

2015

**TRADITIONAL POSTNATAL CARE
IN RESTORING WOMEN'S PHYSICAL
AND MENTAL HEALTH**

HEALTH TECHNOLOGY ASSESSMENT SECTION (MaHTAS)
MEDICAL DEVELOPMENT DIVISION
MINISTRY OF HEALTH MALAYSIA
004/2015

DISCLAIMER

Technology review is a brief report, prepared on an urgent basis, which draws on restricted reviews from analysis of pertinent literature, on expert opinion and / or regulatory status where appropriate. It has been subjected to an external review process. While effort has been made to do so, this document may not fully reflect all scientific research available. Additionally, other relevant scientific findings may have been reported since completion of this review.

Please contact: htamalaysia@moh.gov.my, if you would like further information.

Health Technology Assessment Section (MaHTAS),
Medical Development Division
Ministry of Health Malaysia
Level 4, Block E1, Precinct 1
Government Office Complex
62590, Putrajaya.

Tel: 603 8883 1246

Fax: 603 8883 1230

Available at the following website: <http://www.moh.gov.my>

Prepared by:
Dr Syaquirah Akmal
Senior Principal Assistant Director
Health Technology Assessment Section (MaHTAS)
Ministry of Health Malaysia

Reviewed by:
Puan Noormah Darus
Senior Principal Assistant Director
Health Technology Assessment Section (MaHTAS)
Ministry of Health Malaysia

Datin Dr. Rugayah Bakri
Deputy Director
Health Technology Assessment Section (MaHTAS)
Ministry of Health Malaysia

External Reviewer

Dr. Ravichandran a/l Jeganathan
Consultant Obstetrician and Gynaecologist
Sultanah Aminah Hospital, Johor Bahru

DISCLOSURE

The author of this report has no competing interest in this subject and the preparation of this report is totally funded by the Ministry of Health, Malaysia

EXECUTIVE SUMMARY

Background

Childbirth and the subsequent postnatal period is a special phase in women's life during which major physical and emotional changes as well as adjustment to a new role occurs. It is often deemed as a social celebration and highly influenced by cultural beliefs and practices transmitted from generation to generation. The postnatal (or postpartum) period begins immediately after the birth of the baby and extends for about six weeks during which, the mother's body return to the non-pregnant state.

Traditional postpartum or confinement beliefs and practices are common in many cultures. In general, most Asian traditional practices of postpartum care aim to restore the balance in the body elements described as; soil, which is dry; fire, which is hot; air, which is cold and water, which is wet. As blood is considered as 'hot' element, giving birth that involves loosing blood is thus described as 'cold' element. These traditional practices aim at restoring the normal function of sexual and reproductive organs, increasing wellbeing and energy of the mothers, promoting wound healing, weight loss and for aesthetic reasons. Malaysia is a multicultural country consisting of three major ethnic groups, namely the Malays, Chinese and Indians, with each having their own confinement practices that may vary across different states in the country, but sharing some similar principles. They diligently observe the confinement period ranging from 30 to 44 days during which several practices such as massage, hot compression, traditional girdle or corset and herbal baths are being performed. A woman must remain at home and restricts her behaviour to special diet, specific activity and practices with the help of a village midwife or her female family member.

In spite of the long standing history of traditional rituals being practiced in postpartum women, its effect and safety profile are still not fully understood. Hence, this technology review was conducted following a request from the Director of Traditional and Complementary Medicine Division, Ministry of Health Malaysia.

Objective / aim

The objective of this technology review was to evaluate the evidence on effectiveness, safety and cost-effectiveness of traditional postnatal care which include postnatal deep tissue massage, breast massage, hot compression and body wrapping in restoring women's physical and mental health.

Results and conclusions

A total of 468 titles were identified through the Ovid interface and PubMed. After applying the inclusion and exclusion criteria, seven articles were finally selected. There were two randomised controlled trials, three quasi-experimental studies, one cross-sectional, and one case report. No economic analysis was retrieved.

Effectiveness

Postnatal massage

There was low to fair level of retrievable evidence that examined the effectiveness of Malay traditional postnatal massage. A cross sectional study found that having Malay traditional postpartum massage was shown to have protective effect against postpartum (postnatal) depression (PND). In a case report of a Malay woman who developed postpartum stroke and received series of Malay massage, the patient was found to have improvement in her speech and fine motor skills.

On the other hand, there were fair level of retrievable articles on other traditional postnatal massage that utilized similar techniques to the aforementioned Malay postnatal massage. The studies found that this postnatal massage seemed to have potential effect in reducing anxiety and stress level, improving quality of sleep and mental status among postnatal mothers.

Postnatal breast massage

There was no retrievable evidence on the effectiveness of Malay postnatal breast massage.

However, there was fair level of retrievable evidence regarding the effectiveness of other traditional postnatal breast massage that utilized similar techniques to the aforementioned Malay breast massage. Two pre and post studies done among postnatal mothers in Korea found that breast massage may have effects on relieving breast pain.

Postnatal hot compression and body wrapping

There was low level of retrievable evidence on the effect of Malay hot compression and body wrapping among postnatal mothers. The study found no statistically significant relationship between these practices and PND.

However, there was no retrievable evidence regarding the effect of other traditional hot compression and body wrapping among postnatal mothers.

Safety

There was no retrievable evidence on the adverse events of Malay and other traditional postnatal practices; postnatal massage, breast massage, hot compression and body wrapping in restoring postnatal women's physical and mental health.

Cost/Cost effectiveness

There was no evidence retrieved on cost-effectiveness of Malay and other traditional postnatal care in restoring women's physical and mental health.

A Malay postnatal care package consisting of massage, hot compression (*tungku*) and abdominal wrapping (*barut*) as well as postnatal breast massage are provided free of charge in the Traditional and Complementary Unit, in several dedicated governmental hospitals.

In conclusion, there was limited fair level of retrievable evidence that suggest the effectiveness of traditional postnatal care in restoring women's physical (breast pain) and mental health (postnatal depression, anxiety, stress levels and quality of sleep).

Methods

Electronic databases were searched through the Ovid interface; MEDLINE(R) In-Process and Other Non-Indexed Citations and Ovid MEDLINE (R) 1946 to present, EBM Reviews – Cochrane Central Registered of Controlled Trials – February 2015, EBM Reviews – Database of Abstracts of Review of Effects – 1st Quarter 2015, EBM Reviews – Cochrane Database of Systematic Reviews – 2005 to February 2015, EBM Reviews – Health Technology Assessment – 1st Quarter 2015, EBM Reviews - NHS Economic Evaluation Database – 1st Quarter 2015. Other databases used include PubMed and Embase. Search was also conducted through some official websites such as World Health Organisation (WHO), Traditional and Complementary Medicine Malaysia and INAHTA. General database such as Google was used to search for additional web-based materials and information. Additional articles retrieved from reviewing the bibliographies of retrieved articles. Studies were selected based on inclusion and exclusion criteria. The inclusion criteria included systematic review studies, randomised controlled trials (RCT), diagnostic accuracy studies, observational studies, case report and economic evaluation studies on traditional postnatal deep tissue massage, breast massage, hot compression and body wrapping. The sole use of herbs was not covered in this review. However, when an article reported its used together with the aforementioned traditional postnatal interventions, the article was selected. The search was limited to articles on human and English - written articles. All relevant literature was appraised using the Critical Appraisal Skills Programme (CASP) tool and were graded based on guidelines from the U.S./Canadian Preventive Services Task Force. Last search was conducted on 20 March 2015.

TRADITIONAL POSTNATAL CARE IN RESTORING WOMEN'S PHYSICAL AND MENTAL HEALTH

1.0 BACKGROUND

Childbirth and the subsequent postpartum period is a special phase in women's life during which major physical and emotional changes as well as adjustment to a new role occurs. It is often deemed as a social celebration and highly influenced by cultural beliefs and practices transmitted from generation to generation. The postnatal or alternatively known as postpartum or puerperium period begins immediately after the birth of a baby and extends for about six weeks during which, the mother's body return to a non-pregnant state.¹ Although childbirth is often associated with positive emotions of joy and fulfilment for the new mother and her family, it may be a time of physical and emotional turmoil. Postpartum women experience problems ranging from minor problems such as tiredness, weight gain, constipation, haemorrhoids, and sore breasts to serious problems such as infected wound, pain, haemorrhage, psychosis and postpartum depression (PND).^{1,2}

Traditional postpartum or confinement beliefs and practices are common in many countries.³⁻⁶ In general, most Asian traditional practices of postpartum care aim to restore the balance in the body elements described as; soil, which is dry; fire, which is hot; air, which is cold and water, which is wet.^{4, 7, 8} As blood is considered as 'hot' element, giving birth that involves loosing blood is thus described as 'cold' element. These traditional practices aim at restoring the normal function of sex and reproductive organs, increasing wellbeing and energy of the mothers, encouraging wound healing, weight loss and for aesthetic reasons.⁸ Malaysia is a multicultural country consisting of three major ethnic groups, namely the Malays, Chinese and Indians, with each having their own confinement practices that may vary across different states in the country but sharing some similar principles. In general, they diligently observe the confinement period ranging from 30 to 44 days, during which several practices such as massage, hot compression, traditional girdle or corset and herbal baths are being performed.⁷ A woman must remain at home and restricts her behaviour to special diet, specific activity and practices with the help of a village midwife or her female family member.

The essential features in the Malay postpartum care include the use of herbs, heat, and Malay postnatal massage.⁹ Heat is used in the form of direct exposure such as hot compression (*bertungku*), warm bath or indirect exposure such as consuming 'hot food' during confinement. The former is also an essential practice in the Malay postnatal massage apart from whole body massage and body wrapping (*barut*). Massage is performed for at least three consecutive days, six to seven times during the confinement period. Hot compression is believed to be able to dissolve residual blood clots in the uterus, to help it to contract, break down fat tissue and help woman's body return to its pre-pregnancy state.^{9, 10} Body wrapping is widely believed to be able to help reduce weight and tone the body, protect the internal organs as well as help swollen organs return to their pre-baby state and promote good posture that will aid in breastfeeding.⁹

Chinese confinement tradition dictates the practice of *zuo-yuetzi* or "doing a month", during which women are required to stay indoors for one full month and follow many restrictive behaviours.⁶ These may involve prohibiting shampooing their hair, brushing their teeth, washing their vulvae, restricting activity, avoiding sunshine, closing windows, and avoiding particular types of food. Bathing is allowed only with specially prepared warm water infused with herbs. Massage and abdominal binding are also performed with the help of a confinement lady or *pui yuet*.¹⁰

Indian postnatal women adhere to certain dietary restrictions during the postnatal period, together with special prayers to protect mother and child from spiritual harm. They also have daily massage and abdominal wrapping with special oil blends, such as coconut or mustard seed oil with the help of a confinement lady called *dai*.¹⁰

The Ministry of Health, Malaysia (MOH) has taken a stand to promote safe practices in Malay postpartum care and also provide information to discourage any potentially harmful beliefs that may affect the morbidity and mortality of new mothers.⁹ This is in accordance with the World Health Organization (WHO) Traditional Medicine Strategy 2002 – 2005 that denotes the promotion of safe, efficacious, and quality traditional and complementary medicine (T&CM) services and products.¹¹ Since the establishment of the first integrated T&CM Unit in Kepala Batas Hospital in 2006, there are currently 15 T&CM unit in hospitals throughout Malaysia.¹²

In spite of the long standing history of traditional rituals being practiced in postpartum women, its effect and safety profile are still not fully understood. This technology review was conducted following a request from the Director of Traditional and Complementary Medicine (T&CM) Division, Ministry of Health Malaysia to evaluate the evidence on effectiveness, safety and cost-effectiveness of traditional postnatal practices.

2.0 OBJECTIVE / AIM

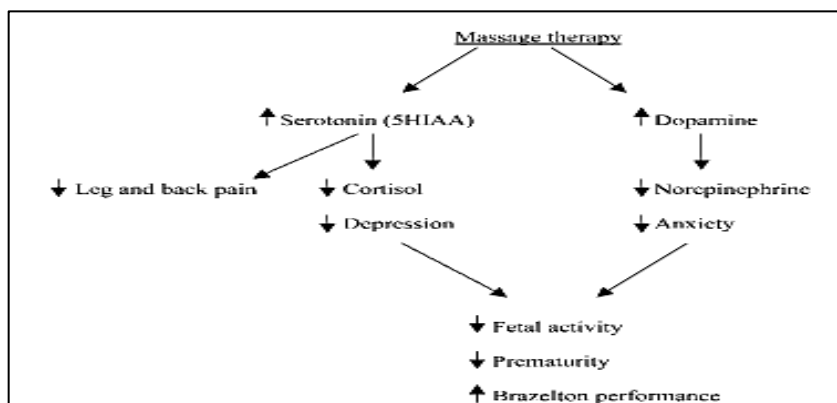
The objective of this technology review was to evaluate the evidence on effectiveness, safety and cost-effectiveness of traditional postnatal care including deep tissue massage, breast massage, hot compression and body wrapping in restoring women's physical and mental health.

3.0 TECHNICAL FEATURES

Deep tissue massage

Field et al (2004) in their proposed theoretical model explained how massage therapy leads to prevention of depression and anxiety in pregnant women as well as better neonatal outcomes (Figure 1).¹³ The increase in serotonin leads to the decreased in cortisol and therefore preventing depression. In addition, serotonin is noted to reduce leg and back pain. Furthermore, in another pathway, the massage therapy is also expected to increase dopamine and, in turn, decrease norepinephrine and anxiety which ultimately, may lead to reduced fetal activity and better neonatal outcome.

Figure 1: Potential mechanisms underlying massage therapy effects



In Malay culture, postnatal massage entails a deep tissue and therapeutic body massage, conducted by an experienced masseuse (Figure 2).⁹ It is claimed to be able to restore a woman's body to its pre-pregnancy condition and speeds up the healing process by helping to realign body weight to its original distribution, tones over-stretched areas of the skin, increases circulation, removes excess fluids and reduces swelling. massage is a mixture of kneading, stroking and pressing with hands.¹⁴ The massage strokes are done depending on the masseur's judgment of one's body need but in principle, the strokes are usually towards the heart. The masseur can either starts from the foot progressing upward (upward trend) or from the head then slowly massaging downward (downward trend). Selected natural plants or herbal oils are sometimes applied during the massage, accompanied by special incantations.¹⁴ It is usually done three times in the first week after normal delivery then on the 39th, 40th and 44th day of confinement period.⁹

Figure 2: Postnatal massage



Postnatal massage has also been reported to be used by postnatal mothers from other cultural group. In Japan, series of slow, firm strokes were applied to the body and limbs with patient lying supine while in Taiwan, patients laid in prone position.^{15, 16}

In general, massage is contraindicated when it could cause worsening of a particular condition, unwanted tissue destruction, or spread of disease. Side effects that may be associated with massage include temporary pain or discomfort, bruising, swelling and allergic reactions to massage oils.¹⁴

Breast massage

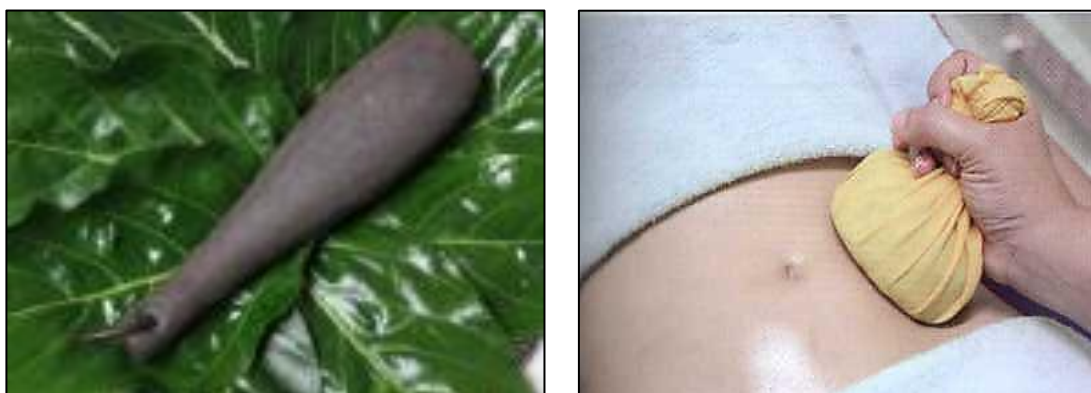
Breast massage involves massaging the breast gently prior to feeding using the fingertips and kneading in a circular motion from chest wall towards nipple for 10 minutes for one breast.⁹ It is claimed to help increase breast milk flow, the production of breast milk and prevent breast engorgement. It can be done by the woman herself after being taught by a trained midwife. Typically, a breast massage session takes around 30 minutes per session.⁹

In other cultural practices, such as in Japanese mothers, Oketani method of breast massage is being used.¹⁷ This type of breast massage was developed by Oketani, which include a total of eight hand techniques; seven retromammary space-separating techniques and one milking technique for each area on both breasts.¹⁷

Hot compression

Hot compression is a form of point massage using heated objects which is usually done after the first week of normal delivery.⁹ It is claimed to be able to reduce pain, muscle spasm and congestions of non-inflammatory origin as well as improve bowel movement, promote flatus and defecation.

Figure 3: Hot compression



The apparatus consists of a) a ball-like iron with a handle or b) a sphere-shaped river stone (Figure 3). Lemongrass, galangal or *pandan* leaves are wrapped in a cloth around the iron and then heated up. Traditionally, the hot compress is applied for at least half an hour to an hour to the limbs, shoulder, neck, abdomen and chest. Sometimes, it is also applied to the thigh area. During this process, the abdomen is also massaged in a particular style, to "lift" the womb and prevent it from sagging in old age.¹⁰

Body wrapping

Traditionally, body wrap is made of cloth, which is tightly wrapped around the woman's waist (Figure 4). It is claimed to provide lower abdominal support and helps realigned the spine to its normal shape. There are several types of body wrap described in the literature.¹⁰ *Bengkung Barut*, or the bandage bengkung, is similar to the traditional cloth carrier for children. It has a left and a right string which are tied together. *Bengkung Mia* is a corset-style cloth with criss-crossed ties. *Bengkung Java*, or entwining *bengkung*, is a broad piece of cloth (about 15m long) wrapped around the torso. These body wraps are typically put on after traditional oil, herbs and spices have been rubbed onto the abdomen and the back.¹⁰

Figure 4: Body wrapping



4.0 METHODS

4.1. Searching

Electronic databases were searched through the Ovid interface; MEDLINE(R) In-Process and Other Non-Indexed Citations and Ovid MEDLINE (R) 1946 to present, EBM Reviews – Cochrane Central Registered of Controlled Trials – February 2015, EBM Reviews – Database of Abstracts of Review of Effects – 1st Quarter 2015, EBM Reviews – Cochrane Database of Systematic Reviews – 2005 to February 2015, EBM Reviews – Health Technology Assessment – 1st Quarter 2015, EBM Reviews - NHS Economic Evaluation Database – 1st Quarter 2015. Other databases used include PubMed and Embase. Search was also conducted through some official websites such as World Health Organisation (WHO), Traditional and Complementary Medicine Malaysia and INAHTA. General database such as Google was used to search for additional web-based materials and information. Additional articles were retrieved from reviewing the bibliographies of retrieved articles. The search was limited to articles on human and English-written articles. **Appendix 1** showed the detailed search strategies. The last search was conducted on 20 March 2015.

4.2. Selection

A reviewer screened the titles and abstracts against the inclusion and exclusion criteria and then evaluated the selected full-text articles for final article selection. The inclusion and exclusion criteria were:

Inclusion criteria

Problem Population	Postnatal or postpartum women
Interventions	Traditional postnatal care a. Deep tissue massage b. Breast massage c. Hot compression d. Body wrapping
Comparators	Nil
Outcomes	a. Physical health: to reduce postnatal discomfort, pain, reduction in breast pain, reduction in breast engorgement

	<ul style="list-style-type: none"> b. Mental health: reduction in stress, reduction in mood disorder, prevention/reduction in postnatal depression c. General health: improve sleep, improve quality of life d. Adverse events of traditional postnatal care e. Cost-effectiveness of traditional postnatal care
Study design	Systematic reviews (SRs), randomised control trials (RCTs), qualitative, cross-sectional, cohort, case control, case series, case report
Type of publication	English, full text articles

Exclusion criteria

Study design	Anecdotal, animal studies
Type of publication	Non-English

The sole use of herbs was not covered in this review. However, when an article reported its used together with the aforementioned interventions, the article was selected. Relevant articles were critically appraised using Critical Appraisal Skills Programme (CASP) and evidence graded according to the US/Canadian Preventive Services Task Force (**Appendix 2**). Data were extracted and summarised in the evidence table (**Appendix 3**).

5.0 RESULTS AND DISCUSSION

Evidence retrievable thru Ovid interface and Pubmed consist of two randomised controlled trials, three quasi-experimental studies, one cross-sectional, and one case report. No economic analysis was retrieved.

5.1 Effectiveness

a. Postnatal massage

There were two studies which looked at the effectiveness of Malay massage among postnatal mothers. Azidah et al (2006) conducted a cross sectional study to determine the prevalence of postnatal depression (PND) in Malaysian women and its association with socio-cultural practices.¹⁸ Level II-3 The study recruited 421 pregnant women who attended Maternal and Child Health Clinics in Kota Bharu, Kelantan, Malaysia at their 36 to 42 weeks antepartum. The mean (SD) age of the women was 31.3 (5.9) and 98% of them were Malay. The women were asked to fill the Malay version of General Questionnaire and the Malay version of Edinburgh Postnatal Depression scale (EPDS) on three occasions; at 36 to 42 weeks antepartum, at about one week and four weeks post-delivery. The traditional postnatal practices that were included in the study were taking traditional medicine, having traditional massage, using traditional corset, following the food taboos, having postnatal rituals and using heat therapy known as *bersalai* (being smoked) or *bertungku*

(using heated stone). Having a traditional massage was shown to have protective effect against postpartum depression (OR 0.2; 95% CI 0.06 to 76, $p = 0.02$). The authors suggested that part of this effect may be a reflective of social support, as the traditional masseuse is often a close friend to women in the community.

Fadzil et al (2012) conducted a case report on a Malay woman who developed postpartum stroke and received Malay massage to complement her rehabilitative care.¹⁹ Level III Patient had lower segment caesarean section for fetal distress and developed postpartum haemorrhage which resulted in subtotal hysterectomy. Subsequently, patient developed dense stroke affecting the right side of her body. She received a series of Malay massage and after 14 sessions, she improved tremendously in her speech and fine motor skills and regained her activities of daily living.

There were other studies which looked at other type of massage which utilised similar techniques to that of Malay massage. Field et al (1996) conducted a randomised controlled trial to compare the effects of massage and relaxation therapies on anxiety and depression among depressed adolescent mothers who had given birth at large inner-city hospital in the United States.²⁰ Level I The inclusion criteria included an elevated Beck Depression Inventory (BDI) score and not on medication or other treatment for depression or related disorders. Thirty two subjects were randomly assigned to either ten 30-minute sessions of massage therapy or relaxation therapy group over a five-week period, in equal proportion. In the former group, slow stroking involving four regions i.e. head/neck, arms/hands, torso and legs, was conducted by a massage therapist. The relaxation therapy consisted of yoga exercises, progressive muscle relaxation during which the subjects were instructed to breathe deeply for several minutes. The instructor then asked the subjects to relax and tense eight different muscle groups beginning with the feet and ending with the head. The effects of the massage and relaxation therapies were assessed on the first and last days of the assessment period in terms of (a) Behaviour Observation Scales including seven behaviour ratings (state, affect, activity level, anxiety level, fidgeting or nervous behaviour, vocalizations, and cooperation); (b) Profile of Mood States; (c) State Anxiety Inventory for Children; (d) pulse rate; (e) saliva samples of cortisol; and (f) urine sample for cortisol. On the first and last days of the treatment period the baseline, during session and post-session assessment measures were collected. Both groups reported significant lower anxiety level following their first and last therapy sessions, but only the massage therapy group showed behavioural and stress hormone changes including a decrease in anxious behaviour ($p= 0.001$), pulse ($p=0.001$), and salivary cortisol ($p=0.01$) levels. A decrease in urine cortisol levels suggested reduction in stress following the five-week period for the massage therapy group ($p<0.05$).²⁰

A randomised controlled trial conducted at a postpartum centre in Northern Taiwan examined the effectiveness of using back massage to improve sleep quality in postpartum women.¹⁶ Level I Sixty postpartum women reporting poor quality of sleep were recruited and were assigned randomly to either back massage therapy (intervention) or a control group. The intervention group received a single 20-minutes back massage session at the same time each

evening for five consecutive days by a certified massage therapist. The outcome measure was the Pittsburgh Sleep Quality Index (PSQI), which was administered pre- and post-test. The changes in mean PSQI were significantly lower in the intervention group ($p=0.001$) than in the control group which indicate that an intervention involving back massage in the postnatal period significantly improved the quality of sleep.¹⁶

Imura et al (2006) conducted a quasi-experimental study which examined the effect of body massage with aromatherapy in healthy postpartum mothers in urban Tokyo, Japan.¹⁵ Level II-2 Thirty-six healthy, first-time mothers with vaginal delivery of a full-term, healthy infant participated in this study. The mean (\pm SD) age of all participants in this study was 31.9 (\pm 4.2) years, and the range was from 24 to 39 years. Mothers who received whole body massage with aromatherapy oil containing Neroli (*Citrus aurantium*) and Lavender (*Lavendula officinalis*), were compared with a control group who received standard postpartum care. All mothers completed four standardized questionnaires before and after the intervention: 1) Maternity Blues Scale; 2) State-Trait Anxiety Inventory; 3) Profile of Mood States (POMS); and 4) Feeling toward Baby Scale. Mothers in the aromatherapy-massage group, experienced significantly lower Maternity Blues scores ($p=0.001$), the State-Anxiety Inventory ($p=0.0001$), and all but one of the Profile of Mood States subscales (Tension-Anxiety, $p=0.001$; Anger-Hostility, $p=0.006$; Depression-Dejection, $p=0.015$; Fatigue, $p=0.001$; Confusion, $p=0.009$ and Conflict Index of Avoidance/Approach Feeling toward Baby, $p=0.013$) than those in the control group. The effects of the aromatherapy-massage as evidenced in the lower scores on anxiety and depression, might signifies improvement in mental status and feelings toward the baby for healthy postpartum mothers compared with women in no intervention group. However since the therapy was a combination of both massage and aromatherapy, their individual effect need to be further evaluated.¹⁵

b. Breast massage

There was no evidence on Malay breast massage retrieved from the databases.

However, there were two studies which evaluated Oketani breast massage. It refers to the type of massage in which a total of eight hand techniques, including seven retro mammary space-separating techniques and one milking technique for each area on the left and right breasts.¹⁷

Ahn, Kim and Cho (2011) conducted a pre and post study on the effects of breast massage on breast pain, breast-milk sodium, and newborn suckling in early postpartum mothers.²¹ Level II-1 Sixty postpartum mothers with mean age of 30 years old who were admitted to a postpartum care centre and had problems with breastfeeding were recruited. Forty four women were assigned to the intervention group and received two 30-minute breast massages within 10 days of postpartum period. The rest were assigned to control group and received only routine care. Breast pain was measured using a numeric pain scale. Women in the intervention group reported significant decrease in breast pain ($p<0.001$), compared to the control group which indicates that breast massage may have effects on relieving breast pain.

A pre and post study was done by Cho et al (2012) to examine the effect of Oketani breast massage compared with conventional massage on breast pain and breast milk pH of mothers, and sucking speed of neonates.¹⁷ Level II-1 Postpartum women complaining of breast pain were recruited at a postpartum care center. Participants were homogeneous in age, gestation period, and birth weight. Twenty two women in the experimental group received Oketani breast massage by an Oketani massage therapist while 25 women in the control group received conventional massage from a postnatal nurse. A visual analogue scale was used to measure breast pain. The study showed that breast pain was significantly relieved in the experimental group that received Oketani breast massage compared to the control group (t=8.384, p<0.001).

c. Hot compression (*Bertungku*)

Azidah et al found that participation in *bertungku* was significantly less common among women who developed PND (Edinburgh Postnatal Depression scale > 12) than among those who did not (P = 0.01).¹⁸ Level II-3 However, after controlling for other independent predictors of PND, such as postpartum massage, *bertungku* was no longer statistically associated with PND.

There was no retrievable evidence on the effect of other traditional practice of hot compression among postnatal women.

d. Body wrapping (*Barut*)

Azidah et al found that wearing traditional corset (*barut*) was less prevalent among women who developed PND but the relationship was not statistically significant (p>0.05).¹⁸ Level II-3

There was no retrievable evidence regarding the effect of other traditional practice of body wrapping among postnatal women.

5.2 Safety

There was no retrievable evidence that evaluate the adverse event of Malay and other traditional postnatal care including postnatal massage, breast massage, hot compression and body wrapping.

5.3 Cost-effectiveness

There was no retrievable evidence that evaluate the cost-effectiveness of Malay and other traditional postnatal care including postnatal massage, breast massage, hot compression and body wrapping among postnatal women.

A Malay postnatal care package consisting of massage, hot compression (*tungku*) and abdominal wrapping (*barut*) as well as postnatal breast massage are provided free of charge in the Traditional and Complementary Unit, in several dedicated governmental hospitals. Estimated costs according to the market prices are as listed (Email communication with T&CM Division, MOH);

Service provided	Cost (RM) per session
Postnatal massage	50 - 100
Postnatal care package including massage, hot	100 - 150

compression (<i>tungku</i>) and abdominal wrapping (<i>barut</i>)	
---	--

Limitation

Our review has several limitations. The selection of the studies and appraisal was done by one reviewer. Although there was no restriction in language during the search, only English full text articles were included in the report.

6.0 CONCLUSION

There was limited fair level of retrievable evidence that suggest the effectiveness of traditional postnatal care in restoring women's physical (breast pain) and mental health (postnatal depression, anxiety, stress levels and quality of sleep). However, there was no retrievable evidence on safety and cost-effectiveness of traditional postnatal care. A postnatal care package consisting of deep tissue massage, hot compression (*tungku*) and abdominal wrapping (*barut*) as well as postnatal breast massage are provided free of charge in the Traditional and Complementary Unit in several dedicated governmental hospitals.

7.0 REFERENCES

1. World Health Organisation. WHO Technical Consultation on Postpartum and Postnatal Care. 2010.
http://whqlibdoc.who.int/hq/2010/WHO_MPS_10.03_eng.pdf (Accessed on 1 March 2015)
2. Blenning CE andPaladine H. An approach to the postpartum office visit. *Am Fam Physician*. 2005;72(12):2491-2496.
3. Dennis CL, Fung K, Grigoriadis S et al. Traditional postpartum practices and rituals: a qualitative systematic review. *Womens Health (Lond Engl)*. 2007;3(4):487-502.
4. Kaewsarn P, Moyle W, Creedy D. Traditional postpartum practices among Thai women. *J Adv Nurs*. 2003;41(4):358-366.
5. Geckil E, Sahin T, Ege E. Traditional postpartum practices of women and infants and the factors influencing such practices in South Eastern Turkey. *Midwifery*. 2009;25(1):62-71.
6. Raven JH, Chen Q, Tolhurst RJ et al. Traditional beliefs and practices in the postpartum period in Fujian Province, China: a qualitative study. *BMC Pregnancy Childbirth*. 2007;7:8.
7. Ariff KM and Beng KS. Cultural health beliefs in a rural family practice: A Malaysian perspective. *Australian Journal of Rural Health*. 2006;14(1):2-8.
8. Naser E, Mackey S, Arthur D et al. An exploratory study of traditional birthing practices of Chinese, Malay and Indian women in Singapore. *Midwifery*. 2012;28(6):e865-871.
9. Ministry of Health Malaysia. Traditional and Complementary Medicine Guideline on Malay Postnatal Care. 2009.
tcm.moh.gov.my/v4/pdf/guideline/Postnatal.pdf (Accessed on 3 March 2015)

10. Babycenter website. Traditional Confinement. updated February 2014; Available from: <http://www.babycenter.com.my/c25004403/traditional-confinement>. (Accessed on 2 March 2015)
11. Ministry of Health Malaysia. Traditional and Complementary Medicine Programme in Malaysia. 2011. (Accessed on 17 March 2015)
12. Portal MyHealth Ministry of Health Malaysia. Perkhidmatan Rawatan Traditional Dan Komplementari Yang Berikan Oleh KKM. June 2014. Available from: <http://www.myhealth.gov.my/?p=2109>. (Accessed on 1 March 2015)
13. Field T, Diego MA, Hernandez-Reif M et al. Massage therapy effects on depressed pregnant women. *J Psychosom Obstet Gynaecol*. 2004;25(2):115-122.
14. Ministry of Health Malaysia. Traditional and Complementary Medicine Practice Guideline On Malay Massage. 2009. 2nd Edition (Accessed on 3 March 2015)
15. Imura M, Misao H, Ushijima H. The psychological effects of aromatherapy-massage in healthy postpartum mothers. *J Midwifery Womens Health*. 2006;51(2):e21-27.
16. Ko YL and Lee HJ. Randomised controlled trial of the effectiveness of using back massage to improve sleep quality among Taiwanese insomnia postpartumwomen. *Midwifery*. 2014;30(1):60-64.
17. Cho J, Ahn HY, Ahn S et al. Effects of Oketani Breast Massage on Breast Pain, the Breast Milk pH of Mothers, and the Sucking Speed of Neonates. *Korean Journal of Women Health Nursing*. 2012;18(2):149.
18. Azidah AK, Shaiful BI, Rusli N et al. Postnatal depression and socio-cultural practices among postnatal mothers in Kota Bahru, Kelantan, Malaysia. *Med J Malaysia*. 2006;61(1):76-83.
19. Fadzil F, Anuar HM, Ismail S et al. Urut Melayu, the traditional Malay massage, as a complementary rehabilitative care in postpartum stroke. *J Altern Complement Med*. 2012;18(4):415-419.
20. Field T, Grizzle N, Scafidi F et al. Massage and relaxation therapies' effects on depressed adolescent mothers. *Adolescence*. 1996;31(124):903-911.
21. Ahn S, Kim J, Cho J. Effects of breast massage on breast pain, breast-milk sodium, and newborn suckling in early postpartum mothers. *J Korean Acad Nurs*. 2011;41(4):451-459.

8.0 APPENDIX

8.1 Appendix 1: LITERATURE SEARCH STRATEGY

Ovid MEDLINE® In-Process & Other Non-indexed Citations and Ovid MEDLINE® 1948 to present

- 1 Postpartum Period/
2 (postpartum adj1 (Wom*n or period)).tw.
- 3 puerperium.tw.
- 4 postpartum.tw.
- 5 Pregnancy Complications/
6 (pregnancy adj1 complication*).tw.
- 7 1 or 2 or 3 or 4 or 5 or 6
- 8 Postnatal Care/
9 ((Postpartum or postnatal) adj1 (care* or program*)).tw.
- 10 Medicine, Traditional/
11 ((Traditional or primitive or indigenous) adj1 medicine).tw.
- 12 ((Remed* or medicine) adj1 (home or folk)).tw.
- 13 Ethnomedicine.tw.
- 14 Massage/
15 (Therap* adj1 (zone or massage or zone massage)).tw.
- 16 (Craniosacral adj1 massage).tw.
- 17 Bodywork*.tw.
- 18 Rolfing.tw.
- 19 Malay Massage/
20 Urut.tw.
- 21 Urut melayu.tw.
- 22 Heat/
23 (Heat adj1 loss*).tw.
- 24 (Hot adj1 temperature*).tw.
- 25 (Body adj1 temperature regulation*).tw.
- 26 Thermoregulation*.tw.
- 27 Hot Compression/
28 Bertungku.tw.
- 29 Brace*.tw.
- 30 barut.tw.
- 31 Bengkung.tw.
- 32 Corset.tw.
- 33 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23
or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32
- 34 7 and 33
- 35 limit 34 to (humans)

OTHER DATABASES	
EBM Reviews – Cochrane Central Registered of Controlled Trials	Same MeSH, keywords, limits used as per MEDLINE search
EBM Reviews – Database of Abstracts of Review of Effects	
EBM Reviews – Cochrane database of systematic reviews	
EBM Reviews – Health Technology Assessment	
NHS economic evaluation database	
Embase	

PubMed

(((((Postpartum Period/) or women postpartum) or postpartum women) or period postpartum) or postpartum period) or puerperium) or postpartum) or Pregnancy Complications/) or complication pregnancy) or complications pregnancy) or pregnancy complications) or pregnancy complication) and (((((((((((((((((((Postnatal Care/) OR postpartum care) or care postpartum) or cares postpartum) or postpartum cares) OR program postpartum) OR programs postpartum) or postpartum programs) or postpartum program) OR care postnatal) or postnatal care) OR Traditional medicine/) or medicine traditional) or medicine primitive) or primitive medicine) or indigenous medicine) or medicine indigenous) or ethnomedicine) OR Malay Massage/) OR zone therap*) or therapy zone) OR massage therap*) or therap* massage) or therap* zone massage) or massage craniosacral) or craniosacral massage) or OR rolfing) OR urut) OR urut melayu) OR Hot Compression/) OR hot temperature*) or temperature* hot) or bertungku) OR body wrapping OR Corset OR braces OR bengkung) or baru))))))))))

8.2 Appendix 2

HIERARCHY OF EVIDENCE FOR EFFECTIVENESS STUDIES

DESIGNATION OF LEVELS OF EVIDENCE

I Evidence obtained from at least one properly designed randomized controlled trial.

II-1 Evidence obtained from well-designed controlled trials without randomization.

II-2 Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one centre or research group.

II-3 Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of the introduction of penicillin treatment in the 1940s) could also be regarded as this type of evidence.

III Opinions or respected authorities, based on clinical experience; descriptive studies and case reports; or reports of expert committees.

**SOURCE: US/CANADIAN PREVENTIVE SERVICES TASK FORCE
(Harris 2001)**

8.3 APPENDIX 3: Evidence Table

Effectiveness

Question: Is traditional postnatal care effective in restoring women's physical and mental health?

Bibliographic citation	Study Type/Methods	LE	Number of Patients & Patient Characteristic	Intervention	Comparison	Length of Follow Up (If Applicable)	Outcome Measures/Effect Size	General Comments
1. Field T, Grizzle N, Scafidi F et al. Massage and relaxation therapies' effects on depressed adolescent mothers. Adolescence. 1996;31(124):903-911.	<p>Randomised controlled trial in US</p> <p>Objective: to compare the effects of massage and relaxation therapies on anxiety and depression in a sample of depressed adolescent mothers</p> <p>Thirty-two depressed adolescent mothers were randomly assigned to 2 groups over five-week period;</p> <p>i. ten 30-minute sessions of massage therapy or</p> <p>ii. ten relaxation therapy sessions</p>	I	32 adolescent mothers The groups did not differ on age (M = 18.1), years of education (M = 10.4), ethnicity (71% black, 29% Hispanic), or SES (M = 4.7 on the Hollingshead Index)	massage therapy	relaxation therapy	Five weeks	<ul style="list-style-type: none"> Both groups reported lower anxiety following their first and last therapy sessions Only the massage therapy group showed behavioral and stress hormone changes including a decrease in anxious behavior, pulse, and salivary cortisol levels. A decrease in urine cortisol levels suggested lower stress following the five-week period for the massage therapy group. 	

Bibliographic citation	Study Type/Methods	LE	Number of Patients & Patient Characteristic	Intervention	Comparison	Length of Follow Up (If Applicable)	Outcome Measures/Effect Size	General Comments

<p>2. Ko YL, Lee HJ. Randomised controlled trial of the effectiveness of using back massage to improve sleep quality among Taiwanese postpartum women. Midwifery.2014;30(1):60-64.</p>	<p>Randomised controlled trial, conducted at a postpartum centre in Northern Taiwan</p> <p>Objective: to examine the effectiveness of using back massage to improve sleep quality in postpartum women.</p> <ul style="list-style-type: none"> • Women were assigned randomly to either an intervention or a control group. • Participants in both groups received the same care except for back massage therapy. • The intervention group received a single 20-minutes back massage session at the same time each evening for 5 consecutive days. • Sessions were administered by a certified massage therapist. 	I	60 postpartum women reporting poor quality	Massage	No massage	February 2012 to May 2012	<ul style="list-style-type: none"> • The outcome measure was the Pittsburgh Sleep Quality Index (PSQI), which was administered pre- and post-test. • Using a generalised estimation equation to control several confounding variables, the changes in mean PSQI were significantly lower in the intervention group (B=-3.97, standard error =0.43, po0.001) than in the control group. <p>Author's conclusions:</p> <ul style="list-style-type: none"> • An intervention involving back massage in the postnatal period significantly improved the quality of sleep. • Implications for practice: midwives should evaluate maternal sleep quality and design early intervention programs to improve the quality of sleep, to increase maternal health. • Midwives interested in complementary therapies should be encouraged to obtain training in back massage and to apply it in postpartum care 	
--	--	---	--	---------	------------	---------------------------	---	--

Bibliographic citation	Study Type/Methods	LE	Number of Patients & Patient Characteristic	Intervention	Comparison	Length of Follow Up (If Applicable)	Outcome Measures/Effect Size	General Comments
------------------------	--------------------	----	---	--------------	------------	-------------------------------------	------------------------------	------------------

<p>3.Imura M, Misao H, Ushijima H. The psychological effects of aromatherapy-massage in healthy postpartum mothers. J Midwifery Womens Health.2006;51(2):e21-27.</p>	<p>A quasi-experimental between 2 groups</p> <p>Objective: To examined the effect of aromatherapy-massage in healthy postpartum mothers.</p> <ul style="list-style-type: none"> • Mothers who received aromatherapy-massage were compared with a control group who received standard postpartum care. • Sixteen mothers received a 30-minute aromatherapy-massage on the second postpartum day; 20 mothers were in the control group. • All mothers completed the following four standardized questionnaires before and after the intervention: <ul style="list-style-type: none"> 1)Maternity Blues Scale; 2)State-Trait Anxiety Inventory; 3)Profile of Mood States (POMS); 4)Feeling toward Baby Scale. 	<p>II-2</p>	<p>36 healthy, first-time mothers with vaginal delivery of a full-term, healthy infant</p>	<p>Massage with aromatherapy</p>	<p>No massage or aromatherapy</p>		<ul style="list-style-type: none"> • In the aromatherapy-massage group, post treatment scores significantly decreased for the Maternity Blues Scale, the State-Anxiety Inventory, and all but one of the Profile of Mood States subscales. • Post treatment scores in the intervention group significantly increased in Profile of Mood States-Vigor subscale and the Approach Feeling toward Baby subscale. • Scores in the intervention group significantly decreased in Conflict Index of Avoidance/Approach Feeling toward Baby subscale. <p>Author's conclusion: Our results suggest that aromatherapy-massage might be an effective intervention for postpartum mothers to improve physical and mental status and to facilitate mother-infant interaction.</p>	
--	--	-------------	--	----------------------------------	-----------------------------------	--	---	--

Bibliographic citation	Study Type/Methods	LE	Number of Patients & Patient Characteristic	Intervention	Comparison	Length of Follow Up (If Applicable)	Outcome Measures/Effect Size	General Comments
------------------------	--------------------	----	---	--------------	------------	-------------------------------------	------------------------------	------------------

<p>4. Azidah AK, Shaiful BI, Rusli N et al. Postnatal depression and socio-cultural practices among postnatal mothers in Kota Bahru, Kelantan, Malaysia. Med J Malaysia. 2006;61(1):76-83.</p>	<p>A cross sectional study</p> <p>Objective: to determine the prevalence of PND in Malaysian women and its association with socio-cultural practices.</p> <ul style="list-style-type: none"> • The women were asked to fill the Malay version of General Questionnaire and the Malay version of Edinburgh Postnatal Depression scale (EPDS) on three occasions; at 36 to 42 weeks antepartum, at about one week and four weeks post-delivery. • The traditional postnatal practices that were included in the study; <ul style="list-style-type: none"> i. taking traditional medicine ii. having traditional massage iii. using traditional corset iv. following the food taboos v. having postnatal rituals vi. using heat therapy known as <i>bersalai</i> (being smoked) or <i>bertungku</i> (using heated stone). 	<p>II-3</p>	<p>421 pregnant women who attended Maternal and Child Health Clinics in Kota Bharu, Kelantan, Malaysia at their 36 to 42 weeks antepartum. The mean (SD) age of the women was 31.3 (5.9) and 98% of them were Malay.</p>				<p>Having a traditional massage was shown to have protective effect against postpartum depression (OR 0.2; 95% CI 0.06 to 76, p = 0.02).</p> <p>Author's conclusion: This effect may be a reflective of social support, as the traditional masseuse is often a close friend to women in the community.</p>	
--	---	-------------	--	--	--	--	--	--

Bibliographic citation	Study Type/Methods	LE	Number of Patients & Patient Characteristic	Intervention	Comparison	Length of Follow Up (If Applicable)	Outcome Measures/Effect Size	General Comments
------------------------	--------------------	----	---	--------------	------------	-------------------------------------	------------------------------	------------------

5. Fadzil F, Anuar HM, Ismail S et al. Urut Melayu, the traditional Malay massage, as a complementary rehabilitative care in postpartum stroke. J Altern Complement Med. 2012;18(4):415-419.	Case report of one patient Methods: The patient received a series of urut Melayu, the traditional Malay massage, sessions at one of the newly established integrated hospitals in the country.	III	The case of a 32-year-old Malay woman who developed postpartum stroke is reported.				After 14 urut Melayu sessions, she improved tremendously in her speech and fine motor skills and regained her activities of daily living. Author's Conclusions: The use of urut Melayu to complement rehabilitation care in patients post stroke is promising.	
6. Ahn S, Kim J, Cho J. Effects of breast massage on breast pain, breast-milk sodium, and newborn suckling in early postpartum mothers. J Korean Acad Nurs. 2011;41(4):451-459.	Non-synchronized non-equivalent control group pretest-post test study Objective: to examine the effects of breast massage on breast pain, breast-milk sodium, and newborn suckling in early postpartum mothers <ul style="list-style-type: none"> • 44 were assigned to the intervention group and received two 30-minute breast massages within 10 days of postpartum period. • The others were assigned control group and received only routine care. • Breast pain was measured using a numeric pain scale and number of times newborns suckled was observed throughout breastfeeding. • Breast milk was self-collected to evaluate breast-milk sodium. 	II-1	Sixty postpartum mothers who were admitted to a postpartum care centre and had problems with breastfeeding were recruited. Mean age of postpartum mothers was 30 years old.	Breast massage	Routine care		Compared to the control group, women in the intervention group reported significant decreases in breast pain ($p<0.001$), increases in number of times newborns suckled after the first and second massage ($p<0.001$), and a decrease in breast-milk sodium after the first massage ($p=0.034$). Author's Conclusion: Breast massage may have effects on relieving breast pain, decreasing breast-milk sodium, and improving newborn suckling.	

Bibliographic citation	Study Type/Methods	LE	Number of Patients & Patient Characteristic	Intervention	Comparison	Length of Follow Up (If Applicable)	Outcome Measures/Effect Size	General Comments
------------------------	--------------------	----	---	--------------	------------	-------------------------------------	------------------------------	------------------

<p>7. Cho J, Ahn HY, Ahn S et al. Effects of Oketani Breast Massage on Breast Pain, the Breast Milk pH of Mothers, and the Sucking Speed of Neonates. Korean Journal of Women Health Nursing. 2012;18(2):149</p>	<p>Pre-post study, non-equivalent control group</p> <p>Objective: to test the effects of Oketani breast massage on breast pain and breast milk pH of mothers, and sucking speed of neonates.</p> <p>Postpartum mothers complaining of breast pain were recruited at a postpartum care centre.</p> <p>The inclusion criteria were postpartum mothers who were nursing their infants, complaining the breast engorgement pain, and agreeing to participate in this study.</p> <p>Experimental group: received Oketani breast massage by an Oketani massage therapist</p> <p>The control group received the conventional massage technique from a nurse at the postpartum care centre.</p> <p>A visual analogue scale was used to measure breast pain.</p>	<p>II-1</p>	<p>22 women in experimental group 25 women in control group</p> <p>Mean age of the experimental group = 29.9 years old, control group = 31.4 years old.</p> <p>The participants were homogeneous in age, gestation period, and birth weight.</p>	<p>Oketani breast massage</p>	<p>Nursing breast massage</p>		<p>Breast pain after the experimental treatment decreased by 5.14 points in the experimental group and by 0.92 points in the control group compared to the breast pain experienced by the subjects before the treatment.</p> <p>This relationship was significant ($t=8.384, p<.001$).</p> <p>pH ($t=4.793, p<.001$) was significantly increased in the experimental group compared to the control group.</p> <p>Author's Conclusion: Oketani breast massage is effective in relieving breast pain compared to conventional breast massage.</p>	
--	---	-------------	--	-------------------------------	-------------------------------	--	--	--