THE EFFICACY OF HYPNOSIS INTERVENTION IN ALLEVIATING THE PSYCHOLOGICAL AND PHYSICAL SYMPTOMS DURING PREGNANCY, LABOUR, AND POSTPARTUM

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FACULTY OF MEDICINE UNIVERSITY OF MALAYA KUALA LUMPUR

2016

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THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENT S FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

FACULTY OF MEDICINE UNIVERSITY OF MALAYA KUALA LUMPUR

2016

UNIVERSITI MALAYA

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ABSTRACT

Physical and psychological symptoms during pregnancy are common. Various strategies such as hypnosis are available to reduce these symptoms. This study investigates the efficacy of hypnosis intervention in alleviating the psychological and physical symptoms during pregnancy and labour as well as postpartum. A quasi-experimental design was utilised in this study with 56 patients (28 participants in the experimental group and 28 participants in the control group). Hypnosis intervention was given to the experimental group participants at weeks 16, 20, 28 and 36 of pregnancy. Participants in the control group received only the routine antenatal care from the obstetricians, with some form of attention control from the healthcare professionals, such as breathing techniques. Participants from both groups completed the Depression Anxiety Stress Scale - 21 (DASS-21) and Pregnancy Symptoms Checklist at weeks 16, 20, 28 and 36 of pregnancy. Participants in the experimental group completed the DASS-21 and the Pregnancy Symptoms Checklist during the hypnosis sessions, and participants in the control group completed the questionnaires during their routine antenatal check-up. Participants' systolic and diastolic blood pressure measurements and foetal weight at week 36 of pregnancy were collected. Data collected during the labour stage consisted of the length of second and third labour stages, pain relief used during labour (e.g. pethidine), delivery methods, and assisted vaginal delivery. Within 24 hours of delivery, data pertaining to neonatal birth weight, neonatal Apgar scores, and self-reported pain were obtained. At two months postpartum, participants from both the experimental and control groups completed the DASS-21 and the Edinburgh Postpartum Depression Scale (EPDS). The results of the pregnancy stage indicated that the experience of antenatal stress and anxiety symptoms for the experimental group had decreased from baseline to week 36 of pregnancy. However, for the control group, antenatal stress and anxiety symptoms had decreased and later increased at week 36. Meanwhile the experience of depressive

symptoms for the experimental group had slightly increased at week 36. The mean of antenatal physical symptoms for the participants in the control group was higher than for the participants in the experimental group. The group differences on antenatal stress, anxiety, and physical symptoms at week 36 of pregnancy were significant (p < .05), and not significant for depressive symptoms ($p \ge 0.05$). The results of the pregnancy stage had also indicated that the experimental group participants' foetal weight at week 36 of pregnancy was higher, and the group differences were significant ($p \le .05$). However, the group differences in systolic and diastolic blood pressure at week 36 were not significant (p>.05). The results of the labour stage showed no significant differences in the length of second and third stages of labour. The group differences in pethidine used were significant (p < .05), with the experimental group participants opting for less pethidine. None of the experimental group participants had opted for epidural, and more participants in the control group had assisted vaginal deliveries and caesarean sections. More participants in the experimental group had given birth naturally. Results within 24 hours postpartum showed that more neonates in the experimental group had higher Apgar scores. Group differences in neonatal weight were not significant (p>.05). Participants in the experimental group had experienced higher pain just before, during, and right after delivery. The results at two months postpartum showed that the experimental group had higher mean of postpartum stress, but lower means of postpartum anxiety and depressive symptoms. The group differences on postpartum anxiety and depressive symptoms were significant ($p \le .05$), and were not significant for postpartum stress ($p \ge .05$). Finally, the group differences on postpartum depression were significant ($p \le 0.05$), and the results indicated that the experimental group had experienced reduced postpartum depression. Thus, alleviation of physical and psychological symptoms during pregnancy via hypnosis ensures a better experience throughout pregnancy, labour and postpartum.

ABSTRAK

Gejala fizikal (contohnya muntah) dan psikologi (tekanan, kebimbangan, dan kemurungan) adalah biasa semasa kehamilan. Pelbagai strategi, contohnya hipnosis boleh membantu untuk mengurangkan gejala ini. Penyelidikan ini bermatlamat untuk mengkaji keberkesanan dalam penggunaan hipnosis dalam mengurangkan gejala psikologi dan fizikal semasa kehamilan, bersalin, dan selepas bersalin. Kaedah separa eksperimen telah digunakan dan seramai 56 peserta telah mengambil bahagian di dalam kajian ini (28 peserta diletakkan di dalam kumpulan eksperimen dan 28 peserta di dalam kumpulan kawalan). Intervensi hipnosis telah diberikan kepada kumpulan eksperimen pada minggu 16, 20, 28 dan 36 kehamilan. Peserta kumpulan kawalan hanya diberikan penjagaan pranatal rutin oleh pakar-pakar obstetrik. Peserta-peserta dari kedua-dua kumpulan telah mengisi borang kaji selidik Depression Anxiety Stress Scale - 21 (DASS 21) dan Pregnancy Symptoms Checklist pada minggu ke 16, 20, 28, dan 36 kehamilan. Pesertapeserta di dalam kumpulan eksperimen mengisi borang kaji selidik ketika perjumpaan untuk sesi hipnosis dan peserta-peserta di dalam kumpulan kawalan mengisi boring kaji selidik ketika pemeriksaan pratanal. Tekanan darah sistolik and diastolik peserta dan berat janin pada minggu ke 36 telah dikumpulkan. Data yang telah dikumpulkan ketika bersalin termasuk tempoh tahap kedua dan ketiga peringkat kelahiran, penggunaan ubat untuk meredakan kesakitan (e.g. pethidine), cara-cara kelahiran, dan penggunaan alat bantuan semasa kelahiran. Untuk tempoh 24 jam selepas bersalin, data berkenaan berat bayi, skor Apgar, dan tahap kesakitan telah dikumpulkan. Dua bulan selepas bersalin, pesertapeserta dari kedua-dua kumpulan telah mengisi borang kaji selidik DASS-21 dan Edinburgh Postpartum Depression Scale (EPDS). Keputusan kajian menunjukkan bahawa gejala tekanan dan kebimbangan untuk kumpulan eksperimen adalah menurun dari minggu 16 ke minggu 36. Walau bagaimanapun, gejala tekanan dan kebimbangan untuk kumpulan kawalan telah menurun dan kemudiannya meningkat pada minggu 36

kehamilan. Sementara itu, gejala kemurungan untuk kumpulan eksperimen telah meningkat sedikit pada minggu 36. Simptom fizikal untuk kumpulan kawalan adalah lebih tinggi. Untuk kumpulan kawalan, tekanan dan kemurungan ketika kehamilan telah menurun dan meningkat di minggu 36. Gejala fizikal telah meningkat di minggu 36 untuk kedua kumpulan. Keputusan kajian menunjukkan berat janin ketika minggu yang ke 36 untuk kumpulan eksperimen adalah lebih tinggi daripada kumpulan kawalan, dan perbezaan ini adalah signifikan ($p \le 0.5$). Perbezaan dalam tekanan darah sistolik dan diastolik tidak signifikan (p>.05). Keputusan kajian ketika tahap bersalin menunjukkan peserta di dalam kumpulan eksperimen mengalami masa kelahiran tahap kedua dan ketiga yang lebih pendek, dan keputusan ini adalah tidak signifikan (p>.05). Peserta di dalam kumpulan eksperimen telah menggunakan ubat meredakan kesihatan (pethidine) yang lebih rendah, dan perbezaan ini adalah signifikan (p < .05). Lebih ramai peserta dari kumpulan eksperimen telah mengalami kelahiran secara semula jadi dan lebih ramai peserta dari kumpulan kawalan telah mengalami kelahiran secara pembedahan. Keputusan kajian dalam masa 24 jam kelahiran menunjukkan bayi peserta kumpulan eksperimen mendapat Apgar skor yang lebih tinggi. Keputusan berat bayi adalah tidak signifikan (p > .05). Keputusan kajian setelah dua bulan bersalin menunjukkan peserta kumpulan eksperimen mempunyai tahap gejala tekanan yang lebih tinggi tetapi tahap gejala kebimbangan dan kemurungan yang lebih rendah dari kumpulan kawalan. Peserta kumpulan eksperimen mempunyai tahap kemurungan selepas bersalin yang lebih rendah dari kumpulan kawalan, dan keputusan ini adalah signifikan ($p \le 0.05$). Perbezaan kumpulan untuk gejala kebimbingan dan kemurungan adalah signifikan ($p \le .05$), dan perbezaan kumpulan untuk tahap gejala tekanan adalah tidak signifikan (p>.05). Keputusan yang diperolehi dari kajian ini menunjukkan yang pengurangan gejala fizikal dan psikologi melalui hipnosis semasa kehamilan memberikan pengalaman yang lebih positif ketika kehamilan, bersalin, dan selepas bersalin.

ACKNOWLEDGEMENTS

I would like to convey my deepest gratitude to the following people for their support and assistance in the process of completing this thesis:

First and foremost, I would like to express my gratitude to my supervisors, Prof Dr Low Wah Yun and Prof Dr Jamiyah Hassan: Thank you for your patience and help in ensuring that this thesis is successfully completed. Thank you for being there whenever I needed to bounce off my ideas and discuss my concerns. Your thoughtful comments and advice had made me a better researcher and a better person. I am honoured with the opportunities given to gain insightful knowledge and experience from you.

To my family and friends: Thank you for your encouragement in ensuring the success of this thesis. Your support has been invaluable. To my dear departed mother: I hope you are proud of your daughter's achievement. You never gave up on my education and had always encouraged me to go further, so I will have the opportunities that you never had.

Finally, to Nather: Thank you for your support and encouragement. You never let me gave up on my studies. Thank you for the strength and motivation you have given me in this journey that at times was full of hurdles.

Special acknowledgements are also given to University of Malaya for funding this research project, candidature defense assessors, ultrasound technicians, nurses, medical officers at the antenatal clinic UMMC for their assistance during data collection, and my study participants for taking part in this study. Last but not least, the London College of Clinical Hypnosis for providing that first step in my hypnosis journey.

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CHAPTER 1: INTRODUCTION

1.1 Overview

Physical symptoms during the period of gestation are normal as they coincide with the physiological, endocrinological, and anatomical changes of the body (Arulkumaran, Sivanesaratnam, Chatterjee, & Kumar, 2011). For some women these changes escalate into severe symptoms. These can range from normal morning sickness in the form of nausea and/or vomiting, or escalating into hyperemesis gravidarum (O'Brien, Evans, & White-McDonald, 2002).

Maternal physical symptoms such as hyperemesis gravidarum¹ and ptyalism gravidarum (excessive salivation), though rarely life threatening, are disabling, disrupt daily activities (O'Brien, Evans, & White-McDonald, 2002; Suzuki, Igarashi, Yamashita, & Satomi, 2010), and lead to further complications such as hypokalaemia or low potassium level and dehydration (Jueckstock, Kaestner & Mylonas, 2010).

Experiencing physical symptoms during pregnancy is one of the factors in the development of stress, anxiety and depression during pregnancy. For example, women with progressively worsening preeclampsia experienced higher stress level (Black, 2007). Stress, anxiety and depression may cause further complications. These complications include poor neonatal health, labour pain, and postpartum depression; for instance, depression and anxiety during pregnancy have been shown to be associated with labour pain (Čuržik & Begić, 2012), postpartum depression (Boath, 2008) and preterm birth (Fransson, O"rtenstrand, & Hjelmstedt, 2010; Dayan, et al., 2002).

Even without the complications of medical conditions and physical symptoms, antenatal psychological symptoms, such as depression, have the potential to cause further problems, such as sleep disturbances (Okun, Kiewra, Luther, Wisniewski, & Wisner, 2011). Orr, Blazer, James, and Reiter (2007) reported that women with symptoms of

¹ Hyperemesis gravidarum "is extreme, persistent nausea and vomiting during pregnancy..."(MedlinePlus, 2014)

depression had either fair or poor health status. Exposure to anxiety and depression during the antenatal period predisposes neonates to be born preterm, and the exposure to stress was associated with lower language abilities including poor understanding of spoken words (Laplante et al., 2004).

Physical and psychological symptoms during pregnancy.

Although the progress of antenatal psychological symptoms (anxiety, depression, and stress) coincides with the experience of physical symptoms, fear of the labour process, and what awaits at postpartum, as well as foetal and neonatal health and development, contribute to the severity of those psychological symptoms.

Treatment during the gestational period is pertinent in the management of the physical and psychological symptoms. Conventional treatment to assist women during pregnancy and labour includes epidural analgesia and drugs with mechanisms similar to morphine (opioids). Although conventional treatment such as epidural analgesia is effective, others such as opioids come with side effects such as neonatal breathing difficulties (Tournaire & Theau-Yonneau, 2007). Others opt for an easier alternative in the form of caesarean section (Melender, 2002).

The use of complementary medicine (such as acupuncture, acupressure, yoga and hypnosis) has been accepted as an adjunct to conventional treatment during pregnancy, and previous studies had indicated the successful use of these complementary medicine in assisting women during pregnancy, and preparing them for labour (Tournaire & Theau-Yonneau, 2007). The use of acupuncture and acupressure, for example, was successful in alleviating the symptoms of nausea and vomiting (Paulus, Zhang, Strehler, El-Danasouri, & Sterzik, 2002; Saberi, Sadat, Abedzadeh-Kalahroudi, & Taebi, 2013). Yoga, which includes relaxation technique incorporating breathing exercises, postures, and meditation, increases well-being during pregnancy (Curtis, Weinrib, & Katz, 2012). Meanwhile, hypnosis assisted women during pregnancy, labour and postpartum, as indicated by

previous studies (such as Madrid, Giovannoli & Wolfe, 2011; Mehl-Madrona, 2004; & Phillips-Moore, 2012).

Hypnosis for pregnancy.

The word hypnotism was first coined in the 19th century by an ophthalmologist from Scotland named James Braid. He first used the term 'neuro-hypnotism', which means 'nervous sleep', and later shortened it to 'hypnotism' and referred to the person who practiced hypnotism as the 'hypnotist' (Barabasz & Watkins, 2004).

The American Psychological Association had defined hypnosis in 1985 as, "a procedure during which a health professional or researcher suggests while treating someone that he or she experience changes in sensations, perceptions, thoughts, or behaviour" (American Psychological Association, 2015).

Hypnosis has come a long way since receiving its stamp of approval by several reputable associations in the 1950s. These include the American Medical Association, Canadian Medical Association, British Medical Association and the American Psychological Association. Since then, a positive growth of hypnosis has been seen in the healthcare settings, albeit with cautious acceptance by healthcare practitioners (Barabasz & Watkins, 2004).

Lack of support from scientific studies, superstitions, and misunderstandings are some of the reasons for the cautious acceptance of hypnosis by the scientific community (Weisberg, 2008). Misunderstandings of hypnosis are largely caused by its rather inaccurate portrayal in film and television dating as far back as the 1950s (Barrett, 2006). These include *Anguish* (a 1987 movie about a mother who hypnotised her son to kill others), *Never Say Never Again* (a 1994 James Bond movie about a doctor who hypnotises women against their will; Hypno-movies.com, 2004), and *The Demon Headmaster* (a 1996 television series about a headmaster who uses the power of suggestion to control his students; Cross, 2014). Just like the aforementioned movies and series, hypnosis has been inaccurately depicted as a process whereby a hypnotist has the ability to control subjects against their will. Thus the subjects are compelled to follow any suggestions given by the hypnotist (Barrett, 2006). The hypnotist is given an air of malevolence and a reputation as someone who is capable of harming another person by suggestion alone with subjects who are portrayed as helpless to fight those powers of suggestion. Thus, hypnosis needs to move from the realm of mystery and inaccurate depictions into the realm of science.

In order for this change to be successful, more research, especially regarding how hypnosis could be an adjunct to medical treatments in general and in the field of obstetrics, is needed as such research will be the cornerstone that will aid in fostering a more favourable attitude towards the science of hypnosis.

In order to change this attitude, emphasis should be on the safe use of the procedure of hypnosis when used by trained hypnotists who understand its nature and the proper application of techniques to avoid any misconceptions as depicted by the movies and stage shows, discussed earlier (Martin et al., 2010). Large and James (1991) showed that participants who obtained knowledge of hypnosis through stage shows were worried and reluctant to be hypnotised. The worries stem from the belief that hypnosis leads to a loss of control, which will enable the hypnotists to obtain secrets from the participants. Participants who were reluctant to undergo hypnosis stated that hypnosis conflicted with their religious beliefs such as Christianity. Barling and De Lucchi (2004) showed that when participants were divided into two groups, where the first group had previously experienced hypnosis and the second group had never experienced hypnosis, participants who had experienced hypnosis had accurate knowledge and positive beliefs toward hypnosis. These participants had less fear and were more likely to use hypnosis in relation to medical issues.

This raises the question as to whether an existing attitude towards hypnosis could be changed. Previous studies such as Martin et al. (2010) and Yu (2004) have shown that attitudes towards hypnosis can be changed from unfavourable to favourable, once subjects had been exposed to the truth about it.

Martin et al. (2010) conducted a study whereby participants were divided into two groups, with the first group consisting of physicians, psychologists, nurses, social workers, and physical therapists, all receiving lectures on the relationship of hypnosis to science. The lecturer was the specialist at a Havana, Cuba Hospital. The second group consisted of physicians who received lectures on urology by an expert in the field. Results indicated that participants in the first group were more interested in hypnosis and had more positive attitudes towards it, while group two participants scored lower on the attitude scale and were less enthusiastic about the topic of hypnosis as well as more afraid of hypnosis. Similarly, Yu (2004) showed that Chinese healthcare professionals in Hong Kong had misconceptions of hypnosis. For example, hypnosis was perceived to be forcing someone to tell the truth. Yu (2004) concluded that these misconceptions were due to the lack of formal hypnosis training and less information on the applications of hypnosis.

Studies have shown the efficacy of hypnosis in medicine in its ability to help patients to increase their relaxation state (Vickers, Zollman & Payne, 2001); relieve pain during medical procedures (Deng & Cassileth, 2005); and alleviate specific symptoms of postpartum depression (e.g., ceasing the thought of causing harm to the newborn) (Mantle, 2003; Yexley, 2007). In the field of obstetrics, hypnosis has been shown as one of the effective ways of assisting women with both physical and psychological symptoms. In terms of the physical symptoms, hypnosis had helped in reducing and/or eliminating nausea and hyperemesis gravidarum during pregnancy (Madrid, Giovannoli & Wolfe, 2011; Simon & Schwartz, 1999); lowering the incidence of epidural use (VandeVusse, Irland, Berner, Fuller, & Adams, 2007); lowering the incidence of intervention through surgery (Martin, Schauble, Rai, & Curry, 2001); providing pain relief during labour and shorter labour stages (Abbasi, Ghazi, Barlow-Harrison, Sheikhvatan, & Mohammadyari, 2009); decreasing the use of pain relief during labour (Mehl-Madrona, 2004); increasing

Apgar score to the average of 9 for newborns (Phillips-Moore, 2012); increasing psychological well-being at postpartum (Guse, Wissing, & Hartman, 2006); and reducing the incidence of postpartum depression (Phillips-Moore, 2012).

The aforementioned studies found that hypnosis did assist patients in the field of medicine. However, more research into the scientific nature of hypnosis needs to be conducted in order to change the attitude of healthcare professionals and healthcare users to be more accepting of hypnosis, as hypnosis has been shown to cause actual physical changes in the brain, particularly in studies on pain perception. For example, the results of Positron Emission Tomography Scans (PET Scan) suggested that perception of pain was associated with increased blood flow to the anterior cingulate gyrus, the brain region involved in attention and the association of emotions in relation to perceptions. However, participants in a hypnosis state experienced a decrease in blood flow to this region following suggestions that the pain was decreasing (Harvard Mental Health, 2002), thus reducing pain sensation.

The prefrontal region of the brain has been shown to be active during subjective pain sensation as in the study by Croft, Haenschel, and Gruzelier (2002). The researchers applied pain sensation to the index finger of participants' right hands. The brain activities of participants were measured via electroencelograph (EEG). These pain sensations were applied for ten minutes each time, and, following each application, participants rated their subjective pain sensation on a Likert scale ranging from 0 ('no pain') to 10 ('unbearable pain'). The participants were asked to press a trigger with their left hand as soon as they detected the pain sensation. These participants were divided into 'non-hypnosis group', 'hypnosis group' (involving the usual hypnosis technique of induction and deepening); and the 'hypnotic-analgesia group' (involving imagery to increase the sensation of numbness in the right hand). Results indicated the increased in brain activities in the prefrontal region of the brain during pain sensation. However, hypnosis had interfered with the subjective perception of pain in the prefrontal region for the participants in both hypnosis groups (Croft, Haenschel, & Gruzelier, 2002).

The aforementioned studies on brain activity are pertinent in emphasising the usefulness of hypnosis as one of the tools in medicine as many medical procedures necessitate pain relief (Deng, Barrie, & Cassileth, 2005). This is particularly useful for the relief of pain during childbirth, as shown by various studies (Abbasi, Ghazi, Barlow-Harrison, Sheikhvatan, & Mohammadyari, 2009) and for reduction in the use of pain relief during childbirth (Mehl-Madrona, 2004; VandeVusse, Irland, Berner, Fuller, & Adams, 2007).

Present Study

In Malaysia, studies on pregnant women have mainly focused on the psychological symptoms such as stress, anxiety, and depression (Fadzil et al., 2013; Raja Lexshimi, Hamidah, Rohani, Syed Zulkifli, 2007); the physical effects of pregnancy, particularly high risk pregnancy such as hypertension and preeclampsia (Yelumalai, Muniandy, Omar, & Qvist, 2010); and postpartum depression (Abdul Kadir, Muhammad Daud, Yaakob, & Nik Hussain, 2009). Studies have also focused on complementary and alternative treatment in pregnancy-related matters, such as the use of herbal medicine (Ab. Rahman, Sulaiman, Ahmad, Daud, & Hamid, 2008).

Although substantial evidence can be found in the aforementioned areas, what is lacking are studies on successful treatment, particularly complementary treatment in assisting women to cope with pregnancy-related problems, both psychological and physical; assisting women to prepare for labour and the postpartum period.

In regards to hypnosis research in obstetrics, the majority of studies involving an experimental approach had been focused on the effect of hypnosis intervention in preparing women for labour and the postpartum period (Abbasi, Ghazi, Barlow-Harrison, Sheikhvatan, & Mohammadyari, 2009; Cyna & McAuliffe, 2006; Mehl-Madrona, 2004;

Phillips-Moore, 2012). Studies that investigated the efficacy of hypnosis intervention during the earlier trimester were primarily centred on individual case reports, especially on hyperemesis gravidarum (Madrid, Giovannoli, & Wolfe, 2011; Simon & Schwartz, 1999).

1.2 Research Questions

The research questions are divided into four main stages, which are pregnancy, labour, 24 hours postpartum, and two months postpartum.

Pregnancy stage.

- Does hypnosis intervention for the experimental group participants alleviate/reduce the antenatal psychological and physical symptoms, as compared to the control group participants who did not receive hypnosis intervention over time from week 16 to week 36 of pregnancy?
- 2. Are foetal weight and blood pressure (systolic and diastolic) for the experimental group participants different from that of the control group participants?
- 3. What are the associations between group types (experimental and control groups) and antenatal psychological symptoms (stress, anxiety, and depression) at week 36 of pregnancy and antenatal physical symptoms at week 36 of pregnancy?

Labour stage.

- 1. Do the variables measured during labour (length of second stage of labour, third stage of labour, the use of pain relief during labour, methods of delivery, and assisted vaginal delivery) differ between the experimental and control groups' participants?
- 2. What are the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, and variables measured during labour (methods of delivery, the use of pain relief, and

24 hours postpartum stage.

- Do the neonatal birth weight, Apgar score at one minute of birth, Apgar score at five minutes of birth, and self-reported pain (just before delivery, during delivery, and right after delivery) differ between the experimental and control groups?
- 2. What are the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, and variables measured within 24 hours postpartum?

Two months postpartum stage.

- 1. What are the changes in the experience of antenatal and postpartum psychological symptoms (stress, anxiety, and depression) over time from pregnancy to the postpartum stages for the experimental and control group participants?
- 2. Does the experience of postpartum depression differ between the experimental and control group participants?
- 3. What are the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, postpartum psychological symptoms, and postpartum depression?
- 4. What are the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, postpartum psychological symptoms, living arrangements during postpartum, and postpartum depression?

1.3 Research objectives.

To answer the research questions, the present study aims to address the following primary and secondary research objectives:

The general objective of this study is to examine the results of hypnosis intervention against those of a control group, who did not receive hypnosis intervention, in terms of the antenatal psychological symptoms (stress, anxiety, and depression) and antenatal physical symptoms (e.g., nausea and vomiting). The general objective is divided into four parts, which are (1) to determine the efficacy of hypnosis intervention during pregnancy, (2) to determine the efficacy of hypnosis intervention for labour, (3) to determine the efficacy of hypnosis intervention for 24 hours postpartum, and (4) to determine the efficacy of hypnosis intervention.

1. To determine the efficacy of hypnosis intervention during the pregnancy stage.

The primary objective is:

• To compare the experimental and control groups' antenatal psychological and physical symptoms (stress, anxiety, and depression) over the intervention phases [week 16 (Time 1), week 20 (Time 2), week 28 (Time 3), and week 36 (Time 4)].

The secondary objectives are:

- To compare the differences between the experimental and control group in foetal weight at week 36 of pregnancy and systolic and diastolic blood pressure at week 36 of pregnancy.
- To determine the relationship between group types (experimental and control groups), antenatal psychological symptoms (stress, anxiety, and depression) at week 36 of pregnancy and antenatal physical symptoms at week 36 of pregnancy.
- To determine the efficacy of hypnosis intervention for the labour stage.
 The secondary objectives are:
- To compare the differences in the variables measured during labour (length of second

stage of labour, third stage of labour, the used of pain relief during labour, methods of delivery, and assisted vaginal delivery) between the experimental and control groups.

- To determine the association between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, and variables measured during labour (methods of delivery, use of pain relief and vaginal assisted delivery).
- To determine the efficacy of hypnosis intervention for 24 hours postpartum The secondary objectives are:
- To compare the differences in the neonatal birth weight, Apgar score at one minute of birth, and Apgar score at five minutes of birth, and self-reported pain (just before delivery, during delivery, and right after delivery) between the experimental and control groups.
- To determine the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, and variables measured within 24 hours postpartum
- To determine the efficacy of hypnosis intervention for two months postpartum. The primary objective is:
- To compare the change in the experience of antenatal and postpartum psychological symptoms (stress, anxiety, and depression) over time between the experimental and control groups.
- To compare the differences in the experience of postpartum depression between the experimental and control groups.

The secondary objectives are:

- To determine the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, postpartum psychological symptoms, and postpartum depression.
- To determine the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, postpartum psychological symptoms, living arrangements during pregnancy, and postpartum depression.

Significance of the present study

The present study contributes significantly to assist pregnant women to increase their psychological and physical well-being during pregnancy by focusing on the alleviation of physical and psychological symptoms earlier in pregnancy. This aids women to better cope with the labour stages and the period of postpartum, as the hypnosis sessions earlier in pregnancy included teaching women self-hypnosis (a self-administered hypnosis, first taught during the first session, and later practiced at home), which they could use during their labour to increase relaxation and decrease fear. Women could also use the technique they had learnt in self-hypnosis to increase psychological well-being during the period of postpartum.

The present study was designed to include all of the pregnancy-related stages, pregnancy, labour and postpartum, where past studies had only focused on one or two of these stages. The link was made between physical and psychological symptoms at the pregnancy stage with those of the labour and the postpartum stages, and comparison was made between women who had received hypnosis intervention (using hypnosis to increase physical and psychological well-being) with women who did not receive hypnosis intervention.

The present study provided a new hypnosis induction technique for the symptom alleviation and this was incorporated in the self-hypnosis technique for women to practice on their own, thus increasing women's ability to relax and strengthening their physical and psychological well-being.

Further, the present study is significant in providing more evidence to healthcare professionals in general and specifically professionals in women's health that hypnosis can be an additional tool in helping women to cope better during pregnancy. It is also an avenue to provide evidence in the efficacy of hypnosis in reducing the use of pain relief during labour and decreasing the incidence of caesarean section. Postpartum depression is a worrying phenomenon in obstetrics; however, hypnosis can help women decrease their psychological symptoms during the postpartum period, thus reducing the incidence of postpartum depression.

Organisation of the Thesis

This thesis is composed of six chapters. The first chapter provides the background of the present study. Chapter two attempts to answer the research questions through a review of the literature related to antenatal psychological symptoms (stress, anxiety, depression) and physical symptoms in relation to three pertinent stages associated with pregnancy along with the role of hypnosis intervention in assisting women in alleviating those symptoms to increase psychological and physical well-being. These three pertinent stages are pregnancy, labour, and postpartum. In order to understand the utility of hypnosis in obstetrics and the techniques of hypnosis, the literature review also discusses the history, techniques and phenomena of hypnosis. Chapter three illustrates the conceptual framework, justification and more detailed significance of the present study. Chapter four discusses the study methodology, and chapter five describes the study's findings or results. Chapter six provides discussion of the results, implications, conclusion, limitations and recommendations stemming from the study.

CHAPTER 2: LITERATURE REVIEW ON THE EFFICACY OF HYPNOSIS INTERVENTION IN ALLEVIATING THE PSYCHOLOGICAL AND PHYSICAL SYMPTOMS DURING PREGNANCY, LABOUR, AND POSTPARTUM

2.1 Introduction

This chapter examines the history of hypnosis, hypnosis techniques, hypnosis phenomena, and the efficacy of hypnosis intervention in medicine and in treatment of psychological symptoms.

2.2 Literature review on hypnosis

History.

The modern history of hypnosis can be traced back to 18th century Europe, to a physician named Mesmer. The idea of utilising hypnosis, which was popularly known as mesmerism, named after Mesmer himself, came from a series of his own findings and learning. The results of his doctoral thesis titled: *De Planetarum Influsu* indicated the gravity and forces in the environment caused changes in the functions of the body. Maxmilian Hell, a priest, demonstrated to Mesmer that holding a magnetised metal rod in front of a person, resulted in the eyes of this person to be transfixed on the rod, and suggestions to heal various ailments were then delivered (Barabasz & Watkins, 2004). These procedures are similar to the current concept of hypnosis in that eye fixation on certain objects, whether the hypnotherapist's eyes or a spot on the wall, will help narrow the focus of attention, subsequently bypassing the conscious process and bringing attention into the unconscious awareness, which assists in the process of change.

Mesmer later found that he could accomplish the priest's technique without using magnetised metal but by simply placing his hands near his patients, a procedure discovered by observing the work of a priest named Gassner. These processes of discovery led him to name his form of treatment 'animal magnetism' (Barabasz & Watkins, 2004).

Mesmer used a round device named the baquet that he used as part of his animal magnetism treatment. The baquet consisted of a tub made from wood, with bottles, metal, glass, and water, arranged in a circle. Patients were asked to sit around this baquet and touch the iron rods protruding from it. His idea was that the power of the animal magnetism from the baquet would be transferred to the patients. This treatment, which occurred in a darkened room, consisted of background music, accompanying Mesmer while he was moving around the baquet rubbing his patients with a rod made of metal.

Mesmer's patients were improving with his form of treatment but the medical professionals in France were sceptical. A committee, which included the famous Benjamin Franklin, had carried out an investigation. The committee decided to discredit Mesmerism (Barabasz & Watkins, 2004).

By then, mesmerism had gained popularity, albeit more in the mystical and paranormal realms. This alienated hypnosis from the legitimate medical and religious practices (Hammond, 2014).

In 1837 in England, John Elliotson, a physician, attempted to revive mesmerism, albeit with great difficulties. Elliotson's practice of mesmerism was ridiculed and met with disbelief by his fellow medical professionals. This led to his resignation from a university hospital (Barabasz & Watkins, 2004; Whorwell, 2005).

In 1845, James Esdaille, a surgeon in India, fared much better in infusing his medical practice with mesmerism. Over the period of seven years, he performed countless surgical procedures for various medical conditions including tumor removals without the use of anaesthesia. However, like the previous physicians who practiced mesmerism, he was discredited once he returned to Scotland (Barabasz & Watkins, 2004).

Clark Hull, a psychologist, conducted the first systematic research on hypnosis in the year 1933 (Barabasz & Watkins, 2004). As with his predecessors, Hull's research was criticised by his peers, but despite these criticisms, he managed to make hypnosis more reputable. Hull's success was followed by a string of other successes in proving the efficacy of hypnosis in the treatment of various conditions. Following this, the Society for Clinical and Experimental Hypnosis (SCEH) was established in 1949 and then a splintered group from the SCEH established the American Society of Clinical Hypnosis (ASCH). Among the pioneers of ASCH was Milton H. Erickson (Barabasz & Watkins, 2004; Whorwell, 2005).

In Asia, practices similar to hypnosis are said to have existed long before it was made popular by Mesmer. The nature of hypnosis was intertwined with ancient philosophy and cultural practices (Otani, 2003), which can be traced to the earliest history of ancient traditional healing. Some forms of ancient treatment, and some which continue well into modern times, include inducing trance in patients. This trance state was very similar to the process that subjects under hypnosis experienced. Often some form of plants and herbs were included in the healing ceremony (Hammond, 2014).

Aside from the ancient healing rituals, the practice of meditation, which involves focused concentration leading to an altered state of consciousness, deep breathing, and relaxation (Barbor, 2013), displays a great similarity to the nature of hypnosis (Lifshitz & Raz, 2012; Otani, 2003).

Hypnosis techniques.

Although ninety percent of the population could be hypnotised, as long as they are willing (Hartland, 2001), preparation prior to hypnosis is still pertinent. A common hypnosis technique uses three stages, which include the preparatory or hypnotic induction stage, the transitory or the deepening stage and 'hypnotic rapport' or the hypnotic suggestion stage (Barabasz & Watkins, 2004).

The preparatory or hypnotic induction stage is the initial stage in the hypnosis process. Suggestions, given in future tense, enable subjects to prepare for what will come next. This includes suggestions such as, "in a few minutes you will feel your eyelids becoming heavier and you will feel the need to close your eyes and go into a deep relaxation," and, "you soon will be aware how light your hand is, so light that it will start to lift off your thigh."

The transitory or the deepening stage follows the preparatory step. Suggestions are given in the present tense. The process of dissociation is deepened during this stage. The dissociation process allows the separation of self from conscious awareness. The progress to this phase should only be allowed once the subjects are responding to the suggestions in the preparatory step. This includes suggestions such as, "you could feel your fingers moving and twitching; your hands are beginning to feel lighter and you can feel a slight lift."

The 'hypnotic rapport' step or the hypnotic suggestion is where the true therapy is conducted. Response to hypnosis is enhanced during this stage, especially if the earlier stages are conducted successfully.

During these stages, subjects may demonstrate several observable phenomena. These phenomena and changes vary from person to person. Success depends on the hypnotic rapport developed between a subject and a hypnotist. According to Yager (2009), these observable phenomena include: (a) changes of the eye, rolling upward as in sleep, or if eyes are open during hypnosis either naturally or suggested by the hypnotist, the eyes seem to be defocused; (b) body movement, either lack of movement in adults, with the body appearing to sink much more deeply into the chair, or movement such as wiggling and laughing in children; (c) relaxation of muscles, becoming flaccid and relaxed more deeply; (d) changes in the breathing pattern, with breathing becoming deeper and more relaxed.

Hypnosis phenomena.

Individuals in a hypnotic state will experience various phenomena. These phenomena include hyperamnesia, amnesia, hallucinations, dissociation, time distortion, age regression, age progression, muscle relaxation, and hypnoanalgesia. These

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phenomena either are due to suggestion or occur naturally.

Hyperamnesia. Hyperamnesia involves giving specific suggestions to allow the mind to remember certain events much more vividly. An event long forgotten could be reconstructed and remembered with much more ease than it could in a waking state (Barabasz & Watkins, 2004). Hyperamnesia is helpful in forensics as this allows a person to remember certain events or people in detail (Voit & DeLaney, 2004).

Amnesia. During hypnosis, suggestions could be given to create amnesia while subjects are in hypnosis until a point where subjects are strong enough to handle remembering those suggestions (Voit & DeLaney, 2004). Although suggestions can be given for subjects to remember certain events, cautions are necessary, as the remembered events could be either real or confabulated.

Hallucinations. Hallucinations during hypnosis are divided into positive and negative. Positive hallucinations occur when subjects are convinced that they are experiencing some events although the events are not there (e.g., phantom limb pain). Negative hallucinations occur when subjects are convinced that they are not experiencing certain events even though the events are occurring (Yager, 2009; Voit & DeLaney, 2004)

Dissociation. It is common for subjects under hypnosis to experience the process of dissociation. Dissociation during hypnosis involves separating the self from various conditions, such as pain (Barabasz & Watkins, 2004) and anxiety (Yager, 2009).

Time distortion. Time distortion in hypnosis is similar to the slowing down of the inner clock (Naish, 2006). Time is manipulated to either move fast (condensation) or move slow (expansion). Manipulating time to make it move faster could be used for a variety of purposes such as for talking in public for people who have anxiety around public speaking (Voit & DeLaney, 2004).

Age regression. Age regression is remembering events from the earlier part of a subject's life (Yager, 2009). There are two categories of age regression: full regression or partial regression. Full regression occurs when a subject fully experiences the age to which

he or she has regressed, and partial regression involves remembering incidents in the past while still maintaining control of self. In therapy, regression can be used to assist recovery from trauma and pain by taking the subjects to an age before the particular trauma or pain had occurred so that subjects can experience a healthy physical or psychological state. Age regression could be used to assist subjects to bring forth forgotten experiences, which can be particularly helpful during therapy (Voit & DeLaney, 2012).

Age progression. Age progression is the opposite of age regression. This is a situation in which subjects' progress forward into their future. This can be used in therapy to take subjects to a time in the future where they are apprehensive due to certain events (e.g., fear of public speaking, anticipating pain due to certain medical procedures) or disabling habits (e.g., unhealthy behaviours). Age progression here is used to create positive feelings about this future event.

Muscle relaxation. A common change during hypnosis is muscle relaxation. This release of muscle tension affects both the skeletal muscle, such as the muscles of the arms and legs, and the smooth muscle like gastrointestinal muscle (Barabasz & Watkins, 2004).

Hypnoanalgesia. Hypnoanalgesia has been used successfully in pain related to medical conditions, including irritable bowel syndrome, wound healing, and labour (Stoelb, Molton, Jensen, & Patterson, 2009). The use of hypnoanalgesia to relieve pain has been documented as far back as the 18th century in the work of a physician named Santiago Ramón y Cajal (1856 – 1934; Lanfranco, Canales-Johnson, & Huepe, 2014).

The first published work was by Santiago Ramón y Cajal in 1889 in the form of a case report of how he used hypnosis to relieve pain of labour for his wife (Lanfranco, Canales-Johnson, & Huepe, 2014). Since then, studies on hypnoanalgesia during labour have continued, supporting its successful usage (Phillip-Moore, 2012).

The following sections outline past studies pertaining to psychological (stress, anxiety, and depression) and physical symptoms during pregnancy, labour, and postpartum. The following sections also present information pertaining to the

investigation of the present study during the pregnancy stage (i.e. foetal weight and blood pressure measurement), labour stage (i.e. labour stage, pain relief during labour, methods of delivery, and assisted vaginal delivery), and postpartum (i.e. neonatal birth weight, neonatal Apgar score, maternal pain experience during labour, and maternal psychological symptoms at postpartum). Information regarding the above-mentioned parameters were obtained from past literature, which included database searches, such as Proquest, Ovid, Ebsco Host, BioMed Central, PubMed Central, ScienceDirect, and Cochrane Library.

2.3 The Pregnancy Stage

This section discusses the antenatal psychological (stress, anxiety, and depression) and physical symptoms during pregnancy. This section will also cover the efficacy of hypnosis intervention during pregnancy.

2.3.1 Antenatal psychological (depression, anxiety and stress) and physical

symptoms during pregnancy.

Evidence supported the inter-relationships between antenatal psychological symptoms (stress, anxiety, and depressive symptoms) during pregnancy with variables such as antenatal physical symptoms, maternal complications such as gestational hypertension, and neonatal complications such as low foetal weight. Women with depression, for example, were more likely to experience preeclampsia, gestational diabetes, preterm labour, abnormalities of placenta, anaemia, and infections. They were also more likely to experience unfavourable foetal outcomes, such as distress, death, growth restriction, and abnormalities (Bansil et al., 2010).

The associations between antenatal physical and psychological symptoms have been well-established. For example, women with antenatal depression and anxiety had higher occurrence of nausea and vomiting, and these women took longer sick leave, with frequent visits to the obstetrics office. These women also opted for elective caesarean
section and requested epidural analgesia during labour (Andersson, Sundstrom-Poromaa, Wulff, Astrom, & Bixo, 2004).

Pregnant women who experienced antenatal physical symptoms during pregnancy have been shown to experience comorbid anxiety and depression. For example, in a study looking at anxiety and depression of women with severe nausea and vomiting or hyperemesis gravidarum, it was found that 37.3% had both anxiety and depression, 9.6% had anxiety and 10.5% had depression (Tan, Zaidi, Azmi, Omar & Khong, 2014).

The failure to properly treat antenatal psychological symptoms may be detrimental, as this may lead to adverse medical conditions, such as preeclampsia. Zhang et al. (2013) found that mental stress during pregnancy was related to the risk of having gestational hypertension and preeclampsia, and this study suggested that pregnant women who were having work stress and depression or anxiety also were found to have preeclampsia.

The Zhang et al. (2013) study was supported by a study conducted to compare women who were diagnosed by an obstetrician to be preeclamptic (pregnancy- induced hypertension) during pregnancy with women who did not experience preeclampsia during pregnancy. Data were collected three days following delivery. Results indicated that the perceived stress score for women diagnosed to be preeclamptic was higher than for women who were not diagnosed with preeclampsia. Mental stress is significantly associated with the increased risk of preeclampsia (Shamsi et al., 2010). However, in a study with nulliparous women, Vollebregt, van der Wal, Wolf, Vrijkotte, Boer, and Bonsel (2008) found no association between stress, anxiety and depression with gestational hypertension and preeclampsia.

Gestational hypertension has been shown to be associated with the worsening of antenatal psychological symptoms, as in a study by Katon, Russo, Melville, Katon and Gavin (2012) which found that pregnant women with pre-existing hypertension had a risk of also having depression. Zhang et al. (2013) found that mental stress was linked to

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having gestational hypertension. Zhang et al. (2013) also found that depression or anxiety during pregnancy was linked to preeclampsia. On the other hand, treatment for depression during pregnancy has been shown to increase the risk of developing gestational hypertension. For example, a study looking into the risk of selective serotonin reuptake inhibitors (SSRIs) for treatment of depression showed that 19.1% of women who received this treatment developed gestational hypertension. Toh et al. (2009) found that a total of 13.1% women who received treatment during their first trimester and 26.1% who continued treatment into the following trimesters had gestational hypertension. Although evidence had shown that SSRIs were safe for consumption during pregnancy, there was some risk to foetal development due to SSRIs exposure in utero, such as the threat of neonatal persistent pulmonary hypertension (Casper, 2015) and newborn respiratory failure, which accounts for one third of neonatal mortality (Steinhorn, 2010; Yonkers, Blackwell, & Forray, 2014). Yonkers, Blackwell, and Forray (2014) emphasised that non-pharmacological treatments like psychotherapy should be chosen as the first line treatment for depression.

Aside from gestational hypertension, psychological symptoms have also been shown to affect foetal weight. In a study using the Brief Symptom Inventory to assess maternal distress (anxiety and depressive symptoms), it was found that although maternal distress was not associated with foetal weight in mid-pregnancy, it was associated with poor foetal weight gain in late pregnancy (third trimester), and, after adjusting for cofounding variables such as gestational age and maternal age, only anxiety was associated with poor foetal weight gain or intrauterine growth restriction (IUGR) (Heinrichs et al., 2010). A study by Uguz, Gezginc, and Yazici (2011) showed that 28.6% of women with IUGR foetuses had experienced generalised anxiety disorder and 33.9% had major depression, compared to 5.4% of women who had experienced generalised anxiety disorder and 6.5% with major depression who had normally growing foetuses. Further analysis by Uguz et al. (2011) indicated that generalised anxiety disorder and major depression had significantly predicted IUGR foetuses.

The complications of IUGR are increased neonatal mortality and morbidity. Neonates born with IUGR may experience a slower growth rate, poorer performance in school (Salhan, 2007), and higher risk of cancer, especially lung and kidney (Ahlgren, Wohlfahrt, Olsen, Sørensen & Melbye, 2007). According to the Barker hypothesis, these neonates may have increased risk of developing coronary artery disease, hypertension, stroke and type II diabetes later in life (Dover, 2009).



Figure 1.1: Barker Hypothesis

Courtesy of Dover (2009; see Appendix VII)

2.3.2 Hypnosis intervention during pregnancy.

Depression, anxiety and stress can be managed and treated using several treatment modalities including psychotropic medications, cognitive-behavioural therapy, stress management (Nolen-Hoeksema, 2011), and hypnosis (Stephenson, 2007).

Psychotropic medications prescribed early in pregnancy for anxiety and depression have been shown to increase the risk of neonatal death and miscarriage (Ban, Tata, West, Fiaschi, & Gibson, 2012). Avoidance of drugs during pregnancy is essential in

ensuring maternal, foetal and neonatal health, as neonates exposed to this drug in utero are at risk of having various complications, such as cyanosis, seizures, tachycardia, respiratory distress, and heart failure (Committee on Obstetrics Practice, American Academy of Pediatrics, 2014).

The WHO mhGAP Intervention Guide (WHO, 2010) for mental, neurological and substance use disorders suggested that the use of antidepressants for pregnant women and lactating mothers is to be avoided. However, low doses of antidepressants are recommended if psychotherapy is ineffective. This recommendation indicates that medications to treat psychological conditions should be avoided as much as possible. Other less harmful means exist to treat psychological symptoms, such as psychotherapy (WHO, 2010).

Although the efficacy of hypnosis as an adjunct to medical treatments is wellestablished (Wobst, 2007), hypnosis studies investigating treating psychological symptoms during pregnancy are limited. Most of these studies focused on alleviating physical symptoms, such as nausea and vomiting. This section will examine the value of using hypnosis during pregnancy.

A study conducted by Simon and Schwartz (1999) shared the results of a case report of several women with hyperemesis gravidarum who were successfully treated with hypnosis. The first case featured a 28-year-old multiparous woman with three previous deliveries who had had hyperemesis gravidarum for all three pregnancies. She was admitted during week eight of her current pregnancy, where she was subsequently treated with hypnosis. Prior to hypnosis treatment she was unable to eat and due to this she had lost a total of eight pounds. She was vomiting eight to 10 times per day and could not take antiemetic medication (the reasons that she could not take the medication were not cited). The patient's nausea and vomiting were resolved following three sessions of hypnosis. The second case followed a 26-year-old primiparous woman who was hospitalised for hyperemesis gravidarum. She was vomiting between six to eight times per day and, due to this, experienced a total weight loss of three pounds. Unlike the first case, this woman was resistant to the antiemetic drug. History taking prior to the hypnosis session revealed that she was ambivalent towards the baby she was carrying and had fears of being an incompetent wife and mother. She was having difficulty meeting her mother-in-law's expectations although psychological assessment was negative for any psychiatric conditions (the type of assessment was not specified). Hypnosis sessions were conducted at week 12 of pregnancy. Hyperemesis symptoms resolved following the third session. The researchers concluded that hypnosis works in alleviating symptoms of hyperemesis gravidarum by inducing a physiological form of relaxation. This relaxation decreases the sympathetic nervous system action that causes muscles to tense. Hypnosis helps women with hyperemesis gravidarum to relax their stomach and throat muscles, thus reducing and/or eliminating the incidence of vomiting.

Madrid, Giovannoli, and Wolfe (2011) discuss the treatment of severe nausea with hypnosis based on case reports of four pregnant women. All the case reports showed that the severe nausea was related to feelings of fear and guilt. These include fear of abusing their babies, fear of their babies' health, guilt of previous abortions, and guilt for having less connection with their babies. The severe nausea resolved at the end of the first session for all four women.

Pregnant women at 20 weeks or more gestation who had a foetus with intrauterine growth restrictions (IUGR) and oligohydramnios (decreased amniotic fluid volume) took part in this next study (Shah, Thakkar, & Vyas, 2011). Participants in the experimental group received hypnosis and medical treatment, and participants in the control group received only medical treatment. The aim of hypnosis was to relax the uterine muscles and improve the circulation of the placenta. During the first month, hypnosis sessions were given to the participants twice per week. From the second week onwards, hypnosis was given once per week until delivery. The suggestions during hypnosis include laying a hand on the abdomen and visualising the baby growing, as in, "A small flower bud on the plant

is seen. It is getting love, care and nourishment by you and is growing and getting converted into a beautiful, full-blown flower." Results indicated that participants in the experimental group had more spontaneous vaginal deliveries, fewer labour inductions and fewer caesarean delivery compared to the control group participants. A total of 70% of participants in the experimental group had full-term neonates compared to 25% in the control group, and 60% of neonates borne to women in the experimental group had a birth weight of two kilograms or more compared to 20% in the control group (Shah, Thakkar, & Vyas, 2011).

The aforementioned studies did not include the measurement of women's psychological symptoms or show the link between psychological and physical symptoms during pregnancy. Although the Simon and Schwartz (1999) study had mentioned the assessment of psychiatric conditions, the nature of this assessment was not included and the changes between pre-treatment and post-treatment were not discussed. Therefore, the present study will attempt to establish the pertinent link between antenatal psychological and physical symptoms during pregnancy, and establish its associations with the experience of gestational hypertension and foetal weight during the third trimester of pregnancy.

In summary, past studies had shown associations between antenatal psychological and physical symptoms. Pregnant women who experienced depression, for example, had higher occurrence of nausea and vomiting. Meanwhile, pre-existing hypertension, for example, has been shown to be a risk factor to depression. Although antenatal psychological symptoms have been shown to affect foetal weight, studies that show this association are still lacking, and more studies are needed to establish a stronger link. This section has shown that hypnosis interventions during pregnancy were focused on case studies of one and or a few patients. None so far, with the exception of the present study that explored the changes of antenatal physical and psychological symptoms from earlier trimester to the period closer to delivery, and showing the link between both the physical and psychological symptoms, as well as the link between these symptoms with the labour and postpartum stages.

2.4 The Labour Stage

This section discusses the variables related to labour, which are the labour stages, the use of pain relief during labour, methods of delivery, assisted vaginal delivery, and self-reported pain (just before, during and right after delivery). This section will also cover the efficacy of hypnosis intervention for labour.

2.4.1 Labour stages.

Labour stages can be divided into three phases: first stage, second stage and third stage. The first stage of labour is defined as the first onset of labour, as diagnosed by medical personnel by the full cervix dilatation (10 cm). This stage can be categorised into two phases. The first phase is the latent phase. This phase is marked by irregular contractions. These contractions will slowly become more frequent, stronger and closer together (The Merck Manual of Diagnosis and Therapy Online, 2015). The cervix becomes effaced, the process whereby the cervix becomes shorter in length, and opens to between four to six centimeters (Baker & Kenny, 2011). The second phase or the active phase lasts from the opening of the cervix from four to six centimeters to 10 centimeters (full dilatation). This dilation occurs at the average of one centimetre for every hour (Baker & Kenny, 2011). As the foetal head descends further into the pelvis, the urge to push increases.

There are instances of poor progress of labour due to various circumstances, such as previous caesarean section (NHS, 2008) and of labour even though the membranes have ruptured. In this instance, labour will be induced in the hospital using artificial means such as prostaglandin and oxytocin to increase the rate of uterine contractions.

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Artificial means used to induce labour following membrane rupture are employed to avoid bacterial infection to the women and foetus, although the use of this artificial means may increase the risk of postpartum haemorrhage due to prolonged labour when administered with oxytocin (Baker & Kenny, 2011). Other side-effect of induction of labour include emergency caesarean section (NHS, 2008). Some women may experience higher pain sensation during labour induction in comparison to spontaneous vaginal birth (NHS, 2008). In this instance, if induction of labour is a necessary measure, teaching women coping mechanisms during labour such as proper breathing and relaxation techniques may assist in reducing the pain. In a survey conducted to investigate the non-pharmacological pain relieving techniques used during labour, the results indicated that women found the use of breathing and relaxation techniques to be effective in pain relief (Brown, Douglas & Flood, 2001).

The second stage of labour spans from the cervix full dilatation to the foetal delivery. The foetal head is visible (head crowning), and the urge to push or bear down becomes stronger (The Merck Manual of Diagnosis and Therapy Online, 2015; Baker & Kenny, 2011). The length of the second stage of labour varies between the nulliparous and the multiparous women with the former having an average of one hour and the latter with an average of 15 to 30 minutes (The Merck Manual of Diagnosis and Therapy Online, 2015). This increase in average time of the second stage of labour is due to several factors. These factors include foetal or maternal complications (Baker & Kenny, 2011) such as foetal macrosomia, and the use of some form of pain relief, such as epidural anaesthesia (Baker & Kenny, 2011).

The time from foetal delivery to the placental delivery is the third stage. The average length of time in this stage is between six to seven minutes. The increase of average time during the third stage of labour is due to several factors. These factors include foetal (e.g., preterm delivery) or maternal complications (e.g., preeclampsia and postpartum haemorrhage or excessive bleeding). Other factors include first pregnancies

and the use of pain relief such as pethidine (Taebi, Kalahroudi, Sadat, & Saberi, 2012).

Pain relief during labour. Opting for pain relief during labour is a natural course of action for some women. Normally the decision to use pain relief is made in consultation with physicians, although the final decision to opt for one should be made by the pregnant woman (Baker & Kenny, 2011). In the healthcare setting, various types of pharmacological relief during labour are adopted, including the use of opiates (such as pethidine), Entonox, epidural analgesia, and spinal anaesthesia. Although these pain relievers have been shown to be safe, they are accompanied by myriad side-effects. For example, pethidine may cause drowsiness, entonox may cause nausea, and epidurals may cause prolonged second stage labour and neonatal respiratory distress (Baker & Kenny, 2011; British Columbia Perinatal Health Program, 2007). The nonpharmacological methods of pain relief taught during pregnancy, such as relaxation techniques, have the ability to reduce anxiety and increase pain tolerance during labour, thus reducing the use of pharmacological methods in pain relief (Brown, Douglas, & Flood, 2001; Hughes, Williams, Bardacke, Duncan, Dimidjian, & Goodman, 2009).

Assisted vaginal delivery. Foetal complications, such as slow foetal heart rate, and maternal complications, such as prolonged labour in the second stage and exhaustion (Unzila, & Norwitz, 2009), have led physicians to opt for interventions in the form of instruments to assist in the process of labour. Instruments of choice include the ventouse, or vacuum extractor, and forceps.

The use of forceps increased the risk of maternal morbidity including increased risk of injuries to the perineum (the area between vulva and anus), pain in the perineum, blood loss due to injuries, and urinary incontinence, while vacuums increased injury to the neonates such as lacerations of the scalp and intracranial haemorrhage or blood accumulation in the cranium (Unzila & Norwitz, 2009; Vacca, 2006).

The problems caused by assisted vaginal delivery caused some women to experience less positive outcomes, which included problems in breastfeeding, fatigue, stitches from labour, which caused pain, painful intercourse, backache, depression, anxiety, and sleep problems. These women had also reported flashbacks of events that occurred during labour (Henderson & Redshaw, 2013).

The results of the study by Henderson and Redshaw (2013) are congruent with those of another study conducted by Rowlands and Redshaw (2012), indicating that at one month postpartum, 17% of women who had assisted vaginal delivery via forceps had experienced anxiety and 11% had experienced depression. At three months postpartum, these women were more likely to report symptoms of posttraumatic stress disorder (PTSD), and they were more likely to experience fatigue, difficulties in breastfeeding and anxiety.

Methods of delivery. An alternative procedure to reduce maternal and neonatal morbidity and mortality is the caesarean section, although some women opt for elective caesarean sections. The caesarean section is a surgical procedure via abdominal incision followed by incision in the uterus (Mayo Clinic, 2015). Caesarean sections are conducted for several reasons, such as failure of assisted vaginal delivery, previous history of caesarean section, poor progress of second stage of labour, foetal malpresentation, twin pregnancies, abruption of the placenta, and hypertension (Mayo Clinic, 2015; Vacca, 2006). Although a caesarean section is a relatively safe procedure, it has several neonatal and maternal complications.

A cohort study of 1,460 nulliparous women in China, which compared women who went through caesarean section (CS) and women who had spontaneous vaginal delivery (SVD), indicated that women in the CS group had 2.2 times more complications (fever, haemorrhage, and infections) and a higher volume of blood loss than the ones in the SVD group (Wang et al., 2010). When followed into the postpartum period, more women in the CS group reported pain in the abdomen and increased incidence of rehospitalisation due to delivery complications like fever. A study (Thompson, Roberts, Currie, & Ellwood, 2002) was conducted to examine mothers' health problems during the first few days of birth and later at weeks eight and 24 postpartum. The questionnaire regarding mothers' health problems included 12 health problems: "exhaustion/extreme tiredness, lack of sleep through baby crying, excessive or prolonged bleeding, backache, frequent headaches or migraines, sexual problems, haemorrhoids (piles), sore perineum, mastitis, bowel problems (e.g., constipation or diarrhoeas), and urinary incontinence (e.g., hard to hold urine when coughing, sneezing, or exercising), with "yes" or "no" as the response options.

Thompson, Roberts, Currie, and Ellwood (2002) found that, aside from the aforementioned listed health problems in the questionnaire, women also reported other problems such as pain caused by caesarean section, as well as respiratory, breast, and musculoskeletal problems. Thompson et al. (2002) found that women who had caesarean section as their birth method were more likely to report exhaustion, problems with bowel movement and problems with sleep due to crying baby at eight and 24 weeks portpartum compared to women who had spontaneous vaginal birth, although women with spontaneous vaginal birth were more likely to report perineal pain at weeks eight, 16, and 24 postpartum. Women who had assisted vaginal deliveries (e.g., forceps and vacuums) were more likely to report pain in the perineal region and bowel and sexual problems than the ones who had spontaneous vaginal deliveries. The study also found that women with caeserean sections were more likely to be readmitted to hospital. Although the researchers did not provide any reasons for changes in the trend, they recommended that there should be some measure to help women alleviate the physical and psychological conditions experienced during the postpartum period.

Caeserean sections negatively affect the neonates as well. Neonates whose mothers had caesarean sections may have various complications, which include breathing problems and injury to skin during surgical incision (Mayo Clinic, 2015).

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2.4.2 Hypnosis intervention for labour.

In a survey examining women's reactions towards their labour, 52.2% if the women described themselves as being frightened and 43.5% were doubtful of their ability to deal with labour pain, in comparison to 26.1% who felt relaxed (Brown, Douglas, & Flood, 2001).

Pregnant women adopt various strategies in order to reduce their psychological reactions, especially anxiety, towards the labour process. These strategies include opting for elective caesarean section (Peret, 2013). WHO worldwide statistics indicate that 18.5 million caesarean sections are performed yearly. A large portion of these caesarean sections was unnecessary; for example, 50% of caesarean sections in Brazil are unnecessary. The costs incurred through unnecessary caesarean sections in 2008 was USD 2.32 billion worldwide (WHO, 2010).

In Malaysia, the rate of caesarean section in the year 2000 was between 7.0% to 20.5%, and this rate increased to between 7.4% and 22.3% in 2001. In 2006, the rate of caesarean section further increased to 11.1% to 20.8%. Data for Federal Territory and Selangor where the sample of the present study was based showed that in the year 2000, the rates were 15.5% and 8.7% respectively and these rates increased to 15.7% and 10.8% in 2001, and further increased to 23.6% and 16.6% respectively (Sivasampu, Chandran, & Ahmad, 2012). The author concluded that the possible reasons for the increase could be the reduction in the use of assisted vaginal deliveries, legal concerns, change in the management of breech presentations, and increased requests from patients for elective caesarean sections (Ravindran, 2008). In 2010, the overall rate of caeserean section in Malaysia was 21.9%, which was slightly higher than the data from 2006 (Sivasampu, Chandran, & Ahmad, 2012).

The University of Malaya Medical Centre, where the present study was conducted, issued an annual report showing that in 2012, 13.86% of the women had emergency caesarean sections and 6.31% had elective caesarean sections (total percentage having

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caesarean sections was 20.17%; Pusat Perubatan University of Malaya, 2012).

Although these rates were lower in comparison to Malaysia's neighbouring counterparts, such as Indonesia (29.6%), Philippines (22.7%), and Thailand (34.8%) (Festin, Laopaiboon, Pattanittum, Ewens, Henderson-Smart & Crowther, 2009), there is a need to create an awareness to prevent it from increasing further as per WHO recommendations for caesarean section, which is not more than 15% of births (Gibbons et al., 2010).

Others opt for non-pharmacological methods in dealing with anxiety over labour. The non-pharmacological methods include relaxation exercises (Baker & Kenny, 2011). A well-planned relaxation exercise includes breathing techniques (Baker & Kenny, 2011). Evidence showed that immersion in water during the first stage of labour reduced the need for pharmacological intervention such as epidural analgesia and spinal anaesthesia (Cluett & Burns, 2009). Although immersion in water is effective to some degree, its safety is yet to be established (Committee on Obstetrics Practice American Academy of Pediatrics, 2014). Soft tissues manipulated through massage increases a sense of relaxation for some women. Lower back discomfort is commonly experienced by women during pregnancy and is alleviated through effective massage techniques (Duddridge, 2002; Jones et al., 2012). Complementary therapies such as acupuncture are also used. During an acupuncture procedure, needles are inserted into various parts of the body said to be related to pain perception, such as the feet, hands and ears (Duddridge, 2002; Jones et al., 2012). Transcutaneous Electrical Nerve Stimulation (TENS) is applied via electrodes, which deliver electrical stimulation. These stimulations increase the production of endorphins and subsequently block pain signals from going through the spinal cord to the brain (Jones et al., 2012; British Columbia Perinatal Health Program, 2007). The efficacy of hypnosis in pain intervention during labour is well established, and the results are discussed in the following paragraphs (Duddridge, 2002).

As discussed earlier (section 4.2), although the use of pharmacological methods in the second stage of labour helps in easing pain, it comes with myriad side-effects, including poor progress of the second stage of labour. In turn, these side-effects create additional complications in terms of delivery via caesarean section, assisted vaginal delivery and others. As shown, hypnosis can be a safer alternative. As such the following paragraphs outline the studies indicating the efficacy of hypnosis for labour.

A study was conducted by Mehl-Madrona (2009) to investigate the effectiveness of hypnosis in reducing complications during labour and the length of labour stages. Interviews were conducted to understand participants' perception of the labour process. Categories derived from these interviews included fear, anxiety, and lack of psychosocial support. Following the interviews, the participants were randomly assigned to either the hypnosis, supportive psychotherapy, or no contact comparison groups. Results indicated that participants in the hypnosis group had less complicated birth in terms of fewer caesarean births, fewer inductions, fewer neonatal resuscitations, and less epidural and less analgesia compared to the other two groups. The supportive psychotherapy group did better than the no contact comparison group. This is an indication that some form of psychological support during pregnancy may be of help in having a better birth experience.

Abbasi, Ghazi, Barlow-Harrison, Sheikhvatan, and Mohammadyari (2009) conducted a study to explore the effects of hypnosis conducted during pregnancy on labour experience. Hypnosis was given to 15 women, and eight were found suitable as they were able to go into trance. Hypnosis suggestions included progressive relaxation, guided imagery to the safe place, giving suggestions for pain control, pain dissociation, and self-hypnosis. Although the researchers had indicated that each session was 75 minutes long, the number of sessions were not mentioned. The researcher was present during labour to guide patient with hypnosis. Out of these eight women, six were interviewed within 24 hours of delivery. Questions included description of feelings during hypnosis, comparing

the previous delivery with the one using hypnosis, recommending hypnosis to other pregnant women, and best and the worst parts of utilising hypnosis for birth. Themes that emerged from the interviews indicated satisfaction with the hypnosis sessions. Participants elaborated that hypnosis gave them a sense of control and confidence about the process of labour. Participants shared that they had experienced less fear, anxiety and pain during labour compared to their previous labour experience. The women shared that their birth experience using hypnosis as the method of relaxation gave them shorter labour and less fatigue. None of the participants opted for pain relief.

Reinhard, Huesken-Janßen, Hatzmann, and Schiermeier (2009) did a study involving pregnant women between 28 to 34 weeks gestation. Participants were assigned to the experimental group (n=64) and control group (n=2135). Group hypnosis sessions were conducted with a maximum of eight women per group. Hypnosis sessions were conducted four times for 1.5 hours per session and on average the participants attended 3.1 sessions. Results indicated that 4.7% of those in the hypnosis group had preterm deliveries compared to 10.3% preterm deliveries in the control group.

Compared to the Reinhard et al. (2009) study, Cyna and McAuliffe (2006), who investigated birth outcomes of women taught self-hypnosis, provided more data on the outcomes of hypnosis intervention for labour. In this study, participants were divided into experimental (n=50 nulliparous and n=27 multiparous) and control (n=1436 nulliparous and n=1813 multiparous) groups. Participants in the experimental group had four hypnosis sessions, each 40 to 60 minutes long, following week 35 of pregnancy. Results indicated that 8% of the nulliparous and 7% of the multiparous women in the experimental group had loc 15% of the multiparous and 15% of the multiparous women in the control group; 16% nulliparous and 11% multiparous women in the experimental group had emergency caesareans compared to 22% nulliparous and 9% multiparous women in the control; 58% nulliparous and 82% multiparous women in the experimental group had SVD compared to 51% nulliparous and 69% multiparous

women in the control group; 12% nulliparous and 15% multiparous women in the experimental group had SVD and epidural compared to 20% nulliparous and 20% multiparous women in the control group.

An experimental study involving 63 nulliparous women assigned participants to either the hypnosis or the control groups (Harmon, Hynan, & Tyre, 1990). Assessments included the MMPI and the McGill Pain Questionnaire (MPQ) for rating childbirth pain. The former assessment was completed within 72 hours of delivery and the latter within 24 hours of delivery. Obstetric assessments included medication use, length of labour (stages one and two), types of delivery and the Apgar score. Hypnosis group participants received a tape recording of a hypnosis induction. The first induction was given live. Inductions included relaxation of muscles, muscles heaviness in the feet spreading throughout the body to the face, counting backward, childbirth enjoyment, joy of labour, hypnoanalgesia, and well-being at postpartum. Control group participants were given a cassette that included 'Practice for Childbirth', which contained muscle relaxation exercises beginning from the feet to the face. Participants were asked to listen to the recording daily. Results indicated that the hypnosis group had shorter stage one labour, higher Apgar score at both one and five minutes, experienced more spontaneous vaginal deliveries, and used less medication. Control group participants were found to use more tranquilizers, narcotics and oxytocics (Harmon, Hynan, & Tyre, 1990).

Martin, Schauble, Rai, and Curry (2001) divided participants in their study into experimental (n=20) and control (n=20) groups. These participants were teenagers (18 years or younger) with normal pregnancies. The hypnosis group received hypnosis to prepare for childbirth. The control group had supportive counselling. This supportive counselling was an avenue for discussion of issues pertaining to pregnancies. Interventions were given between 20 and 24 weeks gestation for a total of four sessions conducted once every two weeks. Results indicated that only one patient in the hypnosis

group stayed in the hospital for more than two days compared to eight days in the control group. None of the participants in the hypnosis group had surgery compared to 12 in the control group. A total of 10 participants in the hypnosis group had anesthesia compared to 14 in the control group. Twelve participants in the hypnosis group had experienced maternal complications (e.g., preeclampsia and vacuum assisted delivery) compared to 17 in the control group.

HypnoBirthing (Mongan, 2005) is a technique using self-hypnosis and visualising the functions of the uterus and its relation to the process of birth, from the start of labour to the time when mothers are able to hold their babies in their arms. Phillips-Moore (2012) found that participants taught this HypnoBirthing technique had an average labour length of 10.4 hours, the average length of stage two labour was 1.1 hours and none had opted for pain relief. The overall score for pain (on a scale of 0 - 10 with 10 being the most severe) during labour was 5.8, and 32% of the participants scored their pain below 5.0, with two participants scoring their pain as 0. A total of 22% of participants had caesarean sections due to foetal distress, post-term pregnancy, failure to progress, malposition, pre-existing hypertension and difficulty giving birth due to narrowness of the pelvic bone. On a scale of 0 to 10, participants rated their calmness before birth as 9, during birth as 7.9 and following delivery as 8.2. The average Apgar score was 9.2. Two participants had postpartum depression (the researcher did not include the method of assessment). Overall, on a scale of 0 to 10, participants rated their satisfaction with HypnoBirthing as 8.8 and 49% of participants rated it as 10.

A recent study by Werner, Uldbjerg, Zachariae and Nohr (2013) divided pregnant participants (pregnancy defined as between 27 to 30 weeks) into three groups; hypnosis intervention, an 'active comparator' and control group. The intervention group received training on self-hypnosis three times for a total of three weeks. Each hypnosis session lasted for one hour. The 'active comparator' received three classes teaching them relaxation, awareness of their bodies, and techniques in mindfulness. Each session lasted for one hour. The control group received the routine antenatal care at the antenatal clinic. The levels of stress and wellbeing were measured at baseline. Information on the labour duration, delivery mode, and neonatal assessment (such as Apgar score at five minutes and birth weight) were obtained. Participants were required to provide information on the applicability of their training to the process of labour and success in breastfeeding and caring for the infants via questionnaires to be completed at six weeks postpartum. The results indicated that there was little difference in the timing of the labour stages between all three groups (5.5 hours in the control group, 5.8 hours in the 'comparator group' and 5.6 hours in the hypnosis intervention group). The mode of delivery, the use of oxytocin and neonatal outcomes showed non-significant differences. Results also indicated that women in the hypnosis intervention group had reported fewer difficulties in child care at six weeks postpartum. Unlike previous studies (Abbasi et al., 2009; Cyna & McAuliffe, 2006; Harmon, & Tyre, 1990; Mehl-Madrona, 2009; Phillips-Moore, 2012), this study did not show any significant differences in stress, wellbeing, labour-related issues and postpartum measurement (except for child care at postpartum) between all three groups. Receiving hypnosis intervention did not give the participants a significant level of improvement on the measurements. Possibly this is due to the number of hypnosis sessions, which was three, and the final hypnosis session being farther from the delivery date (between weeks 30 to 33).

A systematic review in hypnosis intervention during pregnancy had concentrated on its effect on the labour stages, possibly due to the paucity of studies on its effect during pregnancy and postpartum. Cyna, McAuliffe and Andrew (2004) had identified five randomised controlled trials and 14 non-randomised controlled trials on the use of hypnosis for the purpose of pain relief using reduction in pain scores during labour as the primary outcomes, such as reduced use of epidural as the pain relief option and decreased score for pain sensation in the hypnosis group. The secondary outcomes included shorter labour stages, reduction in the use of oxytocin, and more spontaneous vaginal delivery. The number of sessions reported in these studies ranged from four to six. Although the number of sessions differed, the author emphasised that these studies consistently showed that self-hypnosis teaching increased women's control over their pregnancy and decreased fear, which in turn may have had reduced the need to use pain relief and decreased use of labour augmentation. The studies also did not show any negative effects due to the use of hypnosis in obstetrics, indicating that the technique is safe.

Similarly, in a Cochrane review, Madden, Middleton, Cyna, Matthewson, and Jones (2012) in a total of seven hypnosis intervention studies showed that in terms of the primary outcomes, the differences were not significant between hypnosis intervention and control groups in spontaneous vaginal birth and pain relief satisfaction. However, women in the hypnosis group tend to use less pain relief. The secondary outcomes showed that women who received hypnosis interventions experienced lower sensations of pain, shorter length of labour, and reduced hospital stays. However, the differences in satisfaction in the experience of delivery, breastfeeding, the use of assisted vaginal delivery, caesarean section, neonatal admission to the neonatal intensive care unit, Apgar score, epidural use, labour induction, labour augmentation via oxytocin, postpartum haemorrhage, transfusion of blood at postpartum, postpartum depression and others were not significant. The authors emphasised that studies looking at the usefulness of hypnosis for labour and childbirth are small and more studies are needed in order to recommend its use for the management of pain in obstetrics.

In summary, hypnosis interventions in helping women during labour have been shown to reduce delivery via caesarean sections, reduce the experience of pain, reduce the use of pain relief, decrease labour stages, decrease fear, anxiety, and pain. Although most studies on hypnosis interventions for pregnant women had focused on its results in the labour stage, more experimental studies are needed to establish a stronger argument that hypnosis does indeed aid women to experience positive labour outcomes.

2.5 The Postpartum Stage

This section discusses variables related to the postpartum stage (24 hours postpartum and two months postpartum) and the efficacy of hypnosis intervention for the postpartum period.

2.5.1 24 hours postpartum stage.

Neonatal physical assessment. Following the severance of the umbilical cord, the neonates' physical well-being is assessed via Apgar scoring. The Apgar score is noted following the first and the fifth minute of birth. For both the first and the fifth minute of birth, the Apgar score assesses skin colour, heart rate, reflex, muscle tone and respiratory rate of the neonates. The measurement ranges on a scale of 0 to 2 with the lowest mark of 0 and highest mark of 10. A score of 7 and above is good, indicating that neonates are normal, the score of 4 to 6 is intermediate and the score of 0 to 3 is low (The Merck Manual of Diagnosis and Therapy Online, 2015). A low Apgar score, which is due to several factors, includes methods of delivery via caesarean section. This low score leads to immediate neonatal complications, such as asphyxia or oxygen deprivation (The Merck Manual of Diagnosis and Therapy Online, 2015) and future complications, such as cerebral palsy (Lie, Grøholt, & Eskild, 2010).

Although anxiety and depression were not related to preterm birth and birth weight, Apgar scores at one minute and five minutes were lower for women experiencing anxiety disorder according to the study conducted by Berle, Mykletun, Daltveit, Rasmussen, and Holsten (2005). This study indicated that anxiety disorder during pregnancy resulted in neonates with Apgar scores below eight at one and five minutes of birth. Kumari and Joshi (2013) found that Apgar scores at one and five minutes were negatively correlated with the stress scores, indicating that the higher the stress, the lower the Apgar scores. This same study also found negative correlations between stress and neonatal weight and gestational age.

Neonates with mothers who had depression during pregnancy and had taken SSRIs had low APGAR scores (7<) at five minutes after birth. However, the same study revealed that depression before or during pregnancy along with the consumption of antidepressants was not related to low Apgar scores (Jensen et al., 2013).

Psychological symptoms have been shown to affect birth weight. Although studies have shown the effect of psychological symptoms on low birth weight and preterm birth, such as Faizal-Cury, Araya, Zugaib and Menezes (2010), other studies found no relationship between common mental disorders (anxiety and depression) and low birth weight (Orr, James, & Prince, 2002). Some medical conditions, such as gestational hypertension and preeclampsia have been shown to cause lower birth weight among women who deliver preterm (Xiong, Demianczuk, Saunders, Wang, & Fraser, 2014). However, there was no significant difference in the birth weight of neonates of women with preeclampsia and normal blood pressure when the delivery occurred after 37 weeks (Xiong et al., 2014).

The experience of pain during labour. Anxiety has been shown to have a positive association with expected labour pain closer to the delivery time (Čuržik & Jokic-Begic, 2011). Goutaudier, Séjourné, Rousset, Lami, and Chabrol (2012) found that negative emotions, including grief and anger, and pain during childbirth were identified as direct predictors of PTSD symptoms. A positive correlation was shown between pain, PTSD and negative emotions. High pain scores predicted PTSD. The researchers (Goutaudier et al., 2012) indicated the necessity of preventing the development of PTSD by helping women cope with negative emotions due to labour.

Looking at the detrimental effects of PTSD, some intervention strategy is necessary. Gamble et al. (2005) examined the effectiveness of an intervention for women who had had a difficult labour experience. These difficulties include pain, unplanned intervention, risk of death, and anxiety, which led to the development of PTSD. Women were allocated into either the intervention or the control group. Recruitment was conducted in the final trimester of pregnancy. Counselling was given at the postnatal ward within 72 hours of delivery, and repeated between four to six weeks postpartum via telephone. Results from the study showed that at three months postpartum, the intervention group showed improvement. There were significant difference in terms of trauma symptoms, with the intervention group showing better improvement. This trauma was associated with PTSD symptoms. At three months postpartum, more women in the control group had postpartum depression. Women in the intervention group had lower levels of depression, anxiety and stress as measured by the Depression, Anxiety and Stress Scale at three months postpartum. Interview results showed that women in the intervention group indicated that counselling was useful to them (Gamble et al., 2005).

2.5.2 Two months postpartum stage.

Like physical health, mental health at postpartum is an area that needs as much attention as is given during the period of pregnancy and labour (WHO, 2010). In fact, the WHO recommendation on postpartum and postnatal care emphasised that care during this period should comprise increasing maternal physical, social, and mental wellbeing (WHO, 2010).

Due to the process of adjustment at postpartum, some women may be affected psychologically, including experiencing postpartum depression, stress and anxiety (Cheng, Fowles, & Walker, 2006).

Postpartum depression. Postpartum depression is a mixture of emotional, physical and behavioural changes occurring at four weeks postpartum (American Psychiatric Association, 2013). It is classified into three types. The first classification is *baby blues*. Baby blues occur following labour and are considered a normal reaction to the experience of pregnancy and labour. Symptoms include mood swings from extreme happiness to extreme sadness, crying for no apparent reason, irritability, and anxiety. Baby blues may begin from several hours to about two weeks postpartum and tends to resolve on its own

without further intervention. The second classification is *postpartum depression*. Symptoms are similar to baby blues but with stronger intensity. Postpartum depression may start a few days to a few months postpartum. The third classification is *postpartum psychosis*. Postpartum psychosis is serious and includes symptoms of psychosis, such as hallucinations, delusions, agitation, and anger. Postpartum psychosis may begin as early as within three months of postpartum. Immediate intervention is necessary for these women as they may hurt themselves, their babies and others.

The American Psychological Association (2015) stated that the risk factors for postpartum depression are history of prior anxiety or depression; stress due to change in life events (caring for the newborn); newborns with special needs, such as illness and premature birth; newborns who are challenging to care for, such as having irregular sleep patterns; being first time mothers, having children at either a very young or very old age; experiencing emotional stressors, such as death in the family; financial problems; low social support, and changes in hormone levels following delivery.

Factors predicting postpartum stress, anxiety and depression. In a longitudinal study conducted by Thompson, Roberts, Currie, and Ellwood (2002), which was detailed earlier, the results demonstrated a relationship between delivery methods and postpartum depression. Postpartum depression was measured using the Edinburgh Postpartum Depression Scale (EPDS). The results of the EPDS showed that 13% of women who had caesarean sections had postpartum depression compared to 10% of women who had spontaneous vaginal delivery and assisted vaginal deliveries at 8 months postpartum, and these differences were significant. Although the differences at 16 and 24 weeks postpartum were not significant, the trend in postpartum depression changed at 16 week postpartum, indicating more women in the spontaneous vaginal delivery group (8%) had postpartum depression compared to assisted vaginal deliveries (6%) and caesarean section (7%). During the 24th week postpartum, 8% of women in the spontaneous vaginal delivery and caesarean section compared to 7% in the assisted vaginal

delivery group. Although this study reported that primiparous women were more likely to experience assisted vaginal delivery, trauma in the perineal region, lack of sleep due to crying baby, backache and sexual problems, the researchers did not attempt to link these to symptoms of postpartum depression, although they did indicate that the symptoms of depression for the multiparous women began to resolve over a 6-month period.

In a similar study examining the relationship between postpartum depression and methods of delivery, Ramli, Abdullah, Saiful, Hafiz, and Fahmi (2010) found that women who had assisted vaginal deliveries had higher symptoms of postpartum depression compared to the ones who had spontaneous vaginal delivery. This study also found that these mothers who were between the ages of 16 to 20 had higher levels of depressive, anxiety and stress symptoms, followed by the 21 to 30 age group and 31 to 45 age group (Ramli et al., 2010).

In a study conducted in Malaysia investigating factors predicting postpartum depression, which was conducted between 4 to 6 weeks postpartum, a different trend emerged than the one found by Thompson, Roberts, Currie, and Ellwood (2002) and Ramli, Abdullah, Saiful, Hafiz, and Fahmi (2010) in the relationship between postpartum depression and delivery methods. The Azidah, Shaiful, Rusli, and Jamil (2006) study indicated that women who had spontaneous vaginal delivery had higher levels of postpartum depression (91%) compared to assisted vaginal delivery (38%) and caesarean section (5.1%). This study also found that women between the ages of 27 to 31 (29.5%) had more severe postpartum depression compared to 19.2% of the older women. The more children a woman had, the more intense the postpartum depression. For example, 33.3% of women with five or more children had postpartum depression compared to 21.8% who had only one child (Azidah et al., 2006).

Living arrangement during confinement. The development of postpartum depression is not limited to biological factors but also involves sociocultural factors. Qualitative interviews showed an interesting trend in the role of psychosocial support

during confinement. Gao, Chan, You and Li (2010) found that women who had postpartum depression experienced dissonance between following either traditional or modern requirements during confinement. Women shared that they disliked the traditional practice of confinement as it was outdated and they had certain doubts regarding its rituals. Poor relationship with mother-in-law due to constant criticism was also cited as leading to a loss of self-confidence.

Some women with postpartum depression found that confinement practices led to loneliness due to the absence of support from close relationships, friends, and colleagues. This absence of support led some sufferers to experience negative emotions (Kathree & Petersen, 2012). Other studies have shown that although women felt ambivalent about following cultural practices during confinement and frustrated due to the need to comply with in-laws' and parents' wishes during confinement, no association was found between following these cultural practices and the incidence of postpartum depression (Matthey, Panasetis & Barnett, 2002).

Changes in stress, anxiety and depressive symptoms over time. There is a relationship between postpartum depression and antenatal depression, indicating that there is a higher risk of experiencing postpartum depression for women who had depression during pregnancy (Johanson, Chapman, Murray, Johnson, & Cox, 2000). A total of 37% of women who had experienced depression at postpartum also had a high level of depression during pregnancy. The ones who had significant depression (46%) during postpartum displayed more depression at one year postpartum (Rubertsson, Wickberg, Gustavsson, & Ra°destad, 2005). Scores of depression were lower at postpartum in comparison to the scores during pregnancy (Rubertsson, Wickberg, Gustavsson, & Ra°destad, 2005). Evans, Heron, Francomb, Oke and Golding (2001) found a similar trend in the change of depression over time, with higher levels of depression during pregnancy peaking at week 32 and lower levels of depression at postpartum. Although researchers did not give any indication of the reasons that depression had peaked at week 32, the

possible answer could be that week 32 is close to labour.

The trend of changes in anxiety symptoms over time indicated that the level of postpartum anxiety was higher following the first month of postpartum compared to the time before hospital discharge. The groups that had higher anxiety prior to hospital discharge continued to have higher levels of anxiety at one month postpartum compared to mothers who had a low level of anxiety prior to discharge and also experienced low anxiety at one month postpartum. The researchers concluded that risk factors for higher levels of anxiety at one month postpartum. The researchers concluded that risk factors for higher levels of anxiety at one month postpartum and lower levels (Britton, 2008).

Studies that examine the changes in stress over time are limited, as more studies have investigated the changes in depression and anxiety scores over time. One study that investigated acute stress reaction (ASR) at postpartum found that 44.7% of women reported moderate to severe ASR at one week postpartum, and of those 23.7% recovered at three weeks postpartum. This study found a comorbidity of depressive symptoms with severe ASR, which was reported by 3.2% of women at one week postpartum and 1.4% at three weeks postpartum (Gürber et al., 2012).

Outcomes of postpartum stress, anxiety and depression. Most studies involving women following labour have primarily investigated postpartum depression. There is still a lack of studies looking into other psychological conditions, such as stress and anxiety.

Depression and anxiety have been shown to affect various factors at postpartum, including relationship adjustment, which had an inverse relationship with depression and anxiety, indicating that the poorer the adjustment, the higher the depression and anxiety (Whisman, Davila, & Goodman, 2011). Antenatal depression has been shown to affect mothers' emotional involvement with their foetus in a negative way. Decreased emotional involvement with the foetus three months prior to delivery predicted poor emotional involvement at three months following delivery. Although the researchers did not show an association between antenatal depression and postpartum anxiety with emotional

involvement as the covariates, the study did reveal that anxiety during pregnancy was associated with depression during pregnancy. In turn, depression during pregnancy predicted anxiety during pregnancy three months prior to delivery (Figueiredo & Costa, 2009).

2.5.3 Hypnosis intervention for Postpartum.

Similar to hypnosis interventions for pregnancy, studies looking into the efficacy of hypnosis intervention for the postpartum period are limited. The paucity of studies could be due to the concentration of most hypnosis studies in obstetrics on the efficacy of hypnosis for labour. The assumption is that if hypnosis is successful in helping women during labour, women will continue to be well adjusted during the postpartum period. As such the following paragraphs explores the efficacy of hypnosis during postpartum.

A hypnosis programme was developed to promote well-being for first-time mothers based on Ericksonian Ego State Therapy. In this pre-post-follow-up two-group design, participants were randomly assigned into the experimental (n=23) and control (n=23) groups. The study began at the third trimester of pregnancy (24–38 weeks). Participants were required to complete the Childbirth Perceptions Questionnaire to assess early motherhood psychological well-being, the Edinburgh Postnatal Depression Scale (EPDS), and the Satisfaction With Life Scale (SWLS) at two weeks and 10 weeks postpartum. Results indicated that the experimental group obtained higher results at two weeks postpartum. At 10 weeks postpartum, the experimental group participants continued to show improvement in regards to relationship with babies, self-confidence, depression, decreased pathological symptoms, and better life satisfaction. The control group participants indicated depression. (Guse, Wissing, & Hartman, 2006). The value of this study is in the quantitative measurement of the participants' psychological wellbeing at pre-hypnosis intervention, post-hypnosis intervention and follow-up.

Yexley (2007) presented a case report looking into using hypnosis to treat postpartum depression. This case report featured a 27-year-old woman who had delivered five months prior to hypnosis treatment for postpartum depression. She did not respond well to medication for depression. The patient confirmed that she did not experience any mental illness or depression prior to the hypnosis treatment. While she was pregnant, two people important to her had died, and she had experienced another death one month following her delivery. Depressive symptoms, which included crying spells, sadness, guilt feelings, feelings of worthlessness, hopelessness, thoughts of harming her children (intensely when one or both of the twins cried), started five days postpartum. However, the patient denied having any suicidal thoughts. The first hypnosis session included inducing positive emotion in response to her babies' cries. The second hypnosis session included alleviating guilt feelings following the deaths of the people close to her. Symptoms of postpartum depression resolved following the second hypnosis session. Unlike in the Guse et al. (2006) study, the researcher did not include the quantitative measurement of postpartum depression at pre-hypnosis intervention and the improvement of his subjects' psychological wellbeing at post-hypnosis intervention, possibly due to the nature of the paper, which was a case report rather than an experiment involving multiple participants.

Sado, Ota, Stickley, and Mori (2012) had only identified one randomised controlled trial in the use of hypnosis for the prevention of postpartum depression. Although the study by Harmon in 1990 did not specifically measure postpartum depression, the results showed that women in the hypnosis intervention group had lower mean scores of depression as measured by the Depression scale of the MMPI. This review also included the study conducted by Guse in 2006, which was mentioned earlier in this section, showing that the women receiving hypnosis intervention had lower postpartum depression scores. The author emphasised the need for further randomised controlled trials to determine the effectiveness of hypnosis in the prevention of postpartum depression.

Although the present study was not a randomised controlled trial, it did measure the effectiveness of hypnosis in the prevention of postpartum depression as its secondary outcome, which provides more data for understanding the role of hypnosis in increasing women's psychological wellbeing during the postpartum period.

In summary, studies on hypnosis interventions in helping women during postpartum are lacking. The Cochrane Systematic Reviews had only identified on randomised controlled trial, which was conducted in 1990 on the effectiveness of hypnosis in alleviating the symptoms of depression. More experimental studies are needed to establish a stronger evidence that hypnosis could be one of the tools to aid women to increase their psychological well-being at postpartum.

2.5.4 Chapter summary.

In the past, hypnosis has been shown to be of help when incorporated with medical treatments, such as in surgery to remove pain sensation in lieu of anaesthesia. Physicians such as James Esdaille, who was practicing in India in 1845, and John Elliotson, who was practicing in England in 1937, were among the earliest hypnosis practitioners who had used hypnosis successfully.

Now, evidence had shown a link between antenatal psychological symptoms with maternal physical complications during pregnancy, such as higher blood pressure, and neonatal complications, such as low foetal weight. Adequate treatment during the pregnancy stage is needed to reduce these complications. Complementary treatment, such as hypnosis, increased the likelihood of improvements in physical and psychological well-being when combined with conventional treatment provided by medical professionals (such as in the study by Simon & Schwartz, 1999).

Hypnosis has been shown to assist women in alleviating the physical symptoms (such as nausea and vomiting) and psychological (such as fear of labour) experienced during pregnancy. During the labour stage, intervention via hypnosis has been shown to increase spontaneous vaginal delivery, decrease the rate of caesarean section, reduce neonatal resuscitations, decrease the use of pain relief, and reduce labour stages. At postpartum, hypnosis has been shown to improve overall psychological well-being, such as the alleviation of the symptoms of postpartum depression. Although the efficacy of hypnosis in helping women during pregnancy, labour and postpartum has been established by past studies, none had shown changes in the experience of physical and psychological symptoms overtime and none had shown a link between antenatal physical and psychological symptoms with labour and postpartum stages. More studies are needed to show this pertinent link, as the information could be used to increase physical and psychological well-being during pregnancy, and subsequently help women to have better labour and postpartum experiences.

2.5.5 From literature review to the present study.

This chapter has provided a review of the physical and psychological symptoms experienced during pregnancy and the maternal and neonatal complications due to these symptoms. The experience of pregnant women during labour and delivery, neonatal physical conditions and maternal psychological conditions at postpartum were discussed. This chapter has also provided evidence on the success of hypnosis intervention in pregnancy, labour, and postpartum.

The following chapter will illustrate the importance of hypnosis intervention in alleviating the physical and psychological symptoms during pregnancy, assisting women to have improved physical and psychological well-being during pregnancy, labour, and postpartum. Based on the review of the literature, a conceptual framework has been presented and hypotheses are postulated.

CHAPTER 3: CONCEPTUAL FRAMEWORK

The justifications of the conceptual framework are included in the following sections. This conceptual framework was based upon past literature showing the significant negative effects of psychological and physical symptoms during pregnancy and the efficacy of hypnosis in reducing and/or eliminating these symptoms to increase women's psychological and physical well-being and subsequently assist these women to have better labour and postpartum experience as well as to increase the well-being of their foetuses and neonates.

3.1 Rationale of the Study

The conceptual framework of the present study is based on several rationales. Firstly, the present study looks at early intervention in the reduction and/or elimination of psychological and physical symptoms during the early part of the second trimester. Effective management at this early stage of pregnancy helps to increase women's and foetal well-being. The reduction and/or elimination of psychological and physical symptoms help women to prepare for the labour process with a better frame of mind.

Hypnosis interventions for increasing psychological and physical well-being for pregnancy related matters are not new. Evidence go back as far as 1962 in comparing women who had hypnosis intervention and women without hypnosis intervention (Davidson, 1962). However, thus far, no studies have investigated the efficacy of hypnosis intervention to alleviate psychological symptoms during pregnancy. Very few studies had focused on helping women to relieve physical symptoms, particularly nausea and vomiting (Madrid, Giovannoli, & Wolfe, 2011; Shah, Thakkar, & Vyas, 2011; Simon & Schwartz, 1999). There are no studies thus far that show a link between psychological and physical symptoms and the role of hypnosis, such as whether with the help of hypnosis intervention, the alleviation of psychological symptoms will lead to the alleviation of physical symptoms and vice versa. The present study attempts to address this gap.

Secondly, the present study looks at hypnosis intervention during the third trimester by focusing on the preparation of women for labour and subsequently the period of postpartum. Suggestions during hypnosis are given to strengthen the bond between women and their unborn babies, enhance excitement towards the process of bringing their unborn babies into this world, and the ability for them to continuously nurture their babies during the period of postpartum. The continuous management of psychological and physical symptoms is also strengthened during this second phase of hypnosis sessions.

Hypnosis helps women to have a better birth experience as it plays a role in relaxing tense muscles. Fear during labour is common, and fear and stress perceptions have been shown to activate the sympathetic nervous system. The activation of the sympathetic nervous system initiates the fight-or-flight response (Phillips-Moore, 2012). The secretion of stress hormones results in tense muscles, and this causes difficulty during labour. During the natural process of labour, uterine muscles draw up and the cervix muscles are relaxed and open. This is easily achieved if the pregnant women are relaxed and calm. However, if the muscles are tense, contraction becomes an uncomfortable process, causing prolonged labour (Graves, 2013). Other than causing tense muscles, excess cortisol during the stress response may be absorbed by the foetus, causing low birth weight (Phillips-Moore, 2012). Childbirth fears increased pain during labour. Hypnosis preparation prior to labour helps in the removal of this fear, leading to a calmer, more comfortable and easier birthing process (Graves, 2013), and thus dispels the notion that labour is a difficult process that should not be enjoyed.

Thirdly, this study aims to address the gap of knowledge regarding the interrelationships of all the pertinent stages of pregnancy, which are pregnancy, labour and postpartum. Past studies on pregnancy did not investigate the interrelationships between all these stages but rather investigated only one or two of them, such as the link between pregnancy and labour, or pregnancy and postpartum, or labour and postpartum. These studies had shown interrelationships between at least two of these periods, including that

37% of women who experienced depression at postpartum displayed high levels of depression during pregnancy, and the ones who scored higher on depression (46%) during postpartum, reported higher depression at one year postpartum (Rubertsson, Wickberg, Gustavsson, & Ra°destad, 2005). Investigating the interrelationships between all the stages is pertinent in order to identify the role of hypnosis intervention in increasing psychological and physical well-being among pregnant women during their pregnancy, labour and postpartum.

Fourthly, this study intends to address the lack of data showing the eficacy of hypnosis intervention for pregnant women in Malaysia. This is the first study in Malaysia that investigated the effectiveness of hypnosis intervention for pregnancy, labour and postpartum. In Malaysia, the prevalence of antenatal depression, anxiety and stress ranged from 19% (Tan, Zaidi, Azmi, Omar & Khong, 2014) to 30.2% for depression (Azidah, Shaiful, Rusli, & Jamil, 2006), 69% for anxiety; and 21% for stress (Tan, Zaidi, Azmi, Omar & Khong, 2014). The prevalence of postpartum anxiety was 16%, depression was 4%, and stress was 4.7% (Ramli, Abdullah, Saiful, Hafiz, & Fahmi, 2010). The prevalence of postpartum depression in Malaysia ranged from 6.8% (Zainal, Kaka, Ng, Jawan, & Gill, 2012) to 22.8% (Azidah, Shaiful, Rusli, & Jamil, 2006). Most of the studies conducted in Malaysia were in the form of surveys. It is critical that some forms of intervention are given to pregnant women to assist them during their pregnancy. Therefore, the present study is addressing this gap.

3.2 Conceptualisation and Justification of the Conceptual Framework

The previous section had addressed the significance of the study. This section will address the psychological and physical symptoms experienced by pregnant women within three pertinent stages, pregnancy, labour, and postpartum, and the efficacy of hypnosis intervention within these periods. The justification in structuring the study framework is based on previous studies looking at the risk factors for the experience of psychological and physical symptoms during pregnancy, labour and postpartum.

The framework of the present study is mainly based on the comparison of the experimental group participants who were given hypnosis intervention and the control group of pregnant women who did not receive hypnosis intervention in regard to their experience of psychological (stress, anxiety and depression) and physical symptoms during pregnancy. Firstly, the changes in the primary outcomes, which are the psychological and physical symptoms, from week 16 to weeks 20, 28, and 36 will be ascertained. Following this, the interrelationships between psychological and physical symptoms at week 36 of pregnancy; factors predicting the experience of antenatal psychological and physical symptoms, which were the secondary outcomes of foetal weight at week 36 of pregnancy; and systolic and diastolic blood pressure at week 36 of pregnancy and overall outcomes of these symptoms (such as worsening of physical symptoms and low foetal weight) during pregnancy stages will be established. Next, the associations between antenatal psychological and physical symptoms at week 36 of pregnancy and variables measured during labour, which are methods of delivery (spontaneous vaginal delivery and caesarean section), assisted vaginal deliveries, and labour stages (the length of the second and third stages of labour) will be ascertained. The associations between antenatal psychological and physical symptoms at week 36 of pregnancy and variables measured within 24 hours postpartum, which are self-reported pain just before, during, and right after delivery, neonatal birth weight, and Apgar score (one minute and five minutes following birth), will be examined. The changes of psychological symptoms from pregnancy to two months postpartum will be shown.

Finally, the risk factors for postpartum depression, stress, and anxiety (psychological and physical symptoms at week 36 of pregnancy, postpartum psychological symptoms, and living arrangements during confinement) will be illustrated.

The diagram of the conceptual framework is illustrated in Figure 3.1 and details of the intervention in Figures 3.2 and 3.3.



Figure 3.1: Conceptual framework of the present study



Figure 3.2: Details of the intervention during second trimester


Figure 3.2: Details of the intervention during third trimester

Therefore, based on the rationale and the significance of the study put forth in this chapter, four main hypotheses are proposed for this study: the hypotheses for the efficacy of hypnosis intervention during pregnancy, the hypotheses for the efficacy of hypnosis intervention for labour, the hypotheses of hypnosis intervention for 24 hours postpartum, and the hypotheses of hypnosis intervention for two months postpartum. The postulated hypotheses are as follows.

3.3 Hypotheses

Hypotheses postulated at the pregnancy stage.

The independent variables in the present study's pregnancy stage are group types (experimental and control groups), and the dependent variables are antenatal psychological (stress, anxiety, and depression) and physical symptoms at week 36 of pregnancy. The present study also examines the changes of antenatal psychological and physical symptoms over time, from week 16, week 20, week 28, to week 36 of pregnancy.

- There are significant differences in the intervention phases during pregnancy [week 16 (time
 1), week 20 (time 2), week 28 (time 3), and week 36 (time 4)] between the experimental and
 control groups' antenatal psychological symptoms and physical symptoms over time.
 Specific hypothesis:
 - Pregnant women in the experimental group experience lower levels of antenatal psychological symptoms and physical symptoms over time, compared to the pregnant women in the control groups
- There are significant differences in the foetal weight (week 36) and systolic and diastolic blood pressure (week 36) between the experimental and control groups.
 Specific hypothesis:
 - Pregnant women in the experimental group have lower foetal weight (week 36) and lower blood pressure (week 36), compared to the pregnant women in the control group.

3. Antenatal psychological symptoms (week 36) and group types are predictive of antenatal physical symptoms (week 36).

Hypotheses postulated at the labour stage.

The independent variables in the present study's labour stage are group types and antenatal psychological and physical symptoms at week 36 of pregnancy, and the dependent variables are variables measured during labour (the length of second stage of labour, the length of third stage of labour, use of pain relief during labour, which are pethidine and epidural, methods of delivery, which are spontaneous vaginal delivery and caesarean section, and assisted vaginal delivery, which are forceps and vacuum).

 The experimental and control groups significantly differ in terms of variables measured during labour.

Specific hypothesis:

- Participants in the experimental group have a significantly shorter second stage labour, shorter length of third stage labour, reduced use of pain relief during labour, more spontaneous vaginal delivery and less assisted vaginal delivery.
- 2. There are significant relationships between antenatal psychological symptoms (week 36), antenatal physical symptoms (week 36), group types, and the variables measured during labour.
- 3. Antenatal psychological symptoms (week 36), physical symptoms (week 36), and group types are predictive of the variables measured during labour.

Hypotheses postulated within 24 hours postpartum.

The independent variables in the present study's within 24 hours postpartum stage are group types and antenatal psychological and physical symptoms at week 36 of pregnancy, and the dependent variables are variables measured within 24 hours postpartum (neonatal birth weight, Apgar score at one minute, Apgar score at five minutes, and self-reported pain (just before labour, during labour, and right after labour).

 The experimental and control group differ in their neonatal birth weight, Apgar score at one minute, Apgar score at five minutes, and self-reported pain (just before labour, during labour, and right after labour).

Specific hypothesis:

- Participants in the experimental group have significantly more neonates with normal birth weight, neonates with higher Apgar scores at one minute of birth, higher Apgar scores at five minutes of birth, and lower self-reported pain (just before labour; during labour; and right after labour).
- 2. There are significant relationships between antenatal psychological and physical symptoms (week 36) and variables measured within 24 hours postpartum.
- 3. Antenatal psychological and physical symptoms (week 36) and group types are predictive of variables measured within 24 hours postpartum.

Hypotheses postulated at two months postpartum stage.

The independent variables in the present study's two months postpartum stage are group types, antenatal psychological symptoms (week 36), and physical symptoms (week 36), and the dependent variables are the postpartum psychological symptoms (stress, anxiety, and depression) and postpartum depression. The present study also examines the fluctuations in antenatal psychological symptoms over time, from week 16, week 20, week 28, week 36 of pregnancy to two months postpartum.

 There are significant differences in the experience of antenatal psychological symptoms (stress, anxiety, and depression) between the experimental and control groups over time. Specific hypotheses:

Pregnant women in the experimental group experience lower levels of psychological symptoms over time, compared to the pregnant women in the control group.

 The experimental and control groups significantly differ in the experience of postpartum depression.

Specific hypotheses:

Women in the experimental group experience lower levels of postpartum depression, compared to the women in the control group.

- 3. There are significant relationships between antenatal psychological and physical symptoms (week 36), group types, postpartum psychological symptoms, and postpartum depression.
- 4. Antenatal psychological and physical symptoms (week 36) and group types are predictive of postpartum psychological symptoms.
- 5. Antenatal psychological and physical symptoms (week 36), group types, and living arrangements during postpartum are predictive of postpartum depression.

CHAPTER 4: METHODOLOGY

4.1 Introduction

This chapter discusses the methodology of this study. Included in this chapter are the ethics statement, experimental design, experimental setting, operational definitions, participants, sample size, pilot study, measures, procedure, data management and statistical analyses.

4.2 Ethics Statement

This research was approved by the University Malaya Medical Ethics and Research Committee (reference number 901.5; Appendix I). Written informed consent was obtained from all participants.

4.3 Experimental Design

A pretest-posttest quasi-experimental design, with an experimental and a control group, was employed in this study. A quasi-experimental design was chosen because it is a suitable design for medical intervention where randomised control trials are not possible. Although randomised controlled trials are more credible in research, researchers emphasised that the decision to use a quasi-experimental design is due to several important reasons, which are ethical concerns, problems in randomising participants, problems in randomisation due to location, and small sample size. Randomised controlled trials are most suitable if the effectiveness of interventions is yet to be established, but in a case where therapeutic interventions were shown to be effective or it is ethically unacceptable to randomise participants, a quasi-experimental design is more suitable (Harris et al., 2006). Similarly, a quasi-experimental design was chosen for the present study due to its length, which spans from pregnancy to postpartum, as it will give women an opportunity to be in the experimental group and participate in the therapeutic interventions. A quasi-experimental design was also chosen for the present study due to the small available sample in the antenatal clinic. This is also

compounded by the fact that hypnosis is relatively new to patients and thus convincing them to participate is extremely difficult, thus, randomisation is deemed inappropriate. Due to this, the consort guideline (Schulz, Altman, & Moher, 2010) was not used, and the criteria in TREND Statement Checklist (Jarlais, Lyles, & Crepaz, 2004) was followed instead.

Hypnosis has been shown to be an effective mode of intervention during pregnancy as indicated by previous studies (Guse, Wissing, & Hartman, 2006; Madrid, Giovannoli, Wolfe, 2011; Shah, Thakkar, & Vyas, 2011; Yexley, 2007). However, no studies on the efficacy of hypnosis have been conducted in Malaysia. Due to this, caution is necessary in conducting hypnosis studies in this area until more findings indicate that hypnosis is an accepted mode of treatment for the Malaysian population.

4.4 Experimental Setting

The study was conducted at the antenatal clinic, University Malaya Medical Centre (UMMC), which is located in Kuala Lumpur. In 2012, UMMC had received 964,467 patients. Out of these, a total of 28,865 had attended the antenatal clinic, and 6,043 attended the postnatal clinic at the Obstetrics and Gynaecology Department. Aside from the care provided by the obstetricians, the routine antenatal care at this clinic included patient education in the methods of breast-feeding and healthy diet during pregnancy (Pusat Perubatan Universiti Malaya, 2012).

The Obstetrics and Gynaecology Department, UMMC, consists an ultrasound unit providing gynaecology ultrasound, obstetrics ultrasound, and invasive prenatal procedures such as amniocentesis. A total of 13,080 ultrasound investigations were conducted in 2012. Aside from the ultrasound unit, the department also consists of the Reproductive Health Unit, and the services in this unit include the in-vitro fertilisation treatment. A total of 9,500 pregnant women were hospitalised for deliveries, and this number included 3,869 spontaneous vaginal deliveries, 334 by vacuum extraction, 26 by forceps, 1,317 emergency caesarean sections, 599 elective caesarean sections, 21 breech deliveries, and 91 twin deliveries. The department had experienced six maternal mortalities and 85 foetal deaths (Pusat Perubatan Universiti Malaya, 2012).

4.5 Operational Definitions

The operational definitions of the present study were divided into primary and secondary outcomes at four phases or stages in pregnancy, which were pregnancy, labour, 24 hours postpartum, and two months postpartum.

The pregnancy stage.

Primary outcomes for the pregnancy stage included:

- Stress, anxiety and depressive symptoms, as measured by the Depression, Anxiety, and Stress Scale-21 (DASS-21).
- 2. Physical symptoms, consisting of the total score of the 24 common symptoms during pregnancy, which are nausea, vomiting, fatigue, tender and swollen breasts, sensitive to smell, sensitive to taste, dizziness, fainting, constipation, frequent urination, weight gain, stretch marks on abdominal skin, heartburn/indigestion, nosebleeds, swelling in the feet, swelling in the ankles, swelling in the hands, swelling in the face, skin pigmentation, varicose veins, backaches, uterine contractions, shortness of breath and crying spells.

The secondary outcomes for the pregnancy stage included:

- 1. Foetal weight at week 36 of pregnancy, established by the ultrasound assessment of the fetal biometry, specifically biparietal diameter, abdominal circumference, femur length and head circumference against a nomogram, all obtained from the participants' medical records. This information was recorded by the ultrasound technicians at the Ultrasound Department.
- Blood pressure, both systolic and diastolic, measured on a continuous scale. The higher the blood pressure, the higher the risk of gestational hypertension and preeclampsia. Normal systolic blood pressure is below 120, prehypertension is between 120 to 139 and

hypertension is 140 and above. Normal diastolic blood pressure is below 80, prehypertension is between 80 to 89, and hypertension is above 90 (Mayo Clinic, 2015). This information was recorded by nurses at the Antenatal Clinic.

The labour stage.

The secondary outcomes for the labour stage included:

- 1. The length of labour stages.
 - a. The second stage of labour, measured from the opening of the cervix between 4 6 centimeters to 10 centimeters (full dilatation; Baker & Kenny, 2011; The Merck Manual of Diagnosis and Therapy Online, 2015).
 - b. The third stage of labour, measured from the foetal delivery to the placental delivery (Baker & Kenny, 2011; The Merck Manual of Diagnosis and Therapy Online, 2015).
- 2. Assisted vaginal deliveries
 - a. Forceps and vacuum, which are instruments used to assist in the process of labour (Baker & Kenny, 2011; The Merck Manual of Diagnosis and Therapy Online, 2015).
- 3. Methods of delivery.
 - a. Spontaneous vaginal delivery, a natural birth without the assistance of assisted vaginal deliveries and caesarean section.
 - b. Caesarean section, a surgical procedure via abdominal incision, followed by an incision in the uterus (Mayo Clinic, 2015).
- 4. Pain relief during labour.
 - a. Pethidine, a form of opiates given via intramuscular injections (Baker & Kenny, 2011).
 - b. Epidural analgesia, delivered via injection to the lower back (Baker & Kenny, 2011).

The 24 hours' postpartum stage.

The secondary outcomes for the 24 hours' postpartum stage included:

1. Apgar scores, measured at the first and fifth minute of birth to assess neonatal physical well-

being (skin colour, heart rate, reflex, muscle tone and neonatal respiratory rate). A score of 7 and above is in the normal range, a score of 4 to 6 is intermediate and a score of 0 to 3 is low (The Merck Manual of Diagnosis and Therapy Online, 2015).

- 2. Neonatal birth weight, measured on a continuous scale with lower birth weight corresponding to being small for gestational age and higher birth weight corresponding to being large for gestational age (The Merck Manual of Diagnosis and Therapy Online, 2015).
- Self-reported pain just before, during, and right after delivery, measured within 24 hours of postpartum via the visual analog scale that ranges from 0 (no pain) to 10 (excruciating pain). The self-reported pain was recorded by the participants.

The two months' postpartum stage.

Primary outcomes here include stress, anxiety, and depressive symptoms as measured by the Depression, Anxiety, and Stress Scale-21 (DASS-21).

The secondary outcomes for the two months' postpartum stage included:

- 1. Postpartum depression, measured by the Edinburgh Postnatal Depression Scale.
- 2. Living arrangements during postpartum, either staying with husband or parents or in-laws during the confinement period.

4.6 Participants

The pregnant women who participated in the present study were recruited at the Ultrasound Department, Antenatal Clinic, University Malaya Medical Centre (UMMC), during their first antenatal check-up around the week 12 of pregnancy. The recruitment was conducted between August 2012 to June 2013.

The inclusion criteria were women in their second trimester, above the age of 18, and able to read and understand either English or Malay. Women who had previously experienced hypnosis, women who were involved in other studies at the time of the present study, women who were involved in other complementary and alternative therapies to help with pregnancy (such as acupuncture), women who were involved in other relaxation techniques to help with pregnancy and labour (such as Lamaze technique), women who had some form of physical disabilities (e.g., blindness or deafness), women with psychiatric disorders (e.g., bipolar disorders), and cases where the foetus was identified to have medical conditions such as Down's syndrome) were excluded. The inclusion criteria information was obtained from the participants' medical records.

4.7 Sample Size

The sample size was calculated based on the G Power 3.1 sample size calculator (Faul, Erdfelder, Lang, & Buchner, 2009). Based on the effect size of 0.5 for repeated measures (Prajapati, Dunne, & Armstrong, 2010) and studies on relaxation training and hypnosis in obstetrics for both prenatal and postnatal psychological symptoms (Guse, Wissing, & Hartman, 2006), and a power of 0.8, correlation of 0.6, and 95% confidence interval, the total sample size calculated for this study was 26 and then increased to 38, in consideration of the attrition rate.

The sample size was increased in consideration of the following: Sample size 26 x 20% (attrition rate during treatment) = 31.2Sample size $31.2 \times 20\%$ (attrition rate within 24 hours of delivery) = 37.44Sample size $37.44 \times 50\%$ (attrition rate at two months postpartum) = 56.16 = 56Sample size of 56 was further divided into 28 for the experimental group and 28 for the control group.

The resulting group of participants consisted of 28 pregnant women in the experimental group, aged 23 to 36 (M=28.23 SD=3.12). Participants from the control group (n=28), aged 25 to 34 (M=29.28 SD=2.65), were matched for parity (nulliparous and multiparous) and were recruited on a one-to-one ratio from the same antenatal clinic.

Method of recruitment

During the initial recruitment process, pregnant women who met the inclusion criteria were approached by the researcher at the antenatal clinic and asked whether they were interested in participating in a study on hypnosis during pregnancy. Women were briefed regarding the nature of hypnosis and its benefits verbally and through the patient information sheet (see Appendix II). The pregnant women were informed that they may not experienced all the benefits, and that not everyone experiences similar effects. Women were also informed that hypnosis is a safe procedure, without the use of any invasive procedure, when conducted by a trained hypnotherapist, as in the case of the present study. Participants were informed that they will receive a total of RM50.00 for their participation, and this token will be given at week 36 of pregnancy. Upon participants' agreement to take part in the study, written informed consent was obtained prior to the first hypnosis session (see Appendix II).

Participants who declined to participate in the hypnosis intervention were asked if they were interested in being included in the control group, which involved completing questionnaires without intervention, and following agreement to participate in the control group, informed consent was obtained from the participants prior to answering the questionnaires at week 16 of pregnancy.

Reasons for declining to participate included 'unable to wait longer at the antenatal clinic', 'unable to take longer time off from work', 'husband and children will not be able to wait until the intervention is completed', 'not interested to get involved', 'don't know what is it all about', and 'it is against my belief system'.

A total of 23 participants in the experimental group and 23 participants in the control group continued with the present study at time 2 (week 20 of pregnancy) and time 3 (week 28 of pregnancy), with an attrition rate of 17.86%. Participants who dropped out of the study did so due to the intention of continuing their antenatal check-ups in different hospitals. In addition, participants who dropped out of the experimental group stated they did so because they could not spend the time at the antenatal clinic due to other commitments.

A total of 21 participants in the experimental group (with an attrition rate of 25% from baseline) and 23 participants in the control group continued with the present study at time 4 (week 36 of pregnancy). Two participants in the experimental group did not complete the intervention at time 4 due to early maternity leave and could not participate in the final hypnosis session, and an emergency caesarean section due to placenta previa at week 34 of pregnancy. However, data for both of these participants were included in the analysis for the labour stage.

A total of 23 participants in the experimental group and 22 participants from the control group had delivered at UMMC (with an attrition rate of 21.43% from baseline). One participant in the control group had dropped out as she had decided to give birth at another hospital and the researcher was unable to contact the participant for data pertaining to her birth, such as methods of delivery.

A total of 16 participants in the experimental group and 11 participants in the control group had returned the two months postpartum questionnaires, with attrition rates of 42.86% (experimental group) and 60.71% (control group). Participants' recruitment and dropout rates are included in Figures 4.1 and 4.2.



Figure 4.1: Participants' recruitment and drop out rate during pregnancy stage

Continues...



Figure 4.2: Participants' recruitment and drop out rate during labour and postpartum stage

4.8 Pilot Study

A pilot study was conducted to test the script, which was developed and adapted from the existing scripts (Hartland, 2001; Kroger, 1977) to be used during hypnosis intervention. The hypnosis protocol and script were conducted with one pregnant participant. This was done to investigate if the protocol and script had any effect on the participant's psychological and physical well-being. The participant was given four hypnosis sessions at weeks 16, 20, 28 and 36 of pregnancy. Baseline demographic characteristics questionnaire, DASS-21 and the Pregnancy Symptoms Checklist were given prior to the start of the first hypnosis session. Subsequently, the DASS-21 and the Pregnancy Symptoms Checklist were given during sessions 2, 3, and 4. The results of DASS-21 showed that the participant's stress symptoms were mild, anxiety symptoms were severe and depressive symptoms were normal. The Pregnancy Symptoms Checklist score was 12. She was experiencing physical symptoms of nausea, vomiting, fatigue, sensitivity to smell and taste, dizziness, frequent urination, heartburn, weight loss, backaches, uterine contractions and shortness of breath. The results of the DASS-21 obtained during the participant's second session at week 20 of pregnancy showed improvement. The stress symptoms moved into the normal range, anxiety symptoms were reduced from severe to mild, and depressive symptoms were at normal levels. The Pregnancy Symptoms Checklist score was 8. The DASS-21 given during the participant's third (week 28 of pregnancy) and fourth (week 36 of pregnancy) sessions showed that all the symptoms on the scale were at normal levels. The Pregnancy Symptoms Checklist score was 8.

The initial script was slightly modified following the pilot study to include contractions during the third trimester of pregnancy as a positive experience and a sign that participants are becoming closer to physically holding their babies. This was added because the pilot study participant was complaining of discomfort caused by the contractions.

4.9 Measures

1. Pregnancy stage.

a. Demographic Characteristics Questionnaire Part A.

This questionnaire collected the pregnant women's socio-demographic data. The items on this questionnaire, which was distributed at week 16 of pregnancy, consisted of age, ethnicity, education level, employment status, types of occupation, family income per month, and number of children. The Demographic Characteristics Questionnaire Part A, both in English and Bahasa Malaysia, is included in Appendix II.

b. Depression Anxiety Stress Scale (DASS-21).

The Depression Anxiety Stress Scale (DASS-21) was designed to measure depression, anxiety, and stress (Lovibond & Lovibond, 1995). Each subscale (depression, anxiety, and stress) consists of 7 items. The depression scale measures hopelessness, devaluation of life, diminished interest in certain activities, extreme happiness (dysphoria), self-disapproval, inactivity (inertia), and anhedonia. The items of the anxiety scale measure autonomic arousal, skeletal muscle affects, situational anxiety, and subjective experience of anxious affect. Meanwhile, the stress scale measures the ability to relax, "nervous arousal", how easily a person will become upset, impatient, and irritable. The DASS items are measured on a 4-point rating scale as follows: 0 (did not apply to me at all), 1 (applied to me to some degree, or some of the time), 2 (applied to me to a considerable degree, or a good part of the time), 3 (applied to me very much, or most of the time). The score of 0 to 78 is rated as normal; the score of 78 to 87 is rated as a mild level of depression, anxiety, and stress; and the score of 98 to 100 is rated as an extremely severe level of depression, anxiety, and stress (Lovibond & Lovibond, 1995). Some examples of the items are: "I found myself getting upset by quite trivial things", "I was aware of dryness of my mouth", and "I couldn't seem to experience any positive feeling at all" (Lovibond & Lovibond, 1995).

The internal consistencies (Cronbach's alpha) for DASS was 0.88 for its depression subscale, 0.82 for its anxiety scale, 0.90 for its stress subscale, and 0.93 for the total score. It also indicated a good convergent and discriminant validity (Crawford & Henry, 2003). The internal consistencies (Cronbach's alpha) for the Bahasa Malaysia version of the DASS are 0.84 for its depression subscale, 0.74 for its anxiety subscale, 0.79 for its stress subscale, and 0.90 for its overall score (Musa, Fadzil, & Mohd Zain, 2007). This Bahasa Malaysia version of the DASS also has a good concurrent validity with correlation between its total score and the total Hospital Anxiety and Depressive Scale (HADS; Musa, Ramli, Abdullah, & Sarkarsi, 2011). The DASS-21 has been used to measure symptoms of depression, anxiety, and stress in pregnant women in studies conducted in Malaysia (Musa, Fadzil, & Mohd Zain, 2007; Musa, Ramli, Abdullah, & Sarkasi, 2011). The present study utilised the validated DASS-21 in the Malaysian population. The DASS-21 questionnaire, both in English and Bahasa Malaysia, is included in Appendix II.

c. The Pregnancy Symptoms Checklist.

The physical symptoms experienced by participants were noted in the Pregnancy Symptoms Checklist, which was developed for this study. The checklist was developed based on the common symptoms experienced by pregnant women, as described by literature (e.g. Arulkumaran et al., 2004; Germain & Nelson-Piercy, 2011; Mayo Clinic, 2015). This checklist was checked and verified by an obstetrician (JH), who was one of the supervisors of the present study. The final checklist consisted of 24 common symptoms experienced during pregnancy, which were nausea, vomiting, fatigue, tender and swollen breasts, sensitive to smell, sensitive to taste, dizziness, fainting, constipation, frequent urination, weight gain, stretch marks on abdominal skin, heartburn/indigestion, nosebleeds, swelling in the feet, swelling in the ankles, swelling in the hands, swelling in the face, skin pigmentation, varicose veins, backaches, uterine contractions, shortness of breath and crying spells. Participants were required to indicate either 'yes' for the presence of the symptoms or 'no' for the absence of any symptoms. The Pregnancy Symptoms Checklist, both in English and Bahasa Malaysia, is included in Appendix II.

d. Hypnosis script.

There were a total of two hypnosis scripts, which were the script for the first two sessions (time 1 and time 2) and the script for the last two sessions (time 3 and time 4), each containing the three main components of successful hypnosis sessions. These three main components were induction, deepening, and ego strengthening, which were discussed previously in the literature review.

Hypnosis script for the first two sessions (time 1 and time 2).

Induction or the preparatory stage.

The induction stage in the present study consisted of two techniques. The first induction technique was adapted from Hartland's progressive muscle relaxation (Hartland, 1977). The adaptation includes deeper relaxation of the muscles in the legs to alleviate the symptoms of leg cramps, muscles in the waist to alleviate backache, and muscles in the throat to alleviate the symptoms of nausea and vomiting.

The release of muscle tension during hypnosis affects both the skeletal muscle, such as the muscles of the arms and legs, and the smooth muscle, such as the gastrointestinal muscle (Barabasz & Watkins, 2004). Simon and Schwartz (1999), for example, has shown that the alleviation of physical symptoms could be done through muscle relaxation. In their study (details were provided in the literature review section), pregnant women were given suggestions of stomach and throat muscles' relaxation in helping them to alleviate the symptoms of hyperemesis gravidarum.

The second technique was a new induction technique developed for the present study. This new induction technique was based on the symptom removal by symptom transformation concept, described by Kroger (1977) in his book with the title, 'Clinical and Experimental Hypnosis'. The symptom removal by symptom transformation was done by giving a suggestion that any discomfort in the body moves through the arm to the thumb and index finger (symptom transformation) and, following this transformation, participants were given suggestions that this discomfort leaves their bodies through the thumb and index finger (symptom removal; Kroger, 1977). This induction was designed to alleviate both the physical (e.g. nausea) and psychological (e.g. anxiety) symptoms that the participants were experiencing during pregnancy.

The induction process.

At the beginning of the hypnosis session, participants were asked to bring their thumbs and index fingers together before closing their eyes.

The following are excerpts from the script:

I would like you to bring together your thumb and index finger (of your left/right hand) together...You then concentrate on your breathing...breathing in and out in a relaxed manner. With your thumb and index finger touching like that...I am going to count slowly from 10 to 1 ...perhaps you would like to count slowly...and mentally...from 10 to 1 with me. As the counting continues...you will become more and more relaxed...deeper and deeper relaxed. As the count from 10 to 1 continues...you will become more and more and more comfortable...deeper and deeper ...comfortable. When number 1 is reached...you will be deeply relaxed.

Following this, participants were guided through a progressive muscle relaxation, which was adapted from Hartland's progressive muscle relaxation script (Hartland, 1977), beginning from the feet and moving up to their legs, abdomen, chest, back, throat, face, head and then moving down to shoulder, arms, hands and fingertips. The following are excerpts from the script:

Now, a feeling of complete relaxation is gradually stealing over your whole body. Let the muscles of your feet and ankles relax completely. Let them go...Now, your calf muscles...allow them to relax. Now, the muscles of your legs and thighs become completely relaxed...as they do so...your sleep is gradually becoming deeper and deeper. That feeling of relaxation is now spreading upwards...over your whole body.

Let your stomach muscles relax...let them go...Now, the muscles of your chest...your body... and your back. Let them go...allow them to relax...as though your body...is wanting to sink... deeper and deeper...into the chair...Just let your body go...let it sink back comfortably ...deeper and deeper...into the chair...and as it does so...you are falling...slowly but surely, into a deeper, deeper sleep.

Just give yourself up completely...to this very pleasant...relaxed ...drowsy...comfortable feeling. And now, this feeling of relaxation is spreading into the muscles of your neck... your shoulders...and your arms. Let your neck muscles relax...particularly the muscles at the back of your neck. Let them relax...let them go...Now, your shoulder muscles...Let them go...allow them to relax. Now, the muscles of your arms. Let them relax...let them go...And as you do so...your sleep is becoming deeper...deeper...deeper. And as this feeling of complete relaxation spreads...and deepens...over your whole body...you have fallen into a very, very deep sleep...

You are so deeply asleep, in fact...that everything that I tell you that is going to happen... will happen...exactly as I tell you. And every feeling that I tell you that you will experience...you will experience...exactly as I tell you. Now, sleep...very, very deeply. Deeper and deeper asleep... deeper and deeper asleep. (Hartland, 1977, p.106-108).

Deepener or the transitory stage.

The process of dissociation is deepened during this stage. The deepener was adapted from Hartland's hypnosis deepener (1977, p.111). The following are excerpts from the script:

In a few moments...I am going to count slowly from 10 to 1...as I count slowly from 10 to 1 ...all the sound around you will disappear but my voice will go with you and perhaps my voice will be the voice of someone you love...someone you trust...whomever that person is. As I continue to count from 10 to 1...you will take...deep breaths. And with each breath that you take...each time you breathe out...you will become more and more relaxed...and your sleep will become deeper and deeper.

When I reach number one, I would like you to imagine that you are in your most comfortable place...perhaps you can see it...perhaps you can feel it...perhaps you can touch it...perhaps you can hear its wonderful sound...your unconscious mind will know which is the best for you to do.

Ten...Nine...Deep, deep breath...more and more deeply relaxed...deeper and deeper asleep. Eight...Seven...Very deep breath...deeper and deeper relaxed...sleep becoming deeper and deeper. Six...Five...Deeper and deeper breath...more and more deeply relaxed...more and more deeply asleep. Four...Three...Very, very deep breath...deeper and deeper relaxed...sleep becoming even deeper and deeper... Two...One...Very, very deep breath...very, very deeply relaxed...very, very deeply asleep.

Sleep very, very deeply...deeper and deeper asleep ...deeper and deeper asleep.

Positive suggestions.

Symptom removal by symptom transformation is added during this stage, and repeated three times to strengthen the suggestions. The following are excerpts from the script:

Every time you breathe out, the discomfort you experienced during this pregnancy will move down your arm to your thumb and index finger and leave your body. That discomfort is replaced by the feeling of comfort...feeling of pleasure...feeling of satisfaction...allowing you to enjoy your pregnancy in a state of deep and complete relaxation (repeat three times). And very soon...that discomfort during your pregnancy will gradually fade away...will gradually disappear and be replaced by the feeling of comfort...replaced by the feeling of pleasure ...replaced by the feeling of satisfaction...allowing you to enjoy your pregnancy in a deep and complete relaxation (repeat 3 times). The ego strengthening script was adapted from Hartland's hypnotherapy training (Hartland, 1971) for ego strengthening, which was originally aimed at improvement of psychological well-being and adapted for this study to include physical well-being and positive expectation of labour and postpartum. The following are excerpts from the script:

You have now become so deeply relaxed...so deeply asleep...that your mind has become so sensitive...so receptive to what I say...that everything that I put into your mind...will sink so deeply into the unconscious part of your mind...and will cause so deep and lasting an impression there...that nothing will eradicate it.

Consequently...these things that I put into your unconscious mind...will begin to exercise a greater and greater influence over the way you think...over the way you feel...over the way you behave.

And because these things will remain...firmly imbedded in the unconscious part of your mind ...after you have left here ...when you are no longer with me...they will continue to exercise that same great influence...over your thoughts...your feelings...and your actions...just as strongly...just as surely...just as powerfully...when you are back home...or at work...as when you are with me in this room.

You are now so very deeply asleep...that everything that I tell you that is going to happen to you... for your own good...will happen...exactly as I tell you. And every feeling...that I tell you that you will experience...you will experience...exactly as I tell you. And these same things will continue to happen to you...every day...and you will continue to experience these same feelings...every day...just as strongly, just as surely...just as powerfully...when you are back home ...or at work...as when you are with me in this room.

During this deep sleep...you are going to feel physically stronger and fitter in every way. You will feel more alert...more wide-awake...more energetic.

Every day...you will become so deeply interested in whatever you are doing...in whatever is going on around you... that your mind will become completely distracted away from yourself.

Every day...you will become stronger and steadier...your mind calmer and clearer...more composed...more tranquil.

You will be able to think more clearly...you will be able to concentrate more easily. You will be able to give your whole undivided attention to whatever you are doing...to the complete exclusion of everything else.

Consequently...your memory will rapidly improve...and you will be able to see things in their true perspective...without magnifying your difficulties...without ever allowing them to get out of proportion. Every day...you will become emotionally much calmer...much more settled...much less easily disturbed.

Every day...you will become...and you will remain...more and more completely relaxed...and less tense each day...both mentally and physically...even when you are no longer with me.

And as you become...and as you remain...more relaxed...each day...so...you will develop much more confidence in yourself...more confidence in your ability to do...not only what you have ...to do each day...but more confidence in your ability to do whatever you ought to be able to do... Because of this...every day...you will feel more and more independent... to stand upon your own feet...to hold your own...

Every day...you will feel a greater feeling of personal well-being...a greater feeling of personal well-being...a greater feeling of personal safety...and security...than you have felt for a long, long time. You are enjoying your pregnancy with a greater feeling of well-being...looking forward to your delivery...holding your baby in your arms...the baby whom you are nurturing now...whom you are loving now...just imagine how wonderful it is to hold this precious being in your arms...and as you think of this...you feel a greater sense of relaxation and joy...(repeat three times).

And because all these things will begin to happen...exactly as I tell you they will happen...more and more rapidly... powerfully...and completely...with every treatment I give you...you will feel much happier...much more contented...much more optimistic in every way.

You will consequently become much more able to rely upon...to depend upon...yourself...your own efforts, ...your own judgement...your own opinions. You will feel much less need...to have to rely upon...or to depend upon...other people (Hartland, 1977, p. 199-202).

Self-hypnosis.

The self-hypnosis script was adapted from Kroger's hypnotherapy script (1977). The use of the index finger and thumb as described above was also emphasised during self-hypnosis suggestions. The self-hypnosis script is pertinent as suggestions were embedded during hypnosis for participants to continue to practice hypnosis at home. The following are excerpts from the script:

As you sit there in that chair, I would like you to know that you can go into this deep relaxation on your own as anyone can learn and practice self-hypnosis, but to achieve the best results you must carefully consider what you wish to accomplish... perhaps...having a pleasant pregnancy experience...perhaps...looking forward to your childbirth with a pleasant and relaxed feeling... if you aim for a deeply relaxed state, you will reach it.

Find a quiet place in which you will not be interrupted and arrange to spend time doing your self-hypnosis. You can sit or lie down. Once you are comfortable, bring your thumb and index fingers together.

With your thumb and index finger touching like that...you are going to count slowly from 10 to 1 with every outbreath...counting slowly...and mentally...from 10 to 1. As the counting continues...you will become more and more relaxed...deeper and deeper relaxed. As the count from 10 to 1 continues...you will become more and more comfortable... deeper and deeper comfortable. When number 1 is reached...you will be deeply relaxed. During every attempt to achieve self-hypnosis, visualize yourself going deeper and deeper. At first you may experience some difficulty, but as you stick to it, you will be able to picture yourself deeply relaxed.

Whilst you are in this deep sleep...stage by stage, you will be able to experience complete relaxation of all the muscles of your body...exactly as I did earlier...and all other suggestions that you give yourself for your own good...will act...just as effectively as if I had given them to you, myself. Whilst you are in this state...you can only give yourself positive suggestions which are beneficial for you as your unconscious mind will never accept negative suggestions.

Should any unexpected emergency arise during your deep sleep...you will automatically wake up immediately...fully prepared to take any necessary action.

If you do this last thing at night...your self-hypnosis will turn into a natural sleep...and you will have a pleasant sleep...you will wake up the next day feeling calm...relaxed...pleasant.

To come awake from this self-hypnosis, you only need to count from 1 to 10. At the count of 8 you will open your eyes and at the count of 10 you will be fully wide awake. You will wake up being fully aware of your surroundings. And as you wake up all normal healthy sensations will return to your limbs.

If you should not be able to open your eyes, don't worry. Just repeat the suggestions again, and emphasise that on the count of 10 you will absolutely, positively be able to open your eyes very easily. Should you not be able to come out of it, keep calm and give yourself time, you will eventually be able to open your eyes. (Kroger, 1977, p.89).

In the process of re-alerting (awakening) participants from the hypnosis session, positive suggestions of relaxation and comfort were re-emphasised. Upon re-alerting from hypnosis, participants were advised to practice self-hypnosis.

Hypnosis script for the last two sessions (time 3 and time 4).

The patient was also instructed to bring her thumb and index finger together whenever she felt discomfort due to her pregnancy. The script for the last two sessions (time 3 and time 4) was similar to the one conducted during the first two sessions, with an additional inclusion of the childbirth preparation script, adapted from Barabazs and Watkins (2006). For the purpose of the present study, suggestions for faster recovery during postpartum, increased psychological well-being and positive bonding with newborn babies were included in the script.

The following are excerpts from the script:

I would like you to know that...as the process of bringing your baby into the world begins...you may find that the contractions will be weak...and will occur infrequently...as they gradually allow the cervix to open up...but this is a process that takes time...causing no discomfort...that the only thing you will need to do...is to relax as much as possible...you will be able to do this...using your self-hypnosis as you have been taught to do...easily...effortlessly... perhaps as you drift to your peaceful place...

As a result...you will feel the contractions as very natural waves of pressure...and you will feel calm...relaxed...safe and secure...and in control throughout...aware of any distractions fading into the background...taking you into an even deeper relaxation...deeper and deeper with each passing wave... as a result of which ... your labour will progress steadily and easily.... you will remain perfectly calm...and enjoy a wonderful sense of self-control.

The time will come for you to experience the wonders of giving birth to your child. Before that happens...during the first stage, you will find that the contractions will be weak, and will not occur very often.

They will gradually cause the passages to open up, but this is a slow process and takes time... during that time you will feel comfortable...calm...and relaxed...that the only thing you will need to do is to sleep and to relax...you will be able to do this using the self-hypnosis that you have been practising...because of this, you will feel the contractions merely as a very small pressure in your stomach and they will not distress you at all...as a result of which your labour will progress more steadily and easily...you will remain perfectly calm and comfortable...

Later...as the passages open up, the contractions will become stronger...and more frequent. You will not become frightened or try to resist this...this is a sign that your labour is progressing well... you will be able to remain relaxed by taking a series of deep, rapid, rhythmic breaths...with each of these, you will relax more and more completely. All tension will disappear and you will allow the contractions to do their own work without trying to assist in any way.

A short pause may occur...after which the contractions will restart with increased strength...there is no need to become worried or alarmed during that time. It merely means that you have entered into the second stage of your labour...and the actual birth of your child is about to begin.

Although the contractions become more frequent...you will continue to feel comfortable...calm...relaxed.

During that time, as soon as you feel the urge to give birth...inform the relevant people...your doctor...or your nurse...your midwife....but do not give way to it until you are told to do so.

When you are told that you are now ready to bring forth your child...take a deep breath and push as long as each contractions lasts...(repeat three times)...you will find that this greatly reduces the discomfort...remember as you bear down and push...you are helping to bring your child into the world...in each interval between contractions...you will be able to relax completely.

During that time, as the baby's head descends...and appears...the final process of delivery will begin...at this point you will be able to obey all instructions implicitly...whenever you are told to stop pushing, you will stop pushing immediately and indulge in rapid deep breathing instead... as a result of this you will relax more and more completely...and as the baby's head presses down harder and harder at the opening... the whole area will become quite

numb and insensitive... although you will experience stretching...this will not cause you any discomfort...in fact, you will feel a sense of satisfaction that the baby is almost into the world...

focus on your breath...it has the power to help you...focus...move your baby forward...listen...trust...focus...calm and strong... the more focused you become... the more your baby is easing into the world...and in every interval between the contractions...you will be able to completely relax...

Although you will probably need no extra help because you are coping well...suitable drugs or anaesthetics will be available if you feel the need for them...they will not be given to you unless you require them...you have only to ask.

Throughout the whole of your labour, you will be able to talk or answer questions if necessary. Without waking from your deep, relaxed, hypnotic sleep...you will carry out every instruction that you are given to assist in a better childbirth process...just as effectively as if I had given them myself.

When you have seen the baby and the afterbirth has come away...you will fall into a deep refreshing sleep...you will wake up from this feeling really fit and well...without any discomfort...in fact you will feel healthier and refreshed...remembering very little of what has occurred (repeat three times).

You will not feel any discomfort on any part of your body...especially at the opening of the cervix immediately after your childbirth process. In fact you are going to feel comfortable...calm...relaxed...and satisfied (repeat three times).

The physical healing from your birth will take place immediately and rapidly...and as the healing continues...you feel more relaxed...more calm...mentally and emotionally...allowing you to bond with your baby...to nurture you baby...keeping yourself and your baby healthy and well (repeat three times).

The details of the hypnosis sessions are described in detail in the procedure section. The complete hypnosis script, both in English and Bahasa Malaysia, is included in Appendix

e. Hospital Checklist Part A.

The information for Hospital Checklist Part A was obtained from the participants' medical records. The information consisted of:

- Blood pressure (BP), which was divided into systolic blood pressure and diastolic blood pressure.
- Foetal weight measurement in grams via ultrasonography.

The Hospital Checklist Part A is included in Appendix IV.

- 2. Labour and 24 hours postpartum stages.
- a. Hospital Checklist Part B.

The information for Hospital Checklist Part B was obtained from the participants' medical records, except for the data collected regarding self-reported pain, which was obtained from participants within 24 hours of delivery.

Data collected during labour and delivery.

The data collected during labour and delivery consisted of:

- *Duration of labour stages (stage two and three)*. The duration of labour stages was obtained from participants' medical records. These labour stages were measured in minutes.
- *Pain relief during labour*. Pain relief during labour was measured via two methods, the use of pethidine and epidural analgesia (yes and no answer).
- Assisted vaginal delivery. Assisted vaginal delivery was measured via two methods, the use of forceps and of vacuums.
- Methods of delivery. Method of delivery consisted of delivery either via spontaneous vaginal delivery (natural birth) or caesarean section.

Data collected for neonatal assessments.

The data collected for neonatal assessments consisted of:

- Neonatal physical assessments (weight and Apgar score). Birth weight was measured as follows: low birth weight (below 2500 gm), middle-range birth weight (from 2500gm to 4000gm) and high birth weight (more than 4000gm; Shittu et al., 2007).
- Apgar score was measured at two time points following birth, at one minute and at five minutes. The details of the Apgar score were discussed in the literature review.

b. Data collected for pain description.

The data collected for pain description consisted of:

• Self-reported pain, both in English and Bahasa Malaysia. Self-reported pain was measured via three separate scales at three time points, just before delivery, during delivery and right after delivery. This scale was developed for the purpose of this study, consisting of visual analog scales ranging from 0 (no pain) to 10 (excruciating pain).

The Hospital Checklist Part B is included in Appendix V.

3. Two months postpartum.

a. Demographic Characteristics Questionnaire Part B.

The Demographic Characteristics Questionnaire Part B consisted of the information on the confinement period, was collected via mail.

b. Edinburgh Postnatal Depression Scale.

The Edinburgh Postnatal Depression Scale (EPDS) was designed to identify women who are at risk for postpartum depression (Cox & Holden, 2003). This scale consists of 10 items. EPDS items are measured on a 4-point rating scale as follows: 0 (Yes, all the time), 1 (Yes, most of the time), 2 (No, not very often), and 3 (No, not at all). Hannah, Adams, Lee, Glover, and Sandler (1992) had further categorised the cut-off points into 4 groups, which are 0, 1 to 9, 10 to 12, and \geq 13. Examples of the items are "I have felt sad or miserable" and "the thought of harming myself has occurred to me". The internal consistency (Cronbach's alpha) was 0.87 with high predictive validity (Figueira, Corrêa, Malloy-Diniz, & Romano-Silva, 2009). The internal consistency (Cronbach's alpha) for the Bahasa Malaysia version was 0.86. The scale also indicated a satisfactory concurrent and discriminant validity (Wan Mahmud, Awang, & Mohamed, 2003). The EPDS, namely the Malay version used in the present study, has been used to measure symptoms of postpartum depression in women in Malaysia (Abdul Kadir, Nordin Ismail, Yaacob, & Wan Mustapha, 2004).

c. Depression, Anxiety, and Stress Scale-21 (DASS-21).

Details of the DASS-21 were explained earlier in this section.

The Demographic Characteristic Questionnaire Part B, EPDS, and DASS-21 are included in Appendix VI.

Permission from test owners. The DASS-21 (both the English and Bahasa Malaysia versions) is available in the public domain. Permission to use both the English and Bahasa Malaysia versions of the EPDS in the present study was sought from the test owners. Permissions from test owners are included in Appendix VII.

4.10 Procedure

Participants fulfilling the inclusion criteria were recruited at the ultrasound department, Obstetrics and Gynaecology clinic, University of Malaya Medical Centre during their first antenatal appointment at week 12 of pregnancy, in the time period from August 2012 to June 2013.

During the initial recruitment process, pregnant women who fit the inclusion criteria were approached at the antenatal clinic and asked whether they were interested in participating in a research on hypnosis during pregnancy. Women were briefed regarding the nature of hypnosis and its benefits. If the participant agreed to take part in the study, informed consent was obtained prior to the first hypnosis session. Participants who declined to participate in the hypnosis intervention were asked if they were interested in being included in the control group, which involved completing questionnaires without engaging in any intervention. Following their agreement to participate in the control group, informed consent was obtained prior to administering the questionnaires at week 16 of pregnancy. Reasons for declining to participate included 'unable to wait longer at the antenatal clinic', 'unable to take longer time off from work', 'husbands and children will not be able to wait until the intervention is completed', 'not interested in being involved', 'don't know what is it all about', and 'it is against my belief system'.

1. Procedure during the pregnancy stage.

Hypnosis intervention.

Hypnosis intervention was provided by the PhD student of the present study, who received hypnosis training at the diploma level, and who has been practicing hypnosis for the past seven years. This intervention was conducted in a room at the ultrasound department of the antenatal clinic at UMMC. This room was relatively quiet, comfortable, contained light that could be dimmed, and was equipped with a comfortable sofa for the participants.

Hypnosis was conducted in individual sessions for the participants in the experimental group four times, at weeks 16, 20, 28, and 36. Each of the four sessions had a specific objective with a common premise of strengthening the self, encouraging positive thinking and increasing physical and psychological well-being by reducing and/or eliminating the participants' physical and psychological symptoms. The following are details of the hypnosis sessions:

First session. The first session, which was conducted at week 16 of pregnancy, consisted of the initial interview and education on the process of hypnosis (such as requiring the participants to close their eyes and sit in a comfortable position). The safety protocol of hypnosis was discussed during the initial interview. The safety protocols included (a) dispelling the myth of hypnosis and explaining that it is not a process conducted to compel someone to act against their will, (b) reminding participants that they could open their eyes anytime during the hypnosis

session if they feel uncomfortable, and (c) participants could withdraw from taking part in further hypnosis sessions if they felt uncomfortable. During the initial interview, participants were able to query the researcher and discuss any concerns.

Following the initial interview, participants were asked which language, either Bahasa Malaysia or English, they preferred for the hypnosis script. All the participants had chosen Bahasa Malaysia as their preferred language for the script. Participants were then asked to sit in a comfortable position, and the light in the room was dimmed to allow for a more ambient atmosphere. Pillows were provided if their back felt uncomfortable due to pregnancy. Participants were asked to bring their thumb and index fingers together, and the researcher proceeded in going through the script for the first session, which included induction (bringing the thumb and index fingers together and progressive muscle relaxation), deepener (counting down from 10 to 1), post-hypnotic suggestions (symptom removal via symptom transformation), ego strengthening (which included positive suggestions in general and some specific to a positive experience of pregnancy), and teaching self-hypnosis to encourage participants to practice hypnosis at home. After re-alerting (awakening) participants from hypnosis, they were asked to try self-hypnosis in the presence of the researcher to ensure that they did it correctly. Participants were encourage to practice self-hypnosis every day. Participants' engagement in self-hypnosis was checked through phone calls once a week until they were hospitalised for labour. The duration of the first session was 1.5 hours for each participant.

Second session. Prior to the start of the hypnosis session at week 20 of pregnancy, participants were queried regarding their health and whether they had been practicing self-hypnosis at home. Participants were further encouraged to practice self-hypnosis every day. The content of the second session was similar to the first session, except for teaching self-hypnosis. The duration of the second session was one hour.

Third session. The procedure of the third hypnosis session, which was conducted at week 28 of pregnancy, was similar to the second session, with an addition to the post-hypnotic suggestion which included the preparation for labour (such as pain relief during labour) and better physical and psychological well-being during postpartum. The duration of the third session was one hour.

Fourth session. The procedure and duration of the fourth and final session of hypnosis, which was conducted at week 36 of pregnancy, was similar to the third session.

Blinding.

Since the study design was a nonrandomised quasi-experimental design, blinding of participants was not done. However, the type of groups the participants were included in were concealed from the obstetricians and medical officers, who were actively involved in patient treatment at the antenatal clinic and labour ward.

Measurement of physical and psychological symptoms.

Baseline data, collected at time 1, included the measurement of stress, anxiety, depression and physical symptoms prior to the first intervention, which was conducted at week 16 of pregnancy. Subsequently, participants completed the DASS-21 and Pregnancy Symptoms Checklist during the remaining three intervention phases or time points. These were: time 2 at week 20, time 3 at week 28, and time 4 at week 36 of pregnancy, and the timing of the completion of these questionnaires was in relation to the timing of the hypnosis interventions.

Although participants in the control group did not receive hypnosis intervention, they had received the usual routine antenatal care from the obstetricians. Participants in the control group also received some form of attention control in terms of advice on healthy diet, back massage techniques to help them to relax, and breathing exercises, which are also the routine procedures given to all women (including to the participants in the experimental group) attending the antenatal clinic.

The lactation nurses reinforced the advice given to pregnant women during the routine talks at the antenatal clinic. The attendance to these talks were included in the patient notes. The doctors also emphasised the importance of healthy diet, back massage techniques, and breathing exercises during patients' follow-up visits.

Participants were given instructions on the completion of the questionnaires (DASS-21 and the Pregnancy Symptoms Checklist). The forms were then collected and reviewed. Participants were asked to complete any missing information, unless the omission was deliberate.

For ethical purposes, women in the control group were offered four hypnosis sessions following the completion of the study, but none were interested.

Measurement of blood pressure and foetal weight at week 36 of pregnancy.

Information regarding participants' foetal weight and blood pressure (systolic and diastolic) at week 36 of pregnancy from both the experimental and control groups was obtained from medical records. The blood pressure measurement was taken during participants' routine antenatal check-up by the antenatal ward nurses. The foetal weight measurement was taken by the ultrasound technician in the ultrasound department at the antenatal clinic.

2. Procedure during the labour stage and the 24 hours postpartum.

Information necessary for the completion of the Hospital Checklist Part A and Part B were obtained from the hospital medical records. The self-reported pain scale (just before delivery, during delivery, and right after delivery) was completed by participants within 24 hours postpartum.

3. Procedure during the postpartum stage.

At the end of the fourth hypnosis session for the experimental group participants and following completion of questionnaire at Time 4 for the control group participants, an envelope
labelled with the researcher's address was given to each participant. The contents of the envelope were questionnaires to be completed at two months postpartum. These questionnaires included questions on the living arrangement during the confinement period, the DASS-21, and the EPDS. A telephone call was initiated one week before participants needed to complete these questionnaires. Participants were again contacted the week that they needed to complete the questionnaires. If participants did not answer the call, another three calls were initiated followed by short text messages or sms.

4.11 Data Management

Data entry into SPSS version 18 were completed immediately following the availability of data. This is particularly important in detecting postpartum depression and effort was made to contact participants to be referred for further treatment. Missing data are explained in the flow charts (Figures 4.1 and 4.2), and the results section.

4.12 Statistical Analyses

The statistical analyses used in the present study, which were via per protocol analysis were the Repeated Measures ANOVA (to measure the effect of time on the dependent variables, which were stress, anxiety, depressive and physical symptoms); independent samples t-test (to measure the differences between two groups for continuous dependent variables); Chi-square (to measure the differences between two groups for categorical dependent variables); Pearson product-moment correlation (to measure the relationships between variables); point-biserial correlations (to measure the relationships involving categorical variables); multiple regressions (to determine the relationship between predictors and continuous outcome variables); and binomial logistic regressions (to measure the relationship between predictors and categorical outcome variables).

The baseline data collected during the pregnancy stage were checked for normal distributions. Violations from normal distributions were corrected using data transformation

methods. Parametric tests were conducted for data that showed normal distributions, and nonparametric tests were conducted for data that violated the assumptions of normality.

4.13 Stopping rules

The interim analyses were performed for the primary outcomes (stress, anxiety, depression) and secondary outcomes (blood pressure and foetal weight measurement) following the completion of the pregnancy stage at week 36 of pregnancy. Although there were differences in the primary outcomes between the experimental and control groups, these differences did not indicate any significant concerns that would indicate the need to stop the study or withdraw any participants from the study.

CHAPTER 5 - RESULTS

5.1 Introduction

This chapter is divided into four main sections. The first contains the analyses of data collected during the **pregnancy stage**. These analyses include the presentation of the baseline and demographic characteristics. Following the presentation of the baseline characteristics, the changes in the dependent variables (psychological and physical symptoms) over time from baseline or time 1 (week 16 of pregnancy), time 2 (week 20 of pregnancy), time 3 (week 28 of pregnancy) to time 4 (week 36 of pregnancy) were analysed. Group differences between the experimental and control groups (group types), blood pressure at week 36 of pregnancy, and foetal weight at week 36 of pregnancy will be presented. Following the analyses of group differences, the relationship between group types, blood pressure at week 36 (systolic and diastolic), foetal weight at week 36 of pregnancy and psychological symptoms (stress, anxiety, and depression), and physical symptoms at week 36 of pregnancy were ascertained. Regression analyses were conducted for the factors predicting antenatal psychological and physical symptoms at week 36 of pregnancy.

The second section reports the analyses of data collected during the **labour stage**. These analyses included the differences between the experimental and control groups in variables measured during labour, which were the use of pain relief during labour (pethidine and epidural), the length of the second stage of labour, the length of the third stage of labour, methods of delivery (spontaneous vaginal delivery and caesarean section), and assisted vaginal delivery (forceps and vacuum). Following the analyses of group differences, the relationship between antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, group types, and the variables measured during labour was examined. Regression analyses were conducted for the factors predicting the variables measured during labour.

This is followed by the analyses of data collected within the **24 hours postpartum stage**. These analyses included group differences in neonatal Apgar scores at one minute of

birth, neonatal Apgar scores at five minutes of birth, neonatal birth weight, and self-reported pain just before delivery, self-reported pain during delivery, and self-reported pain right after delivery. Following the analyses of group differences, analyses of the relationship between antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, group types, and variables measured within 24 hours postpartum were carried out. Regression analyses were conducted for the factors predicting the variables measured within the 24 hours postpartum stage.

The final section describes the analyses of data collected at the **two months postpartum stage**. These analyses included the changes in stress, anxiety, and depressive symptoms over time (from baseline at week 16 of pregnancy to two months postpartum). Group differences in postpartum depression at two months postpartum were ascertained. Following the analyses of group differences, the relationship between antenatal psychological and physical symptoms at week 36 of pregnancy, group types, and variables measured at two months postpartum depression) were explored. Living arrangement during the confinement period (whether staying with husband, parents, or parent-in-law) was included in the analysis of the relationship between these variables and postpartum depression. Regression analyses were conducted for the factors predicting the variables measured at two months postpartum.

Ethnicity, which was included in the initial hypotheses, was removed from the analyses, as the ethnic background of participants in the final composition of the present study consisted of all Malay pregnant women, except for three Indian women. Chinese pregnant women attending the UMMC antenatal clinic were not interested in taking part in the present study, which is discussed further in the discussion chapter.

5.2 Results on the Efficacy of Hypnosis Intervention during the Pregnancy Stage

Demographic characteristics (Baseline characteristics at time 1).

The hypnosis intervention study was completed by 56 pregnant women, of which 28 women were in the experimental group and 28 women were in the control group at baseline measurement (Time 1 or week 16 of pregnancy).

Age was normally distributed for both the experimental and control groups, as shown by the Shapiro-Wilk test (p > .05) and visual inspection of the histogram. Following this, an independent-samples t-test was performed to determine if there were differences in age between participants in the experimental and control groups. Results showed homogeneity of variances, as assessed by Levene's test for equality of variances (p = .324). Participants in the experimental (28.36 ± 3.08 years old) and control (29.14 ± 2.58 years old) groups had similar age patterns, and the difference was not statistically significant, -0.78 (95% CI, -2.31 to 0.74), t(54) = -1.035, p = .305, d = 0.28. The results of the independent-samples t-test are shown in Table 5.1.

Table 5.1: Age (Years) at Baseline (Time 1 or Week 16 of Pregnancy)

Variables	Groups	n	Mean (SD)	t	df	p-value	d
Age (years)	Experimental	28	28.36 (3.08)	-1.035	54	.305	0.28
• •	Control	28	29.14 (2.58)				

Chi-square tests showed no significant associations between nulliparous and multiparous women, χ^2 (1, *N*=56) = .072, *p*=.789, φ =.036; educational levels, χ^2 (1, *N*=56) = 1.310, *p*=.252, φ =-.153; and work status, Fisher's exact test, χ^2 = 1.00, φ =.695. The chi-square tests for association between group types and income level showed that two cells had an expected count less than five. Since income level was a 2 x 3 table, Fisher's exact test was not generated, and therefore the results were not reported here. The results of chi-square test for associations are shown in Table 5.2.

	Expe Grou n=28	erimental 1p 5)	Contr Group (n=28	ol D)	χ^2	df	p-value	φ /V ¹
	Ν	(%)	Ν	%				
Parity								
Nulliparous	14	51.9	13	48.1	.072	1	.789	.036
Multiparous	14	48.3	15	51.7				
Education								
Secondary school	7	38.9	11	61.1	1.310	1	.252	153
College/	21	55.3	17	44.7				
University								
Work status								
Employed	26	50.0	26	50.0	- ()	1	1.00	.695
Unemployed	2	50.0	2	50.0				
Income (RM) ²								
<1,000	1	100.00	0	0.0	- Ť	2	-	.148
1,000-3,000	9	45.0	11	55.0				
>3,000	18	51.4	17	48.6				

 Table 5.2: Demographic Characteristics of the Experimental and Control Groups at Baseline or Time 1

Note: ${}^{1}\varphi / V =$ strength of association in chi-square; $\varphi =$ Phi lambda for 2 x 2 table and V = Cramer's V for tables larger than 2 x 2; 2 USD\$1 = Ringgit Malaysia RM4.18

Group differences.

Hypothesis 1. The second hypothesis of the pregnancy stage states that there are significant differences in the intervention phases during pregnancy [week 16 (time 1), week 20 (time 2), week 28 (time 3), and week 36 (time 4)] between the experimental and control groups' antenatal psychological symptoms and physical symptoms over time. Specifically, pregnant women in the experimental group experience lower levels of antenatal psychological symptoms and physical symptoms in the control groups.

Intervention Phases for Antenatal Stress Symptoms. Normality testing was performed for antenatal stress symptoms for both the experimental and control groups. Results indicated that the antenatal stress symptoms were normally distributed for both the experimental and control groups, as shown by the Shapiro-Wilk test (p > .05) and visual inspection of the histograms. A repeated measures ANOVA was performed to determine the significant differences in the experience of antenatal stress symptoms between participants in the experimental and control groups from time 1 to time 4 as well as changes of antenatal stress symptoms over time from time 1 to time 4.

Results of the repeated measures ANOVA for antenatal stress symptoms indicated that there were homogeneity of variances, as assessed by Levene's test of homogeneity of variance (p>.05) and homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (p = .358).

The interaction between group types and time on antenatal stress symptoms, F(2.707, 113.701)= 3.037, p=.037, partial $\eta^2=.067$ was statistically significant. The simple main effect for group types (experimental and group) at each level of the within-subjects factor and the simple main effect for time in antenatal stress symptoms between time points for each level of the between-subjects factor was examined following the significance of interaction between group types and time. Results of the simple main effect for group types indicated that there was a statistically significant difference in antenatal stress symptoms at time 4, F(1,44)=4.704, p=.036, partial $\eta^2=.101$, with a mean difference of -4.89 (95% CI, -9.43 to -.34), but not at time 1 [F(1,54) = 1.055, p=.309, partial $\eta^2=.019$] with a mean difference of -2.36 (95% CI, -6.96 to 2.24); time 2[F(1,44)=.007, p=.933, partial $\eta^2=.000$] with a mean difference of -.174 (95% CI, -4.31 to 3.96), and time 3 [F(1,44)=.753, p=.390, partial $\eta^2=.017$] with a mean difference of -.165 (95% CI, -5.49 to 2.19).

The effect of time on antenatal stress symptoms for the experimental group, F(3,60)=7.117, p=.0005, partial $\eta^2=.262$ was significant, and the effect of time on antenatal stress symptoms for the control group was not significant, F(3,66)=1.224, p=.308, partial $\eta^2=.053$. Following the significant effect of time for the experimental group, a pairwise comparison was performed and results indicated that the change in antenatal stress symptoms was not statistically significant between time 1 and time 3 (M=1.62, SE=1.48, p=1.00), between time 2 and time 4 (M=3.05, SE=1.24, p=.139), between time 2 and time 3 (M=1.43, SE=1.12, p=1.00), between time 2 and time 4 (M=3.91, SE=1.45, p=.084, or between time 3 and time 4 (M=2.48, SE=0.90, p=.076), but stress symptoms were statistically significantly reduced at time

4 compared to time 1 (M=5.52, SE=1.18, p=.001; see Table 4, Figure 1). Results of repeated measures ANOVA on the antenatal stress symptoms are shown in Table 5.4 and Figure 5.1.

Source of Variation SS MS F df р ŋ Between Subjects Effect: 1 81.988 81.988 0.529 .471 .012 Group Within Subjects Effect: Time 2.707 257.461 95.104 3.968 .012* .086 Groups x time 2.707197.007 72.772 3.037 .037* .067 *Note:* * *p*<.05 18.00 **Mean of Antenatal Stress Symptoms** M = 13.3616.00 SE=2.06 Experimental Group Control Group 14.00 M=11.00 M=10.70 SE=1.59 SE=1.93 M=9.71 M=9.30 *M*=9.04 12.00 SE=1.47 SD=1.53 SE=1.44 M=8.29SE=1.1410.00 M = 5.818.00 SE=1.29 6.00 4.00 2.00 .00 Time 1 Time 2 Time 3 Time 4 Week 16 Week 20 Week 28 Week 36 Time

 Table 5.4: Repeated Measures ANOVA for Antenatal Stress Symptoms

Figure 5.1: Mean of antenatal stress symptoms from Time 1 to Time 4.

Note. Group differences at Time 4 were significant. Error bars represent the standard error of the mean.

Intervention phases for antenatal anxiety symptoms. Normality testing was performed for antenatal anxiety symptoms for both the experimental and control groups. Results indicated that the antenatal anxiety symptoms were normally distributed for both the experimental and control groups, as shown by the Shapiro-Wilk test (p > .05) and visual inspection of the histograms. Following the normal distributions of data, a repeated measures ANOVA was performed to determine if any significant differences existed in the experience of antenatal anxiety symptoms between participants in the experimental and control groups from Time 1 to Time 4, as well as any changes in antenatal stress symptoms over time from Time 1 to Time 4.

Results of the repeated measures ANOVA for antenatal anxiety symptoms indicated homogeneity of variances, as assessed by Levene's test of homogeneity of variance (p>.05) and homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (p = .314).

The interaction between group types and time on antenatal anxiety symptoms, F(3,126)= 7.933, p=.0005, partial η^2 =.16 was statistically significant. The simple main effect for group types (experimental and control groups) at each level of the within-subjects factor and the simple main effect for time in antenatal anxiety symptoms between time points for each level of the between-subjects factor were performed following the significance of interaction between group types and time. Results for the simple main effect for group types indicated that there was a statistically significant difference in antenatal anxiety symptoms at Time 4, F(1,44)=10.764, p=.002, partial η^2 =.20 with a mean difference of -5.60 (95% CI, -9.05 to -2.16), but not at Time 1 [F(1,53)=.591, p=.446, partial η^2 =.011] with a mean difference of -1.58 (95% CI, -5.71 to 2.55), Time 2 [F(1,44)=.220, p=.641, partial η^2 =.005] with a mean difference of -.783 (95% CI, -4.14 to 2.58), and time 3 [F(1,44)=2.8814, p=.097, partial η^2 =.061] with a mean difference of -2.48 (95% CI, -5.42 to 0.47).

The effect of time on anxiety symptoms for the experimental group was significant, F(2.138,58.457)=12.352, p=.0005, partial $\eta^2=.38$ and the effect of time on anxiety symptoms for the control group was not significant, F(3,66)=0.756, p=.523, partial $\eta^2=.03$. Following the significant effect of time for the experimental group, a pairwise comparison was performed and results indicated that antenatal anxiety symptoms were statistically significantly reduced between Time 2 and Time 1 (M=2.48, SE=0.80, p=.035), between Time 3 and Time 1 (M=3.91, SE=1.18, p=.020), between Time 4 and Time 1 (M=6.10, SE=1.27, p=.001), between Time 3 and Time 1 and Time 1 (M=3.62, SE=1.13, p=.026), but not statistically significant between Time 1 and Time 2 (M=1.43, SE=0.89, p=.734) and between Time 2 and Time 3 (M=2.19, SE=0.82, p=.085). Results of repeated measures ANOVA for antenatal anxiety symptoms are shown in

Table 5.5: Repeated Measures ANOVA for Antenatal Anxiety Symptoms

Source of Variation	df	SS	MS	F	р	ŋ
Between Subjects Effect:						
Group	1	99.684	99.684	1.104	.299	.026
Within Subjects Effect:	2	126 000	42.020	2 022	027*	045
	3	120.090	42.050	2.923	.037.	.003
Groups x time	3	342.136	114.045	7.933	.0005*	.159
<i>Note:</i> * <i>p</i> <.05						



Figure 5.2: Mean of antenatal anxiety symptoms from Time 1 to Time 4.

Intervention phases for antenatal depressive symptoms. Normality testing was performed for antenatal depressive symptoms for both the experimental and control groups. Data was found to be strongly positively skewed, as shown by the Shapiro-Wilk test (p < .05) and visual inspection of the histograms. The violation from the assumption of normality was corrected using the method of logarithmic transformation for strongly positively skewed data. Following this transformation, the results yielded normal distributions and a repeated measures ANOVA was performed to determine the significant differences in the experience of antenatal

Note. Group differences at Time 4 were significant. Error bars represent the standard error of the mean.

depressive symptoms between participants in the experimental and control groups from Time 1 to Time 4 along with and changes in antenatal depressive symptoms over time from Time 1 to Time 4.

Results of the Repeated measures ANOVA indicated that for antenatal depressive symptoms, there were homogeneity of variances, as assessed by Levene's test of homogeneity of variance (p>.05) as well as homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (p = .556).

The interaction between group types and time on antenatal depressive symptoms was not statistically significant, F(3,48)=1.070, p=.371, partial $\mathfrak{y}^2=.063$. Since the interaction was not statistically significant, the main effect of group types and main effect of time were reported. Results of the main effect of group types was not statistically significant, F(1,16)=0.958, p=.342, partial $\mathfrak{y}^2=.06$, with mean differences of Time 1 [-0.50 (95% CI, -4.03 to 3.03)], Time 2 [0.61 (95% CI, 0.61 (-1.78 to 3.00)], Time 3 [-1.57 (95% CI, -4.53 to 1.40)], and Time 4 [-1.18 (95% CI (-3.73 to 1.36)].

The main effect of time was significant, F(3,48)=2.815, p=.049, partial $\eta^2=.15$. Following the overall significant effect of time (regardless of group types), a pairwise comparison was performed and the results indicated that there was a statistically significant effect between Time 1 and Time 4 (M=3.29, SE=1.00, p=.012). However, the pairwise comparison was not significant for the combinations of the other time points. Results of the repeated measures ANOVA for antenatal depressive symptoms are shown in Table 5.6 and Figure 5.3.

Table 5.6: Repeated Measures ANOVA for Antenatal Depressive Symptoms

Source of Variation	df	SS	MS	F	р	ŋ
Between Subjects Effect:	*					
Group	1	0.141	0.141	0.958	.342	.056
Within Subjects Effect:						
Time	3	0.683	0.228	2.815	.049*	.150
Groups x time	3	0.260	0.087	1.070	.371	.063
Note: * p<.05						



Figure 5.3: Mean of antenatal depressive symptoms from Time 1 to Time 4.

Note. Group differences at all time points were not significant. Error bars represent the standard error of the mean.

Intervention phases for antenatal physical symptoms. Normality testing was performed for antenatal physical symptoms for both the experimental and control groups. Results indicated that the antenatal physical symptoms were normally distributed for both the experimental and control groups, as shown by the Shapiro-Wilk test (p > .05) and visual inspection of the histograms. Following the normal distributions of data, repeated measures ANOVA was performed to identify any significant differences in the experience of antenatal physical symptoms between participants in the experimental and control groups from Time 1 to Time 4 in addition to changes in antenatal stress symptoms over time from Time 1 to Time 4.

The results of the repeated measures ANOVA indicated that for antenatal physical symptoms, there were homogeneity of variances, as assessed by Levene's test of homogeneity of variance (p>.05) and homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (p = .153).

The interaction between group types and time on antenatal physical symptoms was not statistically significant, F(3,120)=2.652, p=.052, partial $\eta^2=.06$. Since the interaction was not

statistically significant, the main effect of time and group types was reported. The main effect of time was not statistically significant, F(3,120)=2.652, p=.052, partial $\eta^2=.06$. Results of the main effect of group types were statistically significant, F(1,40)=7.978, p=.007, partial $\eta^2=.17$. Following the significant main effect of group types, further analyses of group differences at Time 1, Time 2, Time 3, and Time 4 were performed, and results indicated that there was a statistically significant difference in antenatal physical symptoms at Time 2, F(1,44)=11.448, p=.002, partial $\eta^2=.901$ with a mean difference of -2.96 (95% CI, -4.72 to -1.02), and statistically significant difference in Time 4, F(1,41)=8.004, p=.007, partial $\eta^2=.16$ with a mean difference of -3.26 (95% CI, -5.59 to -0.93). The group differences in Time 1, F(1,53)=0.680, p=.413, partial $\eta^2=.13$ with a mean difference of -0.71 (95% CI, -2.43 to 1.01), and Time 3, F(1,44)=2.059, p=.158, partial $\eta^2=.045$ with a mean difference of -1.35 (95% CI, -3.24 to 0.55) were not statistically significant. Results of repeated measures ANOVA for the antenatal physical symptoms are shown in Table 5.7 and Figure 5.4.

Table 5.7: Repeated Measures ANOVA for Antenatal Physical Symptoms

Source of Variation	df	SS	MS	F	р	ŋ
Between Subjects Effect:						
Group	1	189.834	189.834	7.978	.007*	.166
Within Subjects Effect:						
Time	3	41.126	13.709	2.447	.067	.058
Groups x time	3	44.579	14.860	2.652	.052	.062
Note: $* n < 05$						

Note: * *p*<.05



Figure 5.4: Mean of antenatal physical symptoms from Time 1 to Time 4.

Hypothesis 2. The first hypothesis for the pregnancy stage states that there are significant differences in foetal weight (week 36), systolic and diastolic blood pressure (week 36) between the experimental and control groups. Specifically, pregnant women in the experimental group have lower foetal weight (week 36) and lower systolic and diastolic blood pressure (week 36).

Foetal weight at week 36 for both the experimental and control groups was found to be moderately positively skewed (p < .05). The violation from the assumption of normality was corrected using the method of square root for moderately skewed data. Following this transformation, the results yielded normal distributions as inspected from the Shapiro-Wilk test (p > .05). The visual inspection of the histograms showed that foetal weight at week 36 was normally distributed. Following the normality confirmation, an independent-samples t-test was performed to determine if there were differences between foetal weight (week 36) between participants in the experimental and control groups (group types). Results of the independentsamples t-test indicated that there was homogeneity of variances, as assessed by Levene's test for equality of variances (p = .186). Participants in the experimental groups had higher mean foetal weight at week 36 (2639.14 ± 228.55gm) compared to the mean foetal weight at week 36 106

Note. Group differences were significant at Time 2 and Time 4. Error bars represent the standard error of the mean.

for the control group (2189.96 \pm 318.24gm), and the difference was statistically significant, 449.19 (95% CI, 279.15 to 619.22), t(42) = 5.331, p = .0005. The results of the independent-samples t-test between foetal weight (week 36) and group types are displayed in Table 5.3.

Systolic and diastolic blood pressure (week 36) of pregnancy were normally distributed for both the experimental and control groups (group types), as shown by the Shapiro-Wilk test (p > .05) and visual inspection of the histograms. Results of the independent-samples t-test for systolic blood pressure (week 36) indicated that there was homogeneity of variances, as assessed by Levene's test for equality of variances (p= .644). The difference was not statistically significant, -1.87 (95% CI, -8.21 to 4.46), t(42) = -.597, p = .554. Results of the independentsamples t-test for diastolic blood pressure (week 36) indicated that there was homogeneity of variances, as assessed by Levene's test for equality of variances (p = .052). The difference was not statistically significant, -.92 (95% CI, -6.65 to 4.81), t(42) = -.324, p = .748. The results of the independent-samples t-test between systolic and diastolic blood pressure (week 36) and group types are shown in Table 5.3.

Variables	Group	n	Mean (SD)	t	df	p-value	d
Foetal	Experimental	21	2639.14				
weight (grams)			(228.55)	5 331	42	0005*	1.62
(grains)	Control	23	2189.96	5.551	72	.0005	1.02
			(318.24)				
Systolic	Experimental	21	113.95				
blood			(9.68)				
pressure				597	42	.554	0.18
(mmhg)	Control	23	115.83				
			(11.01)				
Diastolic	Experimental	21	68.43				
blood			(6.02)				
pressure				324	42	.748	0.10
(mmhg)	Control	23	69.35				
			(11.67)				

 Table 5.3: Foetal Weight (Week 36) and Systolic and Diastolic Blood Pressure (Week 36)

Note: *p < .05

Relationships between variables.

Hypothesis 3. The third hypothesis of the pregnancy stage states that antenatal psychological symptoms (week 36) and group types are predictive of the antenatal physical symptoms (week 36).

Pearson's correlation coefficient was performed to determine the associations between antenatal psychological symptoms and antenatal physical symptoms at week 36 of pregnancy. Results showed that an increase in the antenatal stress symptoms at week 36 of pregnancy was moderately correlated with an increase in antenatal physical symptoms at week 36 of pregnancy, [r(42) = .485, p < .01]. An increase in the antenatal anxiety symptoms at week 36 of pregnancy was strongly correlated with an increase in antenatal physical symptoms at week 36 of pregnancy was strongly correlated with an increase in antenatal physical symptoms at weel 36 of pregnancy, [r(42) = .598, p < .01]. An increase in the antenatal physical symptoms at week 36 of pregnancy, [r(42) = .598, p < .01]. An increase in the antenatal depressive symptoms at week 36 of pregnancy, [r(23) = .483, p < .01]. Results of Pearson's correlation coefficient are contained in Table 5.8.

A point-biserial correlation was performed to determine the associations between group types, antenatal psychological symptoms and antenatal physical symptoms at week 36 of pregnancy. Results indicated that group types had moderate negative correlations with antenatal physical symptoms at week 36 of pregnancy, r(41) = -.404, p < .01. The lower levels of antenatal physical symptoms at week 36 of pregnancy were associated with higher levels of group membership (experimental group). Results of the point-biserial correlation are shown in Table 5.9.

	Variables	1	2	3	4
1	Stress	-	.752**	.720**	.485**
2	Anxiety		-	.596**	.598**
3	Depression			-	.483**
4	Physical Symptoms				0

 Table 5.8: Intercorrelations between Antenatal Psychological (Stress, Anxiety and Depression) and Antenatal Physical Symptoms (Week 36)

Note: *p < .05, **p < .01

 Table 5.9: Intercorrelations between Group Types, Parity, and Antenatal Psychological (Stress, Anxiety and Depression) and Antenatal Physical Symptoms (Week 36)

	Variables	1	2	3	4	5
1.	Group types	-	317*	452**	014	404**
2.	Stress		Q	.752**	.538**	.485**
3.	Anxiety			-	.288	.598**
4.	Depression				-	.369
5.	Physical Symptoms					-

Note: Experimental group coded as 1 and control group coded as 0; *p < .05, **p < .01

A multiple regression was conducted to predict antenatal physical symptoms from group types, antenatal stress, anxiety, and depressive symptoms at week 36 of pregnancy. The assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met. These variables statistically significantly predicted antenatal anxiety symptoms, F(4,20)=5.884, p = .003, adj. $R^2 = .449$. The independent variable coefficients showed that group types (B=-5.124, SE=1.53, B=-.645, p=.003) and antenatal depressive symptoms at week 36 of pregnancy (B=6.311, SE=2.26, B=.519, p=.011) were significant predictors. Results showed that the control group had experienced higher levels of antenatal physical symptoms compared to the experimental group at week 36 of pregnancy. Results also indicated that every increase in antenatal depressive symptoms at week 36 of pregnancy equated to an increase of 6.173 in the score for antenatal physical symptoms at week 36 of pregnancy. Antenatal stress symptoms at week 36 of pregnancy, (B=-.161, SE=.112, B=-.314, p=.168) and antenatal anxiety symptoms at week 36 of pregnancy, (B=.064, SE=.149, B=.097, p=.671), did not statistically predict antenatal physical symptoms at week 36 of pregnancy. Results of the multiple regression analysis are shown in Table 5.10.

Variables	В	SE _B	ß
Intercept	-5.614	6.463	
Group types	-3.533	1.509	454*
Antenatal stress symptoms (week 36)	211	.122	434
Antenatal anxiety symptoms (week 36)	.109	.135	.190
Antenatal depressive symptoms (week 36)	6.713	2.357	.607*

 Table 5.10: Summary of Multiple Regression Analysis for Variables Predicting Antenatal Physical Symptoms (Week 36)

Note: *p<.05; *B*=unstandardized regression coefficient; *SE*_{*B*}=standard error of the coefficient; β = standardised coefficient; Experimental group coded as 1 and control group coded as 0.

Summary of results.

The baseline demographic characteristics at Time 1 showed that there were 28 participants in the experimental group and 28 participants in the control group. The mean age of participants in the experimental group was 28.36 (SD = 3.08), and the mean age of participants in the control group was 29.14 (SD = 2.58). The participants in the experimental group consisted of 51.9% nulliparous women and 48.3% multiparous women, compared with 48.1% nulliparous women and 51.7% multiparous women in the control group. A total of 38.9% of participants in the experimental group had a secondary school education or below, compared to 61.1% in the control group. In the experimental group, 55.3% of women had

college or university education in contrast to 44.7% in the control group. A total of 50.0% of the participants in both groups were employed, compared to 50.0% who were unemployed. The majority of participants' income was higher than RM3000.00 (51.4% in the experimental group and 48.6% in the control group).

The pregnancy stage results indicated that there were group differences in the experience of antenatal stress, anxiety, depressive and physical symptoms. For the experimental group, these factors had a decreasing trend from baseline to the week 36 of pregnancy. However, for the control group, the antenatal stress and depressive symptoms decreased at week 20 of pregnancy compared to baseline and later increased at week 28 and 36 of pregnancy, and antenatal anxiety symptoms showed an increasing trend from baseline to week 36 of pregnancy. The experience of antenatal physical symptoms for the experimental group had decreased at week 20 and increased at week 28 and 36 of pregnancy, and for the control group, the experience of the physical symptoms had decreased at week 28 and increased at week 36, and this increase was higher than the one experienced by the experimental group.

The group differences in foetal weight at week 36 of pregnancy were significant. The foetal weight for the participants in the experimental group was higher than the control group. However, the group differences in systolic and diastolic blood pressure at week 36 of pregnancy were not significant. Mean differences showed that the experimental group had lower systolic and diastolic blood pressure at week 36 of pregnancy.

The correlation results indicated that an increase in the antenatal stress symptoms at week 36 of pregnancy was moderately positively correlated with an increase in antenatal physical symptoms at week 36 of pregnancy. An increase in the antenatal anxiety symptoms at week 36 of pregnancy was strongly positively correlated with an increase in antenatal physical symptoms, and an increase in the antenatal depressive symptoms at week 36 of pregnancy was moderately positively correlated with an increase in antenatal physical symptoms. The results also indicated that group types had moderate negative correlations with antenatal physical symptoms at week 36 of pregnancy. The results also indicated that group types had moderate negative correlations with antenatal physical symptoms at week 36 of pregnancy.

participants had lower levels of antenatal physical symptoms compared to the control group's participants.

Group types, antenatal stress, anxiety, and depressive symptoms at week 36 of pregnancy statistically significantly predicted antenatal physical symptoms at week 36 of pregnancy, and, independently, group types and antenatal depressive symptoms were significant predictors of antenatal physical symptoms.

5.3 Results on the Efficacy of Hypnosis Intervention for the Labour Stage

Group differences.

Hypothesis 1. The first hypothesis of the labour stage states that the experimental and control groups significantly differ in terms of the variables measured during labour. Specifically, participants in the experimental group have significantly shorter length of second stage labour, shorter length of third stage labour, less use of pain relief during labour, more spontaneous vaginal delivery and fewer assisted vaginal deliveries.

An independent-samples t-test was run to determine if there were differences in the length of second stage labour between the experimental and control groups. Results indicated that the length of second stage labour was shorter for the participants in the experimental group (73.05 \pm 140.62 minutes) than for the participants in the control group (96.07 \pm 106.04 minutes). There was homogeneity of variances, as assessed by Levene's test for equality of variances (*p* = .980). The experimental group's length of second stage labour was -23.02 minute (95% CI, -114.44 to 68.41) shorter than the control group. However, the difference was not statistically significant, *t*(31)= -.312, *p*=.611, *d*=.18. Results of the independent-samples t-test are shown in Table 5.11.

Groups	n	Mean (SD)	t	df	p-value	d
Experimental	19	73.05 (140.62)	514	31	.611	0.18
Control	14	96.07 (106.04)				

 Table 5.11: Length of Second Stage Labour (in Minutes)

Note: Missing data included participants who dropped out prior to labour stage, gave birth via caesarean section, and did not give birth at UMMC.

An independent-samples t-test was run to determine if there were differences in the length of third stage labour between the experimental and control groups. Results indicated that the length of third stage labour was shorter for the participants in the experimental group (6.21 \pm 5.22 minutes) than for the participants in the control group (8.29 \pm 3.85 minutes). There was homogeneity of variances, as assessed by Levene's test for equality of variances (*p* = .134). The experimental group's length of second stage labour was -2.08 minutes shorter than the control group (95% CI, -5.45 to 1.30). However, the difference was not statistically significant, *t*(31)= -1.254, *p*=.219, *d*=.15. Results of the independent-samples t-test are shown in Table 5.12.

Groups	n	Mean (SD)	t	df	p-value	d
Experimental	19	6.21 (5.22)	-1.254	31	.219	0.15
Control	14	8.29 (3.85)				

Note: Missing data included participants who dropped out prior to labour stage, gave birth via caesarean section, and did not give birth at UMMC.

The chi-square test for association was performed between group types and pethidine used during labour. All expected cell frequencies were greater than five. There was a statistically significant association between groups and pethidine used during labour, χ^2 (1, N=45)=4.148, p=.041, $\varphi = .304$. Frequency distributions showed that within group, 22.7% of participants in the experimental group were given pethidine compared to 52.2% of the participants in the control group. Results of the chi-square test for association between group types and pethidine used are shown in Table 5.13.

The results of a chi-square test for association between group types and epidural used during labour showed that two cells had an expected count less than five, Fisher's exact test, χ^2 = .511, φ =.147. Frequency distributions showed that within group, 4.3% of participants in the control group took an epidural compared to 0% in the experimental group. Results of a chisquare test for association between group types and epidural use are shown in Table 5.13.

The results of a chi-square test for association between group types and forceps used during labour showed that two cells had an expected count less than five, Fisher's exact test, χ^2 = .511, φ =.147. Frequency distributions showed that within group, 4.3% of participants in the control group had labour assisted by forceps compared to 0% in the experimental group. Results of a chi-square test for association between group types and forceps used are shown in Table 5.13.

The results of the chi-square test for association between group types and vacuum used during labour showed that two cells had an expected count less than five, Fisher's exact test, $\chi^2 = .346$, $\varphi = .187$. Frequency distributions showed that within group, 17.4% of participants in the control group had their labour assisted by vacuum compared to 4.5% in the experimental group. Results of the chi-square test for association between group types and vacuum used are shown in Table 5.13.

		No	Yes
		N(%)	N(%)
Pethidine	Experimental	17 (77.3)	5 (22.7)
	Control	11 (47.8)	12 (52.2)
Epidural	Experimental	22 (100.0)	0 (0.0)
	Control	22 (95.7)	1 (4.3)
Forceps	Experimental	22 (100.0)	0 (0.0)
-	Control	22 (44.1)	1 (4.3)
Vacuum	Experimental	21 (95.5)	1 (4.5)
	Control	19 (82.6)	4 (17.4)

Table 5.13: Frequency D	istributions of the Us	se of Pethidine,	Epidural, Forceps,	, and Vacuum
during Labou	ir for the Experiment	al and Control	Groups	

The chi-square test for association was performed between group types and methods of delivery (spontaneous vaginal delivery or SVD and caesarean section). All expected cell frequencies were greater than five. Frequency distributions showed that 42.2% participants in the experimental group had SVD compared to 31.1% of the participants in the control group. A total of 8.9% of the participants in the experimental group had caesarean sections due to gestational diabetes mellitus (although blood glucose level was controlled at 5.3), foetal macrosomia, and placenta abruption, compared to 17.8% of participants in the control group who had this procedure due to failure of labour induction, participant's request, poor progress of labour, and pregnancy-induced hypertension. The association between group and methods of delivery was not significant, $\chi^2(1, N=45) = 2.070$, p=.150, $\varphi = .214$. Results of the chi-square test for association between group types and methods of delivery are shown in Table 5.14.

 Table 5.14: Frequency Distributions of Methods of Delivery for the Experimental and
 Control Groups

	SVD	Caesarean section
Group	N (%)	N (%)
Experimental	19 (42.2)	4 (8.9)
Control	14 (31.1)	8 (17.8)

- spontaneous vaginal delivery.

Relationships between variables.

Hypothesis 2. The second hypothesis of the labour stage states that there are significant relationships between antenatal psychological symptoms (week 36), antenatal physical symptoms (week 36), group types, and variables measured during labour (the length of second stage labour, the length of third stage labour, pethidine, epidural, methods of delivery, and assisted vaginal delivery).

Statistical analysis indicated that antenatal psychological symptoms at week 36 of pregnancy and antenatal physical symptoms at week 36 of pregnancy did not correlate with the length of second stage labour. Results also indicated that antenatal psychological symptoms at week 36 of pregnancy and antenatal physical symptoms at week 36 of pregnancy did not correlate with the length of third stage labour. Results of Pearson's correlation coefficient are shown in Table 5.15.

Analysis also indicated that group types did not correlate with the length of second and third stages of labour. Results of the point-biserial correlation are shown in Table 5.16.

	Variables	1	2	2	4	=	(
	variables	1	Z	3	4	5	0
1.	Stress symptoms	-	.752**	.720**	.485**	121	.007
2.	Anxiety symptoms		-	.596**	.598**	066	.200
3.	Depressive symptoms			-	.483**	002	008
4.	Physical Symptoms				-	058	.084
5.	The length of second stage of labour					-	.215
6.	The length of third stage of labour						-
Note	e: *p<.05, **p<.01						

 Table 5.15: Intercorrelations between Antenatal Stress, Anxiety, Depressive Symptoms (Week 36), and the Length of Second and Third Stages of Labour

Variables	1	2	3
1. Group types	-	092	220
2. Length of second stage labour		-	.215
3. Length of third stage labour			-

 Table 5.16: Intercorrelations between Group Types and the Length of Second and Third Stages of Labour

Note: Experimental group coded as 1 and control group coded as 0; *p<.05, **p<.01

A point-biserial correlation was performed to determine the association between antenatal psychological symptoms (stress, anxiety, and depression) at week 36 of pregnancy, antenatal physical symptoms at week 36, and pethidine used during labour. Results indicated that pethidine used during labour had moderate positive correlations with antenatal physical symptoms at week 36 of pregnancy, r(34) = .402, p < .05. The higher levels of antenatal physical symptoms were associated with higher level of group membership (the use of pethidine during labour). Results of this point-biserial correlation are shown in Table 5.17.

Table 5.17: Intercorrelations between Antenata	l Psychological and Physical Symptoms
(Week 36), and Pethidine Use	

	Variables	1	2	3	4	5
1.	Stress symptoms	-	.752**	.538**	.485**	.268
2.	Anxiety symptoms		-	.288	.598**	.166
3.	Depressive symptoms			-	.369	159
4.	Physical symptoms				-	.402*
5.	Pethidine use					-

Note: Use of pethidine coded as 1 and did not use pethidine coded as 0; *p<.05, **p<.01

Following the correlation results, a binomial regression analysis was conducted for the variables that showed significant associations with pethidine used during labour, which were 117

group types, systolic blood pressure and physical symptoms at week 36 of pregnancy. Results of regression analyses are shown in Table 5.18.

Hypothesis 3. The third hypothesis of the labour stage states that antenatal psychological symptoms (week 36) and antenatal physical symptoms (week 36) are predictive of the variables measured during labour.

A binomial logistic regression was performed to determine the effects of group types and antenatal physical symptoms at week 36 of pregnancy on the likelihood of pethidine being used during labour. The logistic regression model was statistically significant, $\chi^2(3) = 10.261$, p = .016. The model explained 30.8% (Nagelkerke R^2) of the variance in the use of pethidine during labour and correctly classified 69.4% of cases. Sensitivity was 60.0%, specificity was 76.2%, positive predictive value was 64.28%, and negative predictive value was 72.73%. None of the predictor variables were significant in predicting the use of pethidine during labour. Results of binomial logistic regression are shown in Table 5.18.

Table 5.18: Summary of Binary Logistic Regression of Variables Predicting Likelihood of the
Use of Pethidine during Labour Based on Group Types and Antenatal Physical
Symptoms at Week 36 Of Pregnancy

Independent variable	В	se	Wald	Sig.	Odds ratio	95% od ra	CI for lds tio
						Lower	Upper
Group types	-1.352	.852	2.521	.112	.259	.049	1.373
Physical symptoms	.178	.113	2.473	.116	1.195	.957	1.491
Constant	-1.448	1.255	1.332	.248	.235		
$N_{\rm eff} < 05$							

Note: *p*<.05

Correlations and regression for methods of delivery and assisted vaginal delivery were not performed as data obtained were insufficient for analyses.

Summary of results.

Although there were no group differences in the second and third stages of labour, the experimental group had a shorter length of labour in both stages. A total of 12.5% of participants in the experimental group had used pethidine during labour compared to 30% of participants in the control group; none of the participants in the experimental group had opted for epidural compared to one participant in the control group. One participant in the control group had her delivery assisted by forceps while none of the participants in the experimental group had her delivery assisted by forceps, and one participant in the control group. A total of 42.2% of participants in the experimental group had spontaneous vaginal deliveries compared to 31.1% of participants in the control group. In the experimental group, 8.9% of participants had caesarean sections due to gestational diabetes mellitus, macrosomic foetus, and placenta abruption, compared to 17.8% of participants in the control group who had this procedure due to failure of labour induction, upon participants' request, poor labour progress and preeclampsia.

Results showed that antenatal psychological and physical symptoms at week 36 of pregnancy did not correlate with the second and third stages of labour.

Antenatal physical symptoms at week 36 of pregnancy had moderate negative correlations with the use of pethidine during labour. The binomial regression analysis showed that group types and antenatal physical symptoms at week 36 of pregnancy statistically predicted the use of pethidine during labour (30.8% variability).

5.4 Results on the Efficacy of Hypnosis Intervention for the Postpartum Stage (24 hours of postpartum)

The hypnosis intervention study at the labour stage was completed by 45 pregnant women, of which 23 women were in the experimental group and 22 women were in the control group.

Group differences.

Hypothesis 1. The first hypothesis of the postpartum stage (within 24 hours of labour) states that the experimental and control groups differ in their neonatal birth weight, Apgar scores at one minute, Apgar scores at five minutes, and self-reported pain (just before delivery, during delivery, right after delivery). Specifically, participants in the experimental group have significantly more neonates with normal birth weight, neonates with higher Apgar scores at one minute of birth, neonates with higher Apgar scores at five minutes of birth, and lower self-reported pain (just before delivery, during delivery, and right after delivery).

An independent-samples t-test was run to determine if there were differences in the neonatal birth weight between the experimental and the control groups. There was homogeneity of variances, as assessed by Levene's test for equality of variances (p = .336). Results indicated that the neonatal birth weight was higher for the participants in the experimental group (3103.48 ± 301.18gram) than for the participants in the control group (3070.91 ± 367.24gram). However, the difference was not statistically significant, t(43)= .326, p=.746, , d=0.10. Results of the independent-samples t-test are shown in Table 5.19.

Groups	n	Mean (SD)	t	df	p-value	d
Experimental	23	3103.48 (301.18)				
			.326	43	.746	0.10
Control	22	3070.91 (367.24)				
Note: Weight is in a	TRAME					

Note: Weight is in grams.

The chi-square test for association was performed between group types (experimental and control groups) and Apgar score at one minute of birth. Six cells had an expected count less than five. Frequency distributions showed that 4.3% of participants in the control group had neonates with an Apgar score of 5 and 6 compared to 0% of participants in the control group; 18.2% of participants in the control group had neonates with Apgar scores of 8 compared to 4.3% of the experimental group; 95.7% of neonates in the experimental group had an Apgar

score of 9 compared to 72.7% in the control group. Results of the chi-square test for association are shown in Table 5.20.

	Rating 5	Rating 6	Rating 8	Rating 9
Group	N (%)	N (%)	N (%)	N (%)
Experimental	0 (0.0)	0 (0%)	1 (4.3)	22 (95.7)
Control	1 (4.5)	1 (4.5)	4 (18.2)	16 (72.7)

Table 5.20: Frequency Distributions of Apgar Score at One Minute of Birth

The chi-square test for association was performed between groups and Apgar score at five minutes of birth. Two cells had an expected count less than five, Fisher's exact test, $\chi^2 = .489$, $\varphi = .154$. Frequency distributions showed that 4.5% of participants in the control group had neonates with an Apgar score of 9 to compared to 0% in the experimental group; 100.0% of neonates in the experimental group had an Apgar score of 10 compared to 95.5% in the control group. Results of the chi-square test for association are shown in Table 5.21.

Table 5.21: Frequency Distributions of Apgar Score at Five Minutes of Birth

	Rating 9	Rating 10
Group	N (%)	N (%)
Experimental	0 (0%)	23 (100.0)
Control	1 (4.5)	21 (95.5)

An independent-samples t-test was conducted to determine if there were differences between the experimental and control groups in the self-reported pain just before delivery. There was homogeneity of variances, as assessed by Levene's test for equality of variances (p = .690). Results indicated that the experimental group had experienced more pain just before delivery (4.46 ± 2.43) compared to the pain experienced by the control group (3.46 ± 2.40). However, the difference was not statistically significant, t(39)=1.322, p=.194, d=0.41. Results of the independent-samples t-test are shown in Table 5.22.

An independent-samples t-test was run to determine if there were differences between the experimental and control groups in the self-reported pain during delivery. There was homogeneity of variances, as assessed by Levene's test for equality of variances (p = .074). Results indicated that the experimental group had experienced more pain during delivery (5.49 \pm 2.48) compared to the pain experienced by the control group (3.42 ± 1.90) and the difference was statistically significant, t(39)=3.020, p=.004, d=0.94. Results are shown in Table 26. Results of the independent-samples t-test are shown in Table 5.22.

An independent-samples t-test was run to determine if there were differences in the selfreported pain right after delivery between the experimental and control groups. There was homogeneity of variances, as assessed by Levene's test for equality of variances (p = .935). Results indicated that the experimental group had experienced more pain just after delivery (4.52 ± 2.48) compared to the pain experienced by the control group (4.06 ± 2.44). However, the difference was not statistically significant, t(39)= .586, p=.561, d=0.19. Results of the independent-samples t-test are shown in Table 5.22.

Groups	n 🔶	Mean (SD)	t	df	p-value	d			
	S	elf-reported pain	just before	delivery					
Experimental	19	4.46 (2.43)							
			1.322	39	.194	0.41			
Control	22	3.46 (2.40)							
Self-reported pain during delivery									
Experimental	19	5.49 (2.48)							
			3.020	39	.004*	0.94			
Control	22	3.42 (1.90)							
	S	Self-reported pair	n right after	delivery					
Experimental	19	4.52 (2.48)							
			.586	39	.561	0.19			
Control	22	4.06 (2.44)							

 Table 5.22: Self-Reported Pain Just before, during, and Right after Delivery

Note: p<.05; Results consisting of missing data due to delivery in hospitals other than UMMC and lack of notification during labour.

Hypothesis 2. The second hypothesis of the postpartum stage (within 24 hours of labour) states that there are significant relationships between antenatal psychological and physical symptoms (week 36), group types, and variables measured within 24 hours postpartum.

Pearson's correlation coefficient was performed to determine the association between antenatal psychological symptoms at week 36 of pregnancy, physical symptoms at week 36 of 122 pregnancy, and variables measured within 24 hours postpartum (neonatal birth weight, self-reported just before delivery, self-reported pain during delivery, and self-reported right after delivery). Results indicated that none of the variables measured within 24 hours postpartum correlated with antenatal psychological and physical symptoms at week 36 of pregnancy. Results of Pearson's correlation coefficient are shown in Table 5.23.

Table 5.23	: Intercorrelations between Antenatal Stress, Anxiety, Depressive Symptoms (Week
	36), Antenatal Physical Symptoms (Week 36), and Variables Measured within 24
	Hours Postpartum (Neonatal Birth Weight, Self-Reported Pain Just before, during
	and Right after Delivery)

	Variables	1	2	3	4	5	6	7	8
1.	Stress symptoms	-	.752**	.720**	.485**	.111	092	298	049
2.	Anxiety symptoms		-	.596**	.598**	015	141	068	131
3.	Depressive symptoms			Q	.483**	.100	.205	176	182
4.	Physical symptoms				-	.088	044	.136	026
5.	Pain before delivery					-	.292	.030	.095
6.	Pain during delivery						-	085	170
7.	Pain right after delivery							-	.146
8.	Neonatal birth weight								-

Note: *p<.05, **p<.01

A point-biserial correlation was performed to determine the association between group types and variables (neonatal birth weight, self-reported pain just before delivery, self-reported pain during delivery, and self-reported pain right after delivery) measured within 24 hours postpartum. Results indicated that group types had moderate positive correlations with selfreported pain during delivery, r(42) = .421, p<.05. Higher levels of self-reported pain during 123 delivery were associated with the higher level of group membership, namely being in the experimental group. Results of the point-biserial correlation are shown in Table 5.24.

 Table 5.24: Intercorrelations between Group Types and Variables Measured within 24 Hours

 Postpartum (Neonatal Birth Weight, Self-Reported Pain before, during and right after Delivery)

Variables	1	2	3	4	5
1. Group types	-	.182	.421**	.046	.050
2. Pain right before delivery		-	.292	.030	.095
3. Pain during delivery			-	085	170
4. Pain right after delivery				0	.146
5. Neonatal birth weight					-

Note: Experimental group coded as 1 and control group coded as 0;*p<.05, **p<.01.

Regression analysis was not performed as only group types had significant association with self-reported pain during delivery. The earlier reported results (Table 5.22) on group differences showed that group differences on self-reported pain during delivery were significant. Thus, hypothesis 3, which states that antenatal psychological and physical symptoms (week 36) and group types are predictive of variables measured within 24 hours postpartum, will not be reported.

Summary of results.

Although group differences in neonatal birth weight were not significant, the experimental group had a slightly higher mean in their neonatal birth weight compared to the control group. A total of 95.7% of the experimental group's neonates had a first minute Apgar score of 9 compared to 72.7% of the control group's neonates, and only one neonate in the experimental group had a rating of 8 compared to four in the control group. One neonate in the control group had a rating of 6 and one a rating of 5. A total of 100.0% of the experimental

group's neonates had a score of 10 in the fifth minute compared to 95.5% of the control group's neonates, and one neonate in the control group had a rating of 9 at this timepoint.

Self-reported pain just before delivery and right after delivery were not significantly different, but self-reported pain during delivery did differ significantly, with the experimental group experiencing higher pain levels compared to the control group.

Group types had a moderate positive correlation with self-reported pain during delivery. Antenatal psychological and physical symptoms at week 36 of pregnancy did not correlate with the variables measured within 24 hours postpartum.

Correlations and regression analyses for Apgar scores at one and fifth minutes of delivery were not performed as data obtained were insufficient for analyses.

6.2 Results on the Efficacy of Hypnosis Intervention for the Postpartum Stage (Two Months Postpartum)

Demographic characteristics at two months postpartum stage.

The hypnosis intervention study at the two months postpartum stage was completed by 28 pregnant women, of which 16 women were in the experimental group and 11 women were in the control group.

An independent-samples t-test was performed to determine if there were differences in the age between participants in the experimental and control groups. Results showed homogeneity of variances, as assessed by Levene's test for equality of variances (p = .400). Participants in the experimental (27.81 ± 2.37 years old) and control (29.27 ± 2.97 years old) groups had a similar age pattern, and the difference was not statistically significant, -1.46 (95% CI, -3.58 to 0.66), t(25) = -1.419, p = .168, d = 0.54. The results of the independent-samples ttest are shown in Table 5.25.

Variables	Groups n		Mean (SD)	t	df	p-value	d
Age	Experimental	16	27.81 (2.37)	-1.416	25	.168	0.54
	Control	11	29.27 (2.97)				

Table 5.25: Experimental and Control Groups' Age (Years) at Two Months Postpartum

Chi-square tests showed no significant associations between parity (nulliparous and multiparous women), Fisher's exact test, $\chi^2 = .710$, $\varphi = .080$; educational levels, Fisher's exact test, $\chi^2 = .692$, $\varphi = .107$; and work status, Fisher's exact test, $\chi^2 = .407$, $\varphi = .237$. The chi-square tests for association between group types and income level showed that three cells had an expected count less than five. Since income level was a 2 x 3 table, Fisher's exact test was not generated, and due to this, the results were not reported here. The results of the chi-square test for associations are shown in Table 5.26.

	Experimental		Co	Control		p-value	φ /V^1
	Group n=28)		Gr	oup		-	
			(n=28)				
	Ν	(%)	Ν	%			
Parity							
Nulliparous	6	37.5	5	45.5	1	.710	080
Multiparous	10	62.5	6	54.5			
Education							
Secondary	6	37.5	3	27.3	1	.692	.107
school							
College/	10	62.5	8	72.7			
University							
Work status							
Employed	16	100.0	10	90.1	1	0.407	.237
Unemployed	0	0.0	1	9.1			
Income (RM) ²							
<1,000	1	6.3	0	0.0	2	-	.171
1,000-3,000	6	37.5	5	45.5			
>3,000	9	56.3	6	54.5			

 Table 5.26: Demographic Characteristics of the Pregnant Women from Experimental and Control Groups at Two Months Postpartum

Note: $\sqrt{1}\varphi/V$ = strength of association in chi-square; φ = Phi lambda for 2 x 2 table and V = Cramer's V for tables larger than 2 x 2; 2 1USD = Ringgit Malaysia RM4.18

Group differences.

Hypothesis 1. The first hypothesis for the two months postpartum states that there are significant differences in the experience of psychological symptoms (stress, anxiety, and depression) between the experimental and control groups over time. Specifically, pregnant women in the experimental group experience lower levels of psychological symptoms over time, compared to the pregnant women in the control groups, as a result of hypnosis intervention.

Changes in antenatal and postpartum stress symptoms.

Repeated measures ANOVA was performed for the changes in antenatal and postpartum stress from Time 1, Time 2, Time 3, Time 4 (antenatal), and Time 5 (postpartum). Results showed that there was homogeneity of variances, as assessed by Levene's test of homogeneity of variance (p>.05) and homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (p = .456).

The interaction between group types and time on stress symptoms was not significant, F(4,88)=1.086, p=.368, partial $\eta^2=.047$. Since the interaction was not statistically significant, the main effect of group types and main effect of time were reported.

Results indicated that the main effect of group types from Time 1 to Time 5 was not statistically significant, F(1,22)=0.028, p=.869, partial $\eta^2=.001$. However, the simple main effect for group types indicated that there was a statistically significant difference in stress symptoms at Time 4, but not at any other time point, F(1,22)=.049, p=.828, partial $\eta^2=.002$ with a mean difference of 0.50 (95% CI, 1.31 to 1.85). Detailed results of Time 1, Time 2, Time 3, and Time 4 were discussed in the results for pregnancy section (Table 5.3, Figure 5.1).

The main effect of time was significant, F(4,88)=12.689, p=.0005, partial $\eta^2=.366$. Following the overall significant effect of time (regardless of group types), a pairwise comparison was performed and the results indicated that stress symptoms were statistically reduced between between Time 5 and Time 1 (*M*=-9.77, *SE*=1.69, *p*=.0005), between Time 5 and Time 2 (M=-7.08, SE=1.40, p=.0005), between Time 5 and Time 3 (M=-7.52, SE=1.20, p=.0005), and between Time 5 and Time 4 (M=-6.02, SE=1.20, p=.0005) The pairwise comparisons for the other time points were discussed in the results section for the pregnancy stage (Table 5.4 and Figure 5.1). Results of the repeated measures ANOVA for the stress symptoms are shown in Table 5.27 and Figure 5.5.

Table 5.27: Repeated Measures ANOVA for Postpartum Stress Symptoms Over Time

Source of Variation	df	SS	MS	F	р	ŋ				
Stress symptoms										
Between Subjects Effect:										
Group	1	3.223	3.223	.028	.869	.001				
-										
Within Subjects Effect:										
Time	4	1144.336	286.084	12.689	.0005*	.366				
Groups x time	4	97.960	24.490	1.086	.368	.047				
Note: *statistical significance at n < 05										

Note: **statistical significance at* p < .05



Figure 5.5: Mean of stress symptoms from Time 1 to Time 5.

Note. Group differences at Time 5 were not significant. Details of Time 1 to Time 4 were discussed in Figure 1 (results of pregnancy stage)
Changes in antenatal and postpartum anxiety symptoms.

A repeated measures ANOVA was performed for the changes in antenatal and postpartum anxiety from Time 1, Time 2, Time 3, Time 4 (antenatal), and Time 5 (postpartum). The results indicated that there was homogeneity of variances, as assessed by Levene's test of homogeneity of variance (p>.05) and homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (p = .182).

The interaction between group types and time on postpartum anxiety symptoms was not significant, F(4,72)=1.154, p=.339, partial $\eta^2=.060$. Since the interaction was not statistically significant, the main effect of group types and main effect of time were reported.

Results indicated that the main effect of group types from Time 1 to Time 5 was not statistically significant, F(1,18)=1.868, p=.189, partial $\eta^2=.094$. However, the simple main effect for group types indicated that there was a statistically significant difference in antenatal anxiety symptoms at Time 4 and Time 5, F(1,25)=5.91, p=.023, partial $\eta^2=.191$ with a mean difference of -35.49 (95% CI, -65.55 to -5.43), but not at Time 1, Time 2, or Time 3. These results are described in detail in the results for pregnancy section (Table 5.4, Figure 5.2).

The main effect of time was significant, F(4,72)=19.691, p=.0005, partial $\eta^2=.522$. Following the overall significant effect of time (regardless of group types), a pairwise comparison was performed and the results indicated that anxiety symptoms were statistically reduced between Time 5 and Time 1 (M=-9.18, SE=1.53, p=.0005), between Time 5 and Time 2 (M=-7.60, SE=1.16, p=.0005), between Time 5 and Time 3 (M=-7.48, SE=1.00, p=.0005), and between Time 5 and Time 4 (M=-7.18, SE=1.27, p=.0005). The pairwise comparisons for the other time points were discussed in the results section for the pregnancy stage (Table 5.5, Figure 5.2). Results of the repeated measures ANOVA for the anxiety symptoms are shown in Table 5.28 and Figure 5.6.

Source of Variation	df	SS	MS	F	р	ŋ
Between Subjects Effect:						
Group	1	147.566	147.556	1.868	.189	.094
Within Subjects Effect:						
Time	4	1026.046	256.512	19.691	.0005*	.522
Groups x time	4	60.109	15.027	1.154	.339	.060

 Table 5.28: Repeated Measures ANOVA for Postpartum Anxiety Symptoms Over Time

Note: **statistical significance at* p<.05



Figure 5.6: Mean of anxiety symptoms from Time 1 to Time 5.

Note. Group differences at Time 5 were significant. Details of Time 1 to Time 4 were discussed in Figure 14 (results of pregnancy stage).

Changes in antenatal and postpartum depressive symptoms.

Repeated measures ANOVA was performed for the changes in antenatal and postpartum depressive symptoms from time 1, time 2 time 3, time 4 (antenatal) time 5 (postpartum). The results showed that there were homogeneity of variances, as assessed by Levene's test of homogeneity of variance (p>.05). Homogeneity of covariances, as assessed by Box's test of equality of covariance matrices (p = .000) was violated. This violation was noted and due to this, the interaction term will not be reported. Results indicated that the main effect of group types from Time 1 to Time 5 was not statistically significant, F(1,5)=.014, p=.911, partial

 η^2 =.003. However, the simple main effect for group types indicated that there was a statistically significant difference in antenatal depressive symptoms at Time 5, *F*(1,25)=11.948, p=.002, partial η^2 =.323 with a mean difference of -5.48 (95% CI, -8.74 to -2.21), but not from Time 1 to Time 4. These results were discussed in the results for pregnancy section (Table 5.6, Figure 5.3). The main effect of time was not significant, *F*(4,20)=1.604, *p*=.212, partial η^2 =.243. Results of the repeated measures ANOVA for the depressive symptoms are shown in Table 5.29 and Figure 5.7.

Table 5.29: Repeated Measures ANOVA for Postpartum Depressive Symptoms Over Time

Source of Variation	df	SS	MS	F	р	ŋ
Between Subjects Effect:						
Group	1	.001	.001	.014	.911	.003
_						
Within Subjects Effect:						
Time	4	0.549	0.137	1.604	.212	.243
Groups x time	4	0.644	0.161	1.884	.153	.274
Note: *statistical significant	o at n < 1	25				

Note: **statistical significance at* p < .05



Figure 5.7: Mean of depressive symptoms from Time 1 to Time 5.

Note. Group differences at Time 5 were significant. Details of time 1 to Time 4 were discussed in Figure 15 (results of pregnancy stage)

Hypothesis 2. The second hypothesis of the two months postpartum stage states that the experimental and control groups significantly differ in the experience of postpartum depression. Specifically, women in the experimental group experience lower levels of postpartum depression compared to the women in the experimental group.

An independent-samples t-test was run to determine if there were differences in the experience of postpartum depression between the experimental and the control groups. There was homogeneity of variances, as assessed by Levene's test for equality of variances (p = .397). Results indicated that the mean of postpartum depression was higher for the participants in the control group (10.64 ± 3.96) than for the participants in the experimental group (5.69 ± 2.75), and the difference was statistically significant, t(25)= -3.845, p=.001, d=1.45. Results of the independent samples t-test are shown in Table 5.30.

Table 5.30: Experience o	f Postpartum I	Depression
--------------------------	----------------	------------

Groups	n	Mean (SD)	t	df	p-value
Experimental	16	5.69 (2.75)			
-			-3.845	25	.001
Control	11	10.64 (3.96)			
<i>p</i> < .05					

The chi-square test for association was performed between group types and levels of postpartum depression. Four cells had an expected count less than five. Frequency distributions showed that 55.6% of the participants in the experimental group had obtained an overall score between one and nine on the postpartum depression scale, and one participant had obtained a score greater than 13. A total of 7.7% of participants in the experimental group had obtained a score between one and nine, 22.2% a score between 10 to 12, and 11.1% (three participants) had obtained a score of 13 or more.

Further analyses of item number 10 on the EPDS, which stated that 'the thought of harming myself has occurred to me' (indicative of suicidal ideation; Cox & Holden, 2003), revealed that a total of five participants in the control group had chosen the option 'hardly ever' (rating of one on EPDS) and one participant had chosen the option 'sometimes' (rating of two

on EPDS). However, all the participants in the experimental group had chosen '0' for item

number 10. Results of the chi-square test for association are shown in Table 5.31.

Group types	Score 1 - 9	Score 10 - 12	≥13
	N (%)	N (%)	N (%)
Experimental	15 (53.6)	0 (0.0)	1 (3.6)
Control	2 (7.1)	6 (21.4)	3 (10.7)
Total	17 (63.0)	6 (22.2)	4 (14.8)

Table 5.31: Frequency Distributions of Postpartum Depression for the Experimental and Control Groups

Hypothesis 3. The third hypothesis of the two months postpartum stage states that there are significant relationships between antenatal psychological and physical symptoms (week 36), group types, living arrangement during postpartum, postpartum psychological symptoms, and postpartum depression.

Postpartum stress symptoms. A Pearson's correlation coefficient and point-biserial correlation were performed to explore the association between group types, antenatal psychological and physical symptoms, postpartum anxiety symptoms, postpartum depressive symptoms, postpartum stress symptoms, and postpartum depression. Results indicated that an increase in antenatal stress symptoms at week 36 of pregnancy was strongly correlated with an increase in postpartum stress symptoms, r(24) = .777, p < .01; an increase in antenatal anxiety symptoms at week 36 of pregnancy was moderately correlated with an increase in postpartum stress symptoms, r(24) = .777, p < .01; an increase in postpartum stress symptoms at stress in postpartum anxiety symptoms at stress symptoms, r(24) = .409, p < .05; and an increase in postpartum anxiety symptoms was strongly correlated with an increase in postpartum stress symptoms at stress symptoms, r(17) = .625, p < .01. Results indicated that group types did not correlate with postpartum stress symptoms.

Postpartum anxiety symptoms. Statistical analysis was done using Pearson's correlation coefficient and point-biserial correlation to determine the association between group types, antenatal psychological and physical symptoms, postpartum stress symptoms, postpartum depressive symptoms, and postpartum anxiety symptoms, and postpartum depression. Results

indicated that an increase in antenatal stress symptoms at week 36 of pregnancy was moderately correlated with an increase in postpartum anxiety symptoms, r(20) = .479, p < .05; an increase in antenatal physical symptoms at week 36 of pregnancy was moderately correlated with an increase in postpartum stress symptoms, r(18) = .482, p < .05; an increase in postpartum anxiety symptoms was strongly correlated with an increase in postpartum stress symptoms, r(18) = .482, p < .05; an increase in postpartum anxiety symptoms was strongly correlated with an increase in postpartum stress symptoms, r(17) = .625, p < .01; and postpartum anxiety symptoms and postpartum depression had a moderate positive correlation, r(20) = .471, p < .05. Results also indicated that group types had a strong negative correlation with postpartum anxiety symptoms, r(20) = -.535, p < .05. The lower level of postpartum anxiety symptoms was associated with higher levels of group membership (experimental group).

Postpartum depressive symptoms. In order to determine the association between group types, antenatal psychological and physical symptoms, postpartum stress symptoms, postpartum anxiety symptoms, postpartum depressive symptoms, and postpartum depression, a Pearson's correlation coefficient and point-biserial correlation were performed. Results indicated that an increase in antenatal depressive symptoms at week 36 of pregnancy was moderately correlated with increased postpartum depressive symptoms, r(27) = .455, p < .05; and an increase in antenatal physical symptoms at week 36 of pregnancy was moderately correlated with an increase in postpartum depressive symptoms, r(27) = .489, p < .01; increased postpartum stress symptoms were moderately correlated with an increase in postpartum depressive symptoms, r(27) = .489, p < .01; increased postpartum depressive symptoms, r(27) = .489, p < .01; increased postpartum depressive symptoms, r(24) = .466, p < .05; and postpartum depressive symptoms and postpartum depression had a strong positive correlation, r(20) = .651, p < .01. Results also indicated that group types had a strong negative correlation with postpartum depressive symptoms, r(27) = -.569, p < .01. The lower level of postpartum depressive symptoms was associated with higher levels of group membership (experimental group).

Results of the Pearson's correlation coefficient are shown in Table 5.32, and the pointbiserial correlation results are summarised in Table 5.33.

,	Variables	1	2	3	4	5	6	7	8
1.	Antenatal stress	-	.752**	.720**	.485**	.777**	.479*	.455*	.259
2.	Antenatal anxiety		-	.596**	.598**	.409*	.349	.372	.370
3.	Antenatal depression			-	.483**	.310	.186	.035	178
4.	Physical				-	.107	.482*	.489**	.376
5.	Postpartum stress					-	.625**	.466*	.087
6	symptoms Postpartum							750**	471
0.	anxiety						-	.738	.4/1
7.	Postpartum depressive							-	.651**
0	symptoms								
8.	Postpartum depression	1							-

Table 5.32: Intercorrelations between Antenatal Psychological Symptoms (Week 36), Physical
Symptoms (Week 36), Postpartum Psychological Symptoms (Stress, Anxiety, And
Depression), and Postpartum Depression

Table 5.33: Intercorrelations between Group Types (Experimental And Group), Postpartum Psychological Symptoms (Stress, Anxiety, And Depression) and Postpartum Depression

	Variables	1	2	3	4	5
1.	Group types	-	.048	535*	569**	- .610**
2.	Postpartum stress symptoms		-	.625**	.466*	.087
3.	Postpartum anxiety symptoms			-	.758**	.471*
4.	Postpartum depressive symptoms				-	.651**
5.	Postpartum depression					-

Note: *p < .05, **p < .01; experimental group coded as 1 and control group coded as 0

Hypothesis 4. The fourth hypothesis of the two months postpartum stage states that antenatal psychological and physical symptoms (week 36) and group types are predictive of postpartum psychological symptoms and postpartum depression.

Note: **p*<.05, ***p*<.01

A multiple regression was conducted to predict postpartum stress symptoms from antenatal stress and anxiety symptoms at week 36 of pregnancy along with postpartum anxiety and depressive symptoms. The assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met. The correlation output showed that antenatal stress symptoms had a correlation of .745, which is greater than 0.7, causing multicollinearity. However, antenatal stress symptoms were included in the regression analysis as the tolerance value was more than 0.1 (tolerance value = 0.278). The results indicated that these variables statistically significantly predicted postpartum stress symptoms symptoms, F(4,12)=6.019, p = .007, adj. $R^2 = .557$. The independent variable coefficients showed that only antenatal stress symptoms were a significant predictor, (B=.156, SE=.051, $\beta = .719$, p = .010), indicating that with every increase in antenatal stress symptoms at week 36 of pregnancy, postpartum stress symptoms increased by .156 unit. However, antenatal anxiety symptoms (B=-.070, SE=.058, β =-.269, p=.257), postpartum anxiety symptoms (B=1.158, SE=1.397, β =.210, p=.423), and postpartum depressive symptoms (B=.075, SE=.073, β =.212, p=.327), were not significant predictors of postpartum stress symptoms. Results of the multiple regression analysis are shown in Table 5.34.

Variables	В	SE_B	ß
Intercept	.093	.613	
Antenatal stress symptoms (week 36)	.153	.051	.719*
Antenatal anxiety symptoms (week 36)	068	.059	263
Postpartum anxiety symptoms	1.880	1.207	.341
Postpartum depressive symptoms	.075	.073	.212

 Table 5.34:
 Summary of Multiple Regression Analysis for Variables Predicting Postpartum

 Stress Symptoms
 Stress Symptoms

Note: *p<.05; *B*=unstandardized regression coefficient; *SE*_{*B*}=standard error of the coefficient; β = standardised coefficient.

A multiple regression was conducted to predict postpartum anxiety symptoms from group types (experimental and control), antenatal stress symptoms at week 36 of pregnancy, and antenatal physical symptoms at week 36 of pregnancy, postpartum stress symptoms and postpartum depressive symptoms. The assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met. The results indicated that these variables statistically significantly predicted postpartum anxiety symptoms, F(5,11)=6.903, p = .004, adj. $R^2 = .648$. The independent variable coefficients indicated that only antenatal physical symptoms, (B=.038, SE=.014, B=.571, p=.017) and postpartum stress symptoms (B=.144, SE=.062, B=.796, p=.039), were significant predictors. Results of the multiple regression analysis are shown in Table 5.35.

 Table 5.35:
 Summary of Multiple Regression Analysis for Variables Predicting Postpartum

 Anxiety Symptoms
 Predicting Postpartum

Variables	В	SE _B	ß
Intercept	.074	.165	
Antenatal stress symptoms (week 36)	006	.011	142
Antenatal physical symptoms (week 36)	.038	.014	.571*
Postpartum stress symptoms	.144	.062	.796*
Postpartum depressive symptoms	005	.016	071
Group types	098	.119	178

Note: *p<.05; *B*=unstandardized regression coefficient; *SE*_{*B*}=standard error of the coefficient; β = standardised coefficient; Experimental coded as 1 and control group coded as 0.

A multiple regression was run to predict postpartum depressive symptoms from group types (experimental and control), antenatal stress symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, postpartum stress symptoms, postpartum anxiety symptoms, and postpartum depression. The assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were all met. The results indicated that these variables statistically significantly predicted postpartum depressive symptoms, $F(6,10)=3.242, p=.049, adj. R^2=.457$. Yet, the variable coefficients showed that independently only postpartum stress symptoms ($B=3.003, SE=.1.296, \beta=1.055, p=.043$) significantly predicted postpartum depressive symptoms. Results of this multiple regression analysis are shown in Table 5.36.

Variables	В	SE _B	ß
Intercept	.560	5.069	0
Antenatal stress symptoms	339	.211	549
Antenatal physical symptoms	.414	.332	.392
Postpartum stress symptoms	3.003	1.296	1.055*
Postpartum anxiety symptoms	-1.887	6.118	120
Postpartum depression	060	.337	050
Group types	-4.711	2.790	546

Table 5.36: Summary	y of Multiple	Regression	Analysis	for	Variables	Predicting	Postpartum
Depressi	ve Symptoms						

Note: *p<.05; *B*=unstandardized regression coefficient; *SE*_{*B*}=standard error of the coefficient; β = standardised coefficient; Experimental coded as 1 and control group coded as 0.

Similarly, for postpartum depression, a multiple regression analysis was conducted to predict postpartum depression from group types (experimental and control), antenatal physical symptoms at week 36 of pregnancy, self-reported pain during labour, postpartum anxiety symptoms, and living arrangements during confinement (staying with parents, staying with inlaws and staying with husband). The assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met. The results indicated that these variables statistically significantly predicted postpartum depression, F(6,13)=6.213, p = .003, adj. $R^2 = .623$. The independent variable coefficients showed that postpartum depressive symptoms (B=.396, SE=.174, B=.537, p=.041), group types (B=-4.056, SE=1.673, B=-.535, p=.031), and staying with husband during confinement (B=5.638, SE=2.181, B=.534, p=.023) significantly predicted postpartum depression. Results indicated that with every increased of postpartum depressive symptoms, postpartum depression increased by 0.396. The control group experienced higher depression, and participants who stayed with their husband during confinement had higher postpartum depression. Results of the multiple regression analysis are shown in Table 5.37.

Variables	В	SE_B	ß
Intercept	7.915	1.912	
Postpartum anxiety symptoms	225	1.453	.035
Postpartum depressive symptoms	.396	.174	.537*
Group types	-4.056	1.673	535*
Staying with husband	5.638	2.181	.534*
Staying with parents	.912	1.861	.121
Staying with in-laws	2.209	3.167	.128

 Table 5.37: Summary of Multiple Regression Analysis for Variables Predicting Postpartum Depression

Note: *p<.05; *B*=unstandardized regression coefficient; *SE*_{*B*}=standard error of the coefficient; β = standardised coefficient; Experimental coded as 1 and control group coded as 0.

Summary of results.

The interactions between intervention and time on stress, anxiety and depressive symptoms were not significant. Group differences of postpartum stress symptoms showed that the experimental group had a higher mean of symptoms than the control group. Group differences in postpartum anxiety symptoms showed that the experimental group had a lower mean of symptoms compared to the control group. Group differences in postpartum depressive symptoms showed that the experimental group had a lower mean of symptoms compared to the control group.

Group differences of postpartum depression were significant. Mean differences showed that the experimental group had a lower mean of postpartum depression than the control group. A total of 55.6% of participants in the experimental group had obtained an overall score between 1 and 9, and one participant had obtained a score of more than 13, on the Edinburgh Postpartum Depression Scale (EPDS). A total of 22.2% of control group participants obtained a score

between 10 and 12, and 11.1% (three participants) had obtained a score of 13 or on the EPDS. Further analyses of item number 10 of the EPDS, which stated that 'the thought of harming myself has occurred to me' (indicative of suicidal ideation; Cox & Holden, 2003, revealed that a total of five participants in the control group had chosen the option ' hardly ever' (rating of 1) and one participant had chosen the option 'sometimes' (rating of 2). However, all the participants in the experimental group had replied '0' for item number 10. According to Cox and Holden (2003), patients who had responded with a score of 1 or higher on item 10 should be immediately referred for further evaluation.

Antenatal stress symptoms at week 36 of pregnancy and postpartum anxiety symptoms showed strong positive correlation with postpartum stress symptoms, and antenatal anxiety symptoms at week 36 of pregnancy and postpartum depressive symptoms had moderate positive correlation with postpartum stress symptoms. The regression analysis of these variables with postpartum stress symptoms was significant, accounting for 55.7% variability. Independently, only antenatal stress symptoms at week 36 of pregnancy were a significant predictor of postpartum stress symptoms.

Antenatal stress and physical symptoms at week 36 of pregnancy had moderate positive correlations with postpartum anxiety symptoms, while postpartum stress and depressive symptoms had strong positive correlation with postpartum anxiety symptoms. Group types had strong negative correlation with postpartum anxiety symptoms, indicating that the experimental group had lower postpartum anxiety. The regression analysis of these variables with postpartum anxiety symptoms was significant, accounting for 64.8% variability. Independently, only antenatal physical symptoms at week 36 of pregnancy and postpartum stress symptoms were significant predictors of postpartum anxiety symptoms.

Antenatal stress and physical symptoms at week 36 of pregnancy, along with postpartum stress symptoms, had moderate positive correlations with postpartum depressive symptoms. Postpartum anxiety symptoms had a strong positive correlation with postpartum depressive symptoms. Group types had a strong negative correlation with postpartum depressive symptoms, indicating that the experimental group had lower postpartum depressive symptoms. The regression analysis of these variables with postpartum depressive symptoms was significant, accounting for 45.7% of the variability. Independently, only postpartum stress symptoms were significant predictors of postpartum depressive symptoms.

The correlation results for postpartum depression showed that postpartum anxiety symptoms had moderate positive correlations and postpartum depressive symptoms had strong positive correlations with postpartum depression. The results indicated that the experimental group had lower levels of postpartum depression. Living arrangement during confinement was included in the regression analysis, which showed that all the predictor variables significantly predicted postpartum depression, accounting for 62.3% of the variability. Independently, only postpartum depressive symptoms and staying with husband during confinement were significant predictors of postpartum depression.

CHAPTER 6: DISCUSSION

6.1 Introduction

This chapter provides a discussion of the major findings of the present study. These findings are discussed in the four main sections of this chapter. These sections are the pregnancy stage, the labour stage, the postpartum stage (within 24 hours of delivery), and the postpartum stage (two months of postpartum).

6.2 Pregnancy Stage

The aim of this section was to discuss the efficacy of hypnosis intervention during pregnancy.

The results indicated that the interaction between group types and time on antenatal stress and anxiety were statistically significant. At time 4 or week 36 of pregnancy, group differences on stress and anxiety symptoms were significant, and participants in the experimental group had experienced lower symptoms as compared to the participants in the control group. However, the interaction between group types and time on antenatal depressive symptoms was not statistically significant, and the group differences at all the time point were not statistically significant as well. Although the group differences were not statistically significant, participants in the control group. Although the interaction between group types and time on antenatal depressive symptoms in the control group. Although the interaction between group types and time on antenatal physical symptoms was not statistically significant, group differences at time 2 and time 4 were statistically significant, and participants in the experimental group had experienced lower physical symptoms at both of these time points as compared to the participants in the control group.

Psychological symptoms during pregnancy, particularly anxiety, have been shown to follow a 'u' pattern with more symptoms during the first trimester, a decrease in symptoms in the second trimester and an upward trend in the third trimester (Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009). In the present study, this trend was found in the psychological

symptoms experienced by the control group. This concurred with previous findings that psychological symptoms, particularly depression, showed an increasing trend towards the final stage of pregnancy. For example, a study by Setse et al. (2009) showed that depressive symptoms decreased from 15% in the first trimester to 14% in the second trimester and increasing to 30% in the third trimester. However, the symptoms experienced by the experimental group showed a decreasing trend, particularly in regard to the experience of stress and anxiety. Alleviating psychological symptoms is pertinent as evidence indicated that women with antenatal depression and anxiety had higher incidence of nausea and vomiting, longer sick leave, more frequent visits to obstetricians, planned caesarean sections, and planned epidural analgesia (Andersson, Sundstrom-Poromaa, Wulff, Astrom, & Bixo (2004).

Although therapeutic interventions such as hypnotherapy and relaxation therapy during the antenatal period have been shown to aid in reducing the incidence of psychological symptoms during pregnancy (Marc et al., 2011; Vieten & Astin, 2008), studies exploring this aspect have been largely overlooked (Dennis, Ross, & Grigoriadis, 2007). Therapeutic interventions during the antenatal period are pertinent, as studies have shown a link between maternal mental health and birth outcomes, postpartum well-being and future infant development (Marc et al., 2011; Schetter & Tanner, 2012). Intervention during pregnancy has been shown to reduce psychological symptoms towards the final stage of pregnancy (Consonni et al., 2010). The results of the present study, which was the first study to investigate the efficacy of hypnosis intervention to alleviate psychological symptoms during pregnancy, indicated that pregnant women in the experimental group experienced a reduction in their psychological symptoms during pregnancy.

Although the experience of physical symptoms during pregnancy is common, for some women these symptoms escalate into severe conditions. These include normal morning sickness in the form of nausea and/or vomiting escalating into hyperemesis gravidarum (O' Brien et al., 2002). Physical symptoms, such as nausea and vomiting, can be reduced or eliminated using various strategies. For hyperemesis gravidarum, for example, non-pharmacological options include modification of diet, pharmacological options include antiemetics, and therapeutic interventions include hypnosis (Jueckstock et al., 2010; Nayeri, 2012).

Findings from the present study support the notion that therapeutic interventions may assist in the reduction or elimination of physical symptoms, as the results indicated a reduction in the experience of physical symptoms at time point 4, or week 36, of pregnancy for the participants in the experimental group. In contrast, participants in the control group had experienced an increase in their physical symptoms at week 36 of pregnancy. The use of hypnosis has been shown to aid in the reduction or elimination of physical symptoms during the antenatal period, notably the elimination of nausea and vomiting (Madrid et al., 2011; Simon & Schwartz, 1999).

Simon and Schwartz (1999) demonstrated that hypnosis works in alleviating symptoms of hyperemesis gravidarum by inducing relaxation. The relaxation technique decreased the sympathetic nervous system activity. Hypnosis techniques used for hyperemesis gravidarum helped women to relax their stomach and throat muscles. The authors presented two cases of successful treatment of hyperemesis gravidarum using hypnosis. The first case illustrated a multiparous woman with three previous deliveries who had experienced hyperemesis for all of her three pregnancies. Prior to the hypnosis session, the woman had experienced weight loss and ketoacidosis. Nausea and vomiting resolved after three sessions. The second case illustrated a primiparous woman who was hospitalized for hyperemesis gravidarum. Her symptoms of nausea and vomiting also resolved in three sessions.

More studies on the use of hypnosis are needed to show its efficacy in eliminating various other physical symptoms during the antenatal period, as there is still a paucity of experimental studies in this area.

Alleviating the experience of severe nausea and vomiting during pregnancy, along with other physical symptoms (e.g. ankle swelling), is pertinent as past studies have shown its effect in precipitating stress, anxiety and depression in pregnant women (McCarthy et al., 2011). This is supported by the present study showing that increases in the antenatal stress, anxiety and

depressive symptoms at week 36 of pregnancy were associated with an increase in the antenatal physical symptoms at week 36 of pregnancy. A further regression analysis of the present study revealed that type of groups (experimental and control), antenatal stress, anxiety, and depressive symptoms at week 36 of pregnancy had predicted 44.9% of the variability of the experience of physical symptoms at week 36 of pregnancy. Regression results on the group differences over time indicated that group types did significantly predict the experience of physical symptoms, indicating that the experimental group participants had lower physical symptoms at week 36 of pregnancy and prediction of antenatal symptoms.

Studies have shown the effect of physical symptoms, such as preeclampsia, on the experience of psychological symptoms, such as anxiety. For example, pregnant women with medical disorders were compared to women without medical disorders. These medical disorders included hyperemesis gravidarum, preeclampsia, diabetes mellitus, gestational diabetes, placenta previa, hyperthyroidism and others. Women in the medical disorder group displayed higher state and trait anxiety. They had also higher levels of depression and lower adult wellbeing (consisting of depression, anxiety, and irritability dimensions). Within the pregnancy-related conditions, women having hyperemesis gravidarum achieved higher scores of depression (King et al., 2010). Women with higher depression have been shown to be likely to experience preeclampsia, diabetes, preterm labour, caesarean, abnormalities of placenta, anemia, and infections, as was shown by the study conducted by Bansil et al. (2010). This longitudinal study was conducted from 1998 to 2005 with participants aged 15 to 24. Results indicated that the rate of depression was 2.73 for every 1000 deliveries in 1998, and this increased to 14.12 for every 1000 deliveries. Women between the ages of 35 to 44 had higher levels of depression.

Setse et al. (2009) found that women who developed depressive symptoms experienced more pain in their bodies (as measured by the Health-related Quality of Life (HRQoL) Questionnaire. These women also experienced low vitality, social functioning, emotional and mental health in comparison to women who did not exhibit the symptoms of depression. The authors postulated that the higher percentage of depressive symptoms in the third trimester (28 to 32 weeks) was probably due to the development of complications related to pregnancy, such as gestational hypertension, which are apt to develop during this period. The suggestions from the authors included a multidisciplinary approach by psychotherapists and clinicians in reducing the symptoms of depression. Healthcare providers need to be trained in identifying symptoms of depression and this will increase the health of women during pregnancy and postpartum. Although the depressive symptoms for both the experimental and control groups in the present study were lower in the third trimester compared to the earlier trimester, women in the control group who had higher blood pressure (both systolic and diastolic) at week 36 of pregnancy also had higher depressive symptoms during this period in comparison to the experimental group. As suggested by Setse et al. (2009), these differences in the present study could be due to the hypnosis intervention programme provided to the experimental group.

Claesson, Josefsson, and Sydsjö (2010) found an association between preeclampsia, diabetes, and depressive symptoms for women in the control group in an intervention study with pregnant obese women in their late pregnancy. Women with increasingly worsening preeclampsia/gestational hypertension experienced higher stress than women who exhibited mild preeclampsia/gestational hypertension. Women with increasingly worsening preeclampsia also experienced more symptoms associated with these conditions, such as headache and blurred vision. The author recommended the inclusion of an intervention in future studies to investigate the effectiveness of the intervention in reducing stress linked to the worsening of preeclampsia and gestational hypertension (Black, 2007).

Improvement in the experience of hyperemesis gravidarum has been shown to be associated with reducing depression and stress. However, a study by McCarthy et al. (2011) found that although depression and stress decreased or normalised with the improvement in the symptoms of hyperemesis gravidarum, the anxiety scores remained high. The authors had suggested that since anxiety remained elevated, anxiety may have had contributed to the experience of the symptoms of hyperemesis gravidarum. Subsequently, 9% of women in this study had preeclampsia. The authors had suggested that helping women in the management of anxiety symptoms may assist in alleviating the symptoms of hyperemesis gravidarum. In a study conducted in Malaysia on hyperemesis gravidarum, the women in the sample, although all had experienced stress, anxiety, and depression, had anxiety levels that were higher at 69% compared to stress (21%) and depression (19%; Tan, Zaidi, Azmi, Omar, & Khong, 2014).

A number of past studies examining physical and psychological symptoms during pregnancy did not include any interventions as a means to reduce participants' symptoms. This current study showed that early intervention in pregnancy may assist in the reduction of these symptoms towards the end of pregnancy.

Previous studies on hypnosis intervention did not show associations between psychological and physical symptoms, and as to whether the alleviation of psychological symptoms lead to the alleviation of physical symptoms or vice versa. The present study had attempted to address this gap.

The present study had also noted group differences in foetal weight at week 36 of pregnancy. These were significant, indicating that participants in the experimental group had higher foetal weight at week 36 compared to participants in the control group. On the average, foetal weight for participants in the experimental group was within the normal weight for week 36, which was 2639 grams on average. However, the average foetal weight for participants in control group was 2189 grams. Psychological symptoms, such as depression and anxiety, during pregnancy has been shown to have adverse effects on neonatal growth rate, causing low birth weight of less than 2500 grams (Field et al., 2004; Field et al., 2003; Rondo et al., 2003). The results from the present study (discussed earlier) indicate that women in the control group had higher levels of psychological symptoms compared to the women in the experimental group. Subsequently, the effect on foetus growth, may lead to foetal distress and poor progress of labour (Coutinho, Cecatti, Surita, Costa & Morais, 2011).

Results of the group differences in both the systolic and diastolic blood pressure at week 36 of pregnancy were not significant. Mean differences indicated that experimental group participants had lower systolic and diastolic blood pressure at week 36, and these differences may be due to the higher level of psychological symptoms at week 36 for the control group participants. Bacon, Campbell, Arsenault, and Lavoie (2014), for example, found that anxiety has been linked to the incidence of hypertension.

6.3 The Labour Stage

Group differences.

Length of labour stages. The group differences between the experimental and control groups in the length of second and third stage labour were not significant. However, the participants in the experimental group had shorter length of second stage labour, on the average of 79.88 minutes (or 1.33 hours) compared to the participants in the control group, which had an average of 95.83 minutes (or 1.60 hours). Participants in the experimental group also had a shorter length of third stage labour, with an average of 6.35 minutes compared to the participants in the control group with 7.42 minutes. These results were substantiated by the non-significant results between group types (experimental and control) and the length of labour stages.

Anxiety has been shown to interfere with the labour process, causing longer second stage labour, such as a study conducted by Madhavanprabhakaran, Dumar, Ramasubramaniam, and Akintola (2013), indicating that anxiety caused prolonged labour process. In this study, more women who had high anxiety during the third trimester requested caesarean sections. A total of 93% of women experienced severe anxiety of childbirth, an increase from 42.4% in the first trimester. Similarly, in the present study, more women in the control group had caesarean sections.

Pain relief during labour. Results indicated that participants in the experimental group used less pain relief (12.5%) compared to participants in the control group (30%). Although group differences in epidural use were not significant, results showed that none of the

participants in the experimental group had opted for epidural compared to 2.9% of participants in the control group. The correlation results showed that the use of pethidine was associated with higher levels of antenatal physical symptoms at week 36 of pregnancy. The results of group differences showed that the experimental group had higher antenatal physical symptoms at week 36 of pregnancy. The regression model indicated that both group types and pethidine use had predicted the antenatal physical symptoms at week 36 of pregnancy.

Assisted vaginal deliveries. None of the participants in the experimental group had forceps-assisted delivery compared to 2.9% of participants in the control group. A total of 2.9% of participants in the experimental group had vacuum-assisted delivery compared to 11.8% of the participants in the control group. At one month postpartum, women who had assisted vaginal delivery (forceps) experienced anxiety (17%) and depression (11%). At three months postpartum, these women were more likely to report symptoms of PTSD. These women were also more likely to experience fatigue, difficulties in breastfeeding and symptoms of anxiety (Rowlands & Redshaw, 2012).

Methods of birth. A total of 41.9% of participants in the experimental group had spontaneous vaginal delivery (42.2%) compared to 31.1% of participants in the control group. A total of 8.9% of participants in the experimental group had caesarean sections compared to 17.8% of participants in the control group. The caesarean sections for the participants in the experimental group were performed due to gestational diabetes mellitus, foetus with macrosomia (four kg in birth weight), and placenta abruption. For the participants in the control group, these were performed due to failure of labour induction, requested by participant, poor progress of labour, and pregnancy-induced hypertension. Depression late in the third trimester was related to the use of epidural during labour and caesarean section in lieu of spontaneous vaginal delivery (Chung, Lau, Yip, Chiu, & Lee, 2001). Results in the current study found that women in the control group had higher depression levels in the third trimester.

Hypnosis has been shown to reduce the rate of delivery through caesarean section. Shah, Thakkar and Vyas (2011) conducted hypnosis for pregnant women diagnosed with oligohydramnios and foetus with intrauterine growth restrictions. The aim of hypnosis was to relax the uterine muscles and improve the circulation of the placenta. Results indicated that 11 women in the control group (who received only conventional medical treatment) had caesarean sections, compared to two women in the experimental group who received conventional treatment and hypnosis. A total of 70% of neonates from mothers in the experimental group were borne full-term and 60% with birth weight of two kilograms or more, compared to 25% full-term neonates and 20% with birth weight of two kilograms or more in the control group. There were two foetal deaths in the control group (the authors did not indicate at which month the death had occurred) and all the foetus of women in the experimental group survived. Similarly, a study conducted by Mehl-Madrona (2004) showed that women in the hypnosis group had fewer caesarean sections, a total of 25, compared to 54 in the supportive psychotherapy group and 51 in the comparison group. A total of 42 women in the hypnosis group had epidural compared to 141 in the supportive psychotherapy group and 199 in the comparison group.

A study was conducted by Phillips-Moore (2012) to examine positive labour and postpartum outcomes. Results indicated that the average labour length was 10.4 hours, which was similar to the average labour length for participants in the experimental group in the present study, which was 13.13 hours. A total of 22% had caesarean section (higher than the rate for the experimental group in the present study) due to foetal distress, poor progress, breech and transverse presentation, hypertension and tight and narrow pelvic bone. The average Apgar score was 9.2, but it was not clarified at which minute this was given.

Looking at the effects of methods of birth over time is pertinent in understanding its consequences and ways to help women to better cope at postpartum. A study (Thompson, Roberts, Currie, & Ellwood, 2002) was conducted to explore mothers' health problems the first few days of birth and later at weeks 8 and 24 of postpartum. These health problems were examined in relation to the birth method employed. The questionnaire regarding mothers' health included 12 health problems, "exhaustion/extreme tiredness, lack of sleep through baby crying,

excessive or prolonged bleeding, backache, frequent headaches or migraines, sexual problems, haemorrhoids (piles), sore perineum, mastitis, bowel problems (e.g. constipation or diarrhoea), and urinary incontinence (e.g. hard to hold urine when coughing, sneezing, or exercising), with "yes" or "no" options. Aside from the health problems, the assessment of depressive symptoms was made using the Edinburgh Postnatal Depression Scale (EPDS), which was also used in the current study.

Thompson, Roberts, Currie, and Ellwood (2002) found that aside from the listed health problems in the questionnaire, women also reported other problems such as pain caused by caesarean section and respiratory, breast, and musculoskeletal issues. Women who had caesarean section as their birth method were more likely to report exhaustion, problems with bowel movements and problems with sleep due to crying baby at 8 and 24 weeks postpartum compared to women who had spontaneous vaginal deliveries (SVD), although women with SVD were more likely to report perineal pain at week 8, 16, and 24 postpartum. Women who had assisted vaginal deliveries (e.g. forceps and vacuums) were more likely to state pain in the perineal region, bowel and sexual problems than the ones who had SVD. Women with caesarean section were more likely to be readmitted to hospital. The results of EPDS showed that 13% of women who had caesarean sections had postpartum depression at 8 months postpartum compared to 10% of women who had SVD and assisted vaginal deliveries, and these differences were significant. Although the differences during 16 and 24 weeks postpartum were not significant, the trend in postpartum depression changed at 16 weeks postpartum, indicating more women in the SVD group (8%) had postpartum depression compared to assisted vaginal deliveries (6%) and caesarean section (7%). During the 24th week postpartum, 8% of women in the SVD and caesarean groups had postpartum depression compared to 7% in the assisted vaginal deliveries group. Although this study reported that primiparous women were more likely to experience assisted vaginal deliveries, experience trauma in the perineal region, lack of sleep due to crying baby, backache and sexual problems, the researchers did not attempt to link these to symptoms of postpartum depression but did indicate that the symptoms of

depression for the multiparous women began to resolve over 6 months but not for the primiparous women. Although the researchers did not provide any reasons for changes in the trend, they recommended that there should be some measure to help women alleviate the physical and psychological conditions experienced during the period of postpartum (Thompson, Roberts, Currie, & Ellwood, 2002).

Psychotherapy has been shown to help women opt for spontaneous vaginal delivery and reduce their fear of childbirth (Saisto, Toivanen, Salmela-Aro, & Halmesmäki, 2006). Group relaxation exercises for nulliparous women who experienced fear of spontaneous vaginal delivery and had requested caesarean section as mode of delivery were conducted. Pregnant women (experimental group) were allocated into 17 groups, consisting of six women in each group. Sessions were conducted once a week for 2 hours for a total of five weeks. The women received relaxation exercises, consisting of visualisation, relaxation, and opportunities for discussion. The women in the comparison group had received the conventional antenatal treatment from obstetricians. The contents of the discussion were the effects of the relaxation exercises, labour stages, relief of pain, and becoming parents. The relaxation exercises were conducted via a recording which was developed for the study. Visualisation techniques, such as images of the birthing canal opening like flower buds, were used. Even though the authors did not elaborate on the type of technique used, the method of relaxation with visualisation technique has similarities to the technique used in hypnosis. Results indicated that the women found the sessions and the support from the group members useful. Also, 83% of the women chose natural birth. A total of 12.7% of the women opted for caesarean section due to fear compared to 22.4% in the comparison group (Saisto et al., 2006). Similarly, in the present study, as discussed earlier, more women in the control group had caesarean delivery and women in the experimental group had higher stress, anxiety and depression. Saisto et al. (2006) had emphasised that treatment of fear and anxiety related to labour helped ease these psychological symptoms and increase positive adjustment.

A condition known as tokophohia, or fear of pregnancy and childbirth, may manifest in psychological symptoms, such as anxiety. Tokophobia is manifested in both primiparous and multifarous women. Fear of childbirth has multifactorial reasons. It could be due to the process of socialisation, whereby mothers transmit their fear to their daughters, who in turn expect childbirth to be a painful process (Bakshi, Mehta, Mehta, & Sharma, 2007). Others developed fear after witnessing or hearing of frightening experiences. For multiparous women, fear may have developed through trauma, such as perineal tear from forceps deliveries (Castledine & Cockeram, 2014), sustained through previous labour. This trauma was unresolved before the next pregnancy had occurred. Increasing caesarean rates have been observed in women who were fearful of labour and the birthing process (Haines, Rubertsson, Pallant & Hildingsson, 2012).

Cyna and McAuliffe (2006) conducted a study using hypnosis as a mode of treatment. In this study, pregnant women were divided into experimental and control groups. The experimental group participants were given four hypnosis sessions from week 35 onwards. Results indicated that 15% of women in the experimental group had elective caesarean sections compared to 19% in the control group; and 27% of women in the experimental group had emergency caesarean sections compared to 31% in the control group. A total of 27% of participants in the hypnosis group who had spontaneous vaginal delivery had epidural compared to 40% in the control group

Although Cyna and McAuliffe (2006) found that hypnosis treatment was successful in decreasing emergency caesareans and using epidural analgesia, in comparison to the control group, 15% of participants (8% nulliparous women and 7% multiparous women) did opt for elective caesareans; and 27% of participants opted for epidural for spontaneous vaginal delivery (12% nulliparous women and 15% multiparous women). The author did not elaborate further on these choices. However, it does raise the question as to whether women had opted for the elective caesarean and epidural due to the tokophobia discussed earlier. If the hypnosis session had started much earlier than week 35, as in the present study (which began at week 16 of

pregnancy), perhaps the fear of labour and delivery would have been reduced.

Fewer experimental group participants in the present study had caesarean sections, none had elective caesareans, only one had vacuum assisted delivery, used less pethidine, and none opted for epidural analgesia because hypnosis had reduced their anxiety (as discussed earlier) and thus given them a sense of control and confidence about the process of labour, as found by Abbasi et al. (2009). The researchers (Abbasi et al., 2009) conducted hypnosis sessions for multiparous women between 38 and 42 weeks of pregnancy. Participants were interviewed within 24 hours of delivery. They were asked to describe their feelings during hypnosis and were asked to compare their current experience with previous birthing. They indicated satisfaction with the hypnosis session and that the sessions gave them a sense of control. The participants shared that they had experienced less fear and anxiety during labour. They had also experienced shorter labour and felt less fatigued. None of the participants requested pain relief. This was supported by Schauble, Werner, Rai and Martin (1998), who emphasised that patients prepared by hypnosis have a sense of control over their labour and delivery, resulting in relaxation and confidence. These patients most often do not require the help of pain relief, have fewer complications, have more normal and full-term deliveries and are better adjusted during the postpartum period.

6.4 The Postpartum Stage (24 hours of postpartum)

Self-reported pain. The results of group differences in self-reported pain just before labour were not significant. However, the experimental group experienced higher pain compared to the control group. Self-reported pain during labour was significant. Results indicated that the experimental group experienced significantly higher pain compared to the control group. A similar trend was shown in self-reported pain right after labour that, although the differences were not significant, the experimental group had experienced slightly higher pain levels compared to the control group. In contrast, treatment with hypnosis has been shown to result in less pain experienced during labour, such as in a study conducted by Harmon, Hynan and Tyre (1990). In this study, women in the hypnosis group experienced less pain during labour compared to the control group. The hypnosis group reported labour as distressing, however, the control group had reported labour experiences ranging from distressing to horrible. The hypnosis group also had shorter labour, more spontaneous vaginal delivery, use of less medication, and lower depression levels. Participants in the control group used more tranquilizers. Graves (2013) had emphasised that childbirth fears increased pain during labour and hypnosis preparation prior to labour helps in the removal of this fear leading to a calmer, more comfortable and easier birthing process. During labour, the muscles of the uterus draw up and the cervix muscles are relaxed and open. This is easily achieved if pregnant women are relaxed and calm. On the other hand, fear results in tense cervix muscles as a result of the sympathetic nervous system action. Fear also results in the production of catecholamines and adrenaline that readied the limbs for the fight-or-flight response. This reaction is not helpful during labour, as tense muscles cause the contraction to become an uncomfortable process, causing prolonged labour. Although experimental group participants in the present study did experience higher pain levels compared to the control group participants, on the average they had a shorter length of labour.

Although in the present study participants in the experimental group reported more intense labour pain, as indicated by the previously discussed results, they used less pain relief during labour and had less depression and anxiety. It is possible that the participants in the control group, due to increased anxiety, depression or stress, had felt more pain and therefore opted for pain relief. This is supported by other studies showing that increased depressive and anxiety symptoms are associated with labour pain (Alder, Fink, Bitzer, Hosli, & Holzgreve, 2007).

Apgar score. A total of 48.9% of neonates in the experimental group obtained a nine for their Apgar score at one minute of birth, compared to 35.6% in the control group. A total of 51.1% of neonates in the experimental group obtained a 10 as their Apgar score at fifth minute of birth compared to 46.7% in the control group. Studies have shown that women with high risk

pregnancies (e.g., eclampsia/preeclampsia) gave birth to neonates with an Apgar score lower than 8 at the fifth minute (Zadeh, Khajehei, Sharif, & Hadzic, 2012). The results of the present study showed that a total of 4.4% of women in the control group had neonates with an Apgar score below 8 at one minute of birth, compared to none for the neonates of women in the experimental group. The results of the present study also showed that women in the control group had higher blood pressure at week 36 of pregnancy. Apgar scores at one minute and five minutes were lower for women experiencing anxiety disorder but not for women experiencing only depression in a population-based study, which was conducted between 1995 to 1997 in Norway (Berle et al., 2005).

Nulliparous women were grouped into experimental and control groups in a Multidisciplinary Program for Childbirth and Motherhood Preparation (MPCM). The intervention comprised six meetings every two weeks and four meetings every week, consisting of sharing of information regarding pregnancy-related matters, such as delivery and newborn care; techniques in relaxation (e.g., stretching and breathing), and discussion of experiences during pregnancy. The study found more cases of spontaneous vaginal delivery, higher birth weight, and higher Apgar score at the first minute (greater than 7) in the experimental group compared to the control group. At the fifth minute, both groups had neonates with a 7 or higher Apgar score. Participants in the experimental group had lower state anxiety at the third trimester, closer to delivery (Consonni, Calderon Consonni, De Conti, Prevedel, & Rudge, 2010).

Neonatal birth weight. The average neonatal birth weight for the participants in the experimental group was slightly higher (3103.48 grams) than the average neonatal birth weight in the control group (3070.91 grams). In a study conducted by Berle et al. (2005) showed that anxiety disorder did not associate with birth weight. Similarly, in the present study, neonatal birth weight was not associated with the antenatal psychological symptoms (stress, anxiety, and depression).

6.5 The Postpartum Stage (two months postpartum)

Changes in stress, anxiety and depressive symptoms over time.

The results indicated that the experimental group had lower mean of stress symptoms at two months postpartum compared to the control group. The participants in the experimental group experienced a decrease in stress symptoms from baseline to postpartum, and this was lower than stress symptoms at baseline. Meanwhile, the stress symptoms for the participants in the control group had increased from week 20 to week 36 of pregnancy. However, at postpartum the stress symptoms had dropped below the baseline measurement.

As for anxiety symptoms, the experimental group showed a decrease in anxiety symptoms from baseline to week 36 and a further decrease at two months postpartum. In contrast, the anxiety symptoms for the control group had dropped at week 28 of pregnancy, but increased at week 36, and increased even more at two months postpartum. The anxiety symptoms for the participants in the control group at postpartum were higher than the ones experienced at baseline. On the other hand, the depressive symptoms for the experimental group had decreased from baseline to week 36 of pregnancy, but had increased at two months postpartum (slightly lower than baseline but higher than the ones experienced during week 20 of pregnancy.

The results for these psychological symptoms showed that the symptoms experienced by the experimental group had decreased from baseline to two months postpartum. For the control group, the symptoms had increased from baseline to the final stage of pregnancy, with anxiety and depressive symptoms increasing further at two months postpartum. In contrast, a prior study had shown that anxiety was lower three months following birth as compared to in the first and second trimesters and following childbirth (1 to 3 days of birth; Figueiredo & Conde, 2011). It is possible that the results of the present study showed a marked difference between the experimental and control groups due to the hypnosis intervention that was given to the experimental group participants during pregnancy. The hypnosis script had included suggestions for a more relaxed and faster recovery for women during the period of postpartum. Antenatal stress and physical symptoms at week 36 of pregnancy had a positive association with postpartum anxiety and depressive symptoms, in the present study. Postpartum stress, anxiety, and depressive symptoms were all positively associated. Similar to the results of group differences over time, the results for psychological symptoms showed that participants who had experienced psychological symptoms at week 36 of pregnancy had the potential to continue to experience psychological symptoms at two months postpartum. In addition, the results of the present study had found an association between antenatal physical symptoms at week 36 of pregnancy and postpartum anxiety and depressive symptoms.

Psychological interventions during pregnancy and/or postpartum have been shown to have beneficial effects in helping women to reduce their psychological symptoms at postpartum. One such study was conducted by Osman, Saliba, Chaaya, and Naasan (2014) whereby the first time mothers, who had given birth to healthy babies (in Lebanon) were allocated in either of four groups; the 'postpartum support film', 'the hotline service', receiving both 'postpartum support film and hotline service', and the control group (received CD consisting of children's music). The 'postpartum support film' consisted of watching a DVD on stressors during the postpartum period. These stressors include postpartum depression, body changes, sleep deprivation and others. The 'hotline service' was a number the women could contact to ask questions regarding care of infant, parenting, and so on. Results indicated that the women in the postpartum support film group and the ones in the support film and hotline service had lower perceived stress than the ones in the control group. The ones receiving only the hotline service had lower perceived stress than the control group. Groups receiving both interventions had lower levels of perceived stress than those receiving only one of the interventions. The authors did not specify the length of time from delivery to the recruitment for the study. The author also did not include the significance of giving the control groups the CD consisting of children's music (Osman, Saliba, Chaaya, & Naasan, 2014).

Goutaudier et al. (2012) conducted an intervention study with women who had had difficult experiences during labour. These difficulties included pain, unplanned intervention,

risk of death, and anxiety. Women were allocated into either an intervention or control group. Recruitment was conducted in the final pregnancy trimester. Counselling was given at the postnatal ward within 72 hours of delivery and later repeated at 4 – 6 weeks postpartum via telephone. Results indicated that at 3 months postpartum, the intervention group showed improvement. There were significant differences in terms of trauma symptoms with the intervention group showing better improvement. This trauma was associated with post-traumatic stress disorder (PTSD). At 3 months postpartum, more women in the control group had postpartum depression. Women in the intervention group had lower depression, anxiety and stress as measured by DASS at 3 months postpartum. Interview results showed that women in the intervention group found that counselling was useful to them (Gamble et al., 2005). Although the present study measured the experience of stress symptoms at postpartum, and not participants' experience of PTSD, without proper management of psychological symptoms, the experience of traumatic difficulties during labour and delivery might have resulted in PTSD.

Negative emotions, such as grief and anger and pain, during labour predicted PTSD symptoms. A positive correlation between pain and PTSD and negative emotions was found. High pain scores predicted PTSD. Researchers indicated the necessity of preventing the development of PTSD by helping women to cope with negative emotions due to labour (Goutaudier et al., 2012).

Giakoumaki, Vasilaki, Lili, Skouroliakou, and Liosis (2009) found that within two to three days of delivery, 36.5% of women who showed symptoms of anxiety were experiencing depression. Although the percentage had decreased, a total of 27.3% of women who showed anxiety symptoms were experiencing depression at three months postpartum. In an intervention programme, women less than 12 months postpartum were allocated to one of three treatment groups. These treatment groups consisted of management by general practitioners who were trained in the management of postpartum depression; management via counselling-CBT by a nurse who had received training on counselling-CBT from a psychologist; and management via counselling-CBT by a psychologist. The counselling-CBT groups were also receiving management provided by the general practitioners. Women who were managed through counselling-CBT were given training once a week over the course of six weeks. The general practitioners were able to prescribe antidepressants to the patients in all three groups. Results indicated that regardless of group, all women experienced reduction in their depression and anxiety, although women who did not receive counselling-CBT exhibited higher levels of depression. The results also indicated that anxiety symptoms had diminished. The possible impact of antidepressants on the reduction of symptoms was not discussed (Milgrom et al., 2011).

An intervention programme using mindfulness therapy was developed for another study (Vieten & Astin, 2008). This therapy was based on Mindfulness-Based Stress Reduction, or MBSR, which incorporates cognitive therapy. This new intervention is called the Mindful Motherhood Intervention. Symptoms to be alleviated were listed prior to the intervention programme. Three approaches were combined, which were teaching awareness of breathing and being mindful of feelings and thoughts, awareness of body through hatha yoga meditation, and combining mindfulness with concepts from psychology, such as acceptance. The mindfulness therapy also included being aware of foetal development and issues during pregnancy, such as pain, sleep problems, and labour anxieties. The intervention programme was provided on a weekly basis for 8 weeks for 2 hours per session during second and/or third trimester. A clinical psychologist and a yoga instructor specialising in the prenatal period conducted training. The programme was conducted in groups of between 12 to 20 pregnant women. The intervention was piloted with 12 women, and the programme was refined based on feedback. Feedback was gained from the programme facilitators as well. The group was divided into two; the experimental group receiving the intervention and a wait-list control group. Baseline was collected two weeks prior to the intervention for all participants.

Assessment in the above study was done at three time points: baseline prior to treatment, the week following the final intervention and three months following the final intervention at postpartum. The wait-list control group was given the intervention following the third time point. At each time point, participants were evaluated for perceived stress, anxiety, depression, positive and negative affect, mindfulness, and regulation of affect. Data at the second time point indicated that women in the experimental group experienced a decrease in negative affect and state anxiety compared to the controls. The authors suggested that mindfulness intervention during pregnancy assisted in reducing anxiety and negative affect (Vieten & Astin, 2008). Similarly, the results of the present study showed that women in the experimental group, who had hypnosis intervention, had lower anxiety symptoms compared to the women in the control group. These results suggest that incorporating psychotherapy as an adjunct to obstetrics treatment is of great value in increasing pregnant women's psychological well-being.

Postpartum depression. Group differences in postpartum depression in the present study were significant, indicating that the control group experienced higher postpartum depression. Studies in western society have found the prevalence of postpartum depression to be between 12 to 15%, (Devouche, Gratier, Valente, & Le Nestour, 2012). In the present study, the total prevalence was 8.9%. The prevalence of postpartum depression in other studies conducted in Malaysia ranged from 20.7% (Azidah, Shaiful, Rusli, & Jamil, 2006) to 22.5% (Abdul Kadir, Mohammad Daud, Yaacob, & Nik Hussain, 2009). A study conducted by Wan Mahmud, Shariff, and Yaacob (2002) indicated a rate of 9.8% in postpartum depression in a Malaysian sample, which was closer to the percentage in the present study. The present study found that 7.1% women in the control group had postpartum depression. However, only 1.8% of participants in the experimental group had experienced postpartum depression. Receiving intervention during the pregnancy stage may have contributed to this significant difference. Curtis, Robertson, Forst, and Bradford (2007) found that some women agreed that counselling did help in alleviating their postpartum depression, although others were reluctant to seek help from professionals. Among the reasons cited for this fear was the prospect of losing their children to social workers because of being perceived as a threat to their children.

Curtis et al. (2007) advocated for patient education on postpartum mood disorder by counsellors, including the effectiveness of cognitive therapy in helping patients to alleviate the

symptoms. Postpartum depression is one of the adverse effects of pregnancy for both mothers and infants. Due to the adverse effects, proper management of this major depressive disorder is pertinent. Once suspected, postpartum depression should be adequately diagnosed and proper management adopted. Patients must be informed of its nature, consequences, treatment available and even the adverse effects of antidepressants (Gjerdingen, 2003). The adage that prevention is better than cure is very true in the case of postpartum depression. Psychological intervention during the pregnancy stage may assist in preventing women from experiencing this debilitating condition during the period of postpartum. The present study indicated that women in the experimental group given hypnosis during their pregnancy had a better chance of not having postpartum depression. Although more studies needed to be conducted, this is an indication of the importance of adopting the preventive psychotherapy route, as the alternative to psychotherapy for postpartum depression than prescribing antidepressant to patients (Pearlstein, 2008). However, some antidepressants should be avoided due to some adverse effects on breastfeeding infants (Gjerdingen, 2003). For example, fluoxetine, or Prozac, may cause seizures, cyanosis, and irritability (Misri, Kostaras, & Milis, 2005). This underscores the importance of an intervention programme to help women with psychological symptoms in lieu of using medication. Studies have shown that even with anti-depressants, women still relapse (26%). The proportion of relapse increased following discontinuation of anti-depressants (Cohen et al., 2006).

As indicated above, management via psychotherapy at the postpartum stage is essential. The setting of the present study, the University of Malaya Medical Centre, has an established psychiatry centre under the Department of Psychological Medicine. Treatment in this psychiatry centre includes providing psychotherapy to women who are experiencing psychological symptoms at postpartum, such as postpartum depression. These women who are detected to be having postpartum depression are normally referred to this centre from the postnatal clinic of the same hospital.

Psychotherapy was offered to first-time mothers who had high scores on the Edinburgh Postnatal Depression Scale (EPDS), indicating risk for postpartum depression, in a hospital in New Jersey, USA (Pessagno & Hunter, 2013). The EPDS was given within 72 hours of delivery. This short-term psychotherapy was conducted for eight weeks by a psychiatric nurse in a group of two. Each session was 90 minutes long and began one month following hospital discharge. Results indicated that following the psychotherapy intervention, the EPDS scores decreased significantly in both groups. At six months postpartum, women in both groups had further decreases in their postpartum depression. Women in both groups who had a prior history of depression experienced significant decrease in EPDS scores. Women reported that being in the group gave them support as they were able to relate to other members in the group who had the same issues (Pessagno & Hunter, 2013). The study brought to the forefront several pertinent issues in relation to postpartum depression. These issues were the importance of psychotherapy in the management of the condition, the need to include a rapid referral process for women who were identified as suffering from postpartum depression, and the lack of skilled personnel in the hospital who are able to provide nonpharmacological intervention. These issues were relevant to the current study in that although prevention for postpartum depression was conducted early in pregnancy, there is a need to have specific nonpharmacological intervention options for women who are suffering from postpartum depression in mainstream healthcare settings. One weakness noted in the study by Pessagno and Hunter (2013) is that the EPDS was given to first-time mothers within 72 hours of delivery and was not given again until six months postpartum. The high postpartum scores might have been confused with baby blues, which normally last for two weeks.

Yexley (2007) reported a successful treatment using hypnosis with a woman who was diagnosed with postpartum depression. Symptoms of depression started five days following delivery, which included crying spells, sadness, guilt feelings, feelings of worthlessness, hopelessness, and thoughts of harming her children. The patient did not respond well to medication for depression. Hypnosis was given five months following delivery. Symptoms of PPD resolved following the second session. Guse, Wissing and Hartman (2006) gave the experimental group participants six hypnosis sessions between 24 to 38 weeks of pregnancy. At two weeks postpartum, the experimental group had lower postpartum depression in comparison to the control group. The level of depression in the experimental group had decreased from the evaluation done during pregnancy. This trend is similar to the present study. Guse, Wissing, and Hartman (2006) also found that at 10 weeks postpartum, the experimental group had lower postpartum depression in comparison to the two weeks postpartum measurement. The authors emphasised that hypnosis given during the pregnancy stage facilitated in increasing women's psychological well-being during the postpartum period.

Although the present study did not find an association between antenatal psychological symptoms and postpartum depression, others showed significant associations. For example, a previous history of depression has been shown to be associated with postpartum depression (Gjerdingen, Crow, McGovern, Miner, & Center, 2011; Leigh & Milgrom, 2008), and a link has also found between anxiety and postpartum depression (Giakoumaki, Vasilaki, Lili, Skouroliakou, & Liosis, 2009).

Postpartum depressive and anxiety symptoms, types of group (experimental and control), and living arrangements during confinement (either staying with husband, parents or in-laws) predicted postpartum depression. In addition, independently, postpartum depressive symptoms, group types, and living with husbands predicted postpartum depression. In contrast, other studies, such as the one conducted by Fortner, Pekow, Markenson, and Chasan-Taber (2011) showed living with a spouse or partner during pregnancy reduced the risk of antenatal depression. Low social support during the postpartum stage has been identified as a significant predictor of postpartum depression (Boath, 2008; Lau & Wong, 2008; Lancaster et al., 2010).

Although therapeutic interventions such as hypnotherapy and relaxation therapy during the antenatal period were shown to aid in reducing the incidence of psychological symptoms like anxiety (Marc et al., 2011; Vieten & Astin, 2008) during pregnancy, studies investigating this aspect have been largely overlooked (Dennis, Ross, & Grigoriadis, 2007). Therapeutic
interventions during the antenatal period are relevant, as studies have shown a link between maternal mental health and birth outcomes, postpartum well-being and future infant development (Marc et al., 2011; Schetter & Tanner, 2012). In fact, intervention during pregnancy has been shown to reduce psychological symptoms towards the final stage of pregnancy (Consonni et al., 2010).

6.6 Conclusions

The present study was an experimental study designed to compare pregnant women who had received hypnosis intervention during pregnancy (the experimental group) with pregnant women who did not receive hypnosis intervention (the control group). Women in both the experimental and control groups were compared at three pregnancy-related stages, which were pregnancy, labour, and postpartum (24 hours following delivery and two months prior to delivery). Although the hypnosis intervention for the experimental group participants was conducted during pregnancy, the effects of this intervention were further investigated during labour and postpartum. These were compared to the control group participants who only received routine antenatal care from the obstetricians in the hospital, along with some form of attention control, which involved advice on nutritional intake during pregnancy, back massage techniques, and breathing techniques to be used during delivery.

The present study was also designed to examine various variables measured during pregnancy, labour and postpartum. These variables were antenatal psychological symptoms (stress, anxiety, and depression), antenatal physical symptoms at four time points during pregnancy, which were weeks 16, 20, 28, and 36; foetal weight at week 36; and both systolic and diastolic blood pressures at week 36 of pregnancy. The variables measured during labour were the length of labour stages, the use of pain relief (pethidine and epidural), assisted vaginal deliveries, and methods of delivery. The variables measured during 24 hours postpartum were self-reported pain (just before, during, and right after delivery), neonatal Apgar score (the first and the fifth minutes), and neonatal birth weight. The variables measured at two months

postpartum were postpartum psychological symptoms, which include, stress, anxiety, and depressive symptoms, as well as postpartum depression.

Aside from measuring variables separately at three pregnancy stages, the present study attempted to investigate the associations between antenatal psychological and physical symptoms at week 36 of pregnancy with variables measured during pregnancy (foetal weight and blood pressure), variables measured during labour, and variables measured at postpartum. In short, the present study sought to answer the following research questions, regarding whether pregnant women in the experimental group had better experiences of pregnancy, labour, and postpartum stages compared to the pregnant women in the control group and whether psychological and physical symptoms affect variables measured during pregnancy, labour and postpartum.

The main empirical findings were described and summarised under the results section. This section will synthesise the empirical findings to answer the present study's research questions:

Pregnancy stage.

1. Does hypnosis intervention for the experimental group participants alleviate/reduce antenatal psychological and physical symptoms, as compared to the control group participants who did not receive hypnosis intervention from week 16 to week 36 of pregnancy? The results indicated that the experience of antenatal psychological symptoms for the experimental group participants had decreased over time from week 16 of pregnancy to week 36 of pregnancy. In contrast, the experience of psychological symptoms for the control group had decreased at week 20 of pregnancy but increased steadily to week 36 of pregnancy. For both groups, the experience of antenatal physical symptoms had decreased at week 20 of pregnancy but had increased at weeks 28 and 36. At time 4, or week 36, of pregnancy, which was closer to the time of delivery, the experimental group had experienced significantly lower antenatal stress, anxiety and physical symptoms. The difference in depressive symptoms at time 4 were not significant.

However, the experimental group participants had experienced lower depressive symptoms.

- 2. Are foetal weight and blood pressure (systolic and diastolic) at week 36 of pregnancy for the experimental group participants different than for the control group participants? The results had shown that the foetal weight at week 36 of pregnancy in the experimental group was significantly higher than that of the control group. The results also showed that blood pressure (systolic and diastolic) at week 36 of pregnancy did not significantly differ. However, the experimental group participants had a slightly lower systolic and diastolic blood pressure.
- 3. What are the associations between group types (experimental and control groups), antenatal psychological symptoms (stress, anxiety, and depression) at week 36 of pregnancy and antenatal physical symptoms at week 36 of pregnancy? The results indicated that at week 36 of pregnancy, an increase in the antenatal stress symptoms at week 36 of pregnancy was positively correlated with an increase in antenatal physical symptoms, an increase in the antenatal anxiety symptoms was positively correlated with an increase in antenatal physical symptoms, and an increase in the antenatal depressive symptoms was positively correlated with an increase in antenatal physical symptoms. The results also indicated that group types had moderate negative correlations with antenatal physical symptoms at week 36 of pregnancy, suggesting that the experimental group's participants had lower levels of antenatal physical symptoms compared to the control group's participants. Group types, antenatal stress, anxiety, and depressive symptoms statistically significantly predicted antenatal physical symptoms at week 36 of pregnancy and, independently, group types and antenatal depressive symptoms were significant predictors of antenatal physical symptoms.

Labour stage.

- 1. Do the variables measured during labour (length of second stage of labour, third stage of labour, the use of pain relief during labour, methods of delivery, and assisted vaginal delivery) differ between the experimental and control groups' participants? The results indicated that although there were no group differences in the second and third stages of labour, the experimental group had a shorter length of labour in both stages. More participants in the control group had used pethidine, had epidural, had assisted vaginal delivery, and had caesarean sections.
- 2. What are the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, and variables measured during labour (methods of delivery, use of pain relief, and assisted vaginal delivery)? The results indicated that antenatal physical symptoms at week 36 of pregnancy had positive correlations with the use of pethidine during labour. The results also indicated that group types and antenatal physical symptoms at week 36 of pregnancy statistically predicted the use of pethidine during labour.

24 hours postpartum stage.

1. Do the neonatal birth weight, Apgar score at one minute of birth, Apgar score at five minutes of birth, and self-reported pain (just before delivery, during delivery, and right after delivery) differ between the experimental and control groups? The results indicated that although group differences in neonatal birth weight were not significant, the experimental group had a slightly higher mean neonatal birth weight compared to the control group. More neonates in the experimental group had an Apgar score of 9 at one minute of birth and an Apgar score of 10 at the fifth minute of birth compared to the control group. The results also showed that participants in the experimental group had experimental group had a slightly before delivery, during delivery, and right after delivery.

2. What are the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, and variables measured within 24 hours postpartum? The results indicated that group types had a positive correlation with self-reported pain during delivery. Antenatal psychological and physical symptoms at week 36 of pregnancy did not correlate with the variables measured within 24 hours postpartum.

Two months postpartum.

- 1. What are the changes in the experience of antenatal and postpartum psychological symptoms (stress, anxiety, and depression) over time from pregnancy to the postpartum stages between the experimental and control group participants? The results indicated that the experimental group had lower mean postpartum stress, anxiety, and depressive symptoms compared to the control group.
- 2. Does the experience of postpartum depression differ between the experimental and control group participants? The results showed that the experimental group's participants' postpartum depression was significantly lower than the control group's participants.
- 3. What are the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, postpartum psychological symptoms, and postpartum depression? These findings suggest that antenatal stress symptoms at week 36 of pregnancy and postpartum anxiety and depressive symptoms showed positive correlations with postpartum stress symptoms, and antenatal anxiety symptoms at week 36 of pregnancy and postpartum depressive symptoms had positive correlation with postpartum stress symptoms. The regression analysis of these variables with postpartum stress symptoms was significant. Antenatal stress and physical symptoms at week 36 of pregnancy were positively correlated with postpartum anxiety symptoms. Postpartum stress and depressive symptoms had positive

correlation with postpartum anxiety symptoms. Group types had strong negative correlation with postpartum anxiety symptoms, indicating that the experimental group had lower postpartum anxiety. The regression analysis of these variables with postpartum anxiety symptoms was significant. Antenatal stress and physical symptoms at week 36 of pregnancy and postpartum stress symptoms had positive correlations with postpartum depressive symptoms. Postpartum anxiety symptoms had positive correlation with postpartum depressive symptoms. Group types had strong negative correlation with postpartum depressive symptoms, indicating that the experimental group had lower postpartum depressive symptoms. The regression analysis of these variables with postpartum depressive symptoms was significant. Postpartum depression was found to be positively correlated with postpartum anxiety symptoms.

4. What are the associations between group types, antenatal psychological symptoms at week 36 of pregnancy, antenatal physical symptoms at week 36 of pregnancy, postpartum psychological symptoms, and living arrangements during postpartum and postpartum depression? Postpartum depressive symptoms and staying with husband during confinement were significant predictors of postpartum depression.

Implications, limitations and directions for future research.

The present study has offered evidence that incorporating hypnosis intervention in an obstetrics setting had beneficial implications for pregnant women, their growing foetuses, positive neonatal outcomes, and introducing hypnosis as an adjunct to the management of women's health.

Firstly, hypnosis intervention assists in increasing pregnant women's psychological and physical wellbeing. Lowering these symptoms, particularly anxiety, helps women to have a positive expectation for their labour and postpartum. Mostly the current obstetrics healthcare system monitors women's physical wellbeing, particularly the changes in blood pressure and blood sugar levels, as changes in these can be detrimental to the physical wellbeing of pregnant women and their foetuses. The present study showed that it is also essential to quantify and monitor women's psychological wellbeing early in pregnancy, as its turn for the worse affects their physical wellbeing during pregnancy, labour and postpartum. This early identification could warrant further nonpharmacological interventions, such as hypnosis, for helping women to cope better during pregnancy, thus having better labour and postpartum experiences, as shown by the present study and previous studies. It was discussed earlier that there were links between worsening of antenatal psychological symptoms with the experience of postpartum depression. Evidence from the present study and previous studies had also shown that nonpharmacological interventions, such as hypnosis, increased foetal and neonatal physical wellbeing.

Secondly, the present study has provided evidence for an additional form of treatment, which is pertinent in the development of the future management of pregnancy, labour and postpartum, which in itself is a cost benefit to the healthcare system (such as reduction in the use of pain relief and caesarean section). As shown by the present study, hypnosis can be an adjunct in the management of pregnancy, not only as a treatment of pregnancy-related conditions, but also as preventive measures to ensure that women's psychological and physical wellbeing are at their optimum. As the old adage says, 'prevention is better than cure.'

In other countries, for example in Australia, hypnosis has been successfully incorporated in the obstetric settings at the Women and Children Hospital, University of Adelaide, since the year 2002. This antenatal hypnosis training was designed for women late in their pregnancy in preparation of labour. The successful intervention of the hypnosis programme in obstetrics was published by Cyna et al. (2004) and Cyna and McAuliffe (2006), and the results of these studies were discussed in the lilterature section on the efficacy of hypnosis intervention during the labour stage.

Limitations of the present study. The present study had provided positive implications for the management of pregnancy; however, it also has encountered a number of limitations, which need to be considered in providing positive directions for future research.

Firstly, the hypnosis sessions in the present study were conducted four times, which was adequate in the management during pregnancy, but these sessions were conducted with a long gap between them. There was a gap of one month between the first and second session, a gap of two months between the second and third sessions, and a gap of two months between the third and the fourth sessions. Although the hypnosis sessions may have helped participants in the experimental group in the alleviation of the antenatal physical and psychological symptoms, these long gaps may not have helped in answering the research questions on labour and postpartum-related matters, such as the alleviation of labour pain, as preparation for labour should be done closer to the date of delivery (Barabasz & Watkins, 2005). The reason for the length of the gaps was that the women were only willing to participate in the hypnosis sessions if they were to be conducted in conjunction with their visits to the antenatal clinic for their obstetrics appointments, which were at weeks 16, 20, 28 and 36. For future research, there is a need to encourage pregnant women to participate in hypnosis studies of this nature, so a shorter gap between sessions would be possible and more hypnosis sessions could be conducted, of which a few sessions should be conducted early in the trimesters to alleviate psychological and physical symptoms and a few sessions conducted towards the end of the third trimester to prepare for labour and postpartum.

Secondly, information on ethnic differences may have been valuable, as differences in ethnicity may have had changed the direction of the present study. However, the majority of participants were of Malay ethnic origin. The initial plan was to include Chinese participants in the study. However, Chinese pregnant participants were uninterested in taking part in the hypnosis study. In the Chinese culture, protection of the unborn babies is of the utmost importance. The purpose of this protection is to avoid pregnancy-related problems, such as stillbirth, miscarriage, and disabilities of the babies (Lau, 2012). Subsequent studies are needed to investigate attitudes towards hypnosis. This could be in the form of questionnaires and/or interviews, to identify the cause of this reluctance within Malaysian settings. Identification of

this reluctance will help in developing a better recruitment strategy and a stronger research methodology.

Thirdly, the process of randomisation was not possible as participants needed to be informed that they were to receive hypnosis treatment, due to cultural and religious beliefs. In Malaysia, hypnosis has been equated to black magic and is feared by some people. Due to wide misconceptions of hypnosis, which were discussed in the introductory section, hypnosis is looked upon with fear and apprehension. This had reduced the present study's design strength, as a randomised controlled trial was not possible. As discussed earlier, studies in relation to attitudes towards hypnosis, followed by giving talks and workshops on accurate information about hypnosis may help to dispel some of these misconceptions.

Fourthly, the sample size calculation was based on the intervention research for pregnant women in preparing them for postpartum wellbeing. Although a positive effect of hypnosis was seen for both the primary outcomes (psychological and physical symptoms) and secondary outcome of postpartum depression, it may have underpowered the study in terms of the effects for its remaining secondary outcomes, such as the differences in blood pressure measurement. Future studies need to include more participants, especially considering the higher dropout rate at postpartum.

Fifthly, there was a gap of two months between delivery and completing the postpartum questionnaires. Since some participants needed to complete their postpartum recuperation outside of Kuala Lumpur, they were to return the questionnaires via mail. Every effort made to increase participants' adherence in mailing these questionnaires. These efforts included putting the questionnaires in envelopes, complete with the researcher's address and stamps to ensure ease of mailing. Phone calls and short messaging system (SMS) one week prior to completing the questionnaires were initiated. Participants were again contacted during the week that they needed to complete the questionnaires. At the final time point at week 36 of pregnancy, participants' contact information was updated and they were reminded to inform the researcher

of any change in this information. Despite these efforts, the dropout rate was 50%. Future studies may benefit from a better system of data collection, for example, one in which contact failure will warrant the researchers to visit the participants at their homes to obtain the questionnaires, or one, which offers a more enticing incentive in terms of money or gifts to increase adherence.

Finally, building rapport during all the hypnosis sessions may have had contributed to the Hawthorne effect. In any therapeutic relationship, rapport building is one of the important elements for successful therapeutic session. This rapport building was to ensure that the characteristics of a good therapist, such as flexibility, confidence, empathetic, and being sensitive (Lazar & Demster, 1984) towards patients/participants were uphold. However, the researcher only spent a few minutes with the control group participants while they were completing the questionnaires at weeks 16, 20, 28, and 36. The length of time spent with the experimental group participants, which were one to one and half hour during each session, which also had included listening to the problems related to the participants work and personal lives, may have contributed to the experimental group participants having a better physical and psychological well-being during pregnancy.

The present study offers evidence of the possibility of increasing the psychological and physical well-being of pregnant women by using hypnosis as the nonpharmacological option in addition to routine antenatal care by healthcare professionals (i.e. obstetricians and nurses). The strength of the present study lies in the fact that this is the first study of its kind conducted in Malaysia. Although it is too early to make a definite conclusion that hypnosis did indeed assisted women during pregnancy, labour and postpartum, the results did indicate some form of improvement. In order to strengthen its efficacy, more studies should be conducted to give direction to women and the healthcare policy makers in adding hypnosis, a relatively safe procedure, into women's healthcare in order to improve the wellbeing of women during pregnancy, labour and postpartum.

REFERENCES

- Abdul Kadir, A., Muhammad Daud, M.N., Yaakob, M.J., Nik Hussain, H.H. (2009). Relationship between obstetrics risk factors and postnatal postnatal depression in Malaysian women. *International Medical Journal*, 16(2), 101-106.
- Abdul Kadir, A., Nordin, R., Ismail, S.B., Yaacob, M.J., & Wan Mustapha, W.M.R. (2004). Validation of the Malay version of Edinburgh Postnatal Depression Scale for postnatal women in Kelantan, Malaysia. *Asia Pacific Family Medicine*, 3(1-2), 9-18.
- Ab.Rahman, A., Sulaiman, S.A., Ahmad, Z., Wan Daud, W.N., & Hamid, A.M. (2008). Prevalence and pattern of use of herbal medicines during pregnancy in Tumpat district, Kelantan. *Malaysian Journal of Medical Sciences*, 15(3): 40–48.
- Abbasi, Ghazi, Barlow-Harrison, Sheikhvatan, & Mohammadyari (2009). hypnosis on pain relief during labor and childbirth in Iranian pregnant women. *International Journal of Clinical and Experimental Hypnosis*, 57(2), 174-183. doi: 10.1080/00207140802665435174.
- American Psychological Association. (2015). Hypnosis today-looking beyond the media
portrayal. Retrieved January 12, 2015, from,
https://www.apa.org/topics/hypnosis/media.aspx#
- Andersson, L., Sundstrom-Poromaa, I., Wulff, M., Astrom, M., & Bixo, M. (2004). Implications of antenatal depression and anxiety for obstetric outcome. *Obstetrics & Gynecology*, 104, 467–476.
- Ahlgren, M., Wohlfahrt, J., Olsen, L.W., & Sørensen, M.M. (2007). Birth weight and risk of cancer. *Cancer*, 110(2), 412-419.
- Alder, J., Find, N., Bitzer, J., Hosli, I., & Holzgreve, W. (2007). Depression and anxiety: during pregnancy: A risk factor for obstetric, fetal and neonatal outcome? The *Journal of Maternal-Fetal & Neonatal Medicine*, 20(3), 189-209.
- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Arlington, VA: American Psychiatric Publishing.
- Apter, G., Devouche, E., Gratier, M., Valente, M., & Le Nestour, A. (2012). What lies behind postnatal depression: Is it only a mood disorder? *Journal of Personality Disorders*, 26(3), 357-367.
- Arulkumaran, S., Sivanesaratnam, V., Chatterjee, A., & Kumar, P. (Eds). (2004). *Essentials of Obstetrics*. England: Anshan Ltd O'Brien.

- Azidah, A.K., Shaiful, B.I., Rusli, N., & Jamil, M.Y. (2006). Postnatal depression and sociocultural practices among postnatal mothers in Kota Bharu, Kelantan, Malaysia. *Medical Journal of Malaysia*, 61(1), 76-83.
- Bacon, S.L., Campbell, T.S., Arsenault, A., & Lavoie, K.L. (2014). The impact of mood and anxiety disorders on incident hypertension at one year. *International Journal of Hypertension*, 953094. Retrieved from http://dx.doi.org/10.1155/2014/953094.
- Baker, P.N., & Kenny, L.C. (2011). (Eds). Obstetrics by Ten Teachers. London: Hodder Arnold. Bakshi, R., Mehta, A., Mehta, A., & Sharma, B. (2007). Tokophobia: Fear of pregnancy and childbirth. The Internet Journal of Gynecology and Obstetrics, 10(1). Retrieved from https://ispub.com/IJGO/10/1/4792.
- Ban, L., Tata, L.J., West, J., Fiaschi, L., & Gibson, J.E. (2012). Live and Non-live pregnancy outcomes among women with depression and anxiety: A population based study. *Plos ONE*, 7(8). doi: 10.1371/journal.pone.0043462.
- Bansil, D., Kuklina, E.V., Meikle, S.F., Posner, S.F., Kourtis, A.P., Ellington, S.R., & Jamieson, D.J. (2010). Maternal and fetal outcomes among women with depression. *Journal of Womens Health*, 19(2), 329-334. doi: 10.1089/jwh.2009.1387.
- Barabasz, A., & Watkins, J.G. (2004). *Hypnotherapeutic Techniques 2E*. 2nd ed. NY: Brunner-Routledge.
- Barling, N.R., & DeLucchi, D.A.G. (2004). Knowledge, attitudes, and beliefs about clinical hypnosis. *Australian Journal of Clinical and Experimental Hypnosis*, *32*(1), 36-52.
- Barbor, C. (2013). *The science of meditation. Psychology today*. Retrieved on March 10, 2014, from http://www.psychologytoday.com/articles/200105/the-science-meditation.
- Barrett, D. (2006). Hypnosis in film and television. *American Journal of Clinical Hypnosis,* 49(1), 13-30.
- Berle, J.O., Mykletun, A., Daltveit, A.K., Rasmussen, S., Holsten, F., & Dahl, A.A. (2005). Neonatal outcomes in offspring of women with anxiety and depression during pregnancy. A linkage study from The Nord-Trondelag Health Study (HUNT) and medical birth registry of Norway. *Archives of Women's Mental Health*, 8, 181–189.
- Black, K.D. (2007). Stress, symptoms, self-monitoring confidence, well-being, and social support in the progression of preeclampsia/gestational hypertension. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 36*(5), 419-429.

- Boath, E. (2008). Women's health: postnatal depression. British Journal of Healthcare Assistants, 2(3), 127-131.
- British Columbia Perinatal Health Program. (2007). *Pain management options during labor*. Retrieved on March 10, 2014, from http://www.perinatalservicesbc.ca/.
- Brown, S.T., Douglas, C., & Flood, L.P. (2001). Women's evaluation of intrapartum nonpharmacological pain relief methods used during labor. *The Journal of Perinatal Education*, 10(3), 1-8.
- Britton, J.R. (2008). Maternal anxiety: Course and antecedents during the early postpartum period. *Depression and Anxiety*, 25(9), 793-800.
- Casper, R.C. (2015). Use of selective serotonin reuptake inhibitor antidepressants in pregnancy does carry risks, but the risks are small. The *Journal of Nervous and Mental Disease*, 203(3), 167-169.
- Cheng, C.Y., Fowles, E.R., & Walker, L.O. (2006). Postpartum maternal health care in the United States: A Critical Review. *Journal of Perinatal Education*, 15(3), 34-42. doi: 10.1624/105812406X119002.
- Castledine, H., & Cockeram, M. (2014). Raising awareness without creating fear- teaching about the perineum in labour and perineal trauma. *NCT's journal on Preparing Parents for Birth and Early Parenthood*, 22, 10-11.
- Claesson, I., Josefsson, A., & Sydsjö, G. (2010). Prevalence of anxiety and depressive symptoms among obese pregnant and postpartum women: An intervention study. *BMC Public Health*, 10, 766. Retrieved from http://www.biomedcentral.com/1471-2458/10/766.
- Cluett, E.R., & Burns, E. (2009). Immersion in water in labour and birth. *Cochrane Database* of Systematic Reviews, 2, (CD000111). doi: 10.1002/14651858.CD000111.pub3.
- Cohen, L.S., Altshuler, L.L., Harlow, B.L., Nonacs, R., Newport, D.J., Viguera, A.C., Suri, R...Stowe, J.N. (2006). Relapse of major depression during pregnancy in women who maintain or discontinue antidepressant treatment. *JAMA*, 295(5), 499-507.
- Consonni, E.B., Calderon, I.M.P., Consonni, M., De Conti, M.H.S., Prevedel, T. T.S., Rudge, M. (2010). A multidisciplinary program of preparation for childbirth and motherhood: maternal anxiety and perinatal outcomes. *Reproductive Health*, 7(28). Retrieved from http://www.reproductive-health-journal.com/content/7/1/28.

- Curtis, K., Weinrib, A., Katz, J. (2012). Systematic review of yoga for pregnant women: Current status and future directions. *Evidence-Based Complementary and Alternative Medicine*. Retrieved from http://dx.doi.org/10.1155/2012/715942.
- Curtis, R., Robertson, P., Forst, A., & Bradford, C. (2007). Postpartum mood disorders: Results of an online survey. *Counselling and Psychotherapy Research*, 7(4), 203-210.
- Committee on Obstetrics Practice American Academy of Pediatrics. (2014). Immersion in water during labor and delivery. Committee Opinion No.594. American College of Obstetrics and Gynecology. *Obstetric & Gynecology*, *123*, 912-915.
- Croft, R.J., Williams, J.D., Haenschel, C., & Gruzelier, J.H. (2002). Pain perception, hypnosis and 40 Hz oscillations. *International Journal of Psychophysiology*, 46, 101-108.
- Chung, T.K., Lau, T.K., Yip, A.S., Chiu, H.F., & Lee, D.T. (2001). Antepartum depressive symptomatology is associated with adverse obstetric and neonatal outcomes. *Psychosomatic Medicine*, 63, 830-834.
- Crawford, J.R., & Henry, J.D. (2003). The depression anxiety stress scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology*, *42*, 111-131.
- Cross, G. (2014). *The demon headmaster*. Retrieved January 3, 2014, from http://www.goodreads.com/book/show/139226. The_Demon_Headmaster.
- Coutinho, P.R., Cecatti, J.G., Surita, F.G., Costa, M.L., & Morai, S.S. (2011). Perinatal outcomes associated with low birth weight in a historical cohort. *Reproductive Health*, 8(18). doi:10.1186/1742-4755-8-18.
- Cox, J.L. & Holden, J. (2003). Perinatal Mental Health: A Guide to the Edinburgh Postnatal Depression Scale. London: Gaskell.
- Čuržik, D & Begić, N.J. (2011). Anxiety sensitivity and anxiety as correlates of expected, experienced and recalled labor pain. *Journal of Psychosomatic Obstetrics & Gynecology*, *32*(4), 198-203.
- Cyna, A.M., & McAuliffe, G.L. (2006). Antenatal self-hypnosis for labour and childbirth: A pilot study. *Anaesthesia and Intensive Care, 34*, 464-469.
- Cyna, A.M., McAuliffe, G.L., & Andrew, M.I. (2004). Hypnosis for pain relief in labour and childbirth: A systematic review. *British Journal of Anaesthesia*, 93(4), 505-511.

- Dayan J, Creveuil C, Herlicoviez M, Herbel C, Baranger E, Savoye C, & Thouin A. (2002). Role of anxiety and depression in the onset of spontaneous preterm labor. *American Journal of Epidemiology, 15*, 302-304.
- Deng, G., & Cassileth, B.R. (2005). Integrative Oncology: Complementary therapies for pain, anxiety, and mood disturbance. *Complementary and Alternative Methods*, 55(2), 109-116.
- Dennis, C.L, Ross, L.E, & Grigoriadis, S. (2007). Psychosocial and psychological interventions for treating antenatal depression. *Cochrane Database of Systematic Reviews* 2007, 3(CD006309). doi: 10.1002/14651858.CD006309.pub2.
- Davidson, J.A. (1962). An assessment of the value of hypnosis in pregnancy and labour. *British Medical Journal*, 2(5310), 951-953.
- Dover, G.J. (2009). The barker hypothesis: How pediatricians will diagnose and prevent common adult-onset diseases. *Transactions of the American Clinical and Climatological Association*, 120, 199-207.
- Duddridge, E. (2002). Using complementary therapies during the childbearing process. *British Journal of Midwifery*, *10*(11), 699-704.
- Evans, J., Heron, J., Francomb, H., Oke, S., & Golding, J. (2001). Cohort study of depressed mood during pregnancy and after childbirth. *BMJ*, 323, 257-260.
- Fadzil, A., Balakrishnan, K., Razali, R., Sidi, H., Malapan, T., Japaraj, R.P., Midin, M., Nik Jaafar, N.R., Das, S., & Abdul Manaf, M.R. (2013). Risk factors for depression and anxiety among pregnant women in Hospital Tuanku Bainun, Ipoh, Malaysia. Asia Pacific Psychiatry, 5, 7-13.
- Faizal-Cury, A., Araya, R., Zugaib, M., & Menezes, P.R. (2010). Common mental disorders during pregnancy and adverse obstetric outcomes. *Journal of Psychosomatic Obstetrics* & Gynecology, 31(4), 229-235.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.
- Festin, M.R., Laopaiboon, M., Pattanittum, P., Ewens, M.R., Henderson-Smart, D.J., & Crowther, C.A. (2009). Caesarean section in four South East Asian countries: Reasons for, rates, associated care practices and health outcomes. *BMC Pregnancy and Childbirth*, 9(17). doi:10.1186/1471-2393-9-17.

- Field, T., Diego, M., Hernandez-Reif, M., Schanberg, S., Kuhn, C., Yando, R., & Bendell, D. (2003). Pregnancy anxiety and comorbid depression and anger: Effects on the fetus and neonate. *Depression and Anxiety*, 17(3), 140-151.
- Field, T., Diego, M., Dieter, J., Hernandez-Reif, M., Schanberg, S., Kuhn, C., Yando, R., & Bendell, D. (2004). Prenatal depression effects on the fetus and the newborn. *Infant Behavior and Development*, 27(2), 216-229.
- Figueiredo, B., & Costa, R. (2009). Mother's stress, mood and emotional involvement with the infant: 3 months before and 3 months after childbirth. *Archives of Women's Mental Health*, *12*, 143-153.
- Fortner, R.T., Pekow, P., Dole, N., Markenson, G., & Chasan-Taber, L. (2011). Risk factors for prenatal depressive symptoms among Hispanic women. *Journal of Maternal Child Health*, 15, 1287-1295. doi 10.1007/s10995-010-0673-9.
- Gamble, J., Creedy, D., Moyle, W., Webster, J., McAllister, M., & Dickson, P. (2005). Effectiveness of a counselling intervention after a traumatic childbirth: A randomised controlled trial. *Birth*, *32*(1), 11-19.
- Gao, L., Chan, S.W., You, L., & Li, X. (2010). Experiences of postpartum depression among first-time mothers in mainland China. *Journal of Advanced Nursing*, 66(2), 303-312.
- Germain, S., & Nelson-Piercy, C. (2011). Common symptoms during pregnancy. *Obstetrics, Gynaecology and Reproductive Medicine, 21*(11), 323-326.
- Giakoumaki, O., Vasilaki, K., Lili, L., Skouroliakou, M., & Liosis, G. (2009). The role of maternal anxiety in the early postpartum period: Screening for anxiety and depressive symptomatology in Greece. *Journal of Psychosomatic Obstetrics & Gynecology, 30*(1), 21–28.
- Gjerdingen, D. (2003). The effectiveness of various postpartum depression treatments and the impact of antidepressant drugs on nursing infants. *The Journal of the American Board of Family Medicine*, *16*, 372-382.
- Gjerdingen, D., Crow, S., McGovern, P., Miner, M., & Center, B. (2011). Changes in depressive symptoms over 0 9 months postpartum. *Journal of Women's Health, 20*(3), 381-386. doi: 10.1089/jwh.2010.2355.
- Goutadier, N., Séjourné, N., Rousset, C., Lami, C., & Chabrol, H. (2012). Negative emotions, childbirth pain, perinatal dissociations and self-efficacy as predictors of postpartum posttraumatic stress symptoms. *Journal of Reproductive and Infant Psychology*, *30*(4), 352-362.

Graves, K. (2013). Hypnobirthing in the NHS. Midwifery Matters, 138, 19-20.

- Gürber, S., Bielinski-Blattman. D., Lemola, S., Jaussi, C., von Wyl, A., Surbek, D., Grob, A., & Stadlmayr, W. (2012). Maternal mental health in the first 3-week postpartum: The impact of caregiver support and the subjective experience of childbirth-a longitudinal path model. *Journal of Psychosomatic Obstetrics & Gynaecology*, 33(4), 176-184.
- Guse, T., Wissing, M., & Hartman, W. (2006). The effect of prenatal hypnotherapeutic programme on postnatal maternal psychological well-being. *Journal of Reproductive and Infant Psychology*, 24(2), 163-177.
- Harvard Mental Health (2002). Hypnosis: Theory and application part II. Harvard Mental Health Letter; 18(12), 1-3.
- Hammond, D.C. (2014). A review of the history of hypnosis through the late 19th century. *American Journal of Clinical Hypnosis, 56*(2), 174-191.
- Harmon, T.M., Hynan, M.T., & Tyre, T.E. (1990). Improved obstetric outcomes using hypnotic analgesia and skill mastery combined with childbirth education. *Journal of Consulting and Clinical Psychology*, 58(5), 525-530.
- Harris, A.D., McGregor, J.C., Perencevich, E.N., Furuno, J.P., Zhu, J., Peterson, D.E., & Finkelstein, J. (2006). The use and interpretation of quasi-experimental studies in medical informatics. *Journal of the American Medical Informatics Association*, 13, 16– 23. doi: 10.1197/jamia.M1749.

Hartland, J. (1977). Medical and Dental Hypnosis. London, Bailliere Tindall.

- Hannah, P., Adams, D., Lee, A., Glover, V., & Sandler, M. (1992). Links between early postpartum mood and postnatal depression. *British Journal of Psychiatry*, 154, 777-780.
- Henderson, J., & Redshaw, M. (2013). Who is well after childbirth? Factors related to positive outcome. *Birth*, 40(1), 1-9.
- Hughes, A., Williams, M., Bardacke, N., Duncan, L.G., Dimidjian, S., & Goodman, S.H. (2009). Mindfulness approaches to childbirth and parenting. *British Journal of Midwifery*, 17(10), 630-635.
- Jarlais, D., Lyles, C., & Crepaz, N. (2004). Improving the reporting quality of nonrandomized evaluations of behavioural and public health interventions: The TREND statement. American Journal of Public Health, 94, 361-366.

- Johanson, R., Chapman, G., Murray, Johnson, I. & Cox, J. (2000). The North Staffordshire maternity hospital prospective study of pregnancy-associated depression. *Journal of Psychosomatic Obstetrics & Gynaecology*, 21(2), 93-97.
- Jones, L., Othman, M., Dowswell, T., Alfirevic, Z., Gates, S., Newburn, M., Jordan, S., L... Neilson, J.P. (2012). Pain management for women in labour: An overview of systematic reviews. *Cochrane Database of Systematic Reviews*, 3 (CD009234). doi: 10.1002/14651858.CD009234.pub2.
- Katon, W.J., Russo, J.E., Melville, J.L., Katon, J.G., & Gavin, A.R. (2012). Depression in pregnancy is associated with preexisting but not pregnancy-induced hypertension. *General Hospital Psychiatry*, 34(1), 9-16.
- Kathree, T., & Petersen, I. (2012). South African Indian women screened for postpartum depression: A multiple case study of postpartum experiences. *South African Journal of Psychology, 42*(1), 37-50.
- King, N.M.A., Chambers, J., O'Donnell, K., Jayaweera, S.R., Williamson, C., & Glover, V.A. (2010). Anxiety, depression and saliva cortisol in women with a medical disorder during pregnancy. *Archives of Women's Mental Health*, 13, 339-345. doi: 10.1007/s00737-009-0139-5.
- Kroger, W.S. (1977). *Clinical and Experimental Hypnosis*. 2nd ed. Philadelphia: J.B. Lippincott Company.
- Kumari, S., & Joshi, S. (2013). Neonatal outcomes following maternal stress. *Delhi Psychiatry Journal*, *16*(2), 304-311.
- Fransson, E. O"rtenstrand, A., & Hjelmstedt, A (2010). Antenatal depressive symptoms and Preterm Birth: A prospective study of a Swedish national sample. *Birth*, *38*(1), 10-16.
- Haines, H., Rubertsson, C., J.F., & Hildingsson, I. (2012). The influence of women's fear, attitudes and beliefs of childbirth on mode and experience of birth. *BMC Pregnancy and Childbirth, 12*(55). Retrieved from http://www.biomedcentral.com/content/pdf/1471-2392-12-55.
- Hypno-movies.com (2004). *Movies by genre*. Retrieved January 10, 2014, from http://www.hypno-movies.com/.
- Jueckstock, J.K., Kaestner, R., & Mylonas, I. (2010). Managing hyperemesis gravidarum: A multimodal challenge. *BMC Medicine*, 8(46), 1 12.

- Jensen, H.M., Grøn, R., Lidegaard, Ø., Pedersen, L.H., Andersen, P.K., & Kessing, L.V. (2013). Maternal depression, antidepressant use in pregnancy and Apgar scores in infants. *The British Journal of Psychiatry*, 202, 347-351.
- Heinrichs, J., Schenk, J.J., Roza, S.J., van den berg, M.P., Schmidt, H.G., Steegers, E.A., Hofman, A., ... Tiemeier, H. (2010). Maternal psychological distress and fetal growth trajectories: The generation R study. *Psychological Medicine*, 40(4), 633-643.
- Lancaster, C.A., Gold, K.J., Flynn, H.A., Yoo, H., Marcus, S.M., & Davis, M.W. (2010). Risk factors for depressive symptoms during pregnancy: A systematic review. *American Journal of Obstetric & Gynecology*, 202(1), 5–14. doi:10.1016/j.ajog.2009.09.007.
- Lanfranco, R.C., Canales-Johnson, A., & Huepe, D. (2014). Hypnoanalgesia and the study of pain experience: From Cajal to modern neuroscience. *Frontiers in Psychology*, 5. doi: 10.3389/fpsyg.2014.01126.
- Laplante et al., (2004). Stress during pregnancy affects general intellectual and language functioning in human toddlers. *Pediatric Research*, 56(3), 400-410. doi: 10.1203/01. PDR.0000136281.34035.44.
- Lau, Y. (2012). Traditional Chinese pregnancy restrictions, health-related quality of life and perceived stress among pregnant women in Macao, China. Asian Nursing Research, 6(1), 27-34.
- Leigh, B., & Milgrom, J. (2008). Risk factors for antenatal depression, postnatal depression and parenting stress. *BMC Psychiatry*, 8(24). doi:10.1186/1471-244X-8-24.
- Lifshitz, M., & Raz, A. (2012). Hypnosis and meditation: Vehicles of attention and suggestion. *The Journal of Mind-Body Regulation*, *2*(1), 3-11.
- Lie, K.K., Grøholt, E., Eskild, A. (2010). Association of cerebral palsy with Apgar score in low and normal birthweight infants: Population based cohort study. *British Medical Journal*, *341*, 1-6.
- Lovibond, S.H. & Lovibond, P.F. (1995). *Manual for the Depression Anxiety Stress Scales*. (2nd. Ed.) Sydney: Psychology Foundation.
- Madden, K., Middleton, P., Cyna, A.M., Mathewson, M., & Jones, L. (2012). Hypnosis for pain management during labour and childbirth. *Cochrane Database of Systematic Reviews*, *11*, (CD009356). doi: 10.1002/14651858.CD009356.pub.
- Madrid, A., Giovannoli, R., & Wolfe, M. (2011). Treating persistent nausea of pregnancy with hypnosis: Four Cases. *American Journal of Clinical Hypnosis, 54*(2), 107-115.

- Mantle, F. (2003). Can hypnosis reduce postnatal depression? *British Journal of Midwifery*, 11(5), 299-301.
- Marc, I., Toureche, N., Ernst, E., Hodnett, E.D., Blanchet, C., Dodin, S., & Njoya, M.M. (2011). Mind-body interventions during pregnancy for preventing or treating women's anxiety. *Cochrane Database of Systematic Reviews*, 7(CD007559). doi:10.1002/14651858.CD007559.pub2.
- Martin, A.A., Schauble, P.G., Rai, S.H., & Curry, W. (2001). The effects of hypnosis on the labor processes and birth outcomes of pregnant adolescents. *Journal of Family Practice*, 50(5), 441-443.
- Martins, M., Capafons, A., Espejo, B., Mendoza, M.E., Guerra, M., Santos, J.A.E., Doaz-Puron, S., Guirado, I.G., & Castilla, C.D.S. (2010). Impact of a lecture about empirical bases of hypnosis on beliefs and attitudes toward hypnosis among Cuban health professionals. *International Journal of Clinical and Experimental Hypnosis*, 58(4), 476-496.
- Mayo Clinic (2015). *C-section*. Retrieved March 8, 2015, from http://www.mayoclinic.org/tests-procedures/c-section/basics/definition/prc-20014571.
- Mayo Clinic (2015). *Pregnancy week by week*. Retrieved March 8, 2015, from http://www.mayoclinic.org/healthy-living/pregnancy-week-by-week/basics/healthy-pregnancy/hlv-20049471.
- Mayo Clinic (2015). *Blood pressure chart. What your reading means*. Retrieved March 8, 2015, from http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/blood-pressure/art-20050982.
- Manber, R., Schnyer, R.N., Lyell, D., Chambers, A.S., Caughey, A.B., Druzin, M., Carlyle, E., ... Allen, J.J. (2010). Acupuncture for depression during pregnancy: A randomized controlled trial. *Obstetrics & Gynecology*, 115(3), 511-520.
- MedlinePlus (2014). *Hyperemesis gravidarum*. Retrieved January 20, 2015, from http://www.nlm.nih.gov/medlineplus.
- Mehl-Madrona, L.E.(2004). Hypnosis to facilitate uncomplicated birth. *American Journal of Clinical Hypnosis, 46*(4), 299-312.
- Melender, H.L. (2002). Experiences of fears associated with pregnancy and childbirth: A study of 329 pregnant women. *Birth, 29*(2), 101-111.

- Merck Manual Professional Version (2015). *Abnormal positions and presentations of the fetus*. Retrieved from http://www.merckmanuals.com/professional.
- Matthey, S., Panasetis, P., & Barnett, B. (2002). Adherence to cultural practices following childbirth in migrant Chinese women and relation to postpartum mood. *Health Care for Women International*, 23, 567-575.
- Madhavanprabhakaran, G.K., Kumar, K.A., Ramasubramaniam, S., & Akintola, A.A. (2013). Effects of pregnancy related anxiety on labour outcomes: A prospective cohort study. *Journal of Research in Nursing and Midwifery*, 2(7), 96-103. doi. http://dx.doi.org/10.14303/JRNM.2013.061.
- Matthey, S., Panasetis, P., & Barnett, B. (2002). Adherence to cultural practices following childbirth in migrant Chinese women and relation to postpartum mood. *Health Care for Women International*, 23, 567-575.
- McCarthy, F.P., Khashan, A.S, North, R.A, Moss-Morris, R., Baker, P.N, Dekker, G., Poston, L., & Kenny, L.C. (2011). A prospective cohort study investigating associations between hyperemesis gravidarum and cognitive, behavioural and emotional well-being in pregnancy. PLoS ONE 6(11): e27678. doi:10.1371/journal.pone.0027678.
- Milgrom, J., Holt, C.J., Gemmill, A.W., Ericksen, J., Leigh, B., Buist, A., & Schembri, C. (2011). Treating postnatal depressive symptoms in primary care: A randomized controlled trial of GP management, with and without adjunctive counselling. *BMC Psychiatry*, 11(95). Retrieved from http://www.biomedcentral.com/1471-244X/11/95.
- Misri, S., Kostaras, X., & Milis, L. (2005). The use of antidepressants in pregnancy and lactation. *BC Medical Journal*, 47(3), 139-142.
- Mongan, M.F. (2005). Hypnobirthing. The Mongan Method. Deerfield Beach, FL: Health Communications, Inc.
- Musa, R, Ramli, R., Abdullah, K., & Sarkarsi, R (2011). Concurrent validity of the depression and anxiety components in the Bahasa Malaysia version of the Depression Anxiety and Stress Scales (DASS). *ASEAN Journal of Psychiatry*, *12*(1), 1876-2018.
- Musa, R., Fadzil, M.A., & Mohd Zain, Z. (2007). Translation, validation and psychometric properties of Bahasa Malaysia version of the Depression Anxiety and Stress Scales (DASS). ASEAN Journal of Psychiatry, 8(2), 82-89.
- NHS (2008). *NICE clinical guideline 70. Induction of labour*. Retrieved January 14, 2015, from http://www.nhs.uk.

- Naish, P.L.N. (2006). Time to explain the nature of hypnosis? *Contemporary Hypnosis, 23*(1), 33-46.
- Nayeri, U.A. (2012). Hyperemesis in pregnancy: Taking a tiered approach. *Contemporary Obstetrics and Gynecology*, 57 (7), 22-31.

Nolen-Hoeksema, S. (2011). Abnormal Psychology. 5th ed. New York: McGraw-Hill.

- Okun, M.L, Kiewra, K., Luther, J.F., Wisniewski, S.R., & Wisner, K.L. (2011). Sleep disturbances in depressed and nondepressed pregnant women. *Depression and Anxiety*, 28, 676–685 (2011). doi: 10.1002/da.20828.
- O'Brien, B., Evans, M., & White-McDonald, E. (2002). Isolation from "being alive". Coping with severe nausea and vomiting of pregnancy. *Nursing Research*, *51*(5), 302-308.
- Orr, S.T., Blazer, D., James, S.A., & Reiter, J.P. (2007). Depressive symptoms and indicators of maternal health status during pregnancy. *Journal of Women's Health*, 16(4), 535-542. doi: 10.1089/jwh.2006.0116.535 – 542.
- Osman, H., Saliba, M., Chaaya, M., & Naasan, G. (2014). Interventions to reduce postpartum stress in first-time mothers: A randomized-controlled trial. *BMC Women's Health*, 14(125). Retrieved from http://www.biomedcentral.com/1472-6874/14/125.
- Otani, A. (2003). Eastern meditative techniques and hypnosis: A new synthesis. *American Journal of Clinical Hypnosis*, 46(2), 97-108.
- Paulus, W.E., Zhang, M., Strehler, E., El-Danasouri, I., & Sterzik, K. (2002). Influence of acupuncture on the pregnancy rate in patients who undergo assisted reproduction therapy. *Fertility and Sterility*, 72(4), 721-724.
- Peret, A. (2013). *Pain management for women in labour: An overview of systematic reviews: RHL commentary.* The WHO Reproductive Health Library; Geneva: World Health Organisation. Retrieved October 2015, from http://apps.who.int/rhl/pregnancy_childbirth/childbirth/routine_care/cd009234_amede eperetf com/en/index.html.
- Pessagno, R.A., & Hunker, D. (2013). Using short-term group psychotherapy as an evidencebased intervention for first-time mothers at risk for postpartum depression. *Perspectives in Psychiatric Care*, *49*, 202-209.

- Prajapati, B., Dunne, M. C. M., & Armstrong, R. A. (2010). Sample size estimation and statistical power analyses. *Optometry today*. Retrieved December 5, 2011, from http://www.optometry.co.uk/uploads/articles/STATISTICAL%20ARTICLE.pdf
- Phillips-Moore, J. (2012). Birthing outcomes from an Australian HypnoBirthing programme. British Journal of Midwifery, 20 (8), 558-564.
- Pusat Perubatan Universiti Malaya (2012). Laporan tahunan 2012 Pusat Perubatan Universiti Malaya. Retrieved September 2, 2014, from http://www.ummc.edu.my/backend/view/storage/files/annualReport/Laporan_Tahunan _PPUM_2012.pdf.
- Ramli, M., Abdullah, A.A.W., Saiful, M.I.B., Hafiz, M.N., & Fahmi, A.A.Z. (2010). Determinants of early postpartum psychological reaction among mothers in Kuala Lumpur hospital. *The International Medical Journal*, 9(1), 37-41.
- Raja Lexshimi, R.G., Ho, S.E., Hamiday, H., Rohani, M., & Syed Zulkifli, S.Z. (2007). A study on anxiety and depression level among high risk inpatient pregnant women in an obstetric ward. *Medicine & Health*, 2(1), 34-41.
- Ravindran, J. (2008). Rising caesarean section rates in public hospitals in Malaysia 2006. *Medical Journal of Malaysia*, 63(5), 434-435.
- Reinhard, J., Huesken-Janßen, H., Hatzmann, H., & Schiermeier, S. (2009). Preterm labour and clinical hypnosis. *Contemporary Hypnosis*, 26(4), 187-193. doi:10.1002/ch.387.
- Rondo, P.H., Ferreira, R.F., Nogueira, F., Ribeiro, M.C.N., Lobert, H., & Artes, R. (2003). Maternal psychological stress and distress as predictors of low birth weight, prematurity and intrauterine growth retardation. *European Journal of Clinical Nutrition*, 57, 266-27. doi:10.1038/sj.ejcn.1601526.
- Rowlands, I.J., & Redshaw, M. (2012). Mode of birth and women's psychological and physical wellbeing in the postnatal period. *BMC Pregnancy & Childbirth, 12*(138). Retrieved from http://www.biomedcentral.com/1471-2393/12/138.
- Rubertsson, C., Wickberg, B., Gustavsson, P., & Ra°destad, I. (2005). Depressive symptoms in early pregnancy, two months and one year postpartum prevalence and psychosocial risk factors in a national Swedish sample. *Archives of Women's Mental Health, 8*, 97-104.
- Saberi, F., Sadat, Z., Abedzadeh-Kalahroudi, M., & Taebi, M. (2013). Acupressure and ginger to relieve nausea and vomiting: A randomized study. *Iranian Red Crescent Medical Journal*, 15(9), 854-861.

- Saisto, T., Toivanen, R., Salmela-Aro, K., & Halmesmäki, E. (2006). Therapeutic group psychoeducation and relaxation in treating fear of childbirth. *Acta Obstetricia et Gynecologica*, 85, 1315-1319.
- Schauble, P.G., Werner, W.E.F., Rai, S.H., & Martin, A. (1998): Childbirth preparation through hypnosis: The hypnoreflexogenous protocol. *American Journal of Clinical Hypnosis*, 40(4), 273-283.
- Schetter, C.D., & Tanner, L. (2012). Anxiety, depression and stress in pregnancy: Implications for mothers, children, research and practice. *Current Opinion Psychiatry*, 25, 141-148. doi: 10.1097/YCO.0b013e3283503680.
- Schulz, K.F., Altman, D.G., & Moher, D. (2010). CONSORT 2010 statement: Updated guidelines for reporting parallel group randomised trials. BMJ, 340, c332. doi: http://dx.doi.org/10.1136/bmj.c332.
- Sado, M., Ota, E., Stickley, A., & Mori, R. (2012). Hypnosis during pregnancy, childbirth and the postnatal period for preventing postnatal depression. *Cochrane Database of Systematic Reviews*, 6,(CD009062). doi: 10.1002/14651858.CD009062.pub2.
- Salhan, S. (Ed.). (2007). Textbook of Obstetrics. New Delhi, India: Jaypee Brothers Medical Publishers (p) Ltd.
- Setse, R., Grogan, R., Pham, L., Cooper, L.A., Strobino, D., Powe, N.R., & Nicholson, W. (2009). Longitudinal study of depressive symptoms and health-related quality of life during pregnancy and after delivery: The health status in pregnancy (HIP) study. *Maternal Child Health Journal*, 13, 577-587. doi: 10.1007/s10995-008-0392-7.
- Shah, M.C., Thakkar, S.H., & Vyas, R.B. (2011). Hypnosis in pregnancy with intrauterine growth restriction and oligohydramnios: An innovative approach, *American Journal of Clinical Hypnosis*, 54(2), 116-123.
- Simon, E.P., & Schwartz, J. (1999). Medical hypnosis for hyperemesis gravidarum. *Birth*, *26*(4), 248-254.
- Sivasampu, S., Chandran, A., & Ahmad, F. (2012). *Influence of private practice as compared to public hospitals on modes of deliveries in Malaysia*. Retrieved December 20, 2014, from http://www.crc.gov.my.
- Suzuki, S., Igarashi, M., Yamashita, E., & Satomi, M. (2009). Ptyalism gravidarum. North American Journal of Medical Sciences, 1, 303-304.
- Schetter, C.D., & Tanner, L. (2012). Anxiety, depression and stress in pregnancy: implications for mothers, children, research and practice. *Current Opinion Psychiatry*, 25, 141-148.

- Stoelb, B.L., Molton, I.R., Jensen, M.P., & Patterson, D.R. (2009). The efficacy of hypnotic analgesia in adults: A review of the literature. *Contemporary Hypnosis*, 26(1), 24-39.
- Shamsi, U., Hatcher, J., Shamsi, A., Zuberi, N., Qadri, Z., & Saleem, S. (2010). A multicentre matched case control study of risk factors for preeclampsia in healthy women in Pakistan. *BMC Women's Health*, 10(14). doi:10.1186/1472-6874-10-14.
- Steinhorn, R.H. (2010). Neonatal Pulmonary Hypertension. *Pediatric Critical Care Medicine*, 11(2), 79-84. doi:10.1097/PCC.Ob013e3181c76cdc.
- Stephenson, R. (2007). The benefits of self-hypnosis for childbirth. Positive Health, 137, 9-12.
- The Merck Manual of Diagnosis and Therapy Online (2015). *Alternatives to spontaneous labour and delivery*. Retrieved March 8, 2015, from http://www.merckmanuals.com/professional.
- The Merck Manual of Diagnosis and Therapy Online (2015). *Management of normal labour*. Retrieved March 8, 2015, from http://www.merckmanuals.com/professional.
- The Merck Manual of Diagnosis and Therapy Online (2015). *Neonatal resuscitation*. Retrieved March 8, 2015, from http://www.merckmanuals.com/professional.
- The Merck Manual of Diagnosis and Therapy Online (2015). *Physical growth of infants and children*. Retrieved March 8, 2015, from http://www.merckmanuals.com/professional.
- Thompson. J.F., Roberts, C.L., Currie, M., & Ellwood, D.A. (2002). Prevalence and persistence of health problems after childbirth: Associations with parity and method of birth. *Birth*, 29(2), 83-111.
- Taebi, M., Kalahroudi, M.A., Sadat, Z., & Saberi, F. (2012). The duration of the third stage of labor and related factors. *Iranian Journal of Nursing and Midwifery Research*, 17(2), 76-79.
- Teixeira, C., Figueiredo, B., Conde, A., Pacheco, A., & Costa, R. (2009). Anxiety and depression during pregnancy in women and men. *Journal of Affective Disorders, 119*, 142–148.
- Toh, S., Mitchell, A.A., Louik, C., Werler, M.M., Chambers, C.D., & Hernández-Díaz, S. (2009). Selective serotonin reuptake inhibitor use and risk of gestational hypertension. *Am J Psychiatry*, 166(3), 320-328.

- Tournaire, M., & Theau-Yonneau, A. (2007). Complementary and alternative approaches to pain relief during labor. *eCAM*, 4(4), 409-417.
- Vieten, C., & Astin, J. 92008). Effects of a mindfulness-based intervention during pregnancy on prenatal stress and mood: Results of a pilot study. *Archives of Women's Mental Health*, 11, 67-74. doi 10.1007/s00737-008-0214-3.
- Vickers, A., Zolman, C., & Payne, D.K. (2001). Hypnosis and relaxation therapies. *The Western Journal of Medicine*, 175(4), 269-272.
- Uguz, F., Gezginc, K., & Yazici, F. (2011). Are major depression and generalized anxiety disorder associated with intrauterine growth restriction in pregnant women? A casecontrol study. *General Hospital Psychiatry*, 33(6), 640.e7-640.e9. doi: 101.1016/j.genhosppsych.2011.05.007.
- Unzila, A.A., & Norwitz, E.R. (2009). Vacuum-assisted vaginal delivery. *Reviews in Obstetrics* & *Gynecology*, 2(1), 5 17.
- Vacca, A. (2006). Vacuum-assisted delivery: An analysis of traction force and maternal and neonatal outcomes. Australian and New Zealand Journal of Obstetrics and Gynaecology, 46, 124-127.
- VandeVusse, L., Irland, J., Berner, M.A., Fuller, S., & Adams, D. (2007). Hypnosis for childbirth: A retrospective comparative analysis of outcomes in one obstretricians's practice. *American Journal of Clinical Hypnosis*, 50(2), 109-119.
- Voit, R., & DeLaney, M. (2004). Hypnosis in Clinical Practice. New York: Brunner-Routledge.
- Weisberg, M.B. (2008): 50 years of hypnosis in medicine and clinical health psychology: A synthesis of cultural crosscurrents, *American Journal of Clinical Hypnosis*, 51(1), 13-27.
- Whorwell, P.J. (2005). Review article: The history of hypnotherapy and its role in the irritable bowel syndrome. *Alimentary Pharmacology & Therapeutics, 22*, 1061-1067.
- Whisman, M.A., Davila, J., & Goodman, S.H. (2011). Relationship adjustment, depression, and anxiety during pregnancy and the postpartum period. *Journal of Family Psychology*, 25(3), 375-383.
- Wan Mahmud, W.M.R., Shariff, S., & Yaacob, M.J. (2002). Postpartum depression: A survey of the incidence and associated risk factors among Malay women in Beris Kubor Besar, Bachok, Kelantan, Malaysia, *The Malaysian Journal of Medical Sciences*, 9(1), 41-48.

- Wang, B.S., Zhou, L.F., Coulter, D., Liang, H., Zhong, Y., Guo, Y.N., Zhu, L.P., Gao, X.L., Yuan, W., & Gao, E.S. (2010). Effects of caesarean section on maternal health in low risk nulliparous women: a prospective matched cohort study in Shanghai, China. *BMC Pregnancy* and *Childbirth*, 10(78). Retrieved from http://www.biomedcentral.com/1471-2393/10/78.
- World Health Organisation (2010). *mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings*. Retrieved December 20, 2014, from http://whqlibdoc.who.int/publications/2010/9789241548069 eng.pdf.
- World Health Organisation (2010)._*The global numbers and costs of additionally needed and unnecessary caesarean sections performed per year: Overuse as a barrier to universal coverage.* Retrieved January 15, 2015, from http://www.who.int/healthsystems/topics/financing/healthreport/30C-sectioncosts.pdf.
- Wobst, A.H.K. (2007). Hypnosis and surgery: Past, present and future. *Anesthesia & Analgesia*, *104*, 1199-1208. doi: 10.1213/01.ane.0000260616.49050.6d.
- Xiong, X., Demianczuk, N.N., Saunders, L.D., Wang, F., & Fraser, W.D. (2002). Impact of preeclampsia and gestational hypertension on birth weight by gestational age. *American Journal of Epidemiology*, 155(3), 203-209.
- Yager, E.K. (2009). Foundations of Clinical Hypnosis. From Theory to Practice. Wales, UK: Crown House Publishing Ltd.
- Yexley, M.J. (2007). Treating postpartum depression with hypnosis: Addressing specific symptoms presented by the client. *American Journal of Clinical Hypnosis, 49*(3), 219-223.
- Yelumalai, S., Muniandy, s., Omar, S.Z., & Qvist, R. (2010). Pregnancy-induced hypertension and preeclampsia: Levels of angiogenic factors in Malaysian women. *Journal of Clinical Biochemistry Nutrition*, 47(3), 191–197.
- Yonkers, K.A., Blackwell, K.A., & Forray, A. (2014). Antidepressants use in pregnant and postpartum women. *Annual Review of Clinical Psychology*, *10*, 369-392.
- Yu, C.K. (2004). Beliefs and opinions regarding hypnosis and its applications among Chinese professionals in medical settings. *Contemporary Hypnosis*, 21(4), 177-186.
- Zadeh, M.A, Khajehei, M., Sharif, F., & Hadzic, M. (2012). High-risk pregnancy: Effects on postpartum depression and anxiety. *British Journal of Midwifery*, 20(2), 104-113.

- Zainal, N.Z., Kaka, A.S., Ng, C.G., Jawan, R., & Gill, J.S. (2012). Prevalence of postpartum depression in a hospital setting among Malaysian mothers. *Asia-Pacific Psychiatry*, 4(2), 144-149.
- Zhang, S., Ding, Z., Liu, H., Chen, Z., Wu, J., Zhang, Y., & Yu, Y. (2013). Association between mental stress and gestational hypertension/preeclampsia: A meta-analysis. *Obstetrical* & *Gynecological Survey*, 68(12), 825-834.

List of Publications and Papers Presented

- Beevi, Z., Low, W.Y., & Hassan, J. (2015). Successful treatment of ptyalism gravidarum with concomitant hyperemesis using hypnosis. *American Journal of Clinical Hypnosis, (92)*, 215-223 (Refer to APPENDIX VIII)
- Beevi, Z., Low, W.Y., & Hassan, J (2015). The efficacy of hypnosis intervention in alleviation the psychological and physical symptoms during pregnancy. *American Journal of Clinical Hypnosis, 58,* 368-382.

CONFERENCE PRESENTATIONS

- Evidence Based Practice in Clinical Hypnotherapy Conference, London (May 31st to June 1st 2014). Workshop on "Evidence for Prenatal Hypnosis"
- Malaysian Psychology Conference, Monash University Malaysia (October 2012). Talk on "Hypnosis for Pregnancy and Childbirth"
- Inaugural Malaysian Conference on Clinical Hypnotherapy 2015, Kuala Lumpur (22nd 23rd May 2015). Talk on "Clinical Hypnosis in Pregnancy and Birthing"

POSTER PRESENTATION

Inaugural Malaysian Conference on Clinical Hypnotherapy, Kuala Lumpur, Malaysia (May 2015). Hypnosis Treatment for Leg Cramps

<u>APPENDIX I</u> Ethics Approval from University Malaya Medical Ethics and Research Committee

(Reference number 901.5)



JAWATANKUASA ETIKA PERUBATAN PUSAT PERUBATAN UNIVERSITI MALAYA

PUSAT PERUBATAN UM

ALAMAT: LEMBAH PANTAI, 59100 KUALA LUMPUR, MALAYSIA TELEFON: 03-79493209 FAKSIMILI: 03-79494638

No. Rujukan: PPUM/MDU/300/04/03

21 Februari 2012

Cik Zuhrah Beevi Kunji Ahmad Unit Pembangunan Pendidikan & Penyelidikan Perubatan (MERDU) Pusat Perubatan Universiti Malaya

Puan,

SURAT PEMAKLUMAN KEPUTUSAN PERMOHONAN MENJALANKAN PROJEK PENYELIDIKAN The efficacy of hypnosis training in assisting women during pregnancy and childbirth Protocol No : -MEC Ref. No : 901.5

Dengan hormatnya saya merujuk kepada perkara di atas.

Bersama-sama ini dilampirkan surat pemakluman keputusan Jawatankuasa Etika Perubatan yang bermesyuarat pada 15 Februari 2012 untuk makluman dan tindakan puan selanjutnya.

2. Sila maklumkan kepada Jawatankuasa Etika Perubatan mengenai butiran kajian samada telah tamat atau diteruskan mengikut jangka masa kajian tersebut.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah,

Norashikin Mahmood Setiausaha Jawatankuasa Etika Perubatan Pusat Perubatan Universiti Malaya

s.k Ketua

Unit Pembangunan Pendidikan & Penyelidikan Perubatan (MERDU)

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MEDICAL ETHICS COMMITTEE UNIVERSITY MALAYA MEDICAL CENTRE

E: 03-79494638					
ETHICS COMMITTEE/IRB REFERENCE NUMBER:					
901.5					
10					
SPONSOR:					
UMKG					
The following item [✓] have been received and reviewed in connection with the above study to be conducted by the above investigator. [✓] Application Form Ver date: 31 Jan 12					
 [✓] Quesuonnaire [✓] Investigator(s) CV's & GCP (Cik Zuhrah Beevi Kunji Ahmad) 					
and have been []					
[] Conditionally approved (identify item and specify modification below or in accompanying letter)					
[] Rejected (identify item and specify reasons below or in accompanying letter)					
al Practice (ICH-GCP)					

Date of approval: 15th FEBRUARY 2012

C.C Head Medical Education Research & Development Unit (MERDU)

Deputy Dean (Research) Faculty of Medicine

Secretary Medical Ethics Committee University Malaya Medical Centre

-----PROF. DATUK LOOI LAI MENG Chairman Medical Ethics Committee



PUSAT PERUBATAN UM

MEDICAL ETHICS COMMITTEE UNIVERSITY MALAYA MEDICAL CENTRE

ADDRESS: LEMBAH PANTAI, 59100 KUALA LUMPUR, MALAYSIA TELEPHONE: 03-79493209 FAXIMILE: 03-79494638

MEDICAL ETHICS COMMITTEE COMPOSITION, UNIVERSITY MALAYA MEDICAL CENTRE Date: 15th FEBRUARY 2012

Member (Title and Name)	Occupation (Designation)	Male/Female (M/F)	Tick (✓) if present when above items were reviewed
Chairperson: Y. Bhg. Prof. Datuk Looi Lai Meng	Senior Consultant Department of Pathology	Female	4
Deputy Chairperson: Prof. Kulenthran Arumugam	Senior Consultant Medical Education Research and Development Unit (MERDU)	Male	
Secretary (non-voting): Cik Norashikin Mahmood	Scientific Officer Department of Quality	Female	*
Members: 1. Y. Bhg. Prof. Dato' Patrick Tan Seow Koon	Deputy Director (Professional) University Malaya Medical Centre	Male	
2. Prof. Tan Chong Tin	Representative of Head Department of Medicine	Male	
3. Assoc. Prof. Stephen Thevananthan a/l Jambun	Representative of Head Department of Psychological Medicine	Male	~
4. Assoc. Prof. Alizan Abdul Khalil	Head Department of Surgery	Male	~
5. Dr. Poppy Rajan	Representative of Head Department of Pharmacology	Male	~
6. Pn. Che Zuraini bt. Sulaiman	Representative of Head of Pharmacist Pharmacy Department University Malaya Medical Centre	Female	*
7. Y. Bhg. Assoc .Prof. Datin Grace Xavier	Representative of Dean (Research Fellow) Faculty of Law University Malaya	Female	
8. Y. Bhg. Datin Aminah bt. Pit Abdul Rahman	Public Representative	Female	
9. Madam Ong Eng Lee	Public Representative	Female	. 1

Comments: The MEC of University Malaya Medical Centre is operating according to ICH-GCP guidelines and the Declaration of Helsinki. Member's no. 7, 8 & 9 are representatives from Faculty of Law in the University Malaya and the public. They are independent of the hospital or trial site.

Sm

PROF. DATUK LOOI LAI MENG Chairman Medical Ethics Committee

APPENDIX II The Demographic Characteristics Questionnaire Part A

English and Bahasa Malaysia Versions

university

The Demographic Characteristics Questionnaire Part A

English Version

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Identification number



Thank you for participating in the study that looks into women's experiences during pregnancy. This study will help in understanding how women go through their pregnancy and further help in assisting women to cope better during this period.

Please be noted that all information given will be strictly confidential. This quest ionnaire is divided into **THREE** sections. Please complete **ALL** the sections

For Office Use

Name			
Pregnancy Weeks			
Session			
Date			
Next Appointment			
CONSENT BY PATIENT FOR CLINICAL RESEARCH

(Name of Patient)	
of	(Addross)
hereby agree to take part in the clinical rese	arch (clinical study/questionnaire study/drug trial) spec
below.	aren (ennear staa)/questionnarie staa)/arag trial) spee.
Title of Study: The Efficacy of Hypnosis I	ntervention in Assisting Women During Pregnancy and
dbirth	
The nature and purpose of which has been e	explained to me by Ms Zuhrah Beevi (Psychologist, Hy
herapist, and Phd Researcher)	
I have been told about the nature of the clin	cal research in terms of methodology, possible adverse
cts and complications (as per patient inform	ation sheet). After knowing and understanding all the p
ble advantages and disadvantages of this cli	nical research, I voluntarily consent of my own free wi
participate in the clinical research specified	above.
I understand that I can withdraw from this c	linical research at any time without assigning any reasonable denied the her of the of usual treatment by the otten dine
tors	e defined the benefits of usual treatment by the attending
1013.	
Date:	Signature or Thumbprint
	(Patient)
	HE DDESENCE OF
	HE I RESERCE OF
Name	
Identity Card No.) Signature
	(Witness for Signature of Patie
Designation)
L confirm that I have explained to the patien	t the nature and nurnose of the above mentioned clinica
earch	the nature and purpose of the above-mentioned ennied
Date	Signature
	(Researcher)

PATIENT INFORMATION SHEET

Please read the following information carefully, do not hesitate to discuss any questions y ou may have with your researcher.

Study Title

The Efficacy of Hypnosis Intervention in Assisting Women with Pregnancy and Childbirth

Introduction

Hypnosis has been shown as one of the effective ways in assisting women during pregnancy a nd childbirths, indicating positive outcomes, such as reduction in anxiety associated to childbir th, lowering the incidence of epidural anesthetic use, and lowering the incidence of interventio n through surgery. Hypnosis is also aids in faster wound healing during the post-delivery perio d.

What is the purpose of this study?

The purpose of the study is to investigate the efficacy of using hypnosis to assist pregnant wo men during pregnancy by having a more relaxing pregnancy and in the reduction of physical (e.g. fatigue and nausea) and psychological (stress, anxiety, and prenatal depression) symptoms experienced during pregnancy. The purpose of the study is also to investigate the efficacy of u sing hypnosis to assist women to have a better childbirth outcome (e.g. reduction in the use of epidural anaesthesia, faster delivery, less anxiety during delivery, and faster wound healing dur ing the post-delivery period)

What are the procedures to be followed?

The procedures involved are hypnosis training; completing several questionnaires to understan d your experience during pregnancy and childbirth; looking into the results of your medical ex aminations (e.g. blood test and urine test) and your fetus examinations (e.g. your baby's heart r ate); and interviewing you on how you think of the use of hypnosis during your pregnancy

Who should not enter the study?

You should be participating in this study out of your own free will. You should not enter this st udy if:

- the term of your pregnancy is five months and more
- you are going through any other training (e.g. Lamaze class) to prepare you for childbirth
- you have decided to go for a ceaserean section to help you during childbirth

What will be the benefits of the study:

(a) To you as the subject?

This study will give you several benefits in terms of assisting you in:

- having a better and more relaxing pregnancy
- alleviating the psychological symptoms of pregnancy (e.g. stress and anxiety)
- alleviating the physical symptoms of pregnancy (e.g. nausea and vomiting)
- giving you better childbirth outcomes (e.g. reduction in the use of epidural anaesthesia and faster wound healing)

(b) To the investigator?

This study benefits the investigator in terms of providing data on the efficacy of

hypnosis in assisting women during pregnancy, childbirth, and postpartum

What are the possible drawbacks?

You will need to travel to University of Malaya Medical Centre to take part in this stud y but you will be suitably compensated for your travel and your time during the hypnos is and interview sessions

Can I refuse to take part in the study?

You have the right to refuse to take part in this study

Who should I contact if I have additional questions during the course of the study? Researcher's Name: Zuhrah Beevi Tel: 012-2611813

SECTION A: GENERAL INFORMATION QUESTIONNAIRE

Please	complete the following information about yourself	For office use onl
		Identification Number
Name	:	
RN	:	
A1	Age:	A1
A2	Ethnicity (Please tick ONE):	A2
	1. Malay	
	2. Chinese	
	3. Indian	
	4. Other (Please specify):	
A3	Highest Education Level (Please tick ONE):	A3
	1. No formal schooling	
	2. Religious school	
	3. Primary School	
	4. Secondary School	
	5. College/University (go to A3a)	
	A3a. 1.Doctorate Degree	A3a
	2.Masters Degree	
	3.Bachelor Degree	
	4.Diploma	
	5.Pre-University	
A4	Marital Status (Please tick ONE):	A4
	1. Single	
	2. Currently married	
	3. Divorced	
	4. Separated	
	5. Widowed	
A5	Work Status (Please tick ONE):	A5
	1. Employed (go to A5a)	
	2. Unemployed	
	A5a. Please specify:	
	1. Part-time	A5a
	2. Full-time	
A6	Occupation:	A
		6
	continued on the next page	

		For office use only
A9	Number of Children: (excluding your current pregnancy)	A9
A10	 Family income per month (Please tick ONE): 1. < RM 1,000 2. RM 1,000 - RM 3,000 3. RM 3,001 - RM 5,000 4. >RM5,000 	A10
		S
	Please proceed to section B	

SECTION B: EXPERIENCES DURING CURRENT PREGNANCY

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how muc h the statement applied to you <i>over the past week</i> . There are no right or wrong answe rs. Do not spend too much time on any statement.							office use only
<i>The r</i> 0 D 1 A 2 A 3 A	<i>ating scale is as follows:</i> bid not apply to me at all pplied to me to some degree, or some of the time pplied to me to a considerable degree, or a good part of pplied to me very much, or most of the time	f time					
B 1	I found it hard to wind down	0	1	2	3	B1	
В2	I was aware of dryness of my mouth	0	1	2	3	В2	
B 3	I couldn't seem to experience any positive feeling at a ll	0	1	2	3	В3	
B 4	I experienced breathing difficulty (eg, excessively ra pid breathing, breathlessness in the absence of physic al exertion)	0	1	2	3	B4	
B 5	I found it difficult to work up the initiative to do thin gs	0	1	2	3	В5	
B 6	I tended to over-react to situations	0	1	2	3	B6	
В7	I experienced trembling (eg, in the hands)	0	1	2	3	B7	
B 8	I felt that I was using a lot of nervous energy	0	1	2	3	B8	
B 9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3	В9	
B10	I felt that I had nothing to look forward to	0	1	2	3	B10	

continued on the next page

<i>The rd</i> 0 Di 1 Ap 2 Ap 3 Ap	For office use only					
B11	I found myself getting agitated	0	1	2	3	B11
B12	I found it difficult to relax	0	1	2	3	B12
B13	I felt down-hearted and blue	0	1	2	3	B13
B14	I was intolerant of anything that kept me from gettin g on with what I was doing	0	1	2	3	B14
B15	I felt I was close to panic	0	1	2	3	B15
B16	I was unable to become enthusiastic about anything	0	1	2	3	B16
B17	I felt I wasn't worth much as a person	0	1	2	3	B17
B18	I felt that I was rather touchy	0	1	2	3	B18
B19	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3	B19
B20	I felt scared without any good reason	0	1	2	3	B20
B21	I felt that life was meaningless	0	1	2	3	B21
continued on the next page						

Please proceed to section C

SECTION C: CHECKLIST OF SYMPTOMS EXPERIENCED DURING PREGNANCY

Please mark with a tick ($\sqrt{}$) in the 'YES BOX' if you are experiencing the following s ymptoms during your current pregnancy and in the 'NO BOX' if you had never exper ience any of the following symptoms during your current pregnancy.

No	Symptoms During Pregnan cy	YES	NO		
C 1	Nausea			C1	
C 2	Vomiting			C2	
C 3	Fatigue			C3	
C 4	Tender and swollen breasts			C4	
C 5	Sensitive to smell			C5	
C 6	Sensitive to taste			C6	
C 7	Dizziness	<u> </u>		C7	
C 8	Fainting			C8	
C 9	Constipation			C9	
C10	Frequent urination			C10	
C11	Weight gain			C11	
C12	Stretch marks on abdominal s kin			C12	
C13	Heartburn/indigestion			C13	
C14	Nosebleeds			C14	

continued on the next page

For office use only

No	Symptoms During Pregnan cy	YES	NO	
C15	Swelling in the feet			C15
C16	Swelling in the ankles			C16
C17	Swelling in the hands			C17
C18	Swelling in the face			C18
C19	Skin pigmentation			C19
C20	Varicose veins			C20
C21	Backaches			C21
C22	Uterine Contractions			C22
C23	Shortness of breath			C23
C24	Crying spells	X		C24
	Please specify any other sym ptoms you are experiencing w hich are not listed in the abov e	0)		_

Thank you for your participation

Demographic Characteristics Questionnaire Part A

Bahasa Malaysia Version

Identification number



PENGALAMAN YANG DILALUI OLEH WANITA KETIKA KEHAMILA <u>N</u>

Terima kasih kerana sudi memberi maklumat berkenaan pengalaman yang anda l alui ketika dalam kehamilan. Kajian ini amat penting untuk memahami pengalam an yang dilalui oleh wanita ketika dalam kehamilan. Hasil dari kajian ini diharap dapat membantu wanita untuk lebih berjaya lagi melalui masa yang amat penting ini.

Sila ambil perhatian bahawa semua maklumat yang anda beri adalah sulit. Soal s elidik ini mengandungi TIGA bahagian. Sila penuhkan SEMUA maklumat.

Untuk Kegunaan Pejabat

Nama	
Minggu Kehamilan	
Sesi	
Tarikh	
Appointment	

|--|

Saya,
No. Kad Pengenalan
(Nama Pesakii) beralamat
<i>(Alamat)</i> dengan ini bersetuju menyertai dalam penyelidikan klinikal (pengajian klinikal/pengajian soal-selidik/p ercubaan ubat-ubatan) disebut berikut:
<u>TajukPenyelidikan</u> : Keberkesanan Dalam Penggunaan Hipnosis Dalam Melatih Wanita Ketika Hamil D an Melahirkan Anak
yang mana sifat dan tujuannya telah diterangkan kepada saya oleh Cik Zuhrah Beevi (Psychologist, Hy pnotherapist, and Phd Researcher)
Saya telah diberitahu bahawa dasar penyelidikan klinikal dalam keadaan methodologi, risiko dan komp likasi (mengikut kertas maklumat pesakit). Selepas mengetahui dan memahami semua kemungkinan k ebaikan dan keburukan penyelidikan klinikal ini, saya merelakan/mengizinkan sendiri menyertai penye lidikan klinikal tersebut di atas
Saya faham bahawa saya boleh menarik diri dari penyelidikan klinikal ini pada bila-bila masa tanpa me mberi sebarang alasan dalam situasi ini dan tidak akan dikecualikan dari kemudahan rawatan dari dokto r yang merawat.
Tarikh:
DI HADAPAN
Nama) No. K/P) Tandatangan
(Saksi untuk Tandatangan Pesakit)
Jawatan) Saya sahkan bahawa saya telah menerangkan kepada pesakit sifat dan tujuan penyelidikan klinikal tersebut di atas.
Tarikh:

MAKLUMAT UNTUK PESAKIT

Sila baca maklumat yang berikut, untuk penerangan yang lebih lanjut, sila tanya penyelidik.

Tajuk Kajian

Keberkesanan Dalam Penggunaan Hipnosis untuk Wanita Ketika Hamil dan Melahirkan Anak

Pengenalan

Hipnosis adalah salah satu cara yang efektif untuk membantu wanita ketika hamil dan pada ma sa melahirkan anak, membuktikan hasil yang positif, seperti meredakan kegelisahan yang berk aitan dengan kelahiran anak, mengurangkan penggunaan epidural, dan mengurangkan kadar k elahiran anak dengan melalui kaedah pembedahan. Hipnosis juga membantu ketika masa pant ang supaya luka yang disebabkan melahirkan anak supaya sembuh lebih cepat lagi

Apakah tujuan kajian ini?

Tujuan kajian ini adalah untuk menyiasat keberkesanan dalam penggunaan hipnosis dalam me lalui kehamilan yang lebih relaks lagi dan dalam meredakan simptom fizikal kehamilan (conto hnya, keletihan dan mual) dan simptom psikologi kehamilan (stress, kegelisahan, dan kemurun gan ketika hamil). Tujuan kajian ini adalah juga untuk mengetahui keberkesanan dalam pengg unaan hipnosis untuk membantu wanita ketika masa kelahirkan anak (contohnya, mengurangk an penggunaan epidural, kelahiran yang lebih cepat lagi, menggurangkan kegelisahan ketika k ehamilan dan luka disebabkan kehamilan supaya baik lebih cepat lagi)

Apakah procedur yang akan dilalui?

Procedur yang akan dilalui melibatkan latihan hipnosis; mengisi beberapa maklumat soalselidi k untuk membantu dalam mengetahui pengalaman yang anda lalui ketika kehamilan dan kelah iran; mengetahui keputusan pemeriksaan perubatan anda (contohnya, pemeriksaan darah dan a ir kencing) dan keputusan pemeriksaan bayi dalam kandungan anda (contohnya, degupan jantu ng bayi anda); dan mewawancara anda untuk mengetahui pendapat tentang penggunaan hipno sis ketika kehamilan anda

Siapa yang tidak seharusnya mengambil bahagian dalam kajian ini?

Anda seharusnya untuk mengambil bahagian didalam kajian ini diatas kemahuan anda sendiri. Anda tidak seharusnya mengambil bahagian didalam kajian ini jika:

- anda mengambil bahagian didalam kelas latihan untuk persediaan menghadapi masa kelahiran bayi (contohnya, kelas Lamaze)
- anda telah mengambil keputusan untuk melahirkan bayi secara pembedahan

Apakah manfaat-manfaat kajian ini?

(b) Untuk anda sebagai subjek?

Kajian ini akan memberi anda beberapa manfaat didalam membantu anda agar:

- kehamilan anda andalah lebih relaks lagi
- mengurangkan simptom-simptom psikologi ketika kehamilan (contohnya, stress dan kegelisahan)
- mengurangkan simptom-simptom fizikal ketika kehamilan (contohnya, mual dan muntah)
- memberi anda hasil kelahiran bayi yang lebih memuaskan (contohnya, mengurangkan penggunaan epidural dan luka yang disebabkan oleh kelahiran bayi supaya sembuh lebih cepat lagi)

(c) Untuk penyelidik?

Kajian ini dapat membantu penyelidik memperolehi maklumat tentang keberkesanan dalam penggunaan hipnosis untuk membantu wanit ketika kehamilan dan kelahiran bayi

Apakah kelemahan kajian ini?

Anda dikehendaki untuk ke Pusat Perubatan Universiti Malaya untuk mengambil bahagian did alam kajian ini tetapi anda akan diberi bayaran untuk perjalanan dan masa anda untuk hipnosis dan wawancara

Bolehkah saya enggan untuk mengambil bahagian didalam kajian ini? Anda ada hak untuk tidak mengambil bahagian didalam kajian ini

Siapakah yang boleh dihubungi untuk bertanya mengenai kajian ini? Nama Penyelidik: Zuhrah Beevi No Telefon: 012-2611813

BAHAGIAN A: SOAL SELIDIK MAKLUMAT UMUM

Sila p	penuhkan maklumat mengenai diri anda	For office use only
		Identification Number
Nama	1:	
RN	:	
A1	Umur:	A1
A2	Kaum atau Etnik (Sila tanda SATU): 5. Melayu	A2
	6. Cina	
	7. India	
	8. Lain-lain (Sila nyatakan):	
A3	 Tahap Pendidikan Tertinggi (Sila tanda SATU): 6. Tidak pernah bersekolah 7. Sekolah agama 	A3
	 Sekolah rendah Sekolah menengah 	
	10. Kolej/Universiti (terus ke A3a)	
	A3a. 1. Ijazah Kedoktoran	A3a
	2. Ijazah Sarjana	
	3. Ijazah Sarjana Muda	
	4. Diploma 5. Pra Universiti	
	5. Ha-Oniversiti	
44	Status Perkahwinan (Sila tanda SATU):	A4
	6. Belum berkahwin	
	7. Berkahwin	
	8. Sudah bercerai	
	9. Berpisah	
	10. Janda atau duda	
۸ 5	Status Dekariaan (Sila tanda SATU):	A5
1.7	3 Bekeria (terus ke Δ 5a)	
	4 Tidak hekeria	
	A 5a Sila nyatakan	
	3 Separuh masa	A5a
	4 Sepenuh masa	
	T. Sepenan masa	
46	Pekerjaan:	A6
	Lana and Lana Lana Lana Lana	
	Dersambung aimuka sebelah	

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A9	Bilang (kecua	n Anak: i anak dalam kandungan sekarang)		A9	
A10	Pendaj 5. 6. 7. 8.	atan Isi Rumah untuk Sebulan (Sila < RM 1,000 RM 1,000 - RM 3,000 RM 3,001 - RM 5,000 >RM5,000	a tanda SATU):	A10	
				5	
		Sila ke bahagi	ian B		

BAHAGIAN B: PENGALAMAN YANG DILALUI KETIKA KEHAMILAN SEKARANG

Sila baca setiap kenyataan di bawah dan bulatkan pada nombor 0,1,2 atau 3 bagi men ggambarkan keadaan anda sepanjang minggu yang lalu. Tiada jawapan yang betul ata u salah. Jangan mengambil masa yang terlalu lama untuk menjawab mana-mana keny ataan.

Skala pemarkahan adalah seperti berikut: 0 Tidak langsung menggambarkan keadaan saya 1 Sedikit atau jarang-jarang menggambarkan keadaan saya 2 Banyak atau kerapkali menggambarkan keadaan saya 3 Sangat banyak atau sangat kerap menggambarkan keadaan saya							
B 1	Saya dapati diri saya sukar ditenteramkan	0	1	2	3	B1	
B 2	Saya sedar mulut saya terasa kering	0	1	2	3	В2	
В3	Saya tidak dapat mengalami perasaan positif sama se kali	0	1	2	3	В3	
B 4	Saya mengalami kesukaran bernafas (contohnya pern afasan yang laju, tercungap-cungap walaupun tidak m elakukan senaman fizikal)	0	1	2	3	В4	
В 5	Saya sukar untuk mendapatkan semangat bagi melak ukan sesuatu perkara	0	1	2	3	В5	
B 6	Saya cenderung untuk bertindak keterlaluan dalam se suatu keadaan	0	1	2	3	В6	
В7	Saya rasa menggeletar (contohnya pada tangan)	0	1	2	3	В7	
B 8	Saya rasa saya menggunakan banyak tenaga dalam keadaan cemas	0	1	2	3	В8	
B 9	Saya bimbang keadaan di mana saya mungkin menja di panik dan melakukan perkara yang membodohkan diri sendiri	0	1	2	3	В9	
B10	Saya rasa saya tidak mempunyai apa-apa untuk dihar apkan	0	1	2	3	B10	

bersambung dimuka sebelah

<i>Skala</i> 0 Ti 1 Se 2 Ba 3 Sa	For office use only					
B11	Saya dapati diri saya semakin gelisah	0	1	2	3	B11
B12	Saya rasa sukar untuk relaks	0	1	2	3	B12
B13	Saya rasa sedih dan murung	0	1	2	3	B13
B14	Saya tidak dapat menahan sabar dengan perkara yan	0	1	2	3	B14
	menghalang saya meneruskan apa yang saya lakukan					
B15	Saya rasa hampir-hampir menjadi panik/cemas	0	1	2	3	B15
B16	Saya tidak bersemangat dengan apa jua yang saya la kukan	0	1	2	3	B16
B17	Saya tidak begitu berharga sebagai seorang individu	0	1	2	3	B17
B18	Saya rasa yang saya mudah tersentuh	0	1	2	3	B18
B19	Saya sedar tindakbalas jantung saya walaupun tidak melakukan aktiviti fizikal (contohnya kadar denyuta n jantung bertambah, atau denyutan jantung berkuran gan)	0	1	2	3	B19
B20	Saya berasa takut tanpa sebab yang munasabah	0	1	2	3	B20
B21	Saya rasa hidup ini tidak bermakna	0	1	2	3	B21

bersambung dimuka sebelah

Sila ke bahagian C

BAHAGIAN C: SENARAI SIMPTOM-SIMPTOM (GEJALA) YANG DILALUI KETIKA KEHA MILAN SEKARANG

Sila tandakan rait ($\sqrt{}$) didalam 'KOTAK YA' jika anda mengalami tanda-tanda ketika dalam kehamilan sekarang seperti yang disenaraikan dibawah dan didalam 'KOTAK TIDAK' jika anda tidak pernah mengalami tanda-tanda ketika kehamilan sekarang se perti yang disenaraikan dibawah

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No	SIMPTOM SIMPTOM (CETAT A)//FILAMI	VA	TIDAK	-	
INO	SIMPTOM-SIMPTOM (GEJALA)KEHAMI LAN SEKARANG	YA	HDAK		
C 1	Loya atau mual			C1	
C 2	Muntah			C2	
C 3	Kepenatan/kelesuan		~?	C3	
C 4	Payudara yang membengkak			C4	
C 5	Deria hidu yang sensitif		U	C5	
C 6	Deria rasa yang sensitif			C6	
C 7	Pening			C7	
C 8	Pengsan			C8	
C 9	Sukar buang air besar			С9	
C 10	Kerap buang air kecil			C10	
C11	Regangan kulit dibahagian perut			C11	
C12	Pedih hulu hati/ketakcernaan			C12	
C13	Hidung berdarah			C13	

bersambung dimuka sebelah

perti yang disenaraikan dibawah Symptoms During Pregnancy YES NO No C14 Bengak di tapak kaki C15 C15 Bengak di pergelangan kaki C16 C17 C16 Bengak di tangan C17 Bengak di muka C18 C18 Pigmentasi kulit C19 C19 Vena varikos atau urat simpul C20 C20 Sakit belakang C21 C21 C22 Kontraksi uterine

C22

C23

Kesukaran bernafas

Kerap menangis

Sila tandakan rait ($\sqrt{}$) didalam 'KOTAK YA' jika anda mengalami tanda-tanda ketika dalam kehamilan sekarang seperti yang disenaraikan dibawah dan didalam 'KOTAK TIDAK' jika anda tidak pernah mengalami tanda-tanda ketika kehamilan sekarang se perti yang disenaraikan dibawah

Terima kasih diatas kerjasama anda

C23

C24

APPENDIX III Hypnosis Script English and Bahasa Malaysia Versions

University chalays

Hypnosis Script: English Version

SESSION ONE AND TWO

The self-hypnosis script was done only during session one.

Induction

I would like you to bring together your thumb and index finger (of your left/right hand). You then concentrate on your breathing....breathing in and out in a relaks manner.

With your thumb and index finger touching like that...I am going to count slowly from 10 to 1...perhaps you would like to count slowly...and mentally...from 10 to 1 with me. As the counting continues...you will become more and more relaxed...deeper and deeper relaxed. As the count from 10 to 1 continues...you will become more and more comfortable...deeper a nd deeper comfortable. When number 1 is reached...you will be deeply relaxed.

Now, a feeling of complete relaxation is gradually stealing over your whole body. Let the muscles of your feet and ankles relax completely. Let them go...Now, your calf muscles... allow them to relax. Now, the muscles of your legs and thighs become completely relaxed...as they do so...your sleep is gradually becoming deeper and deeper. That feeling of relaxation is now spreading upwards...over your whole body.

Let your stomach muscles relax...let them go...Now, the muscles of your chest...your body...and your back. Let them go...allow them to relax...as though your body...is wanting to sink down...deeper and deeper...into the chair...Just let your body go...let it sink back comfortably...deeper and deeper...into the chair...and as it does so...you are falling...slowly but surely, into a deeper, deeper sleep.

Just give yourself up completely...to this very pleasant...relaxed...drowsy... comfortable feeling. And now, this feeling of relaxation is spreading into the muscles of your neck...your shoulders...and your arms. Let your neck muscles relax...particularly the muscles at the back of your neck. Let them relax...let them go...Now, your shoulder muscles...Let the m go...allow them to relax. Now, the muscles of your arms. Let them relax...let them go... And as you do so...your sleep is becoming deeper...deeper...deeper. And as this feeling of complete relaxation spreads...and deepens...over your whole body...you have fallen into a very, very deep sleep.

You are so deeply asleep, in fact...that everything that I tell you that is going to happen ...will happen...exactly as I tell you. And every feeling that I tell you that you will experience ...you will experience...exactly as I tell you. Now, sleep...very, very deeply. Deeper and deep er asleep...deeper and deeper asleep." (Hartland, 1977, p.106-108)

Deepening

In a few moments...I am going to count slowly from 10 to 1 as I count slowly from 10 to 1...all the sound around you will disappear but my voice will go with you and perhaps my voice will be the voice of someone you love...someone you trust...whomever that person is.

As I continue to count from 10 to 1...you will take...deep breaths. And with each breath that you take...each time you breathe out...you will become more and more relaxed... and your sleep will become deeper and deeper.

When I reach number one, I would like you to imagine that you are in your most comfortable place...perhaps you can see it...perhaps you can feel it...perhaps you can touch it ...perhaps you can hear its wonderful sound...your unconscious mind will know which is the best for you to do

Ten...Nine..."Deep, deep breath...more and more deeply relaxed...deeper and deeper asleep." Eight...Seven..."Very deep breath...deeper and deeper relaxed...sleep becoming deeper and deeper." Six...Five..."Deeper and deeper breath...more and more deeply relaxed... more and more deeply asleep. Four...Three..."Very, very deep breath...deeper and deeper relaxed...sleep becoming even deeper and deeper.. Two...One..."Very, very deep breath... very, very deeply relaxed...very, very deeply asleep.

Sleep very, very deeply...deeper and deeper asleep...deeper and deeper asleep (Hartland, 1977, 111).

Positive suggestions

Every time you breathe out, the discomfort you experienced during this pregnancy will move down your arm to your thumb and index finger and leave your body. That discomfort is replaced by the feeling of comfort...feeling of pleasure...feeling of satisfaction...allowing you to enjoy your pregnancy in a state of deep and complete relaxation (to repeat three times). And very soon...that discomfort during your pregnancy would gradually fade away...would gradually disappear and replace by the feeling of comfort...replace by the feeling of pleasure ...replace by the feeling of satisfaction...allowing you to enjoy your pregnancy in a deep and complete relaxation (to repeat 3 times).

Ego Strengthening

You have now become so deeply relaxed...so deeply asleep...that your mind has become so sensitive...so receptive to what I say...that everything that I put into your mind... will sink so deeply into the unconscious part of your mind...and will cause so deep and lasting an impression there...that nothing will eradicate it.

Consequently...these things that I put into your unconscious mind...will begin to exercise a greater and greater influence over the way you think...over the way you feel...over the way you behave.

And because these things will remain...firmly imbedded in the unconscious part of you r mind...after you have left here...when you are no longer with me...they will continue to exercise that same great influence...over your thoughts...your feelings...and your actionsjust as strongly...just as surely...just as powerfully...when you are back home...or at work...aswh en you are with me in this room.

You are now so very deeply asleep...that everything that I tell you that is going to happen to you...for your own good...will happen...exactly as I tell you. And every feeling... that I tell you that you will experience...you will experience...exactly as I tell you.

And these same things will continue to happen to you...every day...and you will

continue to experience these same feelings...every day...just as strongly just as surely...just as powerfully...when you are back home...or at work...as when you are with me in this room. During this deep sleep...you are going to feel physically stronger and fitter in every way. You will feel more alert...more wide-awake...more energetic.

Every day...you will become so deeply interested in whatever you are doing...in what ever is going on around you...that your mind will become completely distracted away from yourself.

Every day...you will become stronger and steadier...your mind calmer and clearer... more composed...more tranquil.

You will be able to think more clearly...you will be able to concentrate more easily. You will be able to give your whole undivided attention to whatever you are doing...to the complete exclusion of everything else.

Consequently...your memory will rapidly improve...and you will be able to see things in their true perspective...without magnifying your difficulties...without ever allowing them to get out of proportion. Every day...you will become emotionally much calmer...much more settled...much less easily disturbed.

Every day...you will become...and you will remain...more and more completely relax ed...and less tense each day...both mentally and physically...even when you are no longer with me.

And as you become...and as you remain...more relaxed...each day...so...you will develop much more confidence in yourself...more confidence in your ability to do...not only what you have...to do each day...but more confidence in your ability to do whatever you ought to be able to do... Because of this...every day...you will feel more and more independent... to stand upon your own feet...to hold your own.

Every day...you will feel a greater feeling of personal well-being...a greater feeling of personal safety...and security...than you have felt for a long, long time. You are enjoying your pregnancy with a greater feeling of well-being...looking forward to your delivery...holding

your baby in your arms...the baby whom you are nurturing now...whom you are loving now... just imagine how wonderful it is to hold this precious being in your arms...and as you think of this...you feel a greater sense of relaxation and joy...(to repeat three times)

And because all these things will begin to happen...exactly as I tell you they will happen...more and more rapidly...powerfully...and completely...with every treatment I give you...you will feel much happier...much more contented...much more optimistic in every way.

You will consequently become much more able to rely upon...to depend upon... yourself...your own efforts,...your own judgement...your own opinions. You will feel much less need...to have to rely upon...or to depend upon...other people (Hartland, 1977, p. 199-202).

Self-hypnosis

As you sit there in that chair, I would like you to know that you can go into this deep relaxation on your own as "anyone can learn and practice self-hypnosis, but to achieve the best results you must carefully consider what you wish to accomplish.

Perhaps..having a pleasant pregnancy experience...perhaps...looking forward to your childbirth with a pleasant and relaxed feeling... if you aim for a deeply relaxed state, you will reach it.

Find a quiet place of which you will not be uninterrupted and arrange to spend time doing your self-hypnosis. You can sit or lie down. Once you are comfortable, hold your hands in front of you with your palm touching just like you did earlier. Then you bring your thumb and index fingers together.

With your thumb and index finger touching like that...you are going to count slowly from 10 to 1 with every outbreath...counting slowly...and mentally...from 10 to 1 just like you counted with me. As the counting continues...you will become more and more relaxed... deeper and deeper relaxed. As the count from 10 to 1 continues...you will become more and

more comfortable...deeper and deeper comfortable. When number 1 is reached...you will be deeply relaxed.

During every attempt to achieve" self-hypnosis, "visualize yourself going deeper and deeper. At first you may experience some difficulty, but as you stick to it, you will be able to picture yourself deeply relaxed.

Whilst you are in this deep sleep...stage by stage, you will be able to experience complete relaxation of all the muscles of your body...exactly as I do earlier...and all other suggestions that you give yourself for your own good...will act...just as effectively as if I had given them to you, myself. Whilst you are in this state...you could only give yourself positive suggestions which are beneficial for you as your unconscious mind will never accept negative suggestions.

Should any unexpected emergency arise during your deep sleep...you will automatical ly wake up immediately...fully prepared to take any necessary action. If you do this last thing at night...your self-hypnosis will turn into a natural sleep...and you will have a pleasant sleep ...you will wake up the next day feeling calm...relaxed...pleasant.

To come awake from this self-hypnosis, you only need to count from 1 to 10. At the count of 8 you will open your eyes and at the count of 10 you will be fully wide awake. You will wake up being fully aware of your surroundings. And as you wake up all normal healthy sensations will return to your limbs.

If you should not be able to open your eyes, don't worry. Just repeat the suggestions again, and emphasise that the count of" 10 "you will absolutely, positively be able to open you r eyes very easily. Should you not be able to come out of it, keep calm and give" yourself time , you will eventually be able to open your eyes (Kroger, 1977, p.89).

SESSION THREE AND FOUR

Induction

I would like you to bring together your thumb and index finger (of your left/right hand). You then concentrate on your breathing....breathing in and out in a relaks manner

With your thumb and index finger touching like that...I am going to count slowly from 10 to 1...perhaps you would like to count slowly...and mentally...from 10 to 1 with me. As the counting continues...you will become more and more relaxed...deeper and deeper relaxed. As the count from 10 to 1 continues...you will become more and more comfortable...deeper a nd deeper comfortable. When number 1 is reached...you will be deeply relaxed.

Now, a feeling of complete relaxation is gradually stealing over your whole body. Let the muscles of your feet and ankles relax completely. Let them go...Now, your calf muscles... allow them to relax. Now, the muscles of your legs and thighs become completely relaxed...as they do so...your sleep is gradually becoming deeper and deeper. That feeling of relaxation is now spreading upwards...over your whole body.

Let your stomach muscles relax...let them go...Now, the muscles of your chest...your body...and your back. Let them go...allow them to relax...as though your body...is wanting to sink down...deeper and deeper...into the chair...Just let your body go...let it sink back com fortably...deeper and deeper...into the chair...and as it does so...you are falling...slowly but surely, into a deeper, deeper sleep.

Just give yourself up completely...to this very pleasant...relaxed...drowsy... comfortable feeling. And now, this feeling of relaxation is spreading into the muscles of your neck...your shoulders...and your arms. Let your neck muscles relax...particularly the muscles at the back of your neck. Let them relax...let them go...Now, your shoulder muscles...Let the m go...allow them to relax. Now, the muscles of your arms. Let them relax...let them go... And as you do so...your sleep is becoming deeper...deeper...deeper. And as this feeling of complete relaxation spreads...and deepens...over your whole body...you have fallen into a very, very deep sleep. You are so deeply asleep, in fact...that everything that I tell you that is going to happen ...will happen...exactly as I tell you. And every feeling that I tell you that you will experience ...you will experience...exactly as I tell you. Now, sleep...very, very deeply. Deeper and deep er asleep...deeper and deeper asleep" (Hartland, 1977, p.106-108).

Deepening

In a few moments...I am going to count slowly from" 10 to 1 "as I count slowly from 10 to 1...all the sound around you will disappear but my voice will go with you and perhaps m y voice will be the voice of someone you love...someone you trust...whomever that person is.

As I continue to count from 10 to 1...you will take...deep breaths. And with each breath that you take...each time you breathe out...you will become more and more relaxed... and your sleep will become deeper and deeper.

When I reach number one, I would like you to imagine that you are in your most comfortable place...perhaps you can see it...perhaps you can feel it...perhaps you can touch it ...perhaps you can hear its wonderful sound...your unconscious mind will know which is the best for you to do.

Ten...Nine..."Deep, deep breath...more and more deeply relaxed...deeper and deeper asleep." Eight...Seven..."Very deep breath...deeper and deeper relaxed...sleep becoming deeper and deeper." Six...Five..."Deeper and deeper breath...more and more deeply relaxed... more and more deeply asleep. Four...Three..."Very, very deep breath...deeper and deeper relaxed...sleep becoming even deeper and deeper.. Two...One..."Very, very deep breath... very, very deeply relaxed...very, very deeply asleep. Sleep very, very deeply...deeper and deeper asleep...deeper and deeper asleep (Hartland, 1977, 111).

Positive suggestions

Every time you breathe out, the discomfort you experienced during this pregnancy will move down your arm to your thumb and index finger and leave your body. That discomfort is

replaced by the feeling of comfort...feeling of pleasure...feeling of satisfaction...allowing you to enjoy your pregnancy in a state of deep and complete relaxation (to repeat three times).

And very soon...that discomfort during your pregnancy would gradually fade away... would gradually disappear and replace by the feeling of comfort...replace by the feeling of ple asure...replace by the feeling of satisfaction...allowing you to enjoy your pregnancy in a deep and complete relaxation (to repeat 3 times).

Suggestions for labour

I would like you to know that...as the process of bringing your baby into the world begins ... you may find that the contractions will be weak ... and will occur infrequently ... as they gradually allow the cervix to open up ... but this is a process that takes time ... causing so no discomfort ... that the only thing you will need to do ... is to relax as much as possible ... you will be able to do this ... using your self-hypnosis as you have been taught to do ... easily ... effortlessly ... perhaps as you drift to your peaceful place...as a result ... you will feel the contractions as very natural waves of pressure ... and you will feel calm ... relaxed ... safe and secure ... and in control throughout ... aware of any distractions fading into the background ... taking you into an even deeper relaxation ... deeper and deeper with each passing wave ... as a result of which ... your labour will progress steadily and easily ... you will remain perfectly calm ... and enjoy a wonderful sense of self-control.

The time will come for you to experience the wonders of giving birth to your child. Before that happens...during the first stage, you will find that the contractions will be weak, and will not occur very often.

They will gradually cause the passages to open up, but this is a slow process and takes time...during that time you will feel comfortable...calm...and relax...that the only thing you will need to do is to sleep and to relax..you will be able to do this using the self-hypnosis that you have been practising..because of this, you will feel the contractions merely as a very small pressure in your stomach and they will not distress you at all...as a result of which your labour

will progress more steadily and easily...you will remain perfectly calm and comfortable.

Later...as the passages open up, the contractions will become stronger...and more frequent. You will not become frightened or try to resist this...this is a sign that your labour is progressing well...you will be able to remain relaxed by taking a series of deep, rapid, rhythm ic breaths...with each of these, you will relax more and more completely. All tension will disappear and you will allow the contractions to do their own work without trying to assist in any way

A short pause may occur...after which the contractions will restart with increased strength...there is no need to become worried or alarmed during that time. It merely means that you have entered into the second stage of your labour...and the actual birth of your child is about to begin.

Although the contractions become more frequent...you will continue to feel comfortable...calm...relax.

During that time, as soon as you feel the urge to give birth...inform the relevant people ...your doctor...or your nurse...your midwife....but do not give way to it until you were told to do so.

When you were told that you are now ready to bring forth your child...take a deep breath and push as long as each contractions lasts...(repeat three times)...you will find that this greatly reduces the discomfort...remember as you bear down and push...you are helping to bring your child into the world...in each interval between contractions...you will be able to relax completely and sleep.

During that time, as the baby's head descends...and appears...the final process of delivery will begin...at this point you will be able to obey all instructions implicitly... whenever you are told to stop pushing, you will stop pushing immediately and indulge in rapid deep breathing instead...as a result of this you will relax more and more completely...and as the baby's head presses down harder and harder at the opening...the whole area will become quite numb and insensitive...although you will experience stretching...this will not cause you

any discomfort...in fact you will feel a sense of satisfaction that the baby is almost into the world.

Focus on your breath ... it has the power to help you ... focus ... move your baby for ward..... listen ... trust ... focus ... calm and strong ... the more focused you become ... the more your baby is easing into the world ... and in every interval between the contractions ... you will be able to completely relax.

Although you will probably need no extra help because you are coping well...suitable drugs or anaesthetics will be available if you feel the need of them...they will not be given to you unless you require them...you have only to ask.

Throughout the whole of your labour later, you will be able to talk or answer questions if necessary. Without waking from your deep, relaxed, hypnotic sleep...you will carry out ever y instructions that you are given to assist in better childbirth process...just as effectively as if I had given them myself.

When you have seen the baby and the afterbirth has come away...you will fall into a deep refreshing sleep...you will wake up from this feeling really fit and well...without any discomfort..in fact...you will feel healthier and refreshing...remembering very little of what has occurred (to repeat 3 times).

You would not feel any discomfort on any part of your body...especially at the opening of the cervix immediately after your childbirth process. In fact you are going to feel comfortab le...calm...relaks...and satisfied (repeat three times).

The physical healing from your birth will take place immediately and rapidly...and as the healing continues...you feel more relax...more calm...mentally and emotionally... allowing you to bond with your baby...to nurture you baby...keeping yourself and your baby healthy and well (repeat three times).

Ego Strengthening

You have now become so deeply relaxed...so deeply asleep...that your mind has

become so sensitive...so receptive to what I say...that everything that I put into your mind... will sink so deeply into the unconscious part of your mind...and will cause so deep and lasting an impression there...that nothing will eradicate it.

Consequently...these things that I put into your unconscious mind...will begin to exercise a greater and greater influence over the way you think...over the way you feel...over the way you behave.

And because these things will remain...firmly imbedded in the unconscious part of you r mind...after you have left here...when you are no longer with me...they will continue to exercise that same great influence...over your thoughts...your feelings...and your actions... just as strongly...just as surely...just as powerfully...when you are back home...or at work... as when you are with me in this room.

You are now so very deeply asleep...that everything that I tell you that is going to happen to you...for your own good...will happen...exactly as I tell you. And every feeling... that I tell you that you will experience...you will experience...exactly as I tell you.

And these same things will continue to happen to you...every day...and you will continue to experience these same feelings...every day...just as strongly just as surely...just as powerfully...when you are back home...or at work...as when you are with me in this room.

During this deep sleep...you are going to feel physically stronger and fitter in every way. You will feel more alert...more wide-awake...more energetic.

Every day...you will become so deeply interested in whatever you are doing...in what ever is going on around you...that your mind will become completely distracted away from yourself.

Every day...you will become stronger and steadier...your mind calmer and clearer... more composed...more tranquil.

You will be able to think more clearly...you will be able to concentrate more easily. You will be able to give your whole undivided attention to whatever you are doing...to the complete exclusion of everything else.

Consequently...your memory will rapidly improve...and you will be able to see things in their true perspective...without magnifying your difficulties...without ever allowing them to get out of proportion. Every day...you will become emotionally much calmer...much more settled...much less easily disturbed.

Every day...you will become...and you will remain...more and more completely relax ed...and less tense each day...both mentally and physically...even when you are no longer with me.

And as you become...and as you remain...more relaxed...each day...so...you will develop much more confidence in yourself...more confidence in your ability to do...not only what you have...to do each day...but more confidence in your ability to do whatever you ought to be able to do... Because of this...every day...you will feel more and more independent... to stand upon your own feet...to hold your own.

Every day...you will feel a greater feeling of personal well-being...a greater feeling of personal safety...and security...than you have felt for a long, long time. You are enjoying your pregnancy with a greater feeling of well-being...looking forward to your delivery...holding your baby in your arms...the baby whom you are nurturing now...whom you are loving now... just imagine how wonderful it is to hold this precious being in your arms...and as you think of this...you feel a greater sense of relaxation and joy...(to repeat three times).

And because all these things will begin to happen...exactly as I tell you they will happen...more and more rapidly...powerfully...and completely...with every treatment I give you...you will feel much happier...much more contented...much more optimistic in every way.

You will consequently become much more able to rely upon...to depend upon...yourself ...your own efforts,...your own judgement...your own opinions. You will feel much less need ...to have to rely upon...or to depend upon...other people. (Hartland, 1977, p. 199-202)

Every day...you will become...and you will remain...more and more completely relax ed...and less tense each day...mentally...physically...emotionally...even when you are no longer with me.

And as you become...and as you remain...more relaxed... you will develop much more confidence in yourself...more confidence in your ability to do...not only what you have ...to do each day...but more confidence in your ability to do whatever you ought to be able to do... Because of this...every day...you will feel more and more independent...more able to 'stick up for yourself'...to stand upon your own feet...to hold your own.

Every day...you will feel a greater feeling of personal well-being...a greater feeling of personal safety...and security...than you have felt for a long, long time.

And because all these things will begin to happen...exactly as I tell you they will happen...more and more rapidly...powerfully...and completely...with every treatment I give you...you will feel much happier...much more contented...much more optimistic in every way.

You will consequently become much more able to rely upon...to depend upon... yourself...your own efforts,...your own judgement...your own opinions. You will feel much less need...to have to rely upon...or to depend upon...other people.

SESI SATU

Hipnosis sendiri hanya di sarankan ketika sesi satu sahaja.

Dorongan awal

Dekatkan ibu jari dan jari telunjuk anda dan biarkan ianya bersentuhan. Anda tumpukan perhatian keatas pernafasan anda....dengan menarik dan menghembus nafas dalam keadaan relaks.

Dengan ibu jari dan jari telunjuk anda bersentuhan seperti itu...saya akan mula membilang dari numbor 10 ke nombor satu...mungkin anda mahu membilang bersama-sama saya secara perlahan...didalam hati...dari nombor 10 ke nombor 1 bersama-sama saya. Ketika bilangan nombor berterusan...anda akan semakin lebih relaks lagi...relaksasi yang amat mendalam. Apabila bilangan dari nombor sepuluh ke nombor satu berterusan...anda akan semakin selesa...selesa yang amat mendalam. Apabila sampai kenombor satu...anda akan berasa relaksasi yang mendalam.

Sekarang, rasa relaksasi sepenuhnya merebak keseluruh badan. Biarkan otot ditelapak kaki dan pergelangan kaki relaks. Biarkan relaks...sekarang, otot betis anda...biarkan ia relaks ... Sekarang, otot kaki dan peha semakin relaks sepenuhnya...apabila ianya semakin relaks... tidur anda semakin bertambah nyenyak. Rasa relaksasi sekarang merebak keatas...keseluruh tubuh anda.

Biarkan otot perut anda relaks...biarkan relaks...sekarang, otot dada...badan...dan belakang anda. Biarkan ianya relaks...biarkan ianya relaks...seolah-olah badan anda...mahu semakin terbenam...dalam dan sedalamnya...dikerusi...dan apabila ia berlaku...anda rasa seperti hanyut...perlahan-lahan ke tidur yang semakin nyenyak.

Relaks sepenuhnya...dan biarkan diri anda relaks sepenuhnya melalui rasa keseronokan ...relaks...mengantuk...tidur...rasa selesa. Dan sekarang, perasaan relaksasi merebak ke otot leher anda...bahu...dan tangan. Biarkan otot leher anda relaks...lebih-lebih lagi otot
dibelakang leher anda. Biarkan ianya relaks...biarkan...sekarang, otot bahu...biarkan... biarkan ianya relaks. Sekarang, otot tangan. Biarkan relaks...biarkan...dan semakin anda relaks...tidur anda semakin nyenyak. Dan perasan relaksasi sepenuhnya semakin merebak... dan mendalam...keseleruh tubuh anda...tidur anda semakin nyenyak.

Anda sekarang semakin nyenyak tidur, sebetulnya...semua yang saya beritahu anda akan berlaku kepada anda...akan berlaku...seperti yang saya beritahu anda. Sekarang, tidur.... senyenyak-nyenyaknya. Tidur yang semakin nyenyak...tidur senyenyaknya.

Mendalamkan

Sebentar lagi...saya akan membilang perlahan-lahan dari "10 ke 1"ketika saya membilang bunyi-bunyi disekeliling anda akan lenyap tetapi suara saya akan bersama-sama anda.

Dan ketika saya membilang dari nombor sepuluh ke nombor satu...anda akan... menarik nafas yang dalam. Dan dengan setiap tarikan nafas yang anda ambil...setiap kali anda menghembus nafas...anda akan bertambah relaks...dan tidur anda akan lebih nyenyak.

Apabila saya sampai ke nombor satu, saya mahu anda membayangkan yang anda berada ditempat yang paling selesa...mungkin anda dapat melihat tempat ini...mungkin anda dapat merasanya...mungkin anda dapat menyentuhnya...dan mungkin juga anda dapat mendengar bunyi yang amat mempesonakan...minda tidak sedar anda akan tahu yang mana terbaik untuk anda.

Sepuluh...Sembilan..."tarik nafas yang dalam...tarik nafas lagi...tidurlah dengan nyenyak. lapan...tujuh...tarik nafas yang dalam...relaks yang lebih mendalam...tidur anda semakin nyenyak." Enam...lima..."tarik nafas yang dalam...lebih relaks...semakin nyenyak tidur. Empat...tiga..."tarik nafas yang dalam...relaks yang lebih dalam...tidur anda semakin nyenyak. Dua...satu..."tarik nafas yang dalam...relaks yang semakin mendalam...tidur yang amat nyenyak. Tidur yang amat nyenyak...tidur yang amat nyenyak...tidur yang amat nyenyak.

Anda sekarang berdiri di atas satu jalan....cuba lihat sekeliling anda...dimana sahaja anda lihat...anda rasa selesa...dimana sahaja anda lihat anda rasa selamat...dan anda semakin relaks...cuba berjalan diatas jalan tersebut. Setiap langkah yang anda ambil akan membawa anda ke relaksasi yang semakin mendalam. Semakin menuju kearah keselesaan. Diatas jalan tersebut ada kerusi. Kerusi yang akan membantu anda semakin selesa. Apa sahaja kerusi yang anda ingini. Cuba berjalan menuju kekerusi tersebut. Setiap langkah yang anda ambil menuju kearah kerusi tersebut...membantu anda untuk semakin relaks. Mungkin anda mahu duduk dikerusi tersebut. Cuba rasa tekstur kerusi itu...mungkin lihat warnanya. Semakin lama anda duduk dikerusi tersebut...semakin relaks anda rasa dan semakin relaks anda rasa...semakin selesa anda rasa.

Saranan positif

Saya mahu minda tidak sedar anda tahu yang dari hari ini setiap kali anda terasa kurang selesa disebabkan oleh kehamilan anda...anda hanya perlu sentuh ibu jari dan jari telunjuk anda...sejerus kedua jari telunjuk anda bersentuh ...kurang selesa anda disebabkan kehamilan akan hilang dan digantikan dengan rasa keselesaan...digantikan dengan rasa kegembiraan...digantikan dengan rasa kepuasan....membolehkan anda berasa seronok dengan kehamilan in dalam keadaan relaksasi yang mendalam dan menyeluruh (diulang tiga kali)"

Menguatkan Jati Diri

Anda sekarang semakin mengalami relaks yang amat dalam...tidur yang amat nyenyak ...minda anda semakin sensitive...semakin mahu menerima apa yang saya katakana...semua yang saya sarankan diminda anda...akan masuk kedalam minda tidak sedar anda...dan akan meninggalkan kesan yang amat mendalam disana...tidak ada apa yang akan memadamnya.

Seterusnya...perkara yang saya sarankan pada minda tidak sedar anda...akan mempengaruhi pemikiran anda...perasaan anda...perbuatan anda.

Dan kerana perkara yang saya sarankan akan tinggal...secara kukuh di minda tidak

sedar anda...apabila anda sudah meninggalkan tempat ini....apabila anda tidak berada bersama saya lagi...ianya akan berterusan mempengaruhi pemikiran anda...perasaan anda... dan perbuatan anda...seteguh sepertimana anda bersama saya...seyakin sepertimana anda bersama saya...sekuat sepertimana anda bersama saya...apabila anda berada dirumah...atau ditempat kerja...sepertimana anda berada disini bersama saya.

Anda sekarang semakin nyenyak tidur...semua yang saya beritahu anda akan berlaku keatas anda...untuk kebaikan anda sendiri...akan berlaku...sepertimana yang saya beritahu anda. Dan segala perasaan...yang saya beritahu anda yang akan anda alami...anda akan alami...sepertimana yang saya beritahu anda.

Dan perkara ini akan berterusan berlaku keatas diri anda...setiap hari...dan anda akan berterusan mengalami perkara ini setiap hari...seteguh sepertimana anda bersama saya... seyakin sepertimana anda bersama saya...sekuat sepertimana anda bersama saya...apabila and a berada dirumah...atau ditempat kerja...sepertimana anda berada disini bersama saya.

Ketika tidur yang nyenyak ini...anda akan rasa semakin kuat. Anda akan rasa semakin segar...semakin terjaga...semakin bertenaga.

Setiap hari...anda akan semakin menyukai setiap activiti yang anda lakukan...setiap perkara yang berlaku dipersekitaran anda...menyebabkan minda anda tidak akan memikirkan perkara-perkara yang merisaukan diri anda.

Anda tidak akan memikirkan terlalu banyak perkara-perkara mengenai diri anda...anda tidak akan memikirkan perkara-perkara mengenai diri ada dan kesusahan anda...dan anda akan kurang sedar tentang diri anda dan kesusahan anda...dan perasaan anda.

Setiap hari...semangat anda semakin kuat dan stabil...minda anda tenang dan jelas... lebih tenang...lebih sejuk hati...lebih aman.

Pemikiran anda akan semakin jelas...anda boleh menumpukan perhatian dengan lebih baik. Anda dapat menumpukan perhatian sepenuhnya didalam apa jua perkara yang anda laku kan...tanpa perlu menumpukan perhatian kepada perkara-perkara yang tidak penting.

Seterusnya...ingatan anda akan semakin baik...anda boleh melihat perkara-perkara

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disekeliling anda dalam perspektif yang betul...tanpa memperbesarakan kesusahan anda... tanpa menyebabkan kesusahan itu semakin besar lagi. Setiap hari...emosi anda akan semakin tenang...semakin teguh.

Setiap hari...anda akan menjadi...dan semakin mudah...untuk relaks sepenuhnya... kurang rasa tegang...dari segi mental dan fizikal...walaupun ada tidak bersama saya. Dan apa bila anda...sentiasa relaks... seterusnya...anda akan rasa lebih keyakinan diri...lebih rasa yakin terhadap kebolehan anda...kepada perkara-perkara yang anda boleh buat setiap hari... juga lebih rasa yakin terhadap perkara-perkara yang boleh anda lakukan...Kerana ini...setiap hari...anda boleh semakin berdikari...tanpa bantuan orang lain.

Setiap hari...anda semakin rasa sejahtera...semakin rasa keselamatan diri...dan keamanan...yang anda rasakan setelah sekian lama.

Dan kerana perkara-perkara ini akan mula berlaku...sepertimana yang saya beritahu anda ianya akan berlaku...dengan lebih cepat...kuat...sepenuhnya...dengan setiap rawatan yang saya beri...anda akan rasa semakin gembira...semakin puas...semakin optimistik dalam segala hal

Seterusnya anda akan rasa lebih baik untuk berdiri diatas kaki anda sendiri... bergantung keatas usaha anda sendiri...keputusan anda sendiri...pendapat anda sendiri. Anda akan rasa kurang perlu...untuk bergantung...kepada orang lain.

Hipnosis sendiri

Sedang anda duduk dikerusi itu, saya ingin anda tahu yang anda juga boleh mengalami relaksasi yang mendalam seperti ini jika anda melakukanya sendiri keatas diri anda kerana "setiap orang boleh belajar melakukan hipnosis sendiri tanpa bantuan orang lain, tetapi untuk mendapat hasil yang terbaik anda harus menimbangkan apa yang anda mahu capai...mungkin ...anda mahu mengalami masa-masa kehamilan dengan rasa seronok dan perasaan yang relaks ...jika anda mahukan relaksasi yang mendalam, anda mampu mencapainya.

Cari tempat yang sunyi dimana anda tidak akan diganggu dan rancang untuk meluang

kan masa untuk melakukan hipnosis keatas diri anda sendiri. Anda boleh duduk atau baring. Apabila anda sudah rasa selesa. Pertemukan ibu jari dan jari telunjuk anda seperti yang anda lakukan tadi...Dan apabila ibu jari dan jari telunjuk anda bersentuh...mata anda tertutup dan tahap relaks anda semakin mendalam.

Dengan jari-jari telunjuk anda bersentuhan seperti itu...anda akan mula membilang dari numbor 10 ke nombor satu dengan setiap hembusan nafas... secara perlahan...didalam hati...dari nombor 10 ke nombor 1 seperti yang anda bilang bersama-sama saya. Ketika bilang an nombor berterusan...anda akan semakin lebih relaks lagi...relaksasi yang amat mendalam. Apabila bilangan dari nombor sepuluh ke nombor satu berterusan...anda akan semakin selesa ...selesa yang amat mendalam. Apabila sampai kenombor satu...anda akan berasa relaksasi yang mendalam.

Setiap kali anda cuba melakukan hipnosis keatas diri anda sendiri, bayangkan anda boleh melakukanya dengan lebih dalam lagi. Pada awalnya anda akan berasa sukar untuk melakukanya, tetapi jika anda berterusan mencuba, anda akan dapat membayangkan diri anda dalam keadaan relaksasi yang mendalam.

Semasa dalam keadaan relaksasi yang dalam ini...sedikit demi sedikit, anda boleh merasakan relaksasi yang sepenuhnya keatas semua otot-otot badan...sepertimana yang saya lakukan tadi...dan kesemua saranan yang anda beri untuk diri anda untuk kebaikkan diri anda ...akan berlaku..seefektif sepertimana yang saya berikan kepada anda. Ketika ini anda hanya boleh memberi saranan-saranan yang positif sahaja keran minda tidak sedar anda hanya boleh menerima saranan-saranan positif.

Jika ketika anda berada dalam keadaan tidur yang nyenyak ini ada kecemasan berlaku ...anda akan automatic bangun segera...bersedia untuk mengambil tindakan yang sewajarnya.

Jika anda lakukan hipnosis keatas diri anda pada waktu malam sebelum tidur... hipnosis anda akan bertukar menjadi tidur anda akan bertukar menjadi tidur semulajadi...dan anda akan melalui tidur yang amat seronok...anda akan bangun keesokkan hari dengan rasa tenang...relaks...seronok. Untuk bangun dari hipnosis yang anda lakukan sendiri ini, anda hanya perlu membilang dari nombor 1 kenombor 10. Dibilangan ke 8 anda akan boleh membuka mata and a dan dibilangan ke10 anda akan sedar sepenuhnya. Anda akan sedar sepenuhnya dengan persekitaran anda. Dan apabila anda sedar semua sensasi normal yang menyihatkan badan akan kembali keanggota badan anda.

Jika anda mendapati yang anda tidak boleh membuka mata anda, jangan risau. Ulangi saranan untuk bangun, dan beritahu diri anda yang dibilangan ke10 anda akan semestinya membuka mata anda dengan mudah. Jika anda tidak boleh membuka mata, bertenang dan beri sedikit masa, anda akan boleh membuka mata anda.

SESI TIGA DAN EMPAT

Dorongan Awal

Dekatkan ibu jari dan jari telunjuk anda dan biarkan ianya bersentuhan. Anda tumpukan perhatian keatas pernafasan anda....dengan menarik dan menghembus nafas dalam keadaan relaks

Dengan ibu jari dan jari telunjuk anda bersentuhan seperti itu...saya akan mula membilang dari numbor 10 ke nombor satu...mungkin anda mahu membilang bersama-sama saya secara perlahan...didalam hati...dari nombor 10 ke nombor 1 bersama-sama saya. Ketika bilangan nombor berterusan...anda akan semakin lebih relaks lagi...relaksasi yang amat mendalam. Apabila bilangan dari nombor sepuluh ke nombor satu berterusan...anda akan semakin selesa...selesa yang amat mendalam. Apabila sampai kenombor satu...anda akan berasa relaksasi yang mendalam

Sekarang, rasa relaksasi sepenuhnya merebak keseluruh badan. Biarkan otot ditelapak kaki dan pergelangan kaki relaks. Biarkan relaks...sekarang, otot betis anda... biarkan ia relaks. Sekarang, otot kaki dan peha semakin relaks sepenuhnya...apabila ianya semakin relaks...tidur anda semakin bertambah nyenyak. Rasa relaksasi sekarang merebak keatas...keseluruh tubuh anda. Biarkan otot perut anda relaks...biarkan relaks...sekarang, otot dada...badan...dan belakang anda. Biarkan ianya relaks...biarkan ianya relaks...seolah-olah badan anda...mahu semakin terbenam...dalam dan sedalamnya...dikerusi...dan apabila ia berlaku...anda rasa seperti hanyut...perlahan-lahan ke tidur yang semakin nyenyak.

Relaks sepenuhnya...dan biarkan diri anda relaks sepenuhnya melalui rasa keseronokan...relaks...mengantuk...tidur...rasa selesa. Dan sekarang, perasaan relaksasi merebak ke otot leher anda...bahu...dan tangan. Biarkan otot leher anda relaks...lebih-lebih lagi otot dibelakang leher anda. Biarkan ianya relaks...biarkan...sekarang, otot bahu...biarkan ...biarkan ianya relaks. Sekarang, otot tangan. Biarkan relaks...biarkan...dan semakin anda relaks...tidur anda semakin nyenyak. Dan perasan relaksasi sepenuhnya semakin merebak... dan mendalam...keseleruh tubuh anda...tidur anda semakin nyenyak.

Anda sekarang semakin nyenyak tidur, sebetulnya...semua yang saya beritahu anda akan berlaku kepada anda...akan berlaku...seperti yang saya beritahu anda. Sekarang, tidur.... senyenyak-nyenyaknya. Tidur yang semakin nyenyak...tidur senyenyaknya.

Mendalamkan

Sebentar lagi...saya akan membilang perlahan-lahan dari "10 ke 1"ketika saya membilang bunyi-bunyi disekeliling anda akan lenyap tetapi suara saya akan bersama-sama anda.

Dan ketika saya membilang dari nombor sepuluh ke nombor satu...anda akan... menarik nafas yang dalam. Dan dengan setiap tarikan nafas yang anda ambil...setiap kali anda menghembus nafas...anda akan bertambah relaks...dan tidur anda akan lebih nyenyak.

Apabila saya sampai ke nombor satu, saya mahu anda membayangkan yang anda berada ditempat yang paling selesa...mungkin anda dapat melihat tempat ini...mungkin anda dapat merasanya...mungkin anda dapat menyentuhnya...dan mungkin juga anda dapat mendengar bunyi yang amat mempesonakan...minda tidak sedar anda akan tahu yang mana terbaik untuk anda. Sepuluh...Sembilan..."tarik nafas yang dalam...tarik nafas lagi...tidurlah dengan nyenyak. lapan...tujuh...tarik nafas yang dalam...relaks yang lebih mendalam...tidur anda semakin nyenyak." Enam...lima..."tarik nafas yang dalam...lebih relaks...semakin nyenyak tidur. Empat...tiga..."tarik nafas yang dalam...relaks yang lebih dalam...tidur anda semakin nyenyak. Dua...satu..."tarik nafas yang dalam...relaks yang semakin mendalam...tidur yang amat nyenyak.

Tidur yang amat nyenyak...tidur yang amat nyenyak...tidur yang amat nyenyak.

Anda sekarang berdiri di atas satu jalan....cuba lihat sekeliling anda...dimana sahaja anda lihat...anda rasa selesa...dimana sahaja anda lihat anda rasa selamat...dan anda semakin relaks...cuba berjalan diatas jalan tersebut. Setiap langkah yang anda ambil akan membawa anda ke relaksasi yang semakin mendalam. Semakin menuju kearah keselesaan. Diatas jalan tersebut ada kerusi. Kerusi yang akan membantu anda semakin selesa. Apa sahaja kerusi yang anda ingini. Cuba berjalan menuju kekerusi tersebut. Setiap langkah yang anda ambil menuju kearah kerusi tersebut...membantu anda untuk semakin relaks. Mungkin anda mahu duduk dikerusi tersebut. Cuba rasa tekstur kerusi itu...mungkin lihat warnanya. Semakin lama anda duduk dikerusi tersebut...semakin relaks anda rasa dan semakin relaks anda rasa...semakin selesa anda rasa.

Saya mahu minda tidak sedar anda tahu yang dari hari ini setiap kali anda terasa kurang selesa disebabkan oleh kehamilan anda (contohnya...)...anda hanya perlu sentuh telapak tangan...lilitkan jari- jemari secara longgar dan rehatkan dibelakang tangan...julurkan jari telunjuk kedua belah tangan sehingga keduanya sejajar...saya mahu anda rapatkan kedua jari telunjuk anda supaya ianya bersentuhan....Sejerus kedua jari telunjuk anda bersentuh ... kurang selesa anda disebabkan kehamilan akan hilang dan digantikan dengan rasa keselesaan

...digantikan dengan rasa kegembiraan...digantikan dengan rasa kepuasan....membolehkan anda berasa seronok dengan kehamilan in dalam keadaan relaksasi yang mendalam dan menyeluruh (diulang 3 kali).

Saranan positif

Saya mahu minda tidak sedar anda tahu yang dari hari ini setiap kali anda terasa kurang selesa disebabkan oleh kehamilan anda...anda hanya perlu sentuh ibu jari dan jari telunjuk anda...sejerus kedua jari telunjuk anda bersentuh ...kurang selesa anda disebabkan kehamilan akan hilang dan digantikan dengan rasa keselesaan...digantikan dengan rasa kegembiraan...digantikan dengan rasa kepuasan....membolehkan anda berasa seronok dengan kehamilan in dalam keadaan relaksasi yang mendalam dan menyeluruh (diulang tiga kali).

Dorongan seterusnya

Saya mahu anda tahu yang...process ketika process melahirkan bayi anda bermula... anda akan dapati kontraksi pada mulanya perlahan...dan akan tidak kerap berlaku...perlahanlahan memudahkan serviks anda mula terbuka...tetapi process ini mengambil masa... menyebabkan rasa kurang selesa yang sedikit sahaja...anda hanya perlu relaks sebanyak yang boleh...anda boleh melakukan menerusi self-hypnosis yang telahpun diajar dulu...dengan senang...mudah...mungkin anda dapat pergi ketempat yang anda rasa relaks.

Dari itu...anda akan rasa kontraksi seperti tekanan yang semulajadi...dan anda akan rasa tenang...relaks...aman dan sejahtera...dan segalanya dalam kawalan...sedar yang segala kacau-bilau hilang dan keadaan menjadi aman dan sejahtera...menyebabkan relaksasi anda semakin mendalam...relaksasi semakin mendalam dan mendalam dengan setiap kontraksi... kerana itu...process kelahiran berterusan dengan lebih lancar dan senang...anda akan berada dalam keadaan tenang...dan seronok dengan tahap kawalan anda yang amat baik.

Masa untuk anda mengalami kelahiran bayi anda yang amat menakjubkan akan tiba nanti. Sebelum masa itu tiba...ketika tahap pertama kelahiran bayi atau 'first stage', anda akan mendapati kontraksi amat sedikit dan perlahan, dan tidak akan berlaku begitu kerap.

Kontraksi itu nanti akan menyebabkan serviks anda terbuka, tetapi process ini adalah perlahan dan mengambil masa...pada masa itu anda rasa selesa...tenang...dan relaks...anda hanya perlu tidur...dan relaks...anda boleh melakukannya dengan melakukan hipnosis sendiri seperti yang anda lakukan selama ini...kerana ini, anda hanya akan rasa kontraksi itu seolaholah tekanan yang amat sedikit ...kerana itu process kelahiran bayi anda nanti akan berjalan dengan lebih lancar dan mudah...anda akan berada dalam keadaan tenang dan selesa.

Seterusnya...apabila nanti serviks anda terbuka, kontraksi akan menjadi lebih lagi... dan semakin kerap. Anda tidak akan rasa takut dan melawannya...ini adalah tanda yang process kelahiran bayi anda berjalan dengan lancar....anda akan berada dalam keadaan yang senantiasa relaks dengan menarik nafas yang dalam, cepat, seolah-olah berirama...setiap nafas yang anda tarik, anda akan relaks sepenuhnya. Rasa rungsing anda akan hilang dan anda akan membenarkan kontraksi berlaku dengan semulajadi tanpa bantuan dari anda.

Mungkin kontraksi akan berhenti sebentar...dan kemudian berterusan dengan lebih lagi...anda tidak perlu bersama rungsing atau takut ketika itu. Itu bermakna anda akan berada ke tahap kedua dalam process kelahiran bayi atau 'second stage'....dimasa itu process sebenar kelahiran bayi akan berlaku.

Walaupun kontraksi akan lebih kerap pada masa itu...anda akan berterusan berasa selesa...tenang...relaks.

Pada ketika itu apabila anda rasa anda sudah mahu melahirkan anak...beritahu individual yang sepatutnya...doctor anda...atau jururawat anda...atau bidan anda...tetapi jangan teruskan proses kelahiran sehingga anda telah beritahu.

Pada ketika itu, ketika kepala bayi anda semakin menurun...dan telah boleh dilihat... proses tahap terakhir kelahiran bayi anda sudah bermula...pada ketika itu anda boleh menurut segala arahan dengan baik...apabila anda disuruh berhenti meneran, anda akan berhenti meneran serta merta dan tumpukan perhatian pada pernafasan anda yang cepat dan dalam... kerana itu anda akan relaks lebih lagi dan secara menyeluruh...apabila kepala bayi anda mene kan lebih lagi diruang keluar dari rahim...anda akan rasa ruang keluar tersebut seolah-olah kebas dan tidak berasa apa-apa...yang pastinya anda akan rasa satu kepuasan yang amat sangat kerana bayi anda sudah amat hampir lahir. Fokus pada pernafasan anda ... ianya dapat membantu anda ... fokus ... gerakkan bayi anda... dengar ... percaya ... fokus ... tenang dan kuatkan diri ... lebih anda focus...lebih mudah untuk bayi anda untuk dilahirkan ... dan diantara perut anda mengeras...anda jadi lebih relaks.

Tumpukan perhatian keatas pernafasan anda...ianya boleh membantu anda...focus... biarkan bayi keluar...dengar...percaya...focus...tenang dan bertenaga...lebih anda fokus untuk melahirkan bayi anda kelak...lebih lagi bayi anda akan keluar dari rahim anda...dalam setiap selang atau antara kontraksi...anda akan boleh rehat sepenuhnya.

Walaupun anda tidak perlukan pertolongan yang lebih lagi kerana anda amat berdaya pada ketika itu...segala ubat dan ubat bius aka nada disediakan jika anda mahu...ianya tidak akan diberi kepada anda kecuali anda memerlukannya...jika anda mahu anda hanya perlu memintanya.

Seluruh proses kelahiran bayi anda nanti, anda akan boleh bercakap atau menjawab soalan-soalan jika perlu. Tanpa perlu bangun dari tidur hipnosis anda yang dalam, relaks...and a masih boleh menurut segala arahan yang diberikan untuk melancarkan proses kelahiran nanti ...seolah-olah saya yang memberi arahan tersebut kepada anda (diulang 3 kali)

Sejerus selepas melahirkan anak nanti anda tidak akan mengalami kesakitan pada mana-mana bahagian badan malah anda akan rasa amat selesa...tenang...relaks...dan berpuas hati (diulang 3 kali)

Proses pemulihan fizikal anda dari proses kelahiran akan berlaku serta-merta dan dengan cepat...dan ketika proses pemulihan itu berlaku...anda akan rasa lebih relaks...lebih tenang...dari segi mental dan emosi...itu membolehkan anda untuk rasa lebih dekat lagi dengan bayi anda" (diulang 3 kali)

Menguatkan Jati Diri

Anda sekarang semakin mengalami relaks yang amat dalam...tidur yang amat nyenyak ...minda anda semakin sensitive...semakin mahu menerima apa yang saya katakana...semua

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yang saya sarankan diminda anda...akan masuk kedalam minda tidak sedar anda...dan akan meninggalkan kesan yang amat mendalam disana...tidak ada apa yang akan memadamnya.

Seterusnya...perkara yang saya sarankan pada minda tidak sedar anda...akan mempengaruhi pemikiran anda...perasaan anda...perbuatan anda.

Dan kerana perkara yang saya sarankan akan tinggal...secara kukuh di minda tidak sedar anda...apabila anda sudah meninggalkan tempat ini....apabila anda tidak berada bersama saya lagi...ianya akan berterusan mempengaruhi pemikiran anda...perasaan anda... dan perbuatan anda...seteguh sepertimana anda bersama saya...seyakin sepertimana anda bersama saya...sekuat sepertimana anda bersama saya...apabila anda berada dirumah...atau ditempat kerja...sepertimana anda berada disini bersama saya.

Anda sekarang semakin nyenyak tidur...semua yang saya beritahu anda akan berlaku keatas anda...untuk kebaikan anda sendiri...akan berlaku...sepertimana yang saya beritahu anda. Dan segala perasaan...yang saya beritahu anda yang akan anda alami...anda akan alami ...sepertimana yang saya beritahu anda.

Dan perkara ini akan berterusan berlaku keatas diri anda...setiap hari...dan anda akan berterusan mengalami perkara ini setiap hari...seteguh sepertimana anda bersama saya... seyakin sepertimana anda bersama saya...sekuat sepertimana anda bersama saya...apabila and a berada dirumah...atau ditempat kerja...sepertimana anda berada disini bersama saya.

Ketika tidur yang nyenyak ini...anda akan rasa semakin kuat. Anda akan rasa semakin segar...semakin terjaga...semakin bertenaga.

Setiap hari...anda akan semakin menyukai setiap activiti yang anda lakukan...setiap perkara yang berlaku dipersekitaran anda...menyebabkan minda anda tidak akan memikirkan perkara-perkara yang merisaukan diri anda.

Anda tidak akan memikirkan terlalu banyak perkara-perkara mengenai diri anda...anda tidak akan memikirkan perkara-perkara mengenai diri ada dan kesusahan anda...dan anda akan kurang sedar tentang diri anda dan kesusahan anda...dan perasaan anda.

Setiap hari...semangat anda semakin kuat dan stabil...minda anda tenang dan jelas...

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lebih tenang...lebih sejuk hati...lebih aman.

Pemikiran anda akan semakin jelas...anda boleh menumpukan perhatian dengan lebih baik. Anda dapat menumpukan perhatian sepenuhnya didalam apa jua perkara yang anda laku kan...tanpa perlu menumpukan perhatian kepada perkara-perkara yang tidak penting.

Seterusnya...ingatan anda akan semakin baik...anda boleh melihat perkara-perkara disekeliling anda dalam perspektif yang betul...tanpa memperbesarakan kesusahan anda... tanpa menyebabkan kesusahan itu semakin besar lagi. Setiap hari...emosi anda akan semakin tenang...semakin teguh.

Setiap hari...anda akan menjadi...dan semakin mudah...untuk relaks sepenuhnya... kurang rasa tegang...dari segi mental dan fizikal...walaupun ada tidak bersama saya.

Dan apabila anda...sentiasa relaks... seterusnya...anda akan rasa lebih keyakinan diri ...lebih rasa yakin terhadap kebolehan anda...kepada perkara-perkara yang anda boleh buat setiap hari...juga lebih rasa yakin terhadap perkara-perkara yang boleh anda lakukan...Kerana ini...setiap hari...anda boleh semakin berdikari...tanpa bantuan orang lain.

Setiap hari...anda semakin rasa sejahtera...semakin rasa keselamatan diri...dan keamanan...yang anda rasakan setelah sekian lamal

Dan kerana perkara-perkara ini akan mula berlaku...sepertimana yang saya beritahu anda ianya akan berlaku...dengan lebih cepat...kuat...sepenuhnya...dengan setiap rawatan yang saya beri...anda akan rasa semakin gembira...semakin puas...semakin optimistik dalam segala hal.

Seterusnya anda akan rasa lebih baik untuk berdiri diatas kaki anda sendiri... bergantung keatas usaha anda sendiri...keputusan anda sendiri...pendapat anda sendiri. Anda akan rasa kurang perlu...untuk bergantung...kepada orang lain.

APPENDIX IV.

Hospital Checklist Part A

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HOSPITAL CHECKLISTS PART A

BLOOD PRESSURE AND FOETAL WEIGHT DURING PREGNANCY

Patient's Name: RN:

Date of Examination:

For office use only

Identification Number

NO	TYPES OF ASSESSMENT	DESCRIPTIONS OF FINDINGS
1	Systolic Blood Pressure	
2	Diastolic Blood Pressure	
3	Foetal Weight	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

APPENDIX V Hospital Checklist Part B

university

HOSPITAL CHECKLIST PART B LABOUR AND DELIVERY

LABOUR STAGES

			LADOUR STAUE	,	
Patie RN: Date	nt's Name: of labour:				For office use only Identification Number
NO	LABOUR		DURATION OF	DESCRIPTION	
	STAGES		LABOUR	(e.g. normal or c	
				omplications)	
1	STAGE 2	Delivery of the baby			10
2	STAGE 3	Delivery of the placenta			

NO	PATIENT'S DELIVERY WAS ASSISTED BY:			PLEASE SPECIFY THE REASON (S)
1	Pethidine	□ Yes	□ No	
2	Epidural	□ Yes	□ No	
3	Forcep	□ Yes	🗆 No	
4	Any other medications/equi pment Used (please specify)	□ Yes	□ No	

Note: Please complete only relevant data

Please note if patient has caesarean section instead of normal delivery

	CAESAREAN SECTION	REASON (S)
1		

SECTION H: HOSPITAL CHECKLIST (PART B) NEONATAL PHYSICAL ASSESSMENT

Patient's Name:
RN:
Date of labour:

For office use only

Identification Number

NO	TYPES OF ASSESSMENT	DESCRIPTIONS OF FINDINGS
1	APGAR score at one minute	
2	APGAR score at fifth minute	
3	Neonatal birth weight	. 0





SKALA KESAKITAN SEWAKTU KELAHIRAN ANAK

<u>APPENDIX VI</u>

Questionnaires at two months postpartum English and Bahasa Malaysia versions

University chalays

Questionnaires at two months postpartum English version

university

Identification number



WOMEN'S EXPERIENCES DURING CHILDBIRTH AND POST-DELIV ERY PERIODS

Thank you for participating in the study that looks into women's experiences dur ing pregnancy, childbirth and post-delivery periods. This study will help in under standing how women go through these periods and further help in assisting wom en to cope better.

Please be noted that all information given will be strictly confidential. This quest ionnaire is divided into **FOUR** sections. Please complete information in **ALL** the sections

Researcher's Contact Information: Name: Zuhrah Beevi Tel No: 012-2611813 E-mail: zuhrahbeevi@yahoo.com

SECTION A: DEMOGRAPHIC CHARACTERISTICS QUESTIONNAIRE PART B

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Identification Number

A1

A2

Please complete the following information about yourself.

Name:

A1 Are you still in the confinement period?

- 1. Yes
- 2. No

A2 During confinement period, whom do you stay with?

- 1. Husband
- 2. Parents
- 3. Parent-in-law
- 4. Others (Please specify):

Continued on the next page

SECTION B: CURRENT EXPERINECES

Please h the s rs. Do	For office use only Identification Number						
<i>The rc</i> 0 Did 1 App 2 App 3 App							
B1	I found it hard to wind down	0	1	2	3	B1	
B2	I was aware of dryness of my mouth	0	1	2	3	B2	
В3	I couldn't seem to experience any positive feeling at all	0	1	2	3	В3	
B4	I experienced breathing difficulty (eg, excessivel y rapid breathing, breathlessness in the absence o f physical exertion)	0	1	2	3	В4	
В5	I found it difficult to work up the initiative to do t hings	0	1	2	3	В5	
B6	I tended to over-react to situations	0	1	2	3	B6	
B7	I experienced trembling (eg, in the hands)	0	1	2	3	B7	
B8	I felt that I was using a lot of nervous energy	0	1	2	3	B8	
B9	I was worried about situations in which I might p anic and make a fool of myself	0	1	2	3	В9	
B10	I felt that I had nothing to look forward to	0	1	2	3	B10	
B11	I found myself getting agitated	0	1	2	3	B11	
B12	I found it difficult to relax	0	1	2	3	B12	
B13	I felt down-hearted and blue	0	1	2	3	B13	
B14	I was intolerant of anything that kept me from ge tting on with what I was doing	0	1	2	3	B14	
B15	I felt I was close to panic	0	1	2	3	B15	
B16	I was unable to become enthusiastic about anything	0	1	2	3	B16	

<i>The re</i> 0 Did 1 App 2 App me	ating scale is as follows: not apply to me at all blied to me to some degree, or some of the time blied to me to a considerable degree, or a good part of ti					For of Identi Numb	fice use o fication er
3 App	blied to me very much, or most of the time						
B17	I felt I wasn't worth much as a person	0	1	2	3	B17	
B18	I felt that I was rather touchy	0	1	2	3	B18	
B19	I was aware of the action of my heart in the absence o f physical exertion (eg, sense of heart rate increase, he art missing a beat)	0	1	2	3	B19	5
B20	I felt scared without any good reason	0	1	2	3	B20	
B21	I felt that life was meaningless	0	1	2	3	B21	

SECTION C: CURRENT EXPERINECES								
As yo re fee E PA Here I hav	For office use only Identification Number							
	No, not very often No, not at all Please complete the other questions in the	ne sam	ne way					
In the	past 7 days:	<u> </u>						
CI	nny side of things	6	f me					
	\Box As much as I always could		□ Yes, most of the time I haven't been able to cope at all					
	\Box Not quite so much now		 Yes, sometimes I haven't been coping as well as usual 	C2				
	\Box Definitely not so much now		□ No, most of the time I have cop ed quite well					
	□ Not at all		□ No, I have been coping as well as ever					
C2	I have looked forward with enjoyment t o things	C7	I have been so unhappy that I have had difficulty sleeping	C3				
	 As much as I ever did Rather less than I used to 		□ Yes, most of the time□ Yes, sometimes					
	 □ Definitely less than I used to □ Hardly at all 		□ Not very often□ No, not at all	C4				
C3	I have blamed myself unnecessarily wh en things went wrong	C8	I have felt sad or miserable	C5				
	\Box Yes, most of the time		\Box Yes, most of the time					
	□ Yes, some of the time □ Not very often		□ Yes, quite often □ Not very often	C6				
	\Box No, never		\Box No, not at all					
C4	I have been anxious or worried for no g ood reason	С9	I have been so unhappy that I have been crying	C7				
	□ No, not at all □ Hardly ever		\Box Yes, most of the time \Box Yes, quite often					
	□ Yes, sometimes		 Dest, quite orient Only occasionally 	C8				
	\Box Yes, very often		\square No, never					
C5	I have felt scared or panicky for no very good reason	C10	The thought of harming myself ha s occurred to me	C9				
	□ Yes, quite a lot □ Yes, sometimes		 □ Yes, quite often □ Sometimes 					
	\square No, not much		□ Hardly ever	C10				
	\square No, not at all		□ Never					

Thank you for your participation

Questionnaires at two months postpartum Bahasa Malaysia version

university

Identification number



<u>PENGALAMAN YANG DILALUI OLEH WANITA KETIKA KELAHIRAN D</u> <u>AN SELEPAS KELAHIRAN BAYI</u>

Terima kasih kerana sudi mengambil bahagian didalam kajian berkenaan pengala man yang anda lalui ketika kehamilan, kelahiran bayi dan selepas kelahiran bayi. Kajian ini amat penting untuk memahami pengalaman yang dilalui oleh wanita p ada masa yang berkenaan dan seterusnya membantu wanita untuk menghadapiny a dengan lebih baik lagi.

Sila ambil perhatian bahawa semua maklumat yang anda beri adalah sulit. Soal s elidik ini mengandungi **EMPAT** bahagian. Sila penuhkan maklumat disetiap bah agian.

CONTACT INFO PENYELIDIK: Nama: Zuhrah Beevi No Tel: 012-2611813 E-mail: <u>zuhrahbeevi@yahoo.com</u>

BAHAGIAN A: SOAL SELIDIK MAKLUMAT UMUM

Sila penuhkan maklumat mengenai diri anda.

Nama:

A1 Adakah anda masih dalam pantang?

- 3. Ya
- 4. Tidak

A2 Semasa dalam pantang, anda tinggal bersama siapa?

- 5. Suami
- 6. Ibubapa
- 7. Mertua
- 8. Lain-lain (Sila nyatakan):



bersambung dimuka sebelah

BAHAGIAN B: PENGALAMAN YANG DILALUI SEKARANG

Sila baca setiap kenyataan di bawah dan bulatkan pada nombor 0,1,2 atau 3 bagi me	For office use only
nggambarkan keadaan anda sepanjang minggu yang lalu. Tiada jawapan yang betul a	
tau salah. Jangan mengambil masa yang terlalu lama untuk menjawab mana-mana ke	
nyataan.	

0 T 1 So 2 B 3 Sa	idak langsung menggambarkan keadaan saya edikit atau jarang-jarang menggambarkan keada anyak atau kerapkali menggambarkan keadaan s angat banyak atau sangat kerap menggambarkan	an say saya keada	a 1an sa	aya			
B 1	Saya dapati diri saya sukar ditenteramkan	0	1	2	3	B1	E
В2	Saya sedar mulut saya terasa kering	0	1	2	3	B2	E
B 3	Saya tidak dapat mengalami perasaan positif sa ma sekali	0	1	2	3	В3	Ľ
B 4	Saya mengalami kesukaran bernafas (contohnya pernafasan yang laju, tercungap-cungap walaup un tidak melakukan senaman fizikal)	0	1	2	3	В4	
B 5	Saya sukar untuk mendapatkan semangat bagi m elakukan sesuatu perkara	0	1	2	3	В5	
B 6	Saya cenderung untuk bertindak keterlaluan dal am sesuatu keadaan	0	1	2	3	В6	
B 7	Saya rasa menggeletar (contohnya pada tangan)	0	1	2	3	В7	
B 8	Saya rasa saya menggunakan banyak tenaga dal am keadaan cemas	0	1	2	3	B8	
B 9	Saya bimbang keadaan di mana saya mungkin m enjadi panik dan melakukan perkara yang mem bodohkan diri sendiri	0	1	2	3	В9	
B10	Saya rasa saya tidak mempunyai apa-apa untuk diharapkan	0	1	2	3	B10	

<i>Skala</i> 0 Ti 1 Se 2 Ba 3 Sa	<i>pemarkahan adalah seperti berikut:</i> idak langsung menggambarkan keadaan saya dikit atau jarang-jarang menggambarkan keadaa nyak atau kerapkali menggambarkan keadaan sa ngat banyak atau sangat kerap menggambarkan l	n saya aya keadaa	n say	/a		For of nly	fice use o
B11	Saya dapati diri saya semakin gelisah	0	1	2	3	B11	
B12	Saya rasa sukar untuk relaks	0	1	2	3	B12	
B13	Saya rasa sedih dan murung	0	1	2	3	B13	
B14	Saya tidak dapat menahan sabar dengan perkara y ang menghalang saya meneruskan apa yang saya lakukan	0	1	2	3	B14	9
B15	Saya rasa hampir-hampir menjadi panik/cemas	0	1	2	3	B15	
B16	Saya tidak bersemangat dengan apa jua yang say a lakukan	0	1	2	3	B16	
B17	Saya tidak begitu berharga sebagai seorang indivi du	0	1	2	3	B17	
B18	Saya rasa yang saya mudah tersentuh	0	1	2	3	B18	
B19	Saya sedar tindakbalas jantung saya walaupun tid ak melakukan aktiviti fizikal (contohnya kadar de nyutan jantung bertambah, atau denyutan jantung berkurangan)	0	1	2	3	B19	
B20	Saya berasa takut tanpa sebab yang munasabah	0	1	2	3	B20	
B21	Saya rasa hidup ini tidak bermakna	0	1	2	3	B21	
	bersar	mbung	dimu	ıka se	belah		

BAHAGIAN C: PENGALAMAN YANG DILALUI SEKARANG					
Kami ingin mengetahui perasaan dan keadaan anda pada 7 hari kebelakangan ini. Sil a tandakan jawapan yang paling tepat menggambarkan keadaan diri anda. Contohnya:				For of Identif Numbe	fice use only ication
Saya	 Saya merasa gembira: Sentiasa Kadangkala Ini bermaksud "Saya merasa gembira kadangkala sepanjang minggu ini" Kebayakan waktu Sila tandakan jawapan seterusnya dengan cara yang sama. Jarang sekali 				
C1	Saya berupaya untuk ketawa dan melihat kelucuan sesuatu perkara i tu	C6	Perkara-perkara yang telah memb ebankan fikiran saya	C1	0
	 Sebanyak mungkin seperti biasa 		 Ya, kebanyakan masa saya sama sekali tidak dapat mengatasiny a 		
	Kurang daripada biasa		 Ya, kadang kala saya tidak dapat mengatasinya sebaik biasa 	C2	
	 Jarang sekali masa ini Tiada langsung 		 Tidak, kebanyakan masa saya m ampu mengatasinya sebaik mu ngkin Tidak, saya telah dapat mengata sinya sebaik mungkin 		
C2	Saya telah dapat melihat kehadapa n dengan perasaan gembira terhad ap perkara-perkara yang bakal ber laku	C7	Saya telah merasa sungguh sedih s ehingga saya mengalami kesukara n untuk tidur	C3	
	 Sebanyak mungkin seperti biasa nya 		□ Ya, kebayakan masa		
	□ Kurang dari yang pernah saya b iasa buat		□ Ya, kadang kala	C4	
	□ Tidak pernah langsung		 Tidak, jalang sekan Tidak, tidak pernah 	C4	
C3	Saya telah menyalahkan diri sendi ri secara tidak sepatutnya apabila s esuatu yang buruk	C8	Saya telah merasa sedih atau duka cita	C5	
	□ Ya, kebanyakannya □ Ya kadangkala		□ Ya, kebanyakan masa □ Ya agak kerap		
	 Tidak, jarang sekali Tidak, tidak pernah 		 Tidak berapa kerap Tidak, tidak pernah 	C6	
C4	Saya telah merasa bimbang dan ru ngsing tanpa sebab-sebab yang m unasabah	C9	Saya telah merasa begitu sedih seh ingga saya menangis	C7	
	□ Tidak, tidak pernah □ Ya_iarang sekali		□ Ya, kebanyakan masa □ Ya, agak keran		
	 Ya, kadang-kadang Ya, seringkali 		 Cuma sekala sekali Tidak, tidak pernah 	C8	
C5	Saya telah merasa takut ataupun g ugup tanpa sebab yang munasaba h Ya, kerapkali Xa kadangkala	C10	Perasaan untuk mencederakan diri sendiri pernah terlintas di fikiran s aya Ya, kebanyakan masa Ya agak karan	С9	
	□ Ta, kauangkala □ Tidak, jarang sekali		□ 1a, agak kelap □ Cuma sekali sekali	C10	
	🗆 Tidak, tidak pernah		Tidak pernak terlintas		

<u>APPENDIX VII</u> Permission from test owners

university

 From:
 Dave Jago <djago@rcpsych.ac.uk>

 To:
 Zuhrah Beevi Ahmad <zuhrah_ahmad@imu.edu.my>

 Date:
 8/16/2010 5:11 PM

 Subject:
 RE: Edinburgh Postnatal Depression Scale (EPDS)

Dear Dr Beevi

Thank you for your email. Our standard terms for use of the scale are as follows:

"(c) 1987 The Royal College of Psychiatrists. The Edinburgh Postnatal Depression Scale may be photocopied by individual researchers or clinicians for their own use without seeking permission from the publishers. The scale must be copied in full and all copies must acknowledge the following source: Cox, J.L., Holden, J.M., & Sagovsky, R. (1987). Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry, 150, 782-786. Written permission must be obtained from the Royal College of Psychiatrists for copying and distribution to others or for republication (in print, online or by any other medium).

Translations of the scale, and guidance as to its use, may be found in Cox, J.L. & Holden, J. (2003) Perinatal Mental Health: A Guide to the Edinburgh Postnatal Depression Scale. London: Gaskell."

I think this should cover your use, but please let me know if you have any further questions.

Best wishes

Dave Jago Director of Publications and Website The Royal College of Psychiatrists http://www.rcpsych.ac.uk

-----Original Message-----From: Zuhrah Beevi Ahmad [mailto:zuhrah_ahmad@imu.edu.my] Sent: 16 August 2010 06:04 To: Dave Jago Subject: Edinburgh Postnatal Depression Scale (EPDS)

Dear Mr Jago

I am writing from Kuala Lumpur, Malaysia. I found EPDS while searching for articles on postpartum depression. I found it to be a good questionnaire to be used in the research area of postpartum depression.

I am currently planning my phd and I am very interested to use EPDS as one of the questionnaires in my thesis and I would like to have the permission from you to use it in my research.

Your help is highly appreciated.

Warmest regards Zuhrah Beevi Lecturer Division of Psychology International Medical University Kuala Lumpur, Malaysia Seite 1

From: Azidah Adbul Kadir <azidah@kb.usm.my> Zuhrah Beevi Ahmad <zuhrah_ahmad@imu.edu.my> Date: 8/17/2010 9:39 AM Subject: Re: Edinburgh Postnatal Depression Scale (EPDS) Attachments: Validated EPDS.doc

Dear Zuhrah,

I can't open the e-mail attachment from Dave Jago. Anyway, here's the validated EPDS.

Azidah

To:

----- Original Message -----From: "Zuhrah Beevi Ahmad" <zuhrah_ahmad@imu.edu.my> To: azidah@kb.usm.my Sent: Monday, August 16, 2010 3:10:09 AM GMT -08:00 US/Canada Pacific Subject: Fwd: RE: Edinburgh Postnatal Depression Scale (EPDS)

Dear Dr Azidah,

Attached is the e-mail from Dave Jago regarding the permission to use EPDS for my research. Hope you will be able to give me the malay version

Thank you

warmest regards Zuhrah Beevi

Seite 1
Edinburgh Postnatal Depression Scale¹ (EPDS)

Na	ame:	Address:
Yo	our Date of Birth:	
Ba	by's Date of Birth:	Phone:
As	you are pregnant or have recently had a baby we wo	uld like to know how you are faciling. Discuss the st
the	answer that comes closest to how you have felt IN Th	HE PAST 7 DAYS, not just how you feel today.
He	re is an example, already completed.	
l ha	ave feit happy:	
D	Yes, all the time	
×	Yes, most of the time This would mean: "I have for	
	No not very offen Please complete the ather at	in happy most of the time" during the past week.
0	No, not at all	uestions in the same way.
ln t	he past 7 days:	
1.	I have been able to laugh and see the funny side of things	*6. Things have been getting on top of mo
	 As much as I always could 	Yes. most of the time I haven't been able
	Not quite so much now	to cope at all
	Definitely not so much now Not at all	 Yes, sometimes I haven't been coping as well as usual
2	have looked forward with aniana and to it	No, most of the time I have coped guite well
2.	As much as Lever did	B No, I have been coping as well as ever
	Rather less than Lused to	*7 I have been as a second second second
	Definitely less than I used to	I have been so unhappy that I have had difficulty sleeping a Vest most of the time.
	D Hardly at all	D Yes sometimes
		Not very offen
*3.	I have blamed myself unnecessarily when things	No, not at ali
	went wrong	
	Yes, most of the time	*8 I have felt sad or miserable
	I res, some of the time Not very often	Yes, most of the time
		Yes, quite often
		Not very often
4.	I have been anxious or worried for no good reason	
	No, not at all	*9 I have been so unhanny that I have here as in it
	Hardly ever	Yes most of the time
	a Yes, sometimes	v Yes, duite often
	Yes, very often	Only occasionally
*5	have fall accord an activity for	No, never
5	A Yes guite a lot	
	α Yes sometimes	*10 The thought of harming myself has occurred to me
	□ No. not much	Yés, quite often
		The second s

- No, not at all

- Sometimes
- Hardly ever
- a Never

Administered/Reviewed by

Date

¹Source: Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry 150:782-786

²Source: K. L. Wisner, B. L. Parry, C. M. Piontek, Postpartum Depression N Engl J Med vol. 347, No 3, July 18, 2002, 194-199

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Edinburgh Postnatal Depression Scale¹ (EPDS)

Postpartum depression is the most common complication of childbearing.² The 10-question Edinburgh Postnatal Depression Scale (EPDS) is a valuable and efficient way of identifying patients at risk for "perinatal" depression. The EPDS is easy to administer and has proven to be an effective screening tool.

Mothers who score above 13 are likely to be suffering from a depressive illness of varying severity. The EPDS score should not override clinical judgment. A careful clinical assessment should be carried out to confirm the diagnosis. The scale indicates how the mother has felt *during the previous week*. In doubtful cases it may be useful to repeat the tool after 2 weeks. The scale will not detect mothers with anxiety neuroses, phobias or personality disorders.

Women with postpartum depression need not feel alone. They may find useful information on the web sites of the National Women's Health Information Center <<u>www.4women.gov</u>> and from groups such as Postpartum Support International <<u>www.chss.iup.edu/postpartum</u>> and Depression after Delivery <<u>www.depressionafterdelivery.com</u>>.



QUESTIONS 1, 2, & 4 (without an *)

Are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3.

QUESTIONS 3, 5-10 (marked with an *)

Are reverse scored, with the top box scored as a 3 and the bottom box scored as 0.

Maximum score: 30 Possible Depression: 10 or greater Always look at item 10 (suicidal thoughts)

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Instructions for using the Edinburgh Postnatal Depression Scale:

- 1. The mother is asked to check the response that comes closest to how she has been feeling in the previous 7 days.
- 2. All the items must be completed.
- 3. Care should be taken to avoid the possibility of the mother discussing her answers with others. (Answers come from the mother or pregnant woman.)
- The mother should complete the scale herself, unless she has limited English or has difficulty with reading.

¹Source: Cox, J.L., Holden, J.M., and Sagovsky, R. 1987. Detection of postnatal depression: Development of the 10-Item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry* 150:782-786.

²Source: K. L. Wisner, B. L. Parry, C. M. Piontek, Postpartum Depression N Engl J Med vol. 347, No 3, July 18, 2002, 194-199

EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)

The EPDS was developed for screening postpartum women in outpatient, home visiting settings, or at the 6-8 week postpartum examination. It has been utilized among numerous populations including U.S. women and Spanish speaking women in other countries. The EPDS consists of 10 questions. The test can usually be completed in less than 5 minutes. Responses are scored 0, 1, 2, or 3 according to increased severity of the symptom. Items marked with an asterisk (*) are reverse scored (i.e., 3, 2, 1, and 0). The total score is determined by adding together the scores for each of the 10 items. Validation studies have utilized various threshold scores in determining which women were positive and in need of referral. Cut-off scores ranged from 9 to 13 points. Therefore, to err on safety's side, a woman scoring 9 or more points or indicating any suicidal ideation - that is she scores 1 or higher on question #10 - should be referred immediately for follow-up. Even if a woman scores less than 9, if the clinician feels the client is suffering from depression, an appropriate referral should be made. The EPDS is only a screening tool. It does not diagnose depression - that is done by appropriately licensed health care personnel. Users may reproduce the scale without permission providing the copyright is respected by quoting the names of the authors, title and the source of the paper in all reproduced copies.

Instructions for Users

- 1. The mother is asked to underline 1 of 4 possible responses that comes the closest to how she has been feeling the previous 7 days.
- 2. All 10 items must be completed.
- 3. Care should be taken to avoid the possibility of the mother discussing her answers with others.
- 4. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.

Name: Date: Address: Baby's Age:

As you have recently had a baby, we would like to know how you are feeling. Please UNDERLINE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example, already completed.

I have felt happy: Yes, all the time <u>Yes, most of the time</u> No, not very often No, not at all

This would mean: "I have felt happy most of the time" during the past week. Please complete the other questions in the same way.

In the past 7 days:

- I have been able to laugh and see the funny side of things
 As much as I always could Not quite so much now
 Definitely not so much now
 Not at all
- I have looked forward with enjoyment to things As much as I ever did Rather less than I used to Definitely less than I used to Hardly at all
- *3 .I have blamed myself unnecessarily when things went wrong Yes, most of the time Yes, some of the time Not very often No, never
- I have been anxious or worried for no good reason No, not at all Hardly ever Yes, sometimes Yes, very often
- *5. I have felt scared or panicky for no very good reason
 - Yes, quite a lot Yes, sometimes No, not much No, not at all

Yes, most of the time I haven't been able to cope at all Yes, sometimes I haven't been coping as well as usual No, most of the time I have coped quite well No, have been coping as well as ever *7. I have been so unhappy that I have had difficulty sleeping Yes, most of the time

*6. Things have been getting on top of me

- Yes, sometimes Not very often No, not at all
- *8. I have felt sad or miserable Yes, most of the time Yes, quite often Not very often No, not at all
- *9 I have been so unhappy that I have been crying Yes, most of the time Yes, quite often Only occasionally No, never
- *10. The thought of harming myself has occurred to me Yes, quite often Sometimes Hardly ever Never

EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS) J. L. Cox, J.M. Holden, R. Sagovsky From: British Journal of Psychiatry (1987), 150, 782-786.

Appendix IIB

Skala kemurungan Pascanatal Edinburgh

Kami ingin mengetahui perasaan dan keadaan anda pada 7 hari kebelakangan ini. Sila tandakan jawapan yang paling tepat menggambarkan keadaan diri anda.

Contohnya: Saya merasa gembira

a) Sentiasa	[]
b) Kadangkala	[/]]
c) Kebanyakan waktu	[]
d) Jarang sekali	[]

Nota: Sila tandakan [/] di dalam ruang yang disediakan.

Ini bermaksud "Saya merasa gembira kadangkala sepanjang minggu ini ". Sila tandakan jawapan seterusnya dengan cara yang sama.

Dalam masa 7 hari yang lalu :

1. Saya berupaya untuk ketawa dan melihat kelucuan sesuatu perkara itu

0	Sebanyak mungkin seperti biasa	[]	
1	Kurang daripada biasa	Ľ]	
2	Jarang sekali pada masa ini	[]	
3	Tiada langsung	[]	

2. Saya telah dapat melihat kehadapan dengan perasaan gembira terhadap perkaraperkara yang bakal berlaku.

0	Sebanyak mungkin seperti biasanya	E]	
1	Kurang dari yang pernah saya biasa buat	[]	
2	Jarang sekali pada masa ini	[]	
3	Tidak pernah langsung	E	1	

3. Saya telah menyalahkan diri sendiri secara tidak sepatutnya apabila terjadi sesuatu yang buruk

3	Ya, kebanyakannya	Ε	J
2	Ya, kadangkala	[]
1	Tidak, jarang sekali	ſ	1
0	Tidak, tidak pernah	[]

4. Saya telah merasa bimbang dan rungsing tanpa sebab-sebab yang munasabah

0	Tidak, tidak pernah	[]
1	Ya, jarang sekali	[]
2	Ya, kadang-kadang].]
3	Ya, seringkali	[]

5. Saya telah merasa takut ataupun gugup tanpa sebab yang munasabah

3	Ya, kerapkali	[]
2	Ya, kadangkala	[]
1	Tidak, jarang sekali	[]
0	Tidak, tidak pernah	[]

6. Perkara-perkara yang telah membebankan fikiran saya

3 Ya, kebanyakan masa saya sama sekali tidak dapat mengatasinya []

2	Ya, kadang-kala saya tidak dapat mengatasinya sebaik biasa	ſ	٦
1	Tidak, kebanyakan masa saya mampu mengatasinya sebaik mungkin	ſ	1
0	Tidak, saya telah dapat mengatasinya sebaik mungkin	[1

7. Saya telah merasa sungguh sedih sehingga saya mengalami kesukaran untuk tidur

3	Ya, kebanyakan masa	[]
2	Ya, kadang-kala	[]
1	Tidak, jarang sekali	
0	Tidak, tidak pernah	[]
8. Saya tela	h merasa sedih atau dukacita	

3	Ya, kebanyakan masa 💦 💦	[]
2	Ya, agak kerap	[]
1	Tidak berapa kerap	[]
0	Tidak, tidak pernah	[ĵ

9. Saya telah merasa begitu sedih sehingga saya menangis

3	Ya, kebanyakan masa	[]
2	Ya, agak kerap	[]
1	Cuma sekali sekala	[]
0	Tidak, tidak pernah	[]

10. Perasaan untuk mencederakan diri sendiri pernah terlintas di fikiran saya

3	Ya, kebanyakan masa]]
2	Ya, agak kerap]]
1	Cuma sekala sekali	1]
0	Tidak pernah terlintas	[]

Zuhrah Beevi Kunji Ahmad Yacob

From:	George Dover <gdover1@jhmi.edu></gdover1@jhmi.edu>
Sent:	Friday, 4 September, 2015 11:06 PM
To:	Zuhrah Beevi Kunji Ahmad Yacob
Subject:	Re: Permission to use a figure from your publication

I give you my permission with appropriate attribution

Sent from my iPhone George Dover

On Sep 4, 2015, at 2:45 AM, Zuhrah Beevi Kunji Ahmad Yacob <<u>z.kahmad@hw.ac.uk</u>> wrote:

Dear Dr Dover,

I am a faculty member at Heriot Watt University (Malaysia Branch). I am in the process of completing my PhD thesis.

I would like to seek your permission in using a figure from your publication in the Transactions of the American Clinical and Climatological Association, Vol. 120, 2009. The title of the figure is 'relation of birth weight to infant mortality and complex adult-onset disease'. This is to be included in my discussion on the barker hypothesis.

Hope to have a favourable response from you

Best regards Zuhrah APPENDIX VIII Publication

University challen



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American Journal of Clinical Hypnosis

Publication details, including instructions for authors and subscription information: http://www.tandfonline.com/loi/ujhy20

Successful Treatment of Ptyalism Gravidarum With Concomitant Hyperemesis Using Hypnosis

Zuhrah Beevi^a, Wah Yun Low^a & Jamiyah Hassan^a ^a University of Malaya, Kuala Lumpur, Malaysia Published online: 11 Aug 2015.

To cite this article: Zuhrah Beevi, Wah Yun Low & Jamiyah Hassan (2015) Successful Treatment of Ptyalism Gravidarum With Concomitant Hyperemesis Using Hypnosis, American Journal of Clinical Hypnosis, 58:2, 215-223, DOI: <u>10.1080/00029157.2015.1013186</u>

To link to this article: <u>http://dx.doi.org/10.1080/00029157.2015.1013186</u>

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American Journal of Clinical Hypnosis

ISSN: 0002-9157 (Print) 2160-0562 (Online) Journal homepage: http://www.tandfonline.com/loi/ujhy20

Impact of Hypnosis Intervention in Alleviating Psychological and Physical Symptoms During Pregnancy

Zuhrah Beevi, Wah Yun Low & Jamiyah Hassan

To cite this article: Zuhrah Beevi, Wah Yun Low & Jamiyah Hassan (2016) Impact of Hypnosis Intervention in Alleviating Psychological and Physical Symptoms During Pregnancy, American Journal of Clinical Hypnosis, 58:4, 368-382, DOI: <u>10.1080/00029157.2015.1063476</u>

To link to this article: <u>http://dx.doi.org/10.1080/00029157.2015.1063476</u>