

**Spirituality and Psycho-education of pregnant Chinese women:
An evaluation of the effect of an Eastern based model of Mind-Body-Spirit
intervention on maternal and fetal status**

Spirituality, psychoeducation and pregnancy health are interrelated. Childbearing is the ideal context within which to enrich spirituality. Psychoeducation is important in facilitating spiritual empowerment and health. Pregnancy health has been shown to have significant consequences for the mother, growing foetus, child and family. Present prenatal care aims to promote pregnancy health by prenatal class which mainly on dispensation of information but lack of spiritual care and psychoeducation. In view of limited studies on spirituality, psychoeducation and pregnancy health, this research aims to explore the effects of spirituality and psychoeducation in pregnancy. As there is narrow choice of psychoeducation available, the Study developed an Eastern based meditative intervention (EBMI) for pregnant Chinese women and evaluates its impact on pregnancy health, foetal health and child health. The conceptual framework of the study was based on the postulation that there are positive relationships between spirituality, psychoeducation and pregnancy health which is important for foetal health and child health. The EBMI developed was based on the positive effect of psychoeducation, cognitive intervention, mindfulness practise and Four Immeasurables meditation on health.

Seven psychoeducational classes have been conducted from September 2007 to January 2009. A randomized control quantitative and qualitative study was carried out from September 2007 till September 2009 at Obstetric Unit, Queen Elizabeth Hospital, Hong Kong. 64 pregnant Chinese women were recruited for intervention

and 59 were for control in quantitative study. 43 pregnant Chinese women in the intervention group were recruited for qualitative research. Quantitative results showed statistically significant increase in positive appraisal ($p < 0.05$) and difference in evening salivary cortisol during postpartum period ($p < 0.05$) in the intervention group suggest positive effects of EBMI on maternal health. Cord blood cortisol level of babies was higher in the frequent practise group ($p < 0.01$) and intervention group ($p < 0.05$) indicates positive health status of the newborns which verifies the hypothesis that maternal health can influence foetal health. Carey Infant Temperament Questionnaire showed that the infants of intervention group have better temperament ($p < 0.05$) at sixth month reflects the importance of pregnancy health in relation to child health. Qualitative reports expand upon the quantitative findings, with the majority of participants reporting the importance of spiritual health and spiritual empowerment in pregnancy. They reported perceived benefits from all aspects of health after EBMI.

This research concludes the positive effects of spirituality and psychoeducation on maternal health, foetal health and child health. Cord blood cortisol level, pioneered by this research, is a new indicator for foetal health. Present research illustrates the importance of positive health indicators and recommends more research in this area. Findings of positive foetal health and better temperament of infants in intervention group generate break new ground of scientific bases for foetal education (*Taijiao*). Present study recommends that pregnancy care providers should provide spiritual care and psychoeducation to pregnant women. EBMI, developed by present study, should be included into the prenatal care system. Implications for the incorporation of EBMI in all aspects of pregnancy are discussed.

精神性健康(spirituality)、心理教育(psychoeducation)和妊娠健康是有相互關係的。妊娠期是促進產婦精神性健康最理想的時刻。心理教育則有助促進精神性健康。妊娠健康對孕婦、胎兒、嬰孩和家庭均有深遠的影響。目前產前檢查(prenatal care)只是為產婦提供健康資訊，並沒有照顧妊娠婦女的精神性健康和提供心理教育。現時有關精神性健康、心理教育和妊娠健康的研究較少，所以本研究的目的就是要探究精神性健康和心理教育對懷孕的重要。鑑於目前缺乏可供選擇的有系統妊娠期心理教育模式，本研究特別為香港產婦設計了一套「產前健身健心運動(Eastern based meditative intervention, EBMI)」，並從中探討此運動對妊娠健康、胎兒健康和嬰兒健康的影響。本研究就是以精神性健康、心理教育和妊娠健康對胎兒和嬰兒健康有密切的關係作為理論根據。EBMI是基於心理教育(psychoeducation)、認知介入治療(cognitive intervention)、專注覺察訓練(mindfulness practise)和「四無量心」禪修(Four Immeasurables meditation)對健康有良好影響而設計的。

在研究過程中，於2007年9月至2009年1月共舉辦了7次「產前健身健心運動」訓練班。研究是隨機對照(randomized control)，採用定量(quantitative)和質性(qualitative)方法，在2007年9月至2009年9月於香港伊利沙伯醫院婦產科(Obstetric Unit, Queen Elizabeth Hospital, Hong Kong)進行。實驗組(intervention group)有64位產婦，而控制組(control group)則有59位孕婦參與定量方法研究。實驗組中有43位參加質性研究。定量研究結果顯示，實驗組產婦對自我有正面的積極評價(positive appraisal)($p < 0.05$)，而且在晚間口水唾液皮質醇測試(salivary cortisol)中，比控制組有明顯的分別($p < 0.05$)，這表示了EBMI對妊娠健康有良好的影響。實驗組($p < 0.05$)和多做運動組別(frequent practise group) ($p < 0.01$)出生嬰兒臍帶血皮質醇度數(Cord blood cortisol)比控制組為高，正好表示實驗組和多做運動組別出生嬰兒有更理想的健康狀況(positive health status)，證明妊娠健康會影響胎兒健康。凱里嬰兒氣質問卷(Carey Infant Temperament Questionnaire)結果，顯示實驗組幼兒在六個月大時比控制組幼兒有更佳的氣質(temperament)，這反映了妊娠健康對幼兒健康的重要。質性研究與定量研究得出相同的結果，證實精神性健康和EBMI對妊娠健康、胎兒健康和幼兒健康有正面的影響。質性研究顯示大部分參加者均同意研究得出的結論。

本研究得出的結論是精神性健康和心理教育可以促進妊娠健康、胎兒健康和幼兒健康。此外，臍帶血皮質醇測試對胎兒健康是一項創新的指標。本研究顯示積極健康指標(positive health indicators)的重要，這範疇宜有進一步的探究。實驗組出生嬰兒較為健康和幼兒有更好的氣質，證明了胎教(Taijiao)是有科學根據的。本研究建議孕期保健提供者(pregnancy care providers)應照顧妊娠婦女的精神性健康，並提供妊娠心理教育。EBMI可合併到產前保健系統(prenatal care system)。本論文會詳細討論推行EBMI對妊娠的各個方面的意義。

Research output

Journal Article – “Prenatal meditation influences infant behaviors”

Infant Behavior and Development - available at ScienceDirect

<http://authors.elsevier.com/sd/article/S0163638314000733>