1 showed the conceptual framework for this study. The multiple factors which include socio-demographic and Post Traumatic Stress Disorder (PTSD) are associated with eight domains of quality of life (AQoL-8D) of road traffic crashes on rehabilitation centers.

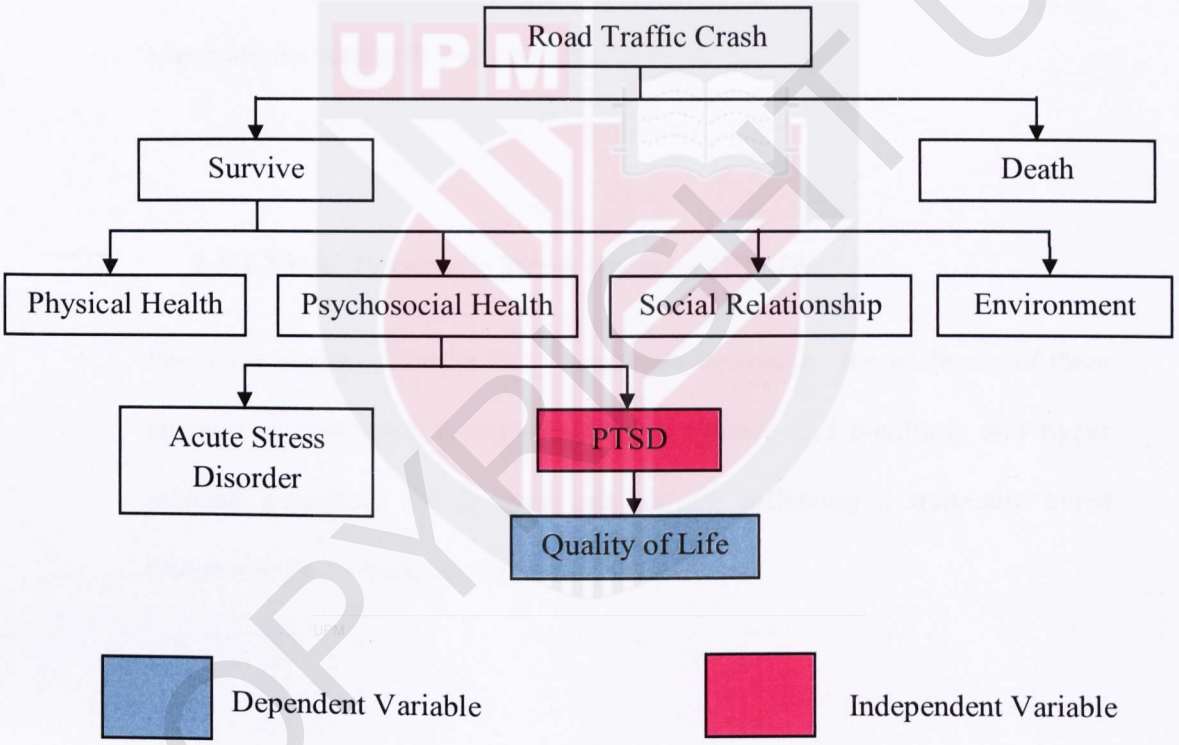

Figure 1: Conceptual framework of the study

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1.5 Definition

1.5.1 Conceptual Definition

1.5.1.1 Quality of life

The World Health Organization (WHO) defines quality of life as "the perception by individuals 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".

1.5.1.2 Post Traumatic Stress Disorder (PTSD)

Pervasive anxiety disorder that is currently defined by the existence of three clusters of symptoms (reexperiencing, avoidance and numbing, and hyper arousal) persisting for at least one month, following a traumatic event (American Psychiatric Association, 1994)

1.5.1.3 Youth

World Health Organization (WHO) and United Nations Educational, Scientific and Cultural Organization (UNESCO) define "youth" as the 15-24 years age group.

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1.5.2 Operational Definition

1.5.2.1 Quality of life

Quality of life were assessed among post trauma motor vehicle survivors by using The Assessment of Quality of Life 8D Instrument (AqoL-8D) (Richardson *et al*. 2011).

1.5.2.2 Post Traumatic Stress Disorder (PTSD)

Post Traumatic Stress Disorder were measured using PTSD Checklist (PCLC) (Weathers *et al*. 1993)

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1.6 Objectives

1.6.1 General Objective

To study the quality of life and post-traumatic stress disorder among youth road traffic crash survivors.

1.6.2 Specific Objectives

i. To determine the socio demographic of respondents.

ii. To determine the mean score of quality of life and it 8 domains.

iii. To determine the PTSD among respondents.

iv. To determine significant association between socio-demographic with the quality of life.

v. To determine significant association between socio-demographic with PTSD among respondents.

vi. To determine significant association between quality of life with PTSD among respondents.

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1.7 Hypotesis

i. There is a significant association between socio-demographic and the quality of life among respondents.

ii. There is a significant association between socio-demographic and PTSD symptoms among respondents.

iii. There is a significant association between PTSD and quality of life symptoms among respondents.

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CHAPTER 2

LITERATURE REVIEW

2.1 Road Traffic Crashes and Youth

Road traffic crashes and injuries is a public health problem worldwide. In 2002, 1.2 million people die as a result of road traffic crashes and 50 million are injured and disabled. Road traffic injuries therefore should be considered alongside heart disease, cancer and stroke as a major public health problem, and one that requires concerted efforts for effective and sustainable prevention. It is also the eleventh cause of death in the world and accounts for 2.1% of all deaths globally (WHO, 2004). Road traffic crashes is a recognized dominant cause of injury and death among teenagers world wide and in Malaysia. A national study in 1996 reported that most of the road injuries occurred among 10-19 years (31.0%), followed by 20-29 years of age. In the year 2000, adolescent between 16-20 years

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were the majority (24.12%) of those who were involved in road traffic crashes. This was followed by those between 21-25 years (23.82%) (PDRM,2010).

Road traffic crashes (RTCs) are globally acknowledged as a major cause of injury-related deaths and hospitalisations. Road traffic crashes in Korea increased nearly eightfold, from 37,000 in 1970 to 290,481 in 2000. The fatalities increased three-fold and injuries ten-fold over the same period. Road traffic injuries were the leading cause of death for people under 29 (Bong-Min *et al.* 2003). Road traffic crashes also a leading source of morbidity and mortality among adults worldwide. For example, in the United States, over 3.5 million people are injured in road crashes every year (Dennis *et al.* 1999). ATP Young Drivers Study showed that the high levels of crash involvement among young drivers phenomenon has been observed in many other industrialised countries or regions including the United States, Canada, New Zealand, the United Kingdom and Europe.

In addition, world report on road traffic injury prevention (2003) showed road traffic death rates also have decreased in high income countries since the 1960s and 1970s, although countries' rates vary greatly even within the same region. For example, in North America, from 1975 to 1998, the road traffic fatality rate per 100 000 population declined by 27% in the United States but by 63% in Canada. Meanwhile, rates in low-income and middleincome countries have increased

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substantially (Nantulya *et al.* 2003). Again, countries vary widely. In Asia, from 1975 to 1998, road traffic fatality rates rose by 44% in Malaysia but by 243% in China (Kopits *et al.* 2003).

Two major studies predicted that the trend towards increase in low-income and middle-income countries will continue, unless deliberate action changes it. As a result, the annual numbers of road traffic deaths globally will rise sharply over the next two decades (Nantulya *et al.* 2003).

2.2 Quality of Life

Health status refers to the functioning of the family and its members, as indicated by concepts such as quality of life, satisfaction with family life, or ability to engage in activities of daily living. As a multidimensional construct including at least four dimensions which are physical, functional, psychological and social (Ford, 2002). Quality of life is thought to be situation-dependent and strongly altered by the quality of personal relationships (Peplau, 1994). Further, quality of life has been conceptualized as an outcome of goal attainment in individuals, families and society (King 1994).

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It is often said that the cost of human suffering cannot be measured. This truism may no longer be accurate. Many aspects of human suffering can be reliably measured. One of the approaches to this difficult yet invaluable task makes use of the concept of quality of life. The World Health Organization (WHO) defines quality of life as "the perception by individuals 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". The concept of quality of life was later applied to compare several antihypertensive medications in terms of functioning, well-being, and life satisfaction (Croog *et al.* 1986). Besides that, a study was conducted to show the quality of life and post trauma symtomatology among motor vehicle crash survivor would caused anxiety and depression as it mediating effect (Berglind *et al.* 2004).

According to Patrick and Erickson (1993), life has two dimensions: quantity and quality. Quantity of life is expressed in terms of "hard" biomedical data, such as mortality rates or life expectancy. Quality of life refers to complex aspects of life that cannot be expressed by using only quantifiable indicators; it describes an ultimately subjective evaluation of life in general. It encompasses, though, not only the subjective sense of well-being but also objective indicators such as health status and external life situations (Dimenas *et al.* 1990). Data about quality of life can be used to estimate the impact of different diseases on functioning and well-being, to compare outcomes between different treatment modalities.

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2.3 Post Traumatic Stress Disorders (PTSD)

PTSD defined as pervasive anxiety disorder that is currently defined by the existence of three clusters of symptoms (reexperiencing, avoidance and numbing, and hyper arousal) persisting for at least one month, following a traumatic event (American Psychiatric Association, 1994). For motor vehicle crashes specifically, Breslau *et al.*'s (1991) study indicated that about 10% of a sample of young urban adults had suffered a serious road crashes and 12% of them went on to develop PTSD. Norris's (1992) study is consistent with this PTSD rate in that of 1000 adults living in the southeast U.S., 25% had experienced traffic crashes and about 12% developed PTSD.

In Jane M. *et al* (2002) study, previous experiences of trauma, subjective appraisal of threat or harm due to the crash, and sex of adolescent (females reporting more symptoms than males) predicted PTSD symptoms; however, type of crash (pedestrian hit by a motor vehicle, passenger in a vehicle, on a motorcycle or bicycle that was involved in an crash).

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The reported rates of PTSD in victims of serious motor vehicle crashes have ranged from 8% to 46%. In a cross-sectional study, Blanchard *et al.* (1995) found that a history of trauma or major depression was a significant risk factor for developing PTSD after a serious motor vehicle crash. Motor vehicle crashes are perhaps the most common trauma experienced by individuals and perhaps the most common cause of PTSD (Davison *et al.* 1992). It is important to note that previous trauma was not a risk factor for motor vehicle crash-related PTSD. As suggested by the "kindling" model of PTSD (Post, 1985), this may indicate that it is not the previous traumatic event but the PTSD-related alterations in brain function that increase the risk for future PTSD.

Previous research has documented the psychological effects of various traumatic events. However, systematic or follow-up study of the psychological aftermath of traffic crashes has been limited (Tsay *et al.* 2001). Both of these effects may lead in reducing the quality of life of the survivors. The development of post trauma symptomatology can cause persistent fear, hypersensitivity or even withdrawal. Moreover, the adverse events can be re-experienced repeatedly because of intensive recall, as found in nightmares or with obsessive concerns. Following traumatic injury, victims may manifest mental health reactions within minutes, hours or days or at some later time following the event (Russell *et al.* 1998). Jaspers (1998) has shown that 25% of traffic crash victims experienced acute stress disorder

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symptoms within several days of the crash, and 18.4% of the victims were still experiencing post trauma symptomatology 6 months after injury.

2.4 Instrumentation to Measure Quality of Life

Many purposes the existence of differences between quality of life instruments is unproblematical. These purposes include classification, description and, with caveats, ordinal ranking. Differences would be of relatively little concern if instruments were for specialised purposes which did not involve comparison between them. However the reason for existence of generic Multi-Attribute Utility Instrument (MAUI) is that they allow comparison between all health states and a person's preference for these states relative to life extension. If all the extant instruments were successful in this latter task they would produce identical scores for identical health states. However multi instrument comparisons have not found this.

A handful of generic instruments have attempted to measure utility were the UK Rosser-Kind Index (Rosser 1993), the US QWB (Kaplan *et al.* 1996), the Canadian HUI instruments (Feeny *et al.* 1996), the Finnish 15D (Sintonen *et al.*1993) and the UK SF-6D and SF12D (Brazier *et al.* 1998; Brazier *et al.* 2002) and the EQ-5D (EuroQol) (Kind 1996). The construction methods employed have varied and the resulting instruments differ significantly in terms of the type and scope of questions,

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the scaling techniques and the models used to derive the scoring formula (Brazier *et al.* 2007; Richardson *et al.* 2011).

In the largest studies Hawthorne *et al.* (2001) found that in paired comparisons of five instrument comparison (EQ-5D, HUI 3, SF-6D, 15D, AQoL-4D) on average only 54 percent of variation in one instrument was explained by another instrument. More recently Fryback *et al.* (2010) found a lower average association of 0.47 in a comparison of four instruments (EQ-5D, QWB, HUI 3, SF-6D). Construction of the AQoL-8D was motivated by this possibility and particularly by the minimal descriptions of mental health in the major instruments. AQoL-8D also demonstrated that the dimensions combine to form two 'super dimensions' 'physical' (independent living, senses, pain) and 'mental health' (self worth, coping, relationships, happiness) (Richardson *et al.* 2011).

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2.5 Instrumentation to Measure PTSD

The PCL is a 17-item self-report measure of PTSD symptoms (in the past month) based on DSM-IV criteria (American Psychiatric Association, 1994), with a 5-point Likert scale response format. There are not "stem" or "gateway" questions on the PCL refering to one or more specific traumatic events; rather, 8 of the 17 questions (including the first five) are constructed with the wording "past dangerous or frightening experiences." The PCL has been found to be highly correlated *(r* = .93) with the Clinician Administered PTSD Scale (Blake *et al*., 1990), have good diagnostic efficiency (>.70), and robust psychometric properties with a variety of trauma populations (Andrykowski *et al*. 1998).

Scores on the PCL range from 17-85. Although there are a number of self-report inventories for evaluating symptoms of PTSD, the PCL was chosen because it is widely used, has strong psychometric properties, and its items correspond directly to DSM-IV diagnostic criteria (Weathers. *et al*. 1993).

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Objective psychometric inventories have a number of general strengths: they are usually easy to administer; do not require a great deal of time to score or interpret; allow for standardized assessment procedures across multiple patients and sites; allow for comparison of individual veterans to other veteran groups or clinical populations; offer known, and usually adequate, reliability and validity coefficients; and allow veterans to complete the testing procedures at their own pace and represent their affective experience without influence from examiners (Kathryn *et al*. 2004)

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CHAPTER 3

METHODOLOGY

3.1 Study Design

The study design of this study is cross sectional study which represent exposure and outcome are determined simultaneously. The cross sectional study design was used to determine the associated factors with quality of life of youth road traffic crash survivors with the Post Traumatic Stress Disorders (PTSD).

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3.2 Study Location

This study was carried out at rehabilitation centre in Kajang Hospital and Serdang Hospital, Selangor. Selangor area was chosen because of the higher number crashes compare to other state which is 115 565 cases (27.9%) in year 2010 (PDRM,2010).

3.3 Sampling Unit

Study participants was selected consecutively is on follow up from Department of Rehabilitation at Kajang Hospital and Serdang Hospital.

3.4 Sampling frame

Name list of all post-trauma youth road traffic crash survivors who have a follow up with the Rehabilitation Center from 1 to 4 month. The review findings within 4 months post road traffic crashes was synthesised in terms of estimates of short-term (Suneela *et al*. 2011). The list name are obtained from the Rehabilitation Center at Kajang Hospital and Serdang Hospital.

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3.5 Sample size

The study sample was randomly selected among youth road traffic crash survivors age 17 until 24 years old who were registered at Rehabilitation Center at Kajang Hospital and Serdang Hospital. The both hospital chosen because it located near to higher education center and industrial area. Therefore, reseacher easier to get the respondent according to inclusive criteria. Sample size for the study is calculated using Kirkwood (1988).

$$N = \frac{P\,(1-P)}{e^2}$$

Where,

N = Sample size

P = Prevalence

e = Probability error

Therefore, according to the equation, N is equal to sample size and p is a prevalence of vehicle injury. The prevalence obtained from study of prevalence of the motor vehicles survivors with PTSD is 34 % (Jackson *et al.* 2007) While standard error, e is $p \leq 0.05$. Below is the calculation of the sample size for the study population:

Sample size, N $= p\,(1-p)/e^2$

$= 0.34(1-0.34)/\,(0.05)^2$

= 90 respondents

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About 20% respondent will be added. So, the additional samples required are:

Sample size, N = 90 x 20%

= 18 respondents

Therefore, the total sample sizes for the study are 90 + 18 =**108 respondents**

3.6 Sampling methods

The samples was chosen using non probability sampling which is purposive sampling. The youth at age 17 until 24 years old and involved in road traffic crash. Face-to-face interview was carried out with each person selected for inclusion in the sample, using a structured questionnaire to collect information regarding the quality of life and post-traumatic stress disorder among youth road traffic crash survivors. Participants were included if they are patients with traffic-related injuries, aged between 17 to 24 years old, mentally unimpaired and willing to participate. In addition, they are excluded if they have traumatic brain injury, previous severe medical illness or a history of psychiatric disorders. The participants was asked to sign a consent form in order to participate in this study (Appendix 2). After consent form is signed, the participants filled up the questionnaire. Data collection will be completed in duration 20 minutes for each participant.

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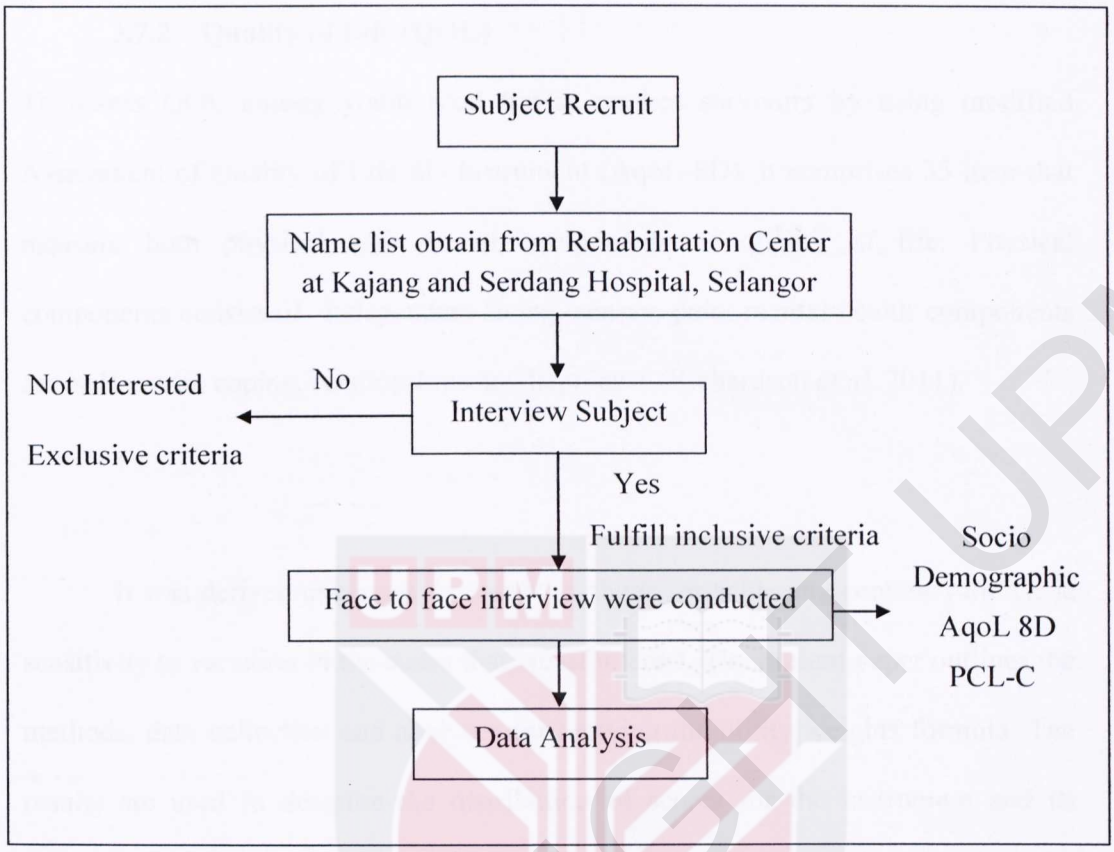

Figure 2: Data collection flow chart

3.7 Sampling instruments

3.7.1 Socio Demographic

Traffic crashes patients was asked to give demographic information by using demographic data form with the initial interviews at the hospital, following their consent to participate. The socio-demographic items that used are selected from previous other similar studies that correlated with the possible predictors of quality of life. (Appendix 3).

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3.7.2 Quality of Life (QOL)

To assess QOL among youth road traffic crashes survivors by using modified Assessment of Quality of Life 8D Instrument (AqoL-8D). It comprises 35 item that measure both physical and mental components of quality of life. Physical components consist of independent living, senses, pain; mental health components are self worth, coping, relationships and happiness (Richardson *et al.* 2011).

It was derived using psychometric methods for achieving content validity, ie sensitivity to variation in the states that are of interest. The present paper outlines the methods, data collection and analyses for deriving the utility weights formula. The results are used to describe the distribution of scores for the instrument and its dimensions, to obtain reliability (test-retest and Cronbach's alpha) coefficients and to conduct preliminary tests of instrument validity (Richardson *et al.* 2011).

It is web version takes, on average, 5.4 minutes to complete. The questionnaire and scoring algorithm are web based and experience with its use to date indicates that, despite the complexity of its construction, its administration and use are simple.

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3.7.3 Post Traumatic Stress Disorder (PTSD)

The Post Traumatic Stress Disorder (PTSD) among the participants are assessed by modified PTSD Checklist for civilian (PCL-C). The PCL is a 17-item self-report measure of the 17 DSM-IV symptoms of PTSD. The PCL has a variety of purposes, including screening individuals for PTSD, diagnosing PTSD and monitoring symptom change during and after treatment. The PCL-C (civilian) asks about symptoms in relation to "stressful experiences." The PCL-C is useful because it can be used with any population. The symptoms endorsed may not be specific to just one event, which can be helpful when assessing survivors who have symptoms due to multiple events. Typically, it is optimal to assess traumatic event exposure to ensure that a respondent has experienced at least one Criterion A event. It takes approximately 5-10 minutes to complete a PCL. A total symptom severity score (range = 17-85) can be obtained by summing the scores from each of the 17 items (Weathers. *et al*. 1993).

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3.8 Data Analysis

Data collection in this study is analyzing using SPSS (Statistical Package for Social Science) program version 20.0. The variables in this study were analyzed using descriptive analysis, univariate analysis and bivariate analysis. Chi-square test were used to determine association between two variables. To determine the association between variables, value of p must less than 0.05 was considered statistically significant.

3.9 Variables

3.9.1 Dependent Variables

The dependents variables in this study is Quality of life.

3.9.2 Independents Variables

The independents variables in this study is Post-traumatic stress disorder.

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3.10 Quality Control

Quality of the data obtained in the study is well controlled to obtain reliable and accurate data. Questionnaires were modified and pre-tested with 20 of the respondents.

3.11 Ethical Issues

The study proposal was sent to Ethical committee at Faculty of Medicine and Health Sciences, University Putra Malaysia for ethic approval. Then, the researcher needs to get consent from respondents. Respondents voluntered to join the study and sign the consent form. Researcher also need to get the consent parents or guardian for respondents below than 18 years old. The respondents have the right to withdraw from this research at any time without assigning any reason whatsoever. They were notified that this study is confidential and all information provided with regards to their identity remain private and confidential.

Besides that, the researcher needs to get the National Instituties of Health approval for conducting research in the Ministry of Health Malaysia and also approval from both hospital. (Appendix 4)

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CHAPTER 4

RESULTS

4.1 Data description

4.1.1 Socio demographic factors

From socio-demographic factors, there were six variables tested which age, gender, race, marital status, education, employment and residents area as shown in Table 3. 113 respondent aged 17 till 24 years old was selected. Majority of respondents were male respondent (76.1%) and 23.9% were female respondents. Besides, most of the respondents were Malay (90.3%) and non Malay (9.7%).

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In term of marital status, 65.5% were single and 10.6% were already married. On education, 65.5% were upper secondary, 18.6% tertiary level and 15.9% for had lower secondary and lower. After involved in road traffic crashes, 74.3% of the respondent was returned to the same job and 25.7% were not returned to the same job. All the respondent live in urban areas.

Table 3: Distribution socio demographic characteristics of the respondents.

Variables	N (%)
Gender	
Male	86 (76.1)
Female	27 (23.9)
Race	
Malay	102 (90.3)
Non Malay	11 (9.7)
Marital Status	
Single	101 (89.4)
Married	12 (10.6)
Widow	0 (0)
Divorced/separated	0 (0)
Education	
Lower secondary and below	18 (15.9)
Upper secondary	74 (65.5)
Tertiary	21 (18.6)
Employment	
Returned to the same job	84 (74.3)
Not returned to the same job	29 (25.7)
Residence	
Urban	113 (100)
Rural	0 (0)

N = 113

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4.1.2 Quality of Life (QoL)

The AqoL 8D questionnaire and scoring algorithm are web based and experience with its use to date indicates that, despite the complexity of its construction, its administration and use are simple. Each of answers had given with item disutility score. To scoring the Quality of Life by AqoL 8D every score computed into the formula were simplified as figure 3 until 5.

General formula	MULT d	=	MULTd = $1/k\ [1-\prod^{n}_{i=1}(1-kw_iDU_i)]$; $kd > 0$
Independent Living	MULT (IL)	=	MULT (IL) = 1.02 [1-(1-0.54du_1)(1-0.59 du_2)(1-0.87 du_3)(1-0.81 du_4)]
Happiness	MULT (HAP)	=	MULT (HAP) = 1.01 [1-(1-0.66du_5)(1-0.60 du_6)(1-0.77 du_7)(1-0.77 du_8)]
Mental Health	MULT (MH)	=	MULT (MH) = 1.00 [1-(1-0.67du_{20})(1-0.69 du_{21})(1-0.69 du_{22})(1-0.74 du_{23})(1-0.65 du_{24})(1-0.67 du_{25})(1-0.66 du_{26})]
Coping	MULT (COP)	=	MULT (COP) = 1.03 [1-(1-0.60du_{17})(1-0.69 du_{18})(1-0.78 du_{19})]
Relationships	MULT (REL)	=	MULT (REL) = 1.00 [1-(1-0.74du_9)(1-0.63 du_{10})(1-0.70 du_{11})(1-0.86 du_{12})(1-0.74 du_{13})(1-0.66 du_{14})(1-0.69 du_{15}) (1-0.76 du_{16})]
Self Worth	MULT (SW)	=	MULT (SW) = 1.02 [1-(1-0.69du_{27})(1-0.74 du_{28})(1-0.70 du_{29})]
Pain	MULT (PAIN)	=	MULT (PAIN) = 1.04 [1-(1-0.69du_{30})(1-0.67 du_{31})(1-0.68 du_{32})]
Senses	MULT (SEN)	=	MULT (SEN) = 1.04 [1-(1-0.63du_{33})(1-0.61 du_{34})(1-0.69 du_{35})]

Figure 3: Multiplicative disutility equations for dimensions

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Independent Living	=	$DU(IL) = 0.123du_4 + 0.525MULT(IL)$
Happiness	=	$DU(HAP) = 0.176du_5 + 0.175du_6 + 0.198du_7 + 0.106du_8 + 0.137MULT(HAP)$
Mental Health	=	$DU(MH) = 0.103du_9 + 0.092du_{11} + 0.169du_{12} + 0.443MULT(MH)$
Coping	=	$DU(COP) = 0.204du_{17} + 0.090du_{18} + 0.198du_{19} + 0.232MULT(COP)$
Relationships	=	$DU(REL) = 0.176du_{20} + 0.103du_{22} + 0.107du_{23} + 0.079du_{25} - 0.109du_{26} + 0.533MULT(REL)$
Self Worth	=	$DU(SW) = 0.184du_{27} + 0.115du_{28} + 0.258du_{29} + 0.190MULT(SW)$
Pain	=	$DU(PAIN) = 0.205du_{30} + 0.277du_{31} + 0.205du_{32} + 0.205MULT(PAIN)$
Senses	=	$DU(SEN) = 0.084du_{33} + 0.113du_{35} + 0.582MULT(SEN)$

Figure 4: Econometric correction to multiplicative utility scores

Note:

MULTd = disutility for each dimension

k = scaling constant for each dimension

du = each item- worst disutility (average value)

(using 0-1 dimension best-dimension worst scale)

kw = item each disutility for each item level

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SD (PHYSICAL)	=	1 - (1- 0.65dud1$_{EcCor}$) (1- 0.72dud7$_{EcCor}$) (1- 0.69dud8$_{EcCor}$)
SD (MENTAL)	=	1 - (1- 0.71dud2$_{EcCor}$) (1- 0.74dud3$_{EcCor}$) (1- 0.64dud4$_{EcCor}$) (1- 0.72dud5$_{EcCor}$) (1- 0.66dud6$_{EcCor}$)
MULT AQoL	=	0.999[1-(1-0.65DU (IL))(1-0.71DU(HAP))(1-0.74DU(MH))(1-0.64DU(COP))(1-0.72DU(REL))(1-0.66DU(SW))(1-0.72DU(PAIN))(1-0.69DU(SEN))]

Figure 5: AQoL-8D and super dimension (SD) multiplicative scores

Note:

dudn$_{EcCor}$ = Econometric correction for each dimension scores

The overall QoL score ranged from -0.03 and 1.00 where 1.00 represents full health. The dimensions are scaled on a "Dimension Worst Health State - Dimension Best Health State" scale. The result showed that the mean score of quality of life was 0.74 ± 0.12 (Table 3).

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Table 4: The mean score of Quality of life and its domain.

Variables	Min	Max	Range	Mean ± S.D
Quality of life	0.42	0.96	0.55	0.74 ± 0.12
Happiness	0.44	1.00	0.56	0.71 ± 0.15
Mental Health	0.30	0.83	0.53	0.51 ± 0.15
Coping	0.44	0.94	0.50	0.67 ± 0.14
Relationships	0.46	1.00	0.54	0.68 ± 0.12
Self Worth	0.49	1.00	0.51	0.72 ± 0.17
Independent Living	0.39	0.96	0.57	0.69 ± 0.16
Pain	0.46	1.00	0.54	0.69 ± 0.18
Senses	0.39	1.00	0.61	0.86 ± 0.12

N = 113

The status Quality of Life were categorized into good and poor based on median scores as cut-off point. For the quality of life status, table 5 showed that 69% had good quality of life and 31% with poor quality of life.

Table 5: The status of Quality of life

Variables	N (%)
Good QoL	78 (69)
Poor QoL	35 (31)

N= 113

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4.1.3 Post Traumatic Stress Disorder (PTSD)

A total symptom severity PCL score (range = 17-85) can be obtained by summing the scores from each of the 17 items. Determining whether an individual meets DSM-IV symptom criteria by at least one of Re-experiencing Symptoms item in questions 1 until 5, three of Avoidant or Numbing Symptoms items in questions 6 until 12, and at least two of Hyperarousal Symptoms items in questions 13 until 17. Symptoms rated as "Moderately" or above (responses 3 through 5) are counted as present (Weathers *et al*. 1994).

For the PTSD level, table 6 showed that 67.3% develop the PTSD symptom and 32.7% without PTSD symptoms.

Table 6: Distribution of level PTSD among respondents

Variables	N (%)
With PTSD	76 (67.3)
No PTSD	37 (32.7)

N = 113

*PTSD = Post Traumatic Stress Disorder

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4.1.4 The association between socio demographic and Quality of Life

Table 7 showed there was no significant association between socio demographic with quality of life. The mean score of quality of life were categorized into good and poor based on median score as cut-off point.

Table 7: Association between socio demographic with status Quality of life (N = 113)

	Quality of Life N (%)		x^2	p-value
	Good	**Poor**		
Gender				
Male	57 (50.4)	29 (25.7)	1.27	0.26
Female	21 (18.6)	6 (5.3)		
Race				
Malay	69 (61.1)	33 (29.2)		0.5#
Non Malay	9 (7.6)	2 (3.4)		
Marital Status				
Single	68 (60.2)	33 (29.2)		0.34#
Married	10 (8.8)	2 (1.8)		
Education				
Lower secondary and below	16 (14.2)	2 (1.8)	5.46	0.07
Upper secondary	46 (40.7)	28 (24.8)		
Tertiary	16 (14.2)	5 (4.4)		
Employment				
Returned to the same job	62 (54.9)	22 (19.5)	3.50	0.06
Not returned to the same job	16 (14.2)	13 (11.5)		

Chi-Square Test. * Significant at $p < 0.05$
Fisher Exact Test. # Significant at $p < 0.05$

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4.1.5 The assosiation between socio demographic and PTSD

Table 8 showed there were significant association education level and employment status with PTSD among respondent. There was significant association between education level and PTSD (x^2 7.18 and p-value is 0.03). The employment status were significant association with PTSD (x^2 6.36 and p-value is 0.01).

Table 8: Association between socio demographic with PTSD (N=113)

	PTSD N (%)		x^2	p-value
	With PTSD	Without PTSD		
Gender				
Male	60 (53.1)	26 (23.0)	1.03	0.31
Female	16 (14.2)	11 (9.7)		
Race				
Malay	70 (68.6)	32 (33.4)		0.5#
Non Malay	6 (7.4)	5 (3.6)		
Marital Status				
Single	66 (58.4)	35 (31.0)	1.58	0.21
Married	10 (8.8)	2 (1.8)		
Education				
Lower secondary and below	10 (8.8)	8 (7.1)	7.18	0.03
Upper secondary	56 (49.6)	18 (15.9)		
Tertiary	10 (8.8)	11 (9.7)		
Employment				
Returned to the same job	51 (45.1)	33 (29.2)	6.36	0.01
Not returned to the same job	25 (22.1)	4 (3.5)		

Chi-Square Test. * Significant at $p < 0.05$
Fisher Exact Test. # Significant at $p < 0.05$
*PTSD = Post Traumatic Stress Disorder

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4.1.6 The association between PTSD and Quality of Life (QoL)

Table 9 showed there were significant association between PTSD and Quality of Life (x^2 5.60 and p-value is 0.02).

Table 9: Association between PTSD and Quality of life among respondent (N=113)

		Level of PTSD N (%)		x^2	p-value
		With PTSD	Without PTSD		
Overall Quality of life score	**Good**	47 (41.6)	31 (27.4)	5.60	0.02
	Poor	29 (25.7)	6 (5.3)		

Chi-Square Test. * Significant at $p < 0.05$

*PTSD = Post Traumatic Stress Disorder

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CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

5.1.1 Response Rate

One hundred and thirteen victims of road traffic crash (RTC) were selected to participate in this study. Almost all the respondents approached agreed to participate except 5% who refused to participate because they were in hurry while turn is being called to see the doctor and lack of interest in participating in this study. Thus, contributes to 95% response rate. The higher the response rate the more reliable the result from the sample.

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5.1.2 Socio demographic of respondents

This study involved 113 youth respondents among youth road traffic crashes survivors at Rehabilitation Center in Kajang Hospital and Serdang Hospital with age range between 17 until 24 years old. This study was focused on youth group because crash involvement was particularly high for young novice drivers, with the TAC (2003) reported that young drivers were almost four times more likely to be involved in fatal or serious injury crashes during their first year of driving than more experienced drivers.

Most young drivers, the attainment of their driving license occurred at a time when they were attempting to find their own identity and gained independence from their parents. At this developmental stage, conformity with perceived social norms was often of great importance, and as a consequence, peer influence was particularly potent. Research suggests that young drivers experienced more pressure from their peers to engage in "risky" and/or illegal driving behaviors than older drivers (Australian Institute of Family Studies, 2002).

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Majority of the respondent were male (76.1%). This may due to the fact that male was having active lifestyle and mostly remained outdoor doing activities so they had high probability to involve in road traffic crashes. Young men also engaged in most unsafe driving behaviors more frequently than young women (particularly speeding, driving when affected by alcohol, and non-seat-belt use). Young men were also more likely to have been detected speeding by police (Australian Institute of Family Studies, 2002).

5.1.3 Quality of life (QoL)

The study showed that more than half of respondents develop a good quality of life (69%). Quality of life is individually-based. It can be evaluated by one's living conditions, the ability to reach expected living goals, and includes physical health, psychological status, level of independent living, social relationships and interaction with the environment. Illness or physical injuries can impair individual quality of life, compounded by changes in occupation, financial condition and social support.

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The Assessment for Quality of Life 8D (AQoL-8D) showed characteristics that were more compatible with those expected from patients and victims of trauma. Assessment of Quality of Life 8D Instrument (AqoL-8D) comprised 8 dimension which were independent living, happiness, coping, relationship, mental health, self worth, pain and senses (Richardson *et al*. 2011).

The highest mean score of domain was self worth (0.72 ± 0.17). Based on Ford and Gilboe (2002) study, health status refered to the functioning of the family and its members, as indicated by concepts such as quality of life, satisfaction with family life, or ability to engage in activities of daily living. However, in this study there was no consideration to it 8 domains. According to research fellow from Center for Health Economics, Monash University all domains were useful only if follow-ups or pre and post were conducted. The score must be compared changes within the same dimension. It was not valid to compare one dimension with another.

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5.1.4 Post Traumatic Stress Disorders

From the PCL-C checklist it showed that more than half of the total number of respondents develops PTSD (67.3%). The road traffic crashes not only resulting a physiological injury but they also might be survivors suffer in psychological reactions from the event. Most of them resulting in the fear of driving, major depression, the development of phobias towards vehicles and having a nightmare about it. Some of them also had a phobia in when seen the road traffic crashes front of them.

Vehicular crashes sometimes lead to post-traumatic stress symptoms. Traffic crashes had become the leading cause of post-traumatic stress disorder (PTSD) since the Vietnam War (Norris *et al.* 1992). It was estimated that 9 percent of survivors of serious crashes developed significant post-traumatic stress symptoms and that many other survivors have PTSD-like reactions.

Studies done in the United States of America found that motor vehicle crashes (MVC) was the single leading cause of post traumatic stress disorder (PTSD) in the general population (Norris *et al.* 1992). The condition was typically identified using criteria set out in the Diagnostic and Statistical Manual of Mental Disorders (DSM). These criteria require that symptoms must be presented for at least 1 month and resulted in 'clinically significant distress or impairment in social, occupational,

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or other important areas of functioning' (American Psychiatric Association, 2000). The road traffic crashes were not only resulting a physiological injury but victim also might be suffered in psychological reactions from the event. Most of them had fear of driving, major depression, the development of phobias towards vehicles and having a nightmare about the event. RTCs were significant minority showing considerable PTSD symptoms up to 12 months after the crash (Jane *et al.* 2002).

Study by Dennis *et al.* (1992) showed that some post-traumatic stress symptoms are frequently associated with vehicular crashes. The re-experiencing of symptoms (flashbacks, distressing memories) was often precipitated by environmental cues. Newscasts frequently reported severe traffic crashes and, given high volumes of traffic and heavy dependence on automobiles for transportation, crash victims face constant reminders. Avoidance symptoms were manifested in alteration of travel behaviors in three ways: driving phobias, limitations on driving and anxious behavior as passengers. Patients may also developed phobic-like responses secondary to the crash, including fear of or resistance to medical examinations, procedures or treatments.

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The crashes tend to be "man-made," the physician should anticipate a complex interplay of emotional reactions. On the other hand, many traumatic reactions resulted from experiences of terror and loss of control. The opposite condition can also occur: victims blame themselves and assume responsibility for the injuries. Fatalities can lead to grief reactions in survivors which, although expected, may disguise their underlying PTSD.

5.1.5 The associations between socio demographic with Quality of Life (QoL).

From the result, it showed that there was no significant association between gender, race, marital status, educational level, employment and residence with Quality of Life (QoL). Thus, the hypothesis stipulated there was a significant association between socio demographic with Quality of Life was rejected.

Otherwise, different finding in the Ongecha-Owuor's study (2004). It showed that there was a signifficant different between Quality of Life and age. Age distribution of their study that they were mostly young. Perhaps they were more likely to be motor vehicle drivers and hence more prone to injury compared to the older group. The similarity might be due to similiar age group of the respondents with previous studies (Ongecha-Owuor *et al.* 2004).

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Besides, in the Holbrook's study (1998) result that showed there were a significant association between quality of life and education level. That study found that, higher education level people can survived and have a better quality of life than lower education level because of better social and economic condition. Higher education level can contribute to have a better quality of life in terms of knowledge that they have to improve their life after involved in crashes.

5.1.6 The associations between Socio demographic with PTSD.

Result showed that there was signifficant associations between education level and employment with PTSD. Thus, the hypothesis which stated that there was a signifficant association between socio demographic and PTSD was accepted.

Due to this study that there was significant association between education level and PTSD. In the Kathryn's study showed the persons of low educational attainment were more to be exposed to traumas and because persons with high PTSD symptoms were unable to reach higher educational levels (Kathryn et. al, 2004). Findings were mixed on whether education level was a significant predictor of posttraumatic stress levels. The National Comorbidity Survey found education was not a significant predictor of PTSD after controlling for gender, age, and marital status (Kessler et. al, 1995). Naomi et. al (1997) found that education level was not significantly associated with PTSD. Yet, Breslau *et al.* (1991) found that individuals

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with lower levels of education had a greater percentage of PTSD than those with higher levels of education.

Beside that, this study showed that there were significant association between employment status and PTSD. The Kessler's study showed that there was a significant relationship between PTSD with those not working due to disability or other reason having higher scores than those not working due to retirement or than those working (Kessler et. al, 1995).

While the other finding showed, there was no longer significant relationship between race and PTSD (Kathryn et. al, 2004). However, Kathryn's study compare race based on nonwhite and white patients. While in Malaysia, there were limited study on associations between race and PTSD.

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5.1.7 The associations between PTSD and Quality of Life (QoL).

The result showed that there were significant associations between PTSD and Quality of Life (QoL). Thus, the hypothesis that stated was there is a significant association between PTSD and Quality of Life is accepted. Based on Zatzick *et al* (1997) study showed symptoms of post-traumatic stress disorder (PTSD) were typically associated with a wide range of acute psychological distress and poor quality of life.

Traffic crash victims' physical function declined immediately after their crashes because of their injuries, but at 6 months, their ability to perform activities of daily living improves. However, many patients had moderate to severe psychological problems, self-abasement, guilt, depression, a distorted self-image and anxiety, which interfere with their quality of life (Holbrook *et al*. 1998). Additionally, improper or insufficient information can make a traffic crash victim feel that their quality of life has worsened after the injury (Lin *et al*. 1990, Anderson *et al*. 1997).

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5.2 Study Limitation

There were some limitations in this study. First, although the PCL was a widely used and psychometrically robust self-report measure of PTSD symptoms, it was not considered to be the standard for making diagnoses of PTSD nor does it provided information about past history of trauma exposure.

An additional concern was that the data collected were cross-sectional. In further study, researcher must conducted a study in cohort for evaluating the scoring eight dimension quality of life. It was to compare the score of pre and post quality of life.

Besides that, there was no study of quality of life had conducted by using AQoL 8D instrument. Plus, there was no baseline score of quality of life for norms population in Malaysia. So the study has limited reference to using the instrument.

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5.3 Conclusion

In conclusion, road traffic crashes were found to be a leading cause of post traumatic stress disorder (PTSD). Decrements in quality of life (QoL) have been associated to develop significant rates of PTSD. Hence, this cross sectional study found that:

i. The prevalence of respondents with PTSD symptoms (67.3%) was higher compared to those without PTSD (32.7%).

ii. The respondents that had good quality of life (69%) compared to poor quality of life (31%).

iii. There was no signifficant association between socio demographic and quality of life.

iv. There was signifficant association between education level and employment status, and PTSD.

v. There were significant associations between PTSD and Quality of Life (QoL).

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5.4 Recommendation

In order to prevent Post Traumatic Stress Disorder (PTSD), there is a need to reduce road traffic crashes (RTCs) by implementing the road safety education, training and publicity with effective information in keeping youth safe on the road. Plus, the implementation must focused on the targeted group which highly involved in RTCs such as victim with low education level and have same job after involved in crash. If the road traffic crashes can be reduce it can prevent the development of PTSD and at the same time provide a good quality of life.

To prevent long term PTSD, it is crucial to treat early. Example of program to help road traffic crash victim was occupational rehabilitation program. It is to regain the necessary physical, behavioral or vocational functions for return to either pre-injury employment or other work and to enable the injured worker to effectively self manage the condition. So that, if the patient quickly recovered from PTSD it will reduce possibility to develop long term PTSD.

Families also play a significant role in treating the PTSD symptoms. As they are living closely person with victims, attending counseling session can help them exposed on how to manage the patient. They can also give moral support and strength to improve patient's quality of life.

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APPENDIX 1

Subject information sheet

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FAKULTI PERUBATAN DAN SAINS KESIHATAN
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UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,
SELANGOR, MALAYSIA

PENERANGAN KEPADA PESERTA

Sila baca maklumat berikut dengan teliti. Sekiranya mempunyai sebarang pertanyaan, sila kemukakan kepada penyelidik. Terima kasih kerana membantu kami di dalam kajian ini.

TAJUK KAJIAN: KUALITI HIDUP DAN GANGGUAN TEKANAN SELEPAS TRAUMA DI KALANGAN BELIA YANG MENJADI MANGSA KEMALANGAN JALAN RAYA DI SELANGOR.

PENGENALAN

Kemalangan di Malaysia semakin meningkat dari tahun ke setahun. Menurut statistik yang dikeluarkan oleh Ibu Pejabat Polis, Malaysia pada tahun 2010 dilaporkan 414,421 kes kemalangan dilaporkan di negara kita. Manakala Selangor merupakan antara negeri di Malaysia yang mencatat kes tertinggi iaitu 115,565 kes. Kajian ini adalah berkaitan dengan kualiti hidup di kalangan mangsa kemalangan jalan raya dari golongan belia di negeri Selangor. Diharap dengan maklumat yang diperolehi daripada kajian ini beberapa cadangan berkenaan mengatasi masalah ini dapat diatasi dan membantu komuniti yang terlibat.

APAKAH YANG PERLU ANDA LAKUKAN?

Anda perlu membaca dan memahami isi kandungan penerangan ini. Setelah itu, anda dikehendaki menandatangani borang **"BORANG PERSETUJUAN PESERTA"** untuk menyatakan minat anda menyertai kajian ini. Borang penyertaan responden harus dikembalikan kepada penyelidik sebelum mengisi boring soal selidik. Sekiranya anda mempunyai sebarang kemusykilan, pengkaji akan membantu untuk memberi maklumat selanjutnya.

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SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?

Responden yang tidak boleh menyertai kajian ini termasuk individu yang mengalami masalah neurological, masalah mental, perempuan mengandung dan tidak mengalami sebarang kemalangan jalan raya.

APAKAH FAEDAH MENYERTAI KAJIAN INI?

KEPADA ANDA SEBAGAI PENYERTA

Anda dapat menyumbang kepada kefahaman kualiti hidup mangsa kemalangan jalan raya dan dapat membantu di dalam cadangan penaik tarafan kualiti hidup pesakit.

KEPADA PENYELIDIK

Semua maklumat yang diperolehi dari kajian ini akan membantu penyelidik mendapatkan maklumat berkenaan signifikasi hubungan kualiti hidup dan gangguan tekanan selepas trauma terhadap mangsa kemalangan jalan raya. Oleh yang demikian, langkah-langkah pembaik pulihan boleh dicadangkan kepada komuniti terlibat.

ADAKAH IA BERISIKO?

Kajian ini tiada risiko daripada segi kesihatan dan keselamatan.

APAKAH PILIHAN UNTUK MENARIK DIRI DARIPADA PENYELIDIKAN INI?

Penyertaan responden di dalam kajian ini adalah secara sukarela. Responden berhak menarik diri daripada kajian pada bila-bila sekiranya responden berasa kurang selesa untuk memberi maklumat kepada penyelidik.

ADAKAH MAKLUMAT DAN IDENTITI SAYA KEKAL RAHSIA?

Identiti anda akan dirahsiakan dan semua maklumat yang diberikan adalah untuk tujuan kajian sahaja. Keputusan kajian ini mungkin akan diutarakan dalam bentuk penerbitan.

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SIAPA YANG SAYA PERLU HUBUNGI SEKIRANYA SAYA MEMPUNYAI SOALAN TAMBAHAN SEMASA MENGIKUTI PENYELIDIKAN INI?

Sekiranya anda mempunyai sebarang kemusykilan, anda boleh menghubungi nama yang tertera di bawah ini.

WAN NUR SHAHIDA BINTI WAN RUSLI
Penyelidik
Unit Kesihatan Persekitaran dan Pekerjaan,
Jabatan Kesihatan Komuniti
Fakulti Perubatan dan Sains Kesihatan,
Universiti Putra Malaysia
No.Tel : 012-9993998
Email: sakura8_pink@yahoo.com

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APPENDIX 2

Consent Form

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SELANGOR, MALAYSIA

BORANG PERSETUJUAN RESPONDEN

TAJUK PENYELIDIKAN: KUALITI HIDUP DAN GANGGUAN TEKANAN SELEPAS TRAUMA DI KALANGAN BELIA YANG MENJADI MANGSA KEMALANGAN JALAN RAYA DI SELANGOR.

PENYELIDIK: WAN NUR SHAHIDA BINTI WAN RUSLI

Saya..... No Kad Pengenalan. .....
beralamat.....
..... dengan ini bersetuju untuk mengambil bahagian secara sukarela dalam menyertai penyelidikan klinikal *(pengajian klinikal/ pengajian soal selidik/ percubaan ubat-ubatan) seperti yang disebut di atas.

Saya telah diberi penjelasan secara menyeluruh mengenai dasar penyelidikan klinikal dari segi
metodologi, risiko dan komplikasi (dirujuk pada Helaian Kepada Responden). Saya memahami
bahawa saya berhak menarik diri dari penyelidikan ini pada bila-bila masa tanpa memberi sebarang alasan. Saya juga memahami bahawa sebarang maklumat yang berkaitan identiti saya akan dirahsiakan.

Saya berminat / tidak berminat* untuk mengetahui keputusan kajian yang dijalankan ke atas sampel saya.

*potong yang tidak berkenaan

Tandatangan ..... Tandatangan .....
(*Responden*) (*Saksi*)
Tarikh :..... Nama:.....
No. K/P: .....

Saya mengesahkan bahawa saya telah menerangkan kepada responden sifat dan tujuan penyelidikan klinikal tersebut di atas.

Tarikh ..... Tandatangan .....
(*Penyelidik*)

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SELANGOR, MALAYSIA

CONSENT FORM (RESPONDENT)

RESEARCH TITLE: QUALITY OF LIFE AND POST-TRAUMATIC STRESS DISORDER AMONG YOUTH ROAD TRAFFIC CRASH SURVIVORS IN SELANGOR.

RESEARCHER: WAN NUR SHAHIDA BINTI WAN RUSLI

I ..... Identity Card No. ..... address
.....
.....hereby voluntarily agree to take part in the clinical research *(clinical study, questionnaire study/ drug trial) specified above.

I have been informed about the nature of the clinical research in terms of methodology, possible adverse effects and complications (refer to Information Sheet). I understand that I have the right to withdraw from this clinical research at any time without assigning any reason whatsoever. I also understand that this study is confidential and all information provided with regards to my identity will remain private and confidential.

I wish to *know/don't wish to know the results of the tests performed on my sample.

* delete where necessary

Signature ..... Signature .....
(*Respondent*) (*Witness*)
Date: ..... Name: .....
I/C No.: .....

I confirm that I have explained to the respondent the nature and purpose of the above-mentioned
clinical research.

Date ..... Signature .....
(Researcher)

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SELANGOR, MALAYSIA

BORANG PERSETUJUAN PENYERTAAN (IBUBAPA/ PENJAGA)

TAJUK PENYELIDIKAN: KUALITI HIDUP DAN GANGGUAN TEKANAN SELEPAS TRAUMA DI KALANGAN BELIA YANG MENJADI MANGSA KEMALANGAN JALAN RAYA DI SELANGOR

PENYELIDIK: WAN NUR SHAHIDA BINTI WAN RUSLI

Saya..... No Kad Pengenalan. .....
beralamat.....
.....dengan ini secara sukarela bersetuju supaya saudara saya menyertai penyelidikan klinikal *(pengajian klinikal/ pengajian soal selidik/ percubaan ubat-ubatan) seperti yang disebut di atas.

Saya telah diberi penjelasan secara menyeluruh mengenai dasar penyelidikan klinikal dari segi metodologi, risiko dan komplikasi (dirujuk pada Helaian Kepada Responden). Saya memahami bahawa saudara saya berhak menarik diri dari penyelidikan ini pada bila-bila masa tanpa member sebarang alasan. Saya juga memahami bahawa sebarang maklumat yang berkaitan identiti saudara saya akan dirahsiakan.

Saya berminat / tidak berminat * untuk mengetahui keputusan kajian yang dijalankan ke atas sampel saudara saya.

*potong yang tidak berkenaan

Tandatangan ..... Tandatangan .....
(*Ibubapa/ Penjaga*) (*Saksi*)

Tarikh :..... Nama :.....
No. K/P: .....

Saya mengesahkan bahawa saya telah menerangkan kepada ibubapa/penjaga responden mengenai sifat dan tujuan penyelidikan klinikal tersebut di atas.

Tarikh ..... Tandatangan .....
(*Penyelidik*)

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CONSENT FORM (PARENTS/ GUARDIAN)

RESEARCH TITLE: QUALITY OF LIFE AND POST-TRAUMATIC STRESS DISORDER AMONG YOUTH ROAD TRAFFIC CRASH SURVIVORS IN SELANGOR

RESEARCHER: WAN NUR SHAHIDA BINTI WAN RUSLI

I ..... Identity Card No. .....address .....
.....hereby voluntarily agree that my realtive to take part in the clinical research *(clinical study, questionnaire study/ drug trial) specified above.

I have been informed about the nature of the clinical research in terms of methodology, possible adverse effects and complications (referred to Information Sheet). I understand that my relative have the right to withdraw from this clinical research at any time without assigning any reason whatsoever.

I also understand that this study is confidential and all information provided with regards to my relative identity will remain private and confidential.

I wish to *know/don't wish to know the result of the tests performed on my relative sample.

* delete where necessary

Signature ..... Signature .....
(*Parent/Guardian*) (*Witness*)
Date :..... Name :.....
I/C No.
:.....

I confirm that I have explained to the respondent's parent/guardian the nature and purpose of the above-mentioned clinical research.

Date ..... Signature .....
(*Researche*

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APPENDIX 3

Questionnaire (Bahasa Melayu)

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RESPONDEN: **ID:**

FAKULTI PERUBATAN DAN SAINS KESIHATAN
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SELANGOR, MALAYSIA

BORANG KAJI SELIDIK

TAJUK KAJIAN: KUALITI HIDUP DAN GANGGUAN TEKANAN SELEPAS TRAUMA DI KALANGAN BELIA YANG MENJADI MANGSA KEMALANGAN JALAN RAYA DI SELANGOR.

Borang ini mengandungi 3 bahagian.

Bahagian 1: **Data sosio demografi responden**

Bahagian 2: **AQOL-8D**

Bahagian 3: **PTSD checklist (PCL-C)**

Semua maklumat yang terkumpul hanya digunakan untuk tujuan kajian sahaja dan ia adalah sulit

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Bahagian 1 – (Data sosio demografi responden)

Bahagian soalan ini adalah mengenai diri anda dan latar belakang anda.

Arahan: Sila tandakan (/) pada jawapan yang bersesuaian atau isikan jawapan pada ruang kosong yang disediakan

1. Umur : _____ tahun

2. Jantina:

☐ Lelaki ☐ Perempuan

3. Bangsa :

☐ Melayu ☐ India

☐ Cina ☐ Lain-lain (Sila nyatakan) .....

4. Status perkahwinan :

☐ Bujang ☐ Berkahwin

☐ Janda/Duda ☐ Bercerai/Tinggal Berasingan

5. Tahap Pendidikan :

☐ Tidak bersekolah ☐ Diploma/STPM

☐ PMR ☐ Ijazah

☐ SPM ☐ Lain-lain

6. Pekerjaan :

☐ Suri rumah

☐ Kembali kerja yang sama

☐ Kembali kerja yang diubah

☐ Tidak berupaya untuk bekerja

☐ Bersara

7. Kawasan kediaman:

☐ kampung

☐ Bandar

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Bahagian 2: AQOL-8D

Bahagian soalan ini adalah berkaitan kualiti hidup anda.

Arahan: Sila tandakan (/) pada kotak yang paling menggambarkan keadaan anda sejak seminggu yang lalu

1) Berapa banyak tenaga yang anda ada untuk melakukan perkara yang anda mahu lakukan?

- ☐ sentiasa penuh bertenaga
- ☐ biasanya penuh bertenaga
- ☐ kadang-kadang bertenaga
- ☐ biasanya kepenatan dan kurang bertenaga
- ☐ sentiasa kepenatan dan kurang bertenaga.

2) Berapa kerapkah anda berasa dikecualikan atau tersisih oleh masyarakat?

- ☐ tidak pernah
- ☐ jarang-jarang
- ☐ kadang-kadang
- ☐ kerap kali
- ☐ sentiasa

3) Bagaimanakah keadaan anda ketika melakukan kegiatan di luar rumah? (contohnya, membeli-belah, lawatan)

- ☐ Melakukan kegiatan luar rumah adalah menyeronokkan dan mudah
- ☐ Saya tidak mempunyai masalah dalam melakukan kegiatan di luar rumah
- ☐ Sedikit sukar
- ☐ Agak sukar
- ☐ Sangat sukar
- ☐ Saya tidak mampu melakukan kegiatan di luar rumah melainkan dengan bantuan seseorang

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4) Bagaimanakah dengan kesihatan dan peranan anda dalam komuniti? (seperti kejiranan, kesukanan, pekerjaan, hal keagamaan atau kumpulan kebudayaan)

- ☐ Kesihatan saya tidak menjejaskan peranan saya dalam masyarakat
- ☐ Saya tidak boleh menjalankan sesetengah peranan kemasayarakatan
- ☐ Saya tidak boleh menjalankan banyak peranan kemasayarakatan
- ☐ Saya tidak boleh menjalankan sebarang peranan kemasayarakatan

5) Berapakah kekerapan anda berasa sedih?

- ☐ Tidak pernah
- ☐ Jarang-jarang
- ☐ Beberapa kali
- ☐ Kebiasaannya
- ☐ Hampir setiap masa

6) Berapakah kekerapan anda mengalami kesakitan yang serius?

- ☐ Sangat jarang
- ☐ Kurang daripada sekali seminggu
- ☐ 3-4 kali seminggu
- ☐ Selalu

7) Apakah tahap keyakinan yang ada pada diri anda?

- ☐ Penuh keyakinan
- ☐ Banyak
- ☐ Sederhana
- ☐ Sedikit
- ☐ Tiada sama sekali

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8) Bagaimanakah keadaan anda dalam situasi ketenangan dan kegelisahan?

- ☐ Sentiasa tenang dan damai
- ☐ Biasanya tenang dan damai
- ☐ Kadang-kadang tenang dan damai, kadang-kadang gelisah
- ☐ Biasanya gelisah
- ☐ Selalu gelisah

9) Bagaimanakah kesihatan anda dan hubungan kekeluargaan anda?

- ☐ Kesihatan saya tidak menjejaskan peranan saya dalam keluarga
- ☐ Saya tidak boleh menjalankan sesetengah peranan dalam keluarga
- ☐ Saya tidak boleh menjalankan banyak peranan dalam keluarga.
- ☐ Saya langsung tidak boleh menjalankan peranan dalam keluarga.

10) Bagaimanakah hubungan rapat (keluarga dan rakan-rakan) anda?

- ☐ Sangat memuaskan
- ☐ Memuaskan
- ☐ Antara memuaskan dan tidak memuaskan
- ☐ Tidak memuaskan
- ☐ Yang tidak menyenangkan
- ☐ Sangat tidak menyenangkan

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11) Bagaimanakah anda berkomunikasi dengan orang lain? (contohnya apabila bercakap, mendengar, menulis atau member isyarat)

☐ Saya tidak mempunyai masalah untuk bercakap dengan mereka atau memahami apa yang mereka katakan.

☐ Saya mempunyai beberapa kesukaran untuk difahami oleh orang yang tidak mengenali saya. Tetapi saya tidak mempunyai masalah untuk memahami apa yang mereka katakan.

☐ Saya hanya difahami oleh orang yang mengenali saya. Saya juga mempunyai masalah untuk memahami apa yang mereka katakan.

☐ Saya tidak dapat berinteraksi dengan orang lain.

12) Berapa kerapkah anda mempunyai masalah tidur?

☐ Tidak pernah

☐ Hampir tidak pernah

☐ Kadang-kadang

☐ Kerap kali

☐ Sepanjang masa

13) Berapa kerapkah anda berasa tidak berharga?

☐ Tidak pernah

☐ Hampir tidak pernah

☐ Kadang-kadang

☐ Kerap kali

☐ Sentiasa

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14) Berapa kerapkah anda berasa marah?

- ☐ Tidak pernah
- ☐ Hampir tidak pernah
- ☐ Kadang-kadang
- ☐ Kerap kali
- ☐ Sepanjang masa

15) Bagaimanakah pergerakan anda? (termasuk yang menggunakan apa-apa bantuan atau peralatan seperti kerusi roda, tongkat, kayu)

- ☐ Saya sangat mudah bergerak
- ☐ Saya tiada masalah untuk bergerak
- ☐ Saya mempunyai sesetengah masalah dalam pergerakan (contohnya, mendaki bukit)
- ☐ Saya mempunyai masalah dalam pergerakan. Saya hanya boleh pergi ke tempat yang berdekatan sahaja.
- ☐ Saya mempunyai banyak masalah dalam pergerakan. Saya memerlukan seseorang untuk membantu saya.
- ☐ Saya hanya terlantar

16) Adakah anda pernah berasa ingin mencederakan diri sendiri?

- ☐ Tidak pernah
- ☐ Jarang-jarang
- ☐ Kadang-kadang
- ☐ Kerap kali
- ☐ Sepanjang masa

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17) Apakah tahap semangat yang anda rasa?

- ☐ Terlalu bersemangat
- ☐ Sangat bersemangat
- ☐ Agak bersemangat
- ☐ Tidak sangat bersemangat
- ☐ Tidak bersemangat sama sekali

18) Masih memikirkan tentang hal seminggu yang lepas. Berapa kerapkah anda berasa bimbang?

- ☐ Tidak pernah
- ☐ Sekali-sekala
- ☐ Kadang-kadang
- ☐ Kerap kali
- ☐ Sepanjang masa

19) Bagaimanakah anda membersihkan diri, pergi ke tandas, berpakaian, makan atau menjaga penampilan anda?

- ☐ Tugasan ini adalah amat mudah bagi saya
- ☐ Saya tidak mempunyai masalah dalam menjalankan tugasan ini
- ☐ Saya mendapati sesetengah tugasan ini sukar namun saya berjaya melakukannya sendiri
- ☐ Banyak tugasan ini sukar dilakukan dan saya memerlukan bantuan untuk melakukannya.
- ☐ Saya tidak boleh melakukan tugasan ini sendiri

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20) Berapa kerapkah anda berasa gembira?

- ☐ Sepanjang masa
- ☐ Kebanyakannya
- ☐ Kadang-kadang
- ☐ Hampir tidak pernah
- ☐ Tidak pernah

21) Bagaimanakah tahap anda dalam mengatasi masalah hidup?

- ☐ Boleh mengatasi semua masalah
- ☐ Boleh mengatasi kebanyakan masalah
- ☐ Boleh mengatasi sebahagian masalah
- ☐ Boleh mengatasi hanya sedikit masalah
- ☐ Tidak boleh mengatasi masalah hidup

22) Bagaimanakah tahap kesakitan atau ketidakselesaan yang anda alami?

- ☐ Tiada langsung
- ☐ Saya mengalami tahap kesakitan yang sederhana
- ☐ Saya mengalami kesakitan yang teruk
- ☐ Saya mengalami kesakitan yang tidak tertanggung

23) Bagaimanakah tahap kegembiraan anda apabila bersama kenalan rapat? (keluarga dan rakan-rakan)?

- ☐ Teramat gembira
- ☐ Gembira
- ☐ Kurang gembira
- ☐ Tidak gembira
- ☐ Benci

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24) Berapa kerapkah kesakitan mengganggu aktiviti-aktiviti yang biasa anda lakukan?

- ☐ Tidak pernah
- ☐ Jarang-jarang
- ☐ Kadang-kadang
- ☐ Kerap kali
- ☐ Sentiasa

25) Berapa kerapkah anda berasa seronok/gembira?

- ☐ Sentiasa
- ☐ Kebiasaannya
- ☐ Kadang-kadang
- ☐ Hampir tidak pernah
- ☐ Tidak pernah

26) Adakah anda membebankan orang lain?

- ☐ Tidak sama sekali
- ☐ Sedikit
- ☐ Sederhana
- ☐ Banyak
- ☐ Sepenuhnya

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27) Adakah ada berpuas hati dengan kehidupan anda?

- ☐ Sangat berpuas hati
- ☐ Berpuas hati
- ☐ Agak berpuas hati
- ☐ Kurang berpuas hati
- ☐ Tidak sama sekali

28) Bagaimanakah dengan penglihatan anda? (termasuk yang menggunakan cermin mata atau kanta lekap)

- ☐ Saya mempunyai penglihatan yang sangat baik
- ☐ Saya mempunyai penglihatan yang normal
- ☐ Saya mempunyai sedikit kesukaran untuk memberi tumpuan kepada objek atau melihatnya secara jelas. Contohnya tulisan yang kecil, surat khabar atau melihat objek pada jarak yang jauh.
- ☐ Saya mempunyai banyak kesukaran untuk melihat objek. Penglihatan saya menjadi kabur dan saya hanya dapat melihat objek yang berjarak dekat sahaja.
- ☐ Saya hanya dapat melihat bentuk am. Saya memerlukan panduan untuk bergerak.
- ☐ Saya buta

29) Berapa kerapkah anda berasa kehidupan anda dikawal?

- ☐ Sentiasa
- ☐ Kebanyakannya
- ☐ Kadang-kadang
- ☐ Hanya sekali-sekala
- ☐ Tidak pernah

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30) Berapa banyakkah bantuan yang anda perlukan untuk melakukan pekerjaan di rumah? (contohnya menyediakan makanan, membersihkan rumah atau berkebun)

- ☐ Saya boleh melakukan tugasan ini dengan cepat dan cekap tanpa bantuan
- ☐ Saya boleh melakukan tugasan ini dengan agak mudah tanpa bantuan
- ☐ Saya boleh melakukan tugasan ini hanya dengan sangat perlahan tanpa bantuan
- ☐ Saya tidak boleh melakukan tugasan ini melainkan dengan bantuan
- ☐ Tiada satu pun tugasan yang boleh dilakukan oleh saya sendiri.

31) Berapa kerapkah anda berasa tersisih daripda masyarakat?

- ☐ Tidak pernah
- ☐ Jarang-jarang
- ☐ Kadang-kadang
- ☐ Kerap kali
- ☐ Sentiasa

32) Bagaimakah pendengaran anda? (termasuk yang menggunakan alat bantu pendengaran)

- ☐ Saya mempunyai pendengaran yang sangat baik
- ☐ Saya mempunyai pendengaran yang normal
- ☐ Saya mempunyai beberapa masalah pendengaran atau saya tidak dapat mendengar dengan jelas. Saya mempunyai masalah untuk mendengar suara yang perlahan atau apabila terdapat bunyi bising di sekelilingnya.
- ☐ Saya mempunyai kesukaran untuk mendengar dengan jelas. Kerap kali saya tidak faham dengan apa yang dikatakan. Kebiasaannya saya tidak mengambil bahagian dalam perbualan kerana saya tidak dapat mendengar apa yang dikatakan.
- ☐ Saya hanya dapat mendengar dengan kadar yang rendah. Saya tidak dapat memahami suara kuat yang bercakap dengan saya secara langsung.

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☐ Saya pekak

33) Berapa kerapkah anda berasa tertekan?

☐ Tidak pernah

☐ Hampir tidak pernah

☐ Kadang-kadang

☐ Kerap kali

☐ Sangat kerap

☐ Sepanjang masa

34) Bagaimanakah perasaab anda dalam hubungan yang rapat dan hubungan intim (termasuk apa-apa hubungan seksual)?

☐ Amat gembira

☐ Amnya gembira

☐ Bukan gembira dan bukan tidak berpuas hati

☐ Amnya tidak berpuas hati

☐ Sangat tidak berpuas hati

35) Berapa kerapkah anda berasa berputus asa dalam tempoh seminggu yang lalu?

☐ Tidak pernah

☐ Sekali-sekala

☐ Kadang-kadang

☐ Kerap kali

☐ Sepanjang masa

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Bahagian 3: PTSD Checklist (PCL-C)

Bahagian soalan ini adalah berkaitan dengan Gangguan Tekanan Selepas Trauma.

Arahan: Di bawah adalah senarai masalah dan aduan tantang pengalaman tekanan hidup. Sila baca setiap satu nya dengan teliti dan tandakan (/) ke dalam kotak untuk menunjukkan tahap gangguan yang dialami akibat masalah tersebut dalam 1 bulan yg lepas.

No.	Respon:	Tidak sama sekali	Kadang-kadang	Sederhana	Kerap	Sangat Kerap
		(1)	(2)	(3)	(4)	(5)
1.	Imej daripada pengalaman tekanan dari masa lalu berulang-ulang, mengganggu pemikiran ingatan dan pemikiran.					
2.	Pengalaman tekanan dari masa lalu berulang-ulang atau mendapat gangguan dalam mimpi.					
3.	Tiba-tiba bertindak atau terasa seolah-olah suatu pengalaman tekanan telah berlaku sekali lagi (seolah-olah anda sedang cuba untuk meredakan kesakitan)					
4.	Berasa amat sedih apabila berlaku sesuatu yang mengingatkan kembali bahawa anda pernah mengalami tekanan di masa yang lalu?					
5.	Mengalami tindak balas fizikal (contohnya, jantung berdebar-debar, kesukaran bernafas, atau berpeluh) apabila sesuatu mengingatkan anda kepada pengalaman tekanan dari masa lalu?					

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No.	Respon:	Tidak sama sekali	Kadang-kadang	Sederhana	Kerap	Sangat Kerap
		(1)	(2)	(3)	(4)	(5)
6.	Mengelakkan daripada berfikir atau bercakap mengenai pengalaman tekanan dari masa lalu atau mengelak daripada mempunyai perasaan yang berkaitan dengannya?					
7.	Mengelakkan aktiviti atau situasi kerana ia mengingatkan anda pada pengalaman tekanan dari masa lalu?					
8.	Mempunyai masalah dalam mengingati perkara yang penting berkaitan pengalaman tekanan dari masa lalu?					
9.	Kehilangan minat untuk melakukan perkara-perkara yang menyeronokkan?					
10.	Berasa jauh atau terputus hubungan dengan orang lain?					
11.	Berasa kaku atau tidak mempunyai perasaan kasih sayang pada mereka yang rapat dengan anda?					
12.	Berasa seolah-olah masa depan anda telah dipendekkan?					
13.	Mempunyai masalah untuk melelapkan mata atau selalu terjaga dari tidur?					

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No.	Respon:	Tidak sama sekali	Kadang-kadang	Sederhana	Kerap	Sangat Kerap
		(1)	(2)	(3)	(4)	(5)
14.	Berasa cepat marah atau mengamuk?					
15.	Mempunyai kesukaran dalam menumpukan perhatian?					
16.	Menjadi terlalu berhati-hati atau berjaga-jaga?					
17.	Berasa gelisah atau mudah terkejut?					

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APPENDIX 4

Approval Letter

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APPENDIX 5

Picture

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Face to face interview with respondent

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