QUALITY OF LIFE AMONG POSTNATAL MOTHERS WITH NORMAL VAGINAL DELIVERY AND CESAREAN SECTION IN OBSTETRICS & GYNAECOLOGY CLINIC, HUSM, KELANTAN

by

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Dissertation submitted in partial fulfillment of the requirements of the degree of Bachelor of Health Sciences (Nursing)

June 2012

ACKNOWLEDGEMENT

I would like to express my gratitude to Allah for giving me guidance, strength and awareness in completing this thesis. Subsequently, I acknowledge several people who played an important role during accomplishing of this research.

First, I would like to thank truly to my supervisor, Dr. Che Rabiaah bt Mohamed, senior lecturer from School of Health Sciences for her assistance, guidance, effort, kindness and patience throughout the completion of this research. I feel grateful with her moral support and understanding in encouraging me to complete my research. Her presence whenever I faced difficulty and had been encouraged me to be more proactive and motivated to finish this research quickly in order to facilitate her checking the thesis in meantime lessen her burden she has to bear.

I would like to express my thank you to the entire person that involved directly or indirectly in completing my study especially to ward sister and all respondents who attended postnatal follow-up at Obstetrics and Gynecology Clinic and statisticians. Thank also goes to Associate Prof Dr Hasanah Che Ismail from Psychiatric Department, School of Medical Sciences for allowing me to use the Malay-version of WHOQoL questionnaire.

I also would like to give my warmest appreciation to my family for their understanding, moral support and financial support in completing my research. Finally, I would like to thank my fellow friends who have shared tears and cheers in completing this research for motivation and encouragement.

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LIST OF ABBREVIATIONS

QoL	Quality of Life
NVD	Normal Vaginal Delivery
CS	Cesarean Section
WHO	World Health Organization
HRQoL	Health Related Quality of Life
BDI	Beck Depression Inventory
WHOQOL-BREF	WHO Quality of Life-BREF
O & G	Obstetric and Gynecology

QUALITY OF LIFE AMONG POSTNATAL MOTHERS WITH NORMAL VAGINAL DELIVERY AND CESAREAN SECTION IN O&G CLINIC, HUSM, KELANTAN.

ABSTRACT

Childbirth is the following stage for women to be a mother. It affects the mothers' condition in many ways particularly via psychological and physical consequences. Thus, by measuring the quality of life, mothers can gain information on how much change they have gone through following the childbirth process. Increase risk of postnatal morbidity cause a lot of studies done including the role of mode of delivery in post natal mother's condition particularly in life quality. The purpose of this study is to assess the quality of life among postnatal mothers with vaginal delivery and cesarean section. This cross sectional study had 50 respondents who included women aged more than 18, had delivered baby after 4 weeks or above, voluntarily participate in this study and able to speak and understand in Malay and English language. The setting of this study involved O & G clinic in HUSM. This study used WHOQoL questionnaire for survey assessment through convenience sampling. This questionnaire also includes sosiodemographic data questionnaire. Statistical analyses used for this study is Independent T test for difference of QoL between NVD and CS mothers, ANOVA test for association of QoL with educational level and socioeconomic status and Pearson Correlation for correlation of QoL with age. Among 50 women participated in this study, 22 were in NVD group while other 28 mothers are in CS group. Based on the

results by comparing QoL for NVD and CS mothers, the entire domain except for overview perception towards life, NVD mothers had higher score compared to CS mothers. Even so there is no significance difference of QoL between NVD and CS mothers. In measuring association of QoL with selected socio demographic data which included age, educational level and socioeconomic status, the study showed there is no significance association between QoL with selected socio demographic data. As a conclusion, eventhough the study found no significance difference in QoL and methods of delivery, the higher mean score in NVD mothers compared to CS mothers indicated better improvement in health and recovery process after delivery.

KUALITI KEHIDUPAN IBU – IBU SELEPAS BERSALIN MELALUI BERSALIN NORMAL SECARA VAGINA DAN *CESAREAN SECTION* DI KLINIK O&G, HUSM, KELANTAN.

ABSTRAK

Melahirkan anak adalah proses yang perlu untuk seorang wanita menjadi seorang ibu. Ia memberi kesan kepada ibu dalam banyak keadaan terutamanya dari segi fizikal dan juga psikologi. Oleh itu, pengukuran kualiti kehidupan membolehkan ibu – ibu mendapat maklumat tentang sejauh mana perubahan yang mereka lalui selepas melahirkan anak. Peningkatan risiko kematian selepas bersalin menyebabkan banyaknya kajian dilakukan termasuklah peranan kaedah melahirkan anak terhadap kesan kualiti kehidupan ibu. Tujuan kajian ini dijalankan adalah untuk menilai kualiti kehidupan ibu – ibu selepas bersalin dengan Bersalin Normal secara Vagina dan *Cesarean Section.* Kajian kajian kerat lintang ini membabitkan 50 orang sampel yang merupakan wanita berumur lebih 18 tahun, telah melahirkan bayi selepas 4 minggu atau lebih, menyertai kajian ini secara sukarela dan mampu bertutur dan memahami bahasa Malaysia and bahasa Inggeris. Lokasi kajian ini melibatkan Klinik O&G di HUSM. Kajian ini menggunakan borang soal selidik untuk penilaian melalui persampelan mudah. Soal selidik ini juga dilengkapi dengan soalan data sosiodemografi. Analisis statistik yang digunakan untuk kajian ini adalah Ujian-t untuk sampel-sampel bebas bagi mengukur perbezaan kualiti kehidupan ibu-ibu bersalin Normal secara Vagina dan *Cesarean Section,* ujian ANOVA digunakan untuk perkaitan kualiti kehidupan dengan tahap pendidikan dan status sosioekonomi,

dan ujian korelasi untuk perkaitan kualiti kehidupan dengan umur. Dalam 50 orang wanita yang menyertai kajian ini, 22 adalah dalam kumpulan Bersalin Normal secara Vagina dan selebih 28 orang dalm kumpulan *Cesarean Section.* Berdasarkan kepada keputusan kajian dengan membandingkan kualiti kehidupan ibu – ibu selepas bersalin antara Bersalin Normal secara Vagina dan *Cesarean Section.* Semua domain kecuali persepsi terhadap kehidupan mempunyai skor yang lebih diperoleh oleh ibu-ibu bersalin normal. Namun begitu, tiada signifikan perbezaan kualiti kehidupan antara ibu-ibu Bersalin Normal secara Vagina dan *Cesarean Section.* Dalam pengukuran perkaitan kualiti kehidupan dengan data sosiodemografi terpilih seperti umur, tahap pendidikan dan status sosioekonomi, kajian menunjukkan tiada signifikan perkaitan antara kualiti kehidupan dengan data sosiodemografi terpilih. Sebagai kesimpulannya, walaupun kajian menunjukkan tiada signifikan perbezaan antara kualiti kehidupan dan kaedah bersalin, markan min yang lebih tinggi dalam ibu Bersalin Normal secara Vagina dibandingkan dengan ibu-ibu *Cesarean Sectio* menunjukkan kesihatan serta proses penyembuhan selepas bersalin yang lebih baik.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Over the last decades, increase in prevalence of cesarean section has brought awareness among health care providers to research more appropriate methods in delivery of baby to ensure the maintenance of quality of life (QoL) or health of one person at the optimum level. This awareness has led the researcher to conduct a study in relation with post natal quality of life comparison of cesarean section and vaginal delivery. The introductory of this thesis is followed by a presentation of the background information related to delivery methods and QoL. This thesis also includes the problem statement, objectives of the study, research questions and significant of the study. Literature review, methods and material of the study are outlined and detailed.

1.2 Background of the Study

Childbirth is the following stage for women to be a mother. It affects the mothers' condition in many ways particularly via psychological and physical consequences. Quality of life (QoL) is a broad ranging concepts affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment (The WHOQoL Group, 1995). QoL for the

mothers following childbirth can be measured to enhance the standard of care for patient based on the mode of delivery they have to undergo. Post partum depression is the most common symptoms mothers have developed. Many studies have discussed regarding the post partum depression in post natal mothers and the delivery methods that mothers have to go through. The study of psychological depression of postpartum mothers is closely related with the quality of life for mothers as resulted in a Canadian study that women with depressive symptomatology had lower Medical Outcomes Study Questionnaire (SF-36) scores and that these women had a significant higher number of contacts with a health professional than those with non-depressive symptomatology (Dennis, 2004).

Physical symptoms of post partum depression such as sleep disturbances and fatigue may interfere in the quality of life as one of the domains is physical. Thus, the physical health of women following childbirth has been studied extensively (McGovern, Dowd, Gjerdingen, Dagher, Ukestad & McCaffrey, 2007; Thompson, Roberts, Currie & Ellwood, 2002; Waterstone, Wolfe, Hooper & Bewley, 2003). Sleep deprivation is said to be associated with day time functioning in daily life and it may affect the mother's life following childbirth. Day time functioning is part of the quality of life for one individual. It is possible that these physical and emotional symptoms contribute to a broader concept of well-being; health-related quality of life (HRQoL) (Webster, Nicholas, Velacott, Cridland & Fawcett, 2010).

Increase risk of postnatal morbidity cause a lot of studies done including the role of mode of delivery in post natal mother's condition particularly in life quality. Previous studies reported that vaginal delivery is better and safer compared to the cesarean section (Jansen, Essink-Bot, Duvekot & Rhenen, 2007; Torkan, Parsay, Lamyian, Kazemnejad & Montazeri, 2009; Yang, Shen, Ping, Wang, Chien, Zainur & Loh, 2011). However, increase technology expert has given opportunities for some area usually in developed country for women to select and decide their own method in delivering babies. One study in Turkey regarding selecting methods of delivery among Turkish obstetricians suggested most of them prefer to deliver via cesarean section as it can decrease the pain of delivery which might be experienced (Arikan, Ozer, Arikan, Coskun & Kiran, 2010). The quality of life of the mothers have to be the top priority as their hormone changes dramatically after childbirth, which make them more vulnerable to physiological and psychological disorder (Yang et al., 2011). The cesarean rate has risen over 10-fold in the last 70 years, and now approaches 39% (National Centre for Health Statistics, 2009). In recently reported series, this cesarean section accounts for 2.6-18% of all cesarean s and 14-22% of elective caesareans.

Postnatal mothers' condition can be influenced by many factors including physical support such as the medicinal practice after labour and psychological which mostly focus on the emotional support. All these things depend on the mothers themselves in which way they will lead their live in motherhood stage.

Results from recent studies on Quality of Life of postnatal mothers by Torkan et al. (2009) showed that women with normal vaginal delivery group had better quality of life for almost all subscales used. The finding of this study suggested that normal vaginal delivery might lead to a better quality of life for postnatal mother (Torkan et al., 2009) so the normal vaginal delivery can be considered as priority in delivering with the absence of medical indications for cesarean section. Another study by Torkan, Parsay, Lamyian, Kazemnejad & Montazeri (2007) resulted in women with normal vaginal delivery experienced better post partum quality of life comparing those with cesarean section and it is suggested normal vaginal delivery as first choice. Another recent studies for post partum depression associated with quality of life in postpartum period stated that low socioeconomic status and low scores in quality of life may facilitate the expression of the depressive symptomatology during postpartum period (Zubaran & Foresti, 2011).

Based on World Health Report 2010 by Gibbons, Belizán, Lauer, Betrán, Merialdi and Althabe (2010), the best recommendation for upper limit use of cesarean section is still 15% as stated by many studies in WHO (1985). There are two observational studies support the recommendation which both assessed the association between cesarean rates and morbidity and mortality in mothers and neonates and was found no reductions in those indicators when frequency of caesarean section was more than 15% (Villar, Valladares, Wojdyla, Zavaleta, Carroli & Velazco, 2006; Althabe, Sosa, Beliza´n, Gibbons, Jacquerioz & Bergel, 2006).

Table 1.1: Cesarean section rates in public hospitals in Malaysia by state and year

	2000		2001		2006
	Cesarean section rates (%)	Cesarean section rates (%)	Cesarean sections	Total deliveries	Cesarean section rates (%)
Perlis	11.2	10	820	4086	20.1
Kedah	10.4	12.4	4903	27264	18
Penang	12.5	14.3	2510	14436	17.4
Perak	13.1	12.7	5427	28081	19.3
Selangor	8.7	10.8	6714	40429	16.6
Federal	15.5	15.7	5339	22657	23.6
territory	12.8	15.2	2752	13219	20.8
Negeri	20.5	22.3	2501	9866	25.4
Sembilan	12	12.4	6762	45032	15
Melaka	12.8	10.8	3168	20868	15.2
Johor	7	7.6	2033	18250	11.1
Pahang	6.8	7.5	2806	24464	11.5
Terengganu	8.2	7.4	4694	43146	10.9
Kelantan	7.9	8	4281	36553	11.7
Sabah	10.5	11.1	54710	348351	15.7
Sarawak					
Total					

Source: Ravindran (2008)

Increase the rates of cesarean section in Malaysia has brought the curiosity of the safety of this procedure. According to Ravindran (2008) in his study regarding the increase prevalence of Cesarean section in Malaysia, it has risen up over the last six years from 10.5% in 2000 to 15.7% in 2006. Variations of the statistics remain still as Melaka the highest population having cesarean section and one of the states with rates more than 20% including Negeri Sembilan, Federal Territory and Perlis. Generally no states showing a drop in cesarean section rates and all the states have increasing rates over the six years period.

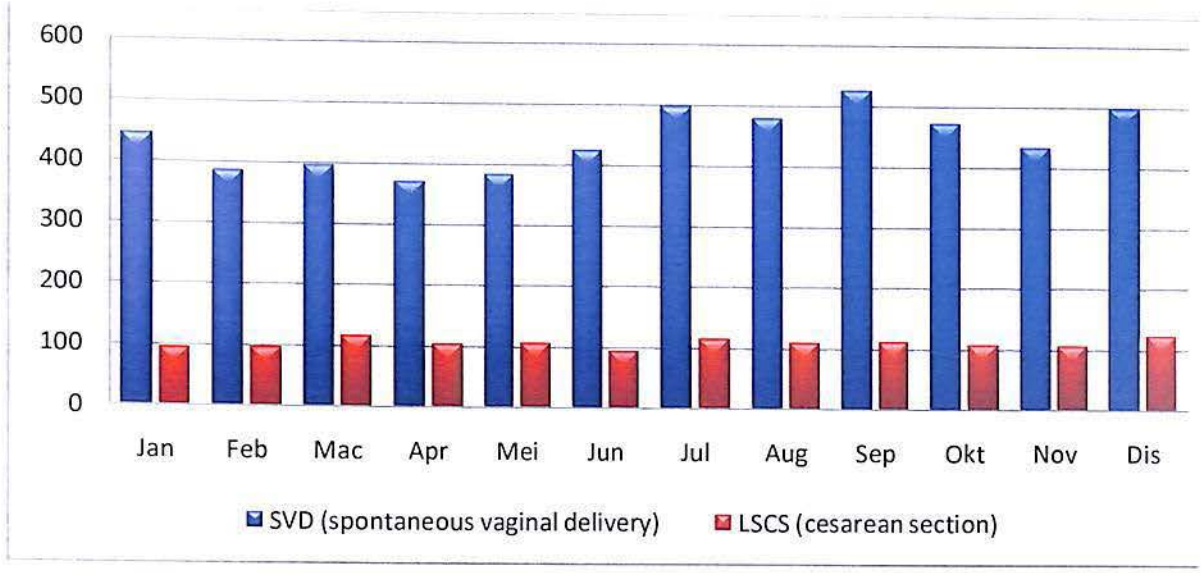

Figure 1.1: Statistics of Delivery of Baby in Ward 1 Berlian (Labour room) HUSM in 2008 Source: Ward 1 Berlian, HUSM

Eventhough there is increase in cesarean section in Malaysia; Kelantan is still having the lowest rate in this method among its population as stated in statistics by Ravindran (2008) in his study. The West Coast states generally had a higher caesarean section rate than the East Coast states as well as East Malaysia (Ravindran, 2008). Based on the statistics the researcher obtained from the labour room, in HUSM spontaneous vaginal delivery consistently has higher rates than cesarean sections. This shows that mothers are always interested in giving birth through vaginal normally rather than having cesarean section as alternative in delivering baby. Medical indication can be another reason for them to pick cesarean as a choice for delivery. However the readiness of a mother to deliver her baby through cesarean indicates her deep understanding regarding the complications and the greater risks involved particularly in situations where there is no absolute contraindications to attempt vaginal delivery (Jackson & Paterson-Brown, 2001).

1.3 Problem Statement

High prevalence in cesarean section has created concern all over the world since World Health Organization (WHO) had stated the recommendation of technologies in birth is acceptable to be range between 5 to 15 % for cesarean section as published in a review in 1994 (Festin, Laopaiboon, Pattanittum, Ewens, Henderson-Smart, & Crowther, 2009). This was based on caesarean rates of countries with the lowest maternal and neonatal mortality rate at the time of the recommendation, and took into account both developed and developing countries (Althabe et al., 2006; World Health Organization, 1985). It is also suggested that no benefit accrues to the children or the mothers when the rates exceed this level (Ghosh & James, 2010). However, based on the study by Notzon (1990), it has indicated that proportion of births by cesarean section rate has increased throughout the industrialized world and in most developed countries with declining the vaginal delivery as the birth option. This rising incidence also has been reported in the study by Stephenson, Bakoula, Hemminki, Knudsen, Levasseur, Schenker et al. (1993) which shows increasing use of cesarean section in several countries (Australia, Hungary, Canada and Israel) was accompanied by declining use of instrumental vaginal delivery.

Post partum period is a crucial and vital period for a mother to adapt to her new life. During this period, some complications may occur due to the lack of maternity care for postnatal mothers. Major acute obstetric morbidities include hemorrhage, pregnancy-related hypertension, obstetric pulmonary embolism and

sepsis (Zainur & Loh, 2006). A few studies reported that cesarean section is associated with postnatal mortality and morbidity. All morbidities were more frequent among women who had elective caesarean section though only peripartum blood transfusion, puerperal febrile morbidity and unplanned readmission were significantly different statistically (Oladapo, Lumina, Sule-Odu, 2007). However one study by Althabe et al. (2006) has indicated there is no association between maternal mortality and cesarean section rates in medium and high income countries as there is no significant change in mortality with the increase of cesarean section whereas in low income countries, as cesarean section rates increase, neonatal and maternal mortality decrease.

In Malaysia, cesarean section rates have also been increasing. According to the statistics obtained from the Health Management Information System (HMIS), a computerized records system that captures the discharge diagnosis of all patients from public hospitals under the Ministry of Health, Malaysia, over the six years, cesarean section has reached 15.7% from 10.5% in the year with Melaka leading the statistics. There have been concern in Malaysia regarding maternal request for cesarean section but no detailed data is available (Ravindran, 2008).

Maternal request for cesarean delivery has been concern in many countries over the world as it has contraindicated to the recommendation by WHO to limit the cesarean section rate only up to 15% (Morrison & MacKenzie, 2003). In Iran the elective cesarean section has been increasing at alarming rate and about 60% of women prefer to have cesarean section to avoid labor pain or

to determine the exact time of childbirth (Torkan et al., 2009). This incidence mostly occurs in developed countries with higher improvement in medical technologies such as European and Middle Eastern countries. Women's preferences for choosing the method of delivery apparently use the importance of quality of care as main issues and their preferably choice for safety and predictability versus risk and danger or opting for perceived higher quality care (Gamble, Creedy, McCourt, Weaver & Beake, 2007). Their choice for cesarean section has shown that knowledge of the risks involved and the potential physical sequelae assumes greater importance, particularly in situations where there are no absolute contraindications to attempted vaginal delivery (Jackson, 2001).

To my knowledge, there is still no study done regarding quality of life among postnatal mothers in HUSM.

1.4 Research Objectives

1.41 General Objective

To assess the quality of life for postnatal mothers with vaginal delivery and cesarean section

1.42 Specific Objectives

1) To determine the difference of quality of life between two methods of delivery
2) To determine the association of the quality of life and selected sociodemographic data

1.5 Research questions

1) Is there any difference in quality of life for postnatal mothers with normal vaginal delivery and cesarean section?
2) What is the association of the quality of life and selected sociodemographic data?

1.6 Research Hypotheses

H_1: there is significant difference in quality of life between postnatal mothers with normal vaginal delivery and cesarean section.

H_0: there is no significant difference in quality of life between postnatal mothers with normal vaginal delivery and cesarean section.

H_1: there is association of the quality of life and selected sociodemographic data of postnatal mothers.

H_0: there is no association of the quality of life and selected sociodemographic data of postnatal mothers.

1.7 Definition of Terms: Conceptual

Quality of Life

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 (The WHOQOL Group, 1995).

Post partum

Period begins 1 hour after delivery of the placenta and lasting 6 weeks, at which time the uterus has regained its pre-pregnant size (Cunningham, Leveno, Bloom, Hauth, Gilstrap & Wenstrom, 2005).

Post natal mothers

Mothers who has delivered the baby and in the post partum period.

Normal vaginal delivery

Normal birth defined as: spontaneous in onset, low-risk at the start of labor and remaining so throughout labor and delivery (Beech & Phipps, 2004).

Cesarean Section

Cesarean section is surgical intervention to prevent or treat life-threatening maternal or perinatal complications, and the appropriate rate of use should be one associated with the lowest attainable level of maternal and perinatal morbidity and mortality (Althabe et al., 2006).

1.8 Significance of Study

Increase the prevalence of cesarean has brought worriedness as WHO recommends the rate of cesarean to be lower than the normal vaginal delivery rates. Measurement of quality of life among post natal mothers with different method of delivery can facilitate the mothers and health care delivery in making decision for delivering baby later. The morbidity of the postnatal mothers affected by methods of delivery can be decreased and recovery process of the mothers can be improved.

Quality of life approach indeed allow mothers to find out their own postnatal life assessment and encourages healthcare providers to view them more holistically as during postpartum period, mothers frequently reported on fatigue, headache and any other physical symptoms which might appear to be associated with their functioning in daily life.

However, cesarean section rate in Malaysia is still appropriate as only the areas of the city have higher rates in this method of delivery. This assessment also can help the healthcare provider in giving advice regarding the methods of delivery including further explanation about the recovery process related to the physical and psychological well being. Hospital setting in care for post natal mothers also can be improved with more appropriate interventions in order to enhance the mothers' satisfaction towards nursing care. Health education can be intervened with more evidence - based to meet patient's belief and trust.

CHAPTER 2

LITERATURE REVIEW

2.1 Quality of Life

Health wellbeing after birth delivery either via vaginal delivery of cesarean section is vital part to be taken care of. For the evaluation of assessment, patient reported outcomes including health-related quality of life (HRQoL) have been widely used. HRQoL is often defined as patient recorded functioning and well-being in the physical, psychological and social domain (Jansen et al., 2007). It is influenced by a variety of medical, psychological, social and obstetric factors (e.g., age , general physical health during pregnancy, length of labor, maternal expectations, beliefs, attachment, and mood) (Jansen et al., 2007). While World Health Organisation (WHO) defines quality of life as 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 (Zubaran & Foresti, 2011).

2.2 Cesarean Section and Vaginal Delivery

The number of cesarean section (CS) deliveries has been growing rapidly in many countries (Khawaja, Kabakian-Khasholian & Jurdi, 2003). Incidents of cesarean section are increasing worldwide despite the recommendation of World Health Organization to deliver baby via vaginal delivery and the rates should not be higher than 10 – 15% (Arikan et. al., 2010). WHO (1998) also stated that

there are no additional health benefits associated with a cesarean rate above 10-15% and the increase has not been associated with a decrease in the perinatal mortality rate (McCourt, Weaver, Statham, Beake, Gamble, & Creedy, 2007). However one study states that mode of delivery can be affected by the culture and social norm in the community itself, cesarean section is increase among well developed country and high level socio demographic persons (Pang, Law, Leung, Lai, & La, 2009).

2.3 Comparative Studies of the Quality of life of Vaginal Delivery and Cesarean Section

One study regarding postnatal QoL with two methods of delivery suggested that normal vaginal delivery might lead to a better QoL especially resulting in a superior physical health (Torkan et al., 2009). By comparing and analyzing the data from the two groups resulted in normal vaginal delivery group improved more on physical health related quality of life while the cesarean section group improved more on mental health related quality of life (Torkan et al., 2009). Another comparative study of life quality in mothers with normal vaginal delivery and cesarean section finding demonstrated women with normal vaginal delivery experienced better QoL comparing those with cesarean section as normal vaginal delivery group got higher marks in all items except satisfaction toward delivery (Torkan et al., 2007).

An investigation on psychometric evaluation of health related quality of life measures in women after different types of delivery showed that women with

vaginal delivery had better health related quality of life compared to elective or emergency cesarean section in which women with vaginal delivery are able to have higher EQ-5D scores in almost all subscales (Jansen et. al., 2007). According to the study of quality of life in the early postpartum period in mothers of a preterm, near term, or term infant, the sosiodemographic characteristics are about the same but more mothers of a preterm and near-term infant experienced a cesarean birth (Hill & Aldag, 2007). In previous research of mothers of term and preterm infants, a higher proportion of mothers of preterm infants had a cesarean birth compared to mothers of term infants (Hill, Aldag, Chatterton, & Zinaman, 2005).

2.4 Comparative problems experienced by post natal mothers with normal vaginal delivery and cesarean section

Some problems might arise in mothers after delivering baby due to the pre partum state or the new problem in post partum state. Complications and consequences that might occur to mothers can affect the quality of life and recovery process to stability. The extent of postnatal morbidity in vaginal delivery and cesarean section has increasingly been recognized in recent years (Torkan et al., 2009). Those two modes of delivery have caused some problems respectively which might be due to the anatomy of the organs that involve during the delivery process. Pelvic floor damages can occur if mothers undergoing vaginal delivery, which might be a reason for mothers to be more preferred on cesarean section (Morrison & MacKenzie, 2003). It is supported by the research of the preferences of Turkish obstetricians toward mode of delivery for

themselves/ partners that 57.7% of the participants decided to deliver by cesarean section to reduce the likelihood of the pelvic organ prolapsed (Arikan et al., 2010).

One research found that women with cesarean section getting more ready for having sex compared to the women with vaginal delivery after the same post partum period. Husband of the women with cesarean section is more intimate probably due to the fact that the infant who was just born is still in treatment and the needs of the support from the husbands to improve the psychological stability of the wives (Rortveit, Daltveit, Hannestad, & Hunskaar, 2003). Vaginal delivery is suggested as the main contributing factor for urinary incontinence, possibly because of damage to important muscle tissue or nerve and the pregnant itself may cause mechanical changes, hormonal changes or both that can lead to it (Rortveit et al., 2003). Similar to study by Morrison and MacKenzie (2003) who found that urinary incontinence consequent upon this damage can be reduced by cesarean section compared to vaginal delivery.

2.5 Physical effects postnatal mothers having during postpartum period

Quality of life is complex and all-embracing, and may be affected by many factors, including physical, mental, emotional, social, sexual and spiritual parameters (Symon, McGreavy, & Picken, 2003). Post partum mothers have broad physical and psychological burden that they have to match it with experiences have been obtained. Studies in Western and developed countries also revealed a high prevalence of physical symptom and emotional problems after

childbirth even among women who undergo a normal pregnancy and delivery (Chien, Tai, Hwang, & Huang, 2009). Maternal depressive or postpartum depression has significance association with the physical symptoms including tiredness, urinary incontinence, back pain, sexual problems, and more colds and illness than usual (Chien et al., 2009). Fatigue or tiredness seems to be essential reason to improve the quality of life of the mothers as suggested due to the serious consequences of fatigue after delivery by given prevalence (Jansen et al., 2007). While in another finding highlighted many women during first six weeks after childbirth experienced some kind of distress characteristics by mild insomnia, tearfulness, fatigue, poor concentration and depressed called postpartum blues, and the majority manage to cope with and overcome this distress (Halberiech and Karkun, 2006).

Postpartum physical symptoms may decrease women's QoL and interfere with their adaptation to motherhood (Chien et al., 2009). It is supported by Australian study (Boyce, Johnstone, Hickey, Morris-Yates, Harris, & Strachan, 2000) demonstrated that 54 (12.7%) women reporting depressive symptoms had significantly lower SF-36 scores in 5 of the 8 dimensions of the instrument 24 weeks after delivery (Zubaran & Foresti, 2011). There is also a study found that different physical symptoms experienced by women with cesarean section and vaginal delivery. In a large-scale Australian study, women who delivered by cesarean section appeared to suffer from exhaustion, lack of sleep, and bowel problems; therefore, they were more likely to be rehospitalisation compared to women who delivered vaginally (Thompson et al., 2002). Post partum mothers

will also experience high levels of sleep disturbances, especially during the first three postpartum months (Insana, Stacom, & Montgomery-Downs, 2010).

2.6 Psychological consequences having by postnatal mothers following childbirth

Common physical symptoms that occur to the post partum mothers significantly associated with post partum depression. Post partum depression not only may affect the body function that cause the physical post partum depression symptoms but also affect the quality of life of the mothers as one of the components of quality of life is emotional well-being. A previous study also used a cumulative rating for the severity of physical symptoms and found that it was highly associated with functional impairment and emotional well-being (Webb, Bloch, Coyne, Chung, Bennett, & Culhane, 2008). Post partum depression also affects the quality of life of mothers with different mode of delivery.

As stated by an Italian Study which used World Health Organization Quality of Lif-100 (WHOQOL-100) and the Beck Depression Inventory (BDI) were to evaluate QoL and the presence of depressive symptomatology among 100 women revealed that women experiencing normal gestations has significantly higher QoL scores than women going through high-risk pregnancies (Zubaran & Foresti, 2011). In another study, there was significant association between post partum depression and mode of delivery ($p<0.0001$) as women who undergone emergency cesarean section and elective cesarean section had higher

rate than those who undergone non vaginal delivery and instrumental vaginal delivery (32.68%, 24.06% vs. 17.80%, 15.34%) (Yang et al., 2011).

According to Pang et al., (2009), women in developed countries and has stable financial support (Pang et al., 2009) tend to deliver baby by cesarean section as it can reduce the level of pain and the scary experiences. Educated women tend to delay giving birth until older ages, therefore, increasing their likelihood of having cesarean section (Khawaja, Kabakian-Khasholian, & Jurdi, 2004). As mothers psychological is still in the state to passage to motherhood, support from the closest person particularly is a vital point to quicken the recovery process. One research found women tried to achieve sense of normality through making sense of what happened and normalising their experience and communication is important element to perceive desirable state (normality) by an individual because person may come to understand it better (Fenwick, Holloway, & Alexander, 2007).

Mothers with cesarean sections have to go through experiences for achieving normality as they have to believe the baby is born normally as vaginal delivery is considered as normal childbirth process. Therefore some mothers who are unable to undergo this process will have feeling of loss due to the expectation for the first birth to be a normal process and lose the important moments to experience the baby born as the baby is already by the mothers' side or have to be isolated for treatment. Thus, one important roles of the midwife is to be with the woman and support her during the pregnancy, the delivery and the puerperium (Tham, Ryding, & Christensson, 2010) because mothers may

possibly develop post traumatic stress. Ford and Ayes (2009) found that support during birth can reduce effects of a stressful labour, maximize perceptions of control and potentially reduce levels of anxiety or negative mood in the postnatal period.

2.7 Theoretical framework

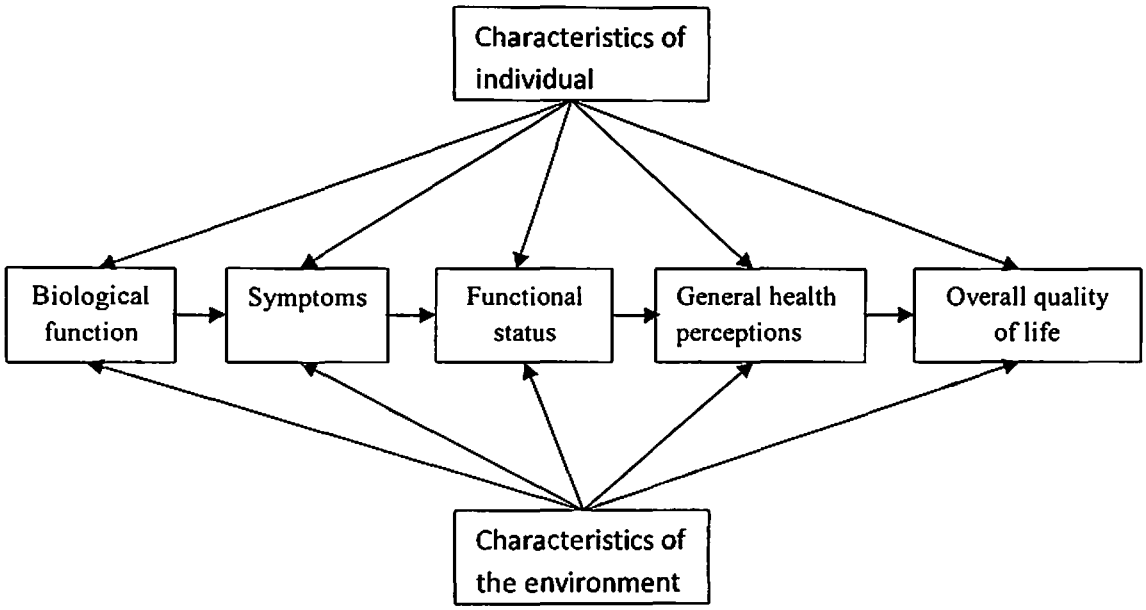

Figure 2.7.1: revised Wilson and Cleary model for health related quality of life.

This conceptual model of quality of life originally published by Wilson and Cleary in 1995 and it was later revised by Ferrans, Zerwic, Wilbur &Larson in 2005. This model was developed in order to help explain the relationships of clinical variables that relate to quality of life and its presentation as taxonomy of patient outcomes that link the characteristics of the individual to the characteristics of the environment (Saban, Penckofer, Androwich, & Bryant, 2007).

The primary focuses on the biological function, symptoms, functional status, general health perceptions and overall quality of life as a result. Biological functions would be assessed through the physical assessment, laboratory tests and medical diagnoses while the symptoms refer to physical, emotional, and cognitive symptoms perceived by the patients. The third, functional status' components composed of physical, psychological, social, and role function. Fourth is general health perception which refers to a subjective rating that includes all of the health concepts that precede it. The last fifth, overall quality of life described as subjective well being, which means how happy or satisfied someone with life as whole. The arrow indicates the causal relationship between the focuses (Ferrans et al., 2005).

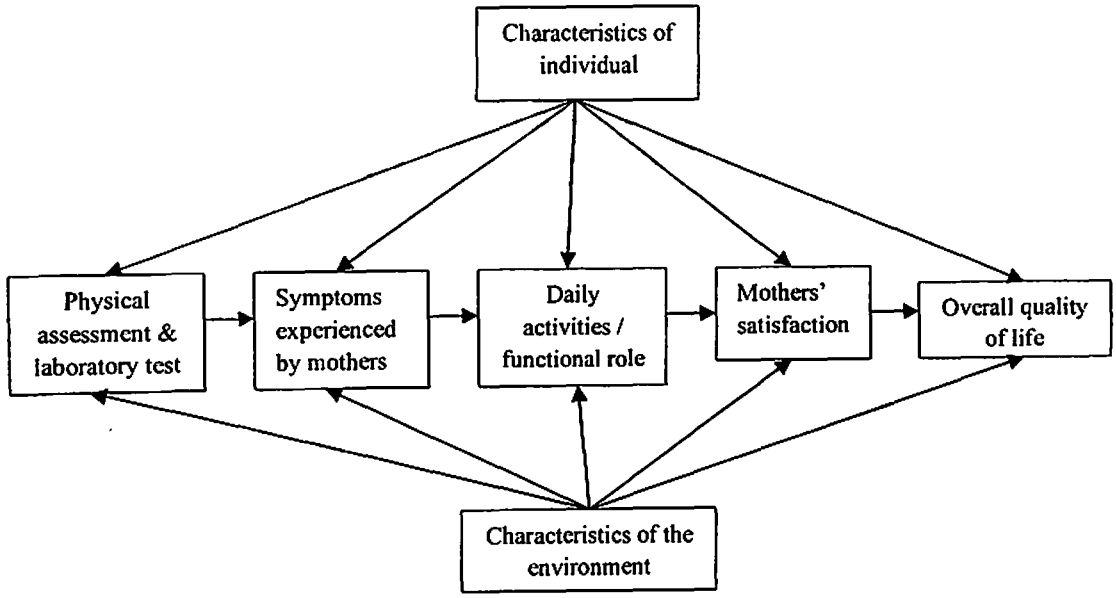

Figure 2.7.2: adapted Wilson and Clearly model for quality of life among postnatal mothers

This model has been applied into this study. Mothers' biological functional can be assessed through physical assessment and laboratory test such as Full Blood Count to determine the level of hemoglobin of the mothers, health assessment of mothers can be result in giving health care providers' idea regarding current condition of the mothers. Childbirth is a complex life event associated with numerous biopsychosocial changes, so there are few symptoms will be experienced by the mothers. These symptoms can be sleep disturbances and fatigue (Insana, Stacom, Montgomery-Downs 2011) as mothers have to consume all of her energy during giving birth. Mothers' functional status can be measured after delivery through her adaptability to perform their daily activities and their role in the family. Since quality of life also depends on individual's view in satisfaction of life (Bowling, 2001), thus, general health perception for the fourth component lies on the mother to decide her own satisfaction level towards their health. At the end, overall quality of life can be assessed after all the factors have been met. Sosiodemographic data of an individual can also influence the mother's quality of life as her current living may be the source of satisfaction. All the components are related to one another as represented by the arrow for the causal relationship between the components.

CHAPTER 3

METHODOLOGY

3.1 Research Design

This research is a quantitative study which uses cross sectional design. Cross sectional study is non experimental design without any control group and usually done in the study field. In this type of research study, either the entire population or a subset of the population which is selected, and from these individuals, data are collected to help answer research questions of interest (Olsen & St. George, 2004). Survey questionnaire was used to collect the data in this study.

3.2 Population and Setting

The aim of this study is to measure quality of life among postnatal mothers. Thus mothers following childbirth are required to participate in this study. This research was conducted among post natal mothers who attended Obstetric & Gynecology (O & G) Clinic for postnatal follow up visit in Hospital Universiti Sains Malaysia. These mothers were given self administered questionnaire.

3.3 Sampling

3.31 Sample size

Researcher found that the total population of post natal mothers attending O&G Clinic adds up to 139 participants from January to March in 2011 (Unit Rekod Perubatan HUSM, 2011). Calculation of the sample size and estimate in for the accuracy of a sample (sampling error) while determine the representative and parameters of the sample (Naing, 2003); the researcher used the sample size table by Krejcie and Morgan (1970) (Chua, 2006). Controlling the probability of type I error alpha equal 0.05 and confidence level of 95%, the sample size required in this study is 103 respondents. 10 % dropout rate will be needed for dropout and incomplete questions. Therefore, the total required for this study will be within the range of 93 to 113 respondents.

However, only 50 respondents were able to participate in this study as there are some limitations during data collection process.

3.32 Sampling selection

Sampling selection was done by using convenience sampling. Selected respondents who agreed were given the questionnaires to answer. The researcher has selected the respondents appropriately according to the criteria. This design sampling was used due to its convenience to assemble the respondents.