

行政院國家科學委員會專題研究計畫 期末報告

身心靈夫妻支持團體於乳癌存活者與其配偶之療效-第三階段臨床試驗(第2年)

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執行單位：國立臺灣大學醫學院護理學系暨研究所

計畫主持人：蕭妃秀
共同主持人：賴佑銘、郭文宏、陳玉婷、卓貴美、黃俊升
賴佑銘、郭文宏、陳玉婷、卓貴美、黃俊升
計畫參與人員：學士級-專任助理人員：魏蕙珊

公開資訊：本計畫涉及專利或其他智慧財產權，2年後可公開查詢

中華民國 102 年 10 月 29 日

中文摘要：背景. 乳癌存活率的增加使得存活者及其伴侶經歷在回到正常生活過程中，面臨過渡時期的挑戰。但目前研究對於團體治療減輕存活者及其伴侶困擾和改善他們親密關係的成效，以及神經內分泌於產生效果所扮演的治療機轉尚未有完整的探討。

目的. 探討身心靈夫妻支持團體對乳癌存活者及其伴侶的婚姻親密關係、睡眠品質、生命意義、憂鬱、焦慮、生活品質、唾液可體松的效果。

研究方法. 本研究設計為一隨機控制之臨床實驗(the randomized controlled trial, RCT)。本研究邀請醫院外科門診的轉移性乳癌存活者參與本研究，他們的伴侶經由存活者的邀請參加。經由隨機選擇的方式分別至兩個組別：控制組的乳癌存活者及其伴侶僅接受例行性照護以及衛教的建議，實驗組的乳癌存活者及其伴侶接受的八週身心靈夫妻支持團體介入措施。測量工具包括親密關係經驗量表、Moss 睡眠量表、生命意義問卷、貝氏憂鬱量表第二版，STAI 焦慮量表，SF-12 生活品質問卷，以及唾液可體松的濃度和晝夜型態 (the diurnal cortisol patterns)。測試時間於治療前、治療後 (八週身心靈夫妻支持團體後) 以及治療後第三個月、六個月和十二個月進行。

結果：共有 40 對夫妻參與本研究，其中 21 對夫妻經由隨機分配至實驗組接受身心靈夫妻支持團體，另外 19 對夫妻至控制組接受例行性照護以及健康衛生教育。GEE 分析結果顯示於 14 個月的追蹤，團體*時間的交互作用於 STAI 焦慮程度的分數達顯著意義(model group \times time interaction, $\chi^2 = 9.806$; $p = 0.044$)。結果顯示參加身心靈夫妻支持團體的夫妻比接受衛生教育的夫妻於減輕焦慮程度上更為顯著。唾液可體松方面，GEE 分析結果顯示相較接受衛生教育的夫妻，身心靈夫妻支持團體的夫妻於唾液可體松於睡醒的濃度，睡醒後 30 分鐘的濃度，和晚上 9 點的濃度，皆有顯著較低的濃度(T1: $\beta = -2.993$, $\chi^2 = 5.937$, $p = 0.015$ at the second follow up; T2: $\beta = -0.3145$, $\chi^2 = 4.689$, $p = 0.030$ at the second follow up; T6: $\beta = -1.426$, $\chi^2 = 4.757$, $p = 0.029$)。

結論：

身心靈夫妻支持團體能減輕乳癌存活者及其配偶的焦慮程度

和身心壓力反應。異常的可體松與睡眠障礙、腸胃或是心臟疾病有關。且體內持續性對於壓力呈現異常可體松反應與乳癌存活者的存活時間有關。因此身心靈夫妻支持團體於強化可體松正常反應之效果對於保護乳癌存活者和其配偶的身體健康是有所助益。臨床應用方面，根據身心靈整體觀所設計的身心靈夫妻支持團體較能符合乳癌存活者及其配偶的全人健康之需求。

中文關鍵詞：身心靈夫妻支持團體、乳癌存活者和伴侶、親密關係、焦慮、憂鬱、生活品質、唾液可體松

英文摘要：Aims and objectives. This study aimed to examine the effects of the body-mind-spirit couple support group on marital close relationships, sleeping quality, depression, anxiety, quality of life, meaning of life, and salivary cortisol levels in metastatic breast cancer survivors and partners.

Methods. The design adopted the randomized controlled trial (RCT). The breast cancer survivors were recruited from outpatient department of surgical at hospital. The partners were invited to participate in this study through the survivors. Survivors and spouse partners in an experimental group received 2-month time body-mind-spirit (BMS) couple support group while those in a control received usual care with educational advice (EDU) in the same period of time. The outcome measures include Experiences in close relationships scale, Moss sleeping scale, Short-form 12 health-related quality of life questionnaires, Meaning of life questionnaire, BDI-II depression scale, State-Trait Anxiety Inventory (STAI) and salivary cortisol levels and the diurnal cortisol patterns. Measurement time-points include pre intervention, post intervention (after 8 weekly body-mind-spirit couple support group), & then 3, 6, 12 months after the end of intervention for the maintenance effect.

Results.

Total 40 couples were randomized into two groups: 21 in BMS couple group and 19 in EDU control group. The GEE analysis confirmed that there was the significant difference in the effect of the study group-by-time interaction on STAI scores from the baseline condition through the four follow-up times during the 14 months (model group \times time interaction, $\chi^2 = 9.806$; $p = 0.044$). The results showed that the greater reductions of anxiety levels more likely occurred in BMS couple group than in EDU group. About cortisol responses, GEE analysis indicated that the greater reductions in cortisol levels at awakening time, 30 minutes after wake up and 21:00 more likely occurred in BMS couple group than in EDU group (T1: $\beta = -2.993$, $\chi^2 = 5.937$, $p = 0.015$ at the second follow up; T2: $\beta = -0.3.145$, $\chi^2 = 4.689$, $p = 0.030$ at the second follow up; T6: $\beta = -1.426$, $\chi^2 = 4.757$, $p = 0.029$).

Conclusion.

BMS couple support group could reduce anxiety levels and psychophysiological stress responses during 14-month follow ups for breast cancer survivors and their partners.

英文關鍵詞： Breast cancer survivors and partners, body-mind-spirit couple support group, close relationships, anxiety, depression, quality of life, salivary cortisol levels

行政院國家科學委員會補助專題研究計畫 成果報告
 期中進度報告

(計畫名稱)

身心靈夫妻支持團體於乳癌存活者與其配偶之療效-第三階段臨床試驗

計畫類別： 個別型計畫 整合型計畫

計畫編號：100-2629-B-002-001-MY2

執行期間： 100 年 08 月 01 日至 102 年 07 月 31 日

計畫主持人：蕭妃秀

共同主持人：卓貴美、張金堅、郭文宏、黃俊升、賴佑銘、陳玉婷

計畫參與人員：魏蕙珊專任助理人員-學士級

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涉及專利或其他智慧財產權， 一年 二年後可公開查詢

執行單位：台灣學大學醫學院護理學系

中 華 民 國 102 年 10 月 29 日

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研究計畫中英文摘要：請就本計畫要點作一概述，並依本計畫性質自訂關鍵詞。

(一) 計畫英文摘要。(五百字以內)

Aims and objectives. This study aimed to examine the effects of the body-mind-spirit couple support group on marital close relationships, sleeping quality, depression, anxiety, quality of life, meaning of life, and salivary cortisol levels in metastatic breast cancer survivors and partners.

Methods. The design adopted the randomized controlled trial (RCT). The breast cancer survivors were recruited from outpatient department of surgical at hospital. The partners were invited to participate in this study through the survivors. Survivors and spouse partners in an experimental group received 2-month time body-mind-spirit (BMS) couple support group while those in a control received usual care with educational advice (EDU) in the same period of time. The outcome measures include Experiences in close relationships scale, Moss sleeping scale, Short-form 12 health-related quality of life questionnaires, Meaning of life questionnaire, BDI-II depression scale, State-Trait Anxiety Inventory (STAI) and salivary cortisol levels and the diurnal cortisol patterns. Measurement time-points include pre intervention, post intervention (after 8 weekly body-mind-spirit couple support group), & then 3, 6, 12 months after the end of intervention for the maintenance effect.

Results.

Total 40 couples were randomized into two groups: 21 in BMS couple group and 19 in EDU control group. The GEE analysis confirmed that there was the significant difference in the effect of the study group-by-time interaction on STAI scores from the baseline condition through the four follow-up times during the 14 months (model group \times time interaction, $\chi^2 = 9.806$; $p = 0.044$). The results showed that the greater reductions of anxiety levels more likely occurred in BMS couple group than in EDU group. About cortisol responses, GEE analysis indicated that the greater reductions in cortisol levels at awakening time, 30 minutes after wake up and 21:00 more likely occurred in BMS couple group than in EDU group (T1: $\beta = -2.993$, $\chi^2 = 5.937$, $p = 0.015$ at the second follow up; T2: $\beta = -0.3.145$, $\chi^2 = 4.689$, $p = 0.030$ at the second follow up; T6: $\beta = -1.426$, $\chi^2 = 4.757$, $p = 0.029$).

Conclusion.

BMS couple support group could reduce anxiety levels and psychophysiological stress responses during 14-month follow ups for breast cancer survivors and their partners. Abnormal cortisol responses are associated with sleep disturbances, gastrointestinal or heart disease. Moreover, the negative cortisol responses to cumulative stress have been considered a predictor of breast cancer patients' shorter survival rates. The improvement of cortisol responses by survivors and their partners in BMS couple support group program in this study might protect their body from the adverse effects of cortisol. Implication of this study is to develop BMS couple support group based on holistic approach in order to meet survivors' and their partners' needs of holistic well-being.

Keywords: Breast cancer survivors and partners, body-mind-spirit couple support group, close relationships, anxiety, depression, quality of life, salivary cortisol levels

(二) 計畫中文摘要。(五百字以內)

背景. 乳癌存活率的增加使得存活者及其伴侶經歷在回到正常生活過程中，面臨過渡時期的挑戰。但目前研究對於團體治療減輕存活者及其伴侶困擾和改善他們親密關係的成效，以及神經內分泌於產生效果所扮演的治療機轉尚未有完整的探討。

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結果：共有 40 對夫妻參與本研究，其中 21 對夫妻經由隨機分配至實驗組接受身心靈夫妻支持團體，另外 19 對夫妻至控制組接受例行性照護以及健康衛生教育。GEE 分析結果顯示於 14 個月的追蹤，團體*時間的交互作用於 STAI 焦慮程度的分數達顯著意義(model group \times time interaction, $x^2 = 9.806$; $p = 0.044$)。結果顯示參加身心靈夫妻支持團體的夫妻比接受衛生教育的夫妻於減輕焦慮程度上更為顯著。唾液可體松方面，GEE 分析結果顯示相較接受衛生教育的夫妻，身心靈夫妻支持團體的夫妻於唾液可體松於睡醒的濃度，睡醒後 30 分鐘的濃度，和晚上 9 點的濃度，皆有顯著較低的濃度(T1: $\beta = -2.993$, $x^2 = 5.937$, $p = 0.015$ at the second follow up; T2: $\beta = -0.3.145$, $x^2 = 4.689$, $p = 0.030$ at the second follow up; T6: $\beta = -1.426$, $x^2 = 4.757$, $p = 0.029$)。

結論：

身心靈夫妻支持團體能減輕乳癌存活者及其配偶的焦慮程度和身心壓力反應。異常的可體松與睡眠障礙、腸胃或是心臟疾病有關。且體內持續性對於壓力呈現異常可體松反應與乳癌存活者的存活時間有關。因此身心靈夫妻支持團體於強化可體松正常反應之效果對於保護乳癌存活者及其配偶的身體健康是有所助益。臨床應用方面，根據身心靈整體觀所設計的身心靈夫妻支持團體較能符合乳癌存活者及其配偶的全人健康之需求。

關鍵詞:身心靈夫妻支持團體、乳癌存活者和伴侶、親密關係、焦慮、憂鬱、生活品質、唾液可體松

報告內容

Introduction

With the increased survival rates of breast cancer, the current challenge for clinical and academic professionals is to develop a program for the breast cancer survivors and their partners in order to manage the difficulty in coping with the transition to normal life and to achieve a positive quality of life during survivorship period. In recent years, a number of small pilot studies (Donnelly et al., 2000; Kalaitzi et al., 2007; Manne & Badr, 2008) on efficacy of couple programs for breast cancer patients and their partners have been conducted and the positive effects are reported. Nevertheless, the intervention program for survivors and their partners during survivorships is not well developed. Moreover, while the cortisol pattern in relation to survival rate has been studied, exploring the impact of group therapy on cortisol pattern has not been studied. Therefore, this RCT study with sufficient sample sizes examining the effects of the intervention program for survivors and partners during survivorships could possible contribute to the important knowledge in the areas of cancer nursing, psycho-oncology and neuroendocrinology.

In our pilot study, the participants included 19 breast cancer survivors and their partners in control group and 12 couples in body-mind-spirit (BMS) couple support group. The results indicated that the greater reductions in depression scores were shown in the participants in BMS couple support group than the couples in control group. Similarly, the greater increases in cortisol levels at the time of 21:00 more likely occurred in control group than BMS couple support group after treatment. The higher cortisol levels at night in control group indicated that an upward trend likely occurred in control group which suggested a flatter diurnal cortisol slope. The results suggest that BMS couple support group might provide protective effects for breast cancer survivors' and their partners' resistance to abnormal depression and negative psychophysiological responses to stress shown as a flatter diurnal cortisol pattern. This pilot study is the first study to examine the effects of couple support group on neuroendocrine function and the results show positively for BMS couple support group, however, the research design was non-randomized control trial which limits in demonstrating the efficacy of BMS couple therapy. Therefore, to mitigate this limitation, we need to conduct the III stage of clinical trial with randomized controlled design to examine the efficacy of BMS couple support group for breast cancer survivors and their partners.

The Purposes of the Study

This study aimed to examine the effects of the body-mind-spirit (BMS) couple support group on subjective psychosocial well-being (close relationships, sleeping distress, meaning of life, depression, anxiety, quality of life), and objective salivary cortisol levels and diurnal cortisol patterns in breast cancer survivors and spouse partners.

Methods

The design adopted the randomized controlled trial (RCT). The breast cancer survivors were recruited from outpatient department of surgical at general hospital. The partners were invited to participate in this study through the survivors. Survivors and partners in an experimental group received 2 months time body-mind-spirit (BMS) couple support group while those in a control group received education advice in the same period of time. Measurement time-points include pre intervention, post intervention (after 8 weekly group therapy), & then 3, 6, 12 months after the end of intervention for the maintenance effect.

The subjects

Inclusion criteria of Survivors

1. breast cancer patients who complete active treatments,
2. those who are willing to participate in the research,
3. those who currently do not receive any individual or group psychotherapy
4. aged between 18 and 65.

Exclusion criteria of Survivors

1. diagnosed as both breast cancer and other types of cancers,
2. those with adrenal function disorders (for example, Cushing syndrome, Addison's disease, adrenal tumor, pituitary tumor)
3. those who currently use antidepressants.

Inclusion criteria of Partners

1. spouse, cohabitant, boyfriend of breast cancer patient who complete active treatments,
2. those who are willing to participate in the research,
3. those who currently do not receive any individual or group psychotherapy
4. aged between 18 and 65.

Exclusion criteria of Survivors

1. diagnosed as adrenal function disorders (for example, Cushing syndrome, Addison's disease, adrenal tumor, pituitary tumor),,
2. those who currently use antidepressants.

Intervention

EDU program: The subjects in control group received oncologist's follow-up care and one session of person-to-person education on health behaviors such as avoiding fatty foods, regular exercise, sleep hygiene, and emotional expression. Muscle relaxation tapes and qi-gong videos were provided for patients to practice at home.

Intervention program: BMS couple program

In addition to oncologist's follow-up, the intervention program consists of 8 weekly body-mind-spirit (BMS) couple support group. The BMS therapy was conducted in small groups

(3-4 couples) for 120 minutes every week for 2-month. BMS therapy was provided by both a mental health nurse and an oncology nurse who had been trained to use and adhere to the treatment protocol. The contents of the BMS couple support group include discussion of impact of cancer on lives, emotional expression, self-concept empowerment, communicating enhancement, management of distress including grief, interpersonal conflicts, and role transitions, and increasing resources of social support. The physical activities developed for this study included discussions and practices of a healthy diet, sleep hygiene, breathing exercises, massaging acupressure points, qi-gong, and guided imagery. The qi-gong video, developed by qi-gong master for this study, was used to practice during group therapy and at home. For the mind aspect, activities to amplify the breast cancer survivors' and their partners' positive strengths included discussing personal growth from the impact of cancer on their lives, practicing forgiveness and loving their own body, and exploring positive relationships with their inner self and significant other. For spiritual well-being, activities included exploring the meanings of "loss and gain" on their life road, practicing "letting go" of attachments and desires, and learning to love others.

Analysis

To analyze diurnal cortisol patterns, firstly diurnal cortisol slopes were calculated based on salivary cortisol levels (nmol \pm 1) collected at six time points (upon waking and at 30 and 45 minutes after waking and at 1200 hours, 1700 hours, and 2100 hours). Cortisol levels at six time points were skewed positively, so we used the natural logarithm to transform the raw cortisol levels to obtain an unskewed distribution for calculation of diurnal cortisol slopes. To identify the diurnal cortisol patterns, β values for diurnal cortisol slopes (log nmol/l per hour) were calculated based on a regression of the log-transformed mean (standard deviation) cortisol levels (nmol \pm 1) at each of the six measuring times. Steeper slopes (log nmol/l per hour), which are characterized by a normal descending profile from high morning cortisol levels to lower evening cortisol levels, are indicated by smaller β values for the slope of the regression. Flatter slopes that do not show descending cortisol levels as the day progresses are indicated by larger β values, which show slower declines.

Data were analyzed using generalized estimating equations (GEE) for the correlated structure of data from repeated measures across 14 months: baseline condition (T0) and the four follow-up times after baseline, including T1 (the 2nd month), T2 (the 5th month), T3 (the 8th month) and T4 (the 14th month). GEE allows the use of an intention-to-treat approach for data analysis because GEE analysis includes all cases (even drop-out cases) by using available pairs to estimate working correlation parameters for the total sample. GEE was conducted to test for group differences (BMS couple group and EDU group) over time in the following: frequencies of BDI-II depression, STAI anxiety scores, sleep disturbance, close relationship, meaning in life, quality of life and diurnal cortisol slopes (continuous variables). The GEE analysis produces a model group \times time interaction effect, which would indicate if the participants in the BMS couple group were significantly different from the participants in EDU group in the above outcome variables during the 14-month follow ups. The comparisons were made considering the

baseline values (T0) and the relative changes over time in outcome variables at the four follow-up times (T1: the 2 month; T2: the 5 month; T3: the 8 month; and T4: the 14month).

Results

Subjects

The 467 breast cancer survivors and their partners are assessed for eligibility. The 427 breast cancer survivors and their partners are excluded because they refuse to participate. The reasons for rejections are mainly due to their partners no time to participate in this study. Total 40 couples are randomized into two groups: 21 in BMS couple group and 19 in EDU group. Three partners in BMS were dropped out from study: for two partners, they dropped out at the first follow up time. The reason was because of having a job on the same day of group while the other partner was died due to heart disease at the third follow up time.

Breast cancer survivors' and their partners' demographic characteristics and baseline data in the in BMS couple group and EDU group were presented in Table1 and Table 2. For breast cancer survivors' partners, there were no significant differences in all variables between BMS and EDU groups. Nevertheless, for breast cancer survivors, while there were no significant differences in most variables between two groups, the cortisol levels at 30 and 45 minutes after wake up are significant lower in EDU group ($p = 0.02$) than BMS group ($p = 0.02$).

The comparison of effects of BMS couple program and EDU program on couples' self-reported well-being

According to GEE model analysis, the data showed that there were no significant differences in the effect of the study group-by-time interaction on BDI-II, close relationship, meaning in life, sleep disturbances, quality of life scores from the baseline condition through the four follow-up times during the 14 months ($p > 0.05$). Nevertheless, the GEE analysis confirmed that there was the significant difference in the effect of the study group-by-time interaction on STAI scores from the baseline condition through the four follow-up times during the 14 months (model group \times time interaction, $x^2 = 9.806$; $p = 0.044$). The results showed that the greater reductions of anxiety levels more likely occurred in BMS couple group than in EDU group.

The comparison of effects of BMS couple program and EDU program on couples' cortisol responses

About cortisol responses, GEE analysis indicated that the greater reductions in cortisol levels at awakening time, 30 minutes after wake up and 21:00 more likely occurred in BMS couple group than in EDU group (T1: $\beta = -2.993$, $x^2 = 5.937$, $p = 0.015$ at the second follow up; T2: $\beta = -0.3.145$, $x^2 = 4.689$, $p = 0.030$ at the second follow up; T6: $\beta = -1.426$, $x^2 = 4.757$, $p = 0.029$). The rest of cortisol levels at 45 minutes after wake up, 12:00, 17:00 and diurnal cortisol slopes were not significant difference between BMS couple group and EDU group.

Conclusion

The results indicated that BMS couple support group could reduce anxiety levels and psychophysiological stress responses during 14-month follow ups for breast cancer survivors and their partners. Abnormal cortisol responses are associated with sleep disturbances, gastrointestinal or heart disease. The role of cortisol elevation in contributing to physical problems such as hypertension, increased abdominal fat, decreased bone density, was reported in a 2004 review (Brown et al., 2004). Moreover, the negative responses to cumulative stress reflected in flatter diurnal cortisol patterns have been considered a predictor of breast cancer patients' shorter survival rates (Sephton et al., 2000). Accordingly, the improvement of cortisol responses by survivors and their partners in BMS couple support group program in this study might protect their body from the adverse effects of cortisol. Implication of this study is to develop BMS couple support group based on holistic approach in order to meet survivors' and their partners' needs of holistic well-being.

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Table 1 Demographic characteristics and baseline data of breast cancer survivors in the study

	BMS couple group (n=21) (mean or %)	EDU Group (n=19) (mean or %)	χ^2 or t test	p-Value
Ages	52.43(8.68)	47.84(6.32)	1.89	0.06
Educational levels			5.08	0.27
Elementary school	4.8	5.3		
High school	19.0	15.8		
College	76.2	79.0		
Occupational status			7.92	0.24
employed	90.5	100		
Unemployed	9.5	0		
Cancer Stage			5.85	0.21
0	19.0	5.3		
1	14.3	42.1		
2	47.6	36.8		
3	14.3	5.3		
Unsure	4.8	10.5		
Chemotherapy			0.79	1.00
Yes	61.9	57.9		
No	38.1	42.1		
Radiotherapy			0.90	0.34
Yes	42.9	57.9		
No	57.1	42.1		
Hormone Treatment			0.40	0.52
Yes	76.2	84.2		
No	23.8	15.8		
Cortisol levels at awakening	9.07(3.91)	7.11(4.24)	1.49	0.14
Cortisol levels at 30 minutes after wake up	12.71(5.79)	8.88(4.65)	2.29	0.02*
Cortisol levels at 45 minutes after wake up	10.87(5.01)	7.65(3.58)	2.32	0.02*
Cortisol levels at 12:00	5.64(2.71)	4.80(2.12)	1.07	0.28
Cortisol levels at 17:00	4.29(2.37)	3.66(1.88)	0.92	0.36
Cortisol levels at 21:00	3.28(1.72)	3.12(2.17)	0.26	0.79
Diurnal cortisol slope	-0.040(0.013)	-0.031(0.017)	-1.83	0.07
BDI-II depressive status	7.80(7.01)	8.00(7.49)	-0.08	0.93
STAI anxiety status	39.95(8.83)	40.36(9.05)	-0.14	0.88
MLQ_presence	26.76(4.90)	25.78(5.89)	0.56	0.57
MLQ_search	25.61(5.20)	24.89(6.71)	0.38	0.70
MOS	31.74(13.43)	24.91(9.98)	1.81	0.07
Close relationship_avoidant	47.52(19.84)	37.42(16.07)	1.75	0.08
Close relationship_anxiety	43.00(18.03)	41.94(19.20)	0.17	0.85
SF12_Physical	44.83(10.73)	47.41(8.67)	-0.83	0.41
SF12_Mental	47.75(7.73)	46.07(9.07)	0.63	0.53

*p<0.05

Table 2 Demographic characteristics and baseline data of the partners in the study

	BMS couple group (mean or %)	EDU Group (mean or %)	χ^2 or t test	p-Value
Ages	54.05(10.57)	50.42(7.84)	1.22	0.23
Educational levels			6.71	0.08
Elementary school	4.8	5.3		
High school	9.5	21.1		
College and above	85.7	73.7		
Occupational status			3.64	0.72
employed	85.7	84.2		
Unemployed	14.3	15.8		
Cortisol levels at awakening	8.81(2.95)	8.32(4.51)	0.39	0.69
Cortisol levels at 30 minutes after wake up	10.11(4.63)	10.37(4.54)	-0.18	0.85
Cortisol levels at 45 minutes after wake up	9.01(3.88)	8.08(4.48)	0.70	0.48
Cortisol levels at 12:00	5.87(2.61)	5.58(3.05)	0.32	0.74
Cortisol levels at 17:00	3.67(1.93)	3.80(2.24)	-0.19	0.84
Cortisol levels at 21:00	3.39(2.14)	2.48(1.24)	1.58	0.12
Diurnal cortisol slope(ug/dl)	-0.036(0.015)	-0.0485(0.042)	1.20	0.23
BDI-II depressive status	6.23(5.78)	4.57(3.89)	1.05	0.29
STAI anxiety status	36.33(7.49)	37.94(6.89)	-0.70	0.48
MLQ_presence	26.28(6.00)	25.89(5.66)	0.21	0.83
MLQ_search	25.42(6.56)	23.47(8.32)	0.82	0.41
MOS	22.38(10.01)	23.15(7.92)	-0.27	0.78
Close relationship_avoidance	48.28(21.32)	39.21(12.34)	1.62	0.11
Close relationship_anxiety	47.61(21.96)	42.84(16.63)	0.76	0.44
SF12_Physical	47.04(7.40)	48.85(9.40)	-0.68	0.50
SF12_Mental	50.37(7.78)	51.12(4.82)	-0.36	0.71

國科會補助專題研究計畫成果報告自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現或其他有關價值等，作一綜合評估。

1. 請就研究內容與原計畫相符程度、達成預期目標情況作一綜合評估

達成目標

未達成目標（請說明，以 100 字為限）

實驗失敗

因故實驗中斷

其他原因

說明：

2012 臺北國際乳癌研討會擔任身心靈夫妻支持團體於乳癌存活者與其配偶之療效
主講人

2. 研究成果在學術期刊發表或申請專利等情形：

論文：已發表 未發表之文稿 撰寫中 無

專利：已獲得 申請中 無

技轉：已技轉 洽談中 無

其他：（以 100 字為限）

3. 請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值(簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性)(以 500 字為限)

The Body-mind-spirit (BMS) couple support group therapy is the first holistic approach design for breast cancer survivors and their partners. This therapy not only focuses on psychosocial adjustment but also body awareness and sensation. In Western, couple psychotherapy more focuses on psychological aspects of problems, which might not be accepted by Chinese people especially male clients because they are more reluctant to talk their family matter in front of strangers. The comprehensive holistic empowerment strategies seem to meet the needs of the participants for developing their healthy life during survivorship stage and to be accepted by Chinese couples. The impacts of BMS couple therapy on reductions of anxiety levels and cortisol levels demonstrate its contributions to reduce psychological distress and to decrease psychophysiological stress adverse effects. Therefore, BMS couple therapy developed for breast cancer survivors and their partners produces not only psychological but also physical significance.

國科會補助計畫衍生研發成果推廣資料表

日期:2013/09/30

國科會補助計畫	計畫名稱: 身心靈夫妻支持團體於乳癌存活者與其配偶之療效-第三階段臨床試驗
	計畫主持人: 蕭妃秀
	計畫編號: 100-2629-B-002-001-MY2 學門領域: 性別主流科技計畫
無研發成果推廣資料	

100 年度專題研究計畫研究成果彙整表

計畫主持人：蕭妃秀		計畫編號：100-2629-B-002-001-MY2				計畫名稱：身心靈夫妻支持團體於乳癌存活者與其配偶之療效-第三階段臨床試驗	
成果項目		量化			單位	備註（質化說明：如數個計畫共同成果、成果列為該期刊之封面故事...等）	
		實際已達成數（被接受或已發表）	預期總達成數（含實際已達成數）	本計畫實際貢獻百分比			
國內	論文著作	期刊論文	0	0	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	0	0	100%		
		專書	0	0	100%		
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力 （本國籍）	碩士生	0	0	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	1	0	100%		
國外	論文著作	期刊論文	0	0	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	1	1	100%		
		專書	0	0	100%		章/本
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力 （外國籍）	碩士生	0	0	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	0	0	100%		

<p>其他成果 (無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)</p>	<p>2012 臺北國際乳癌研討會擔任身心靈夫妻支持團體於乳癌存活者與其配偶之療效主講人</p>
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	成果項目	量化	名稱或內容性質簡述
科 教 處 計 畫 加 填 項 目	測驗工具(含質性與量性)	0	
	課程/模組	0	
	電腦及網路系統或工具	0	
	教材	0	
	舉辦之活動/競賽	0	
	研討會/工作坊	0	
	電子報、網站	0	
	計畫成果推廣之參與(閱聽)人數	0	

國科會補助專題研究計畫成果報告自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現或其他有關價值等，作一綜合評估。

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達成目標

未達成目標（請說明，以 100 字為限）

實驗失敗

因故實驗中斷

其他原因

說明：

2. 研究成果在學術期刊發表或申請專利等情形：

論文： 已發表 未發表之文稿 撰寫中 無

專利： 已獲得 申請中 無

技轉： 已技轉 洽談中 無

其他：（以 100 字為限）

2012 臺北國際乳癌研討會擔任身心靈夫妻支持團體於乳癌存活性與其配偶之療效主講人

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