

科技部補助專題研究計畫成果報告

期末報告

遮瑕修容於改善多元族群女性頭頸癌病人外觀毀損與社交
功能之成效(A09) (第三年)

計畫類別：個別型計畫

計畫編號：MOST 103-2629-B-255-001-

執行期間：103 年 08 月 01 日至 104 年 09 月 30 日

執行單位：長庚學校財團法人長庚科技大學護理系

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中 華 民 國 104 年 08 月 28 日

中文摘要：研究目的：試驗在多元族群女性頭頸癌病人存活期憂鬱、自尊、社交功能、及外觀毀損的成效（縱貫性調查）。研究方法：研究採隨機控制臨床試驗研究設計，以“醫院焦慮憂鬱量表-憂鬱次量表”、“自尊量表”、“社交焦慮量表”、“身體心像量表”、“毀損量表”、“身體活動功能”及“基本資料表”收集資料。收案地點於北部某醫學中心放射腫瘤科門診及癌症中心，針對符合收案條件之女性頭頸癌病人進行方便取樣。資料以混合憲性模式進行分析，共收得45位個案，23位實驗組，22位控制組。研究結果：兩組個案的臉部毀損及憂鬱後測顯著低於前測，遮瑕修容可改善女性頭頸癌病人臉部毀損及憂鬱。結論：遮瑕修容方案可使用於臉部外觀照護，促進改善女性頭頸癌病人之外觀毀損及憂鬱。

中文關鍵詞：多元族群、女性、頭頸癌、臉部毀損、遮瑕修容、身體心像、憂鬱、自尊、社交焦慮。

英文摘要：Objectives. The purposes of this study was to examine the effects of a 4-week Camouflage Therapy Program (CTP) on depression, self-esteem, social function, and disfigurement in multi-cultural ethnic females with head and neck cancer during the survival period (longitudinal survey).

Methods. A randomized controlled clinical trial was used to evaluate the 4-week CTP. Eligible participants will be recruited 3 months after the completion of treatment and randomized into a control group and an experimental group, with the control group patients receiving routine hospital care and the experimental group patients receiving the 4-week CTP. A set of questionnaires was used to measure depress, self-esteem, social anxiety, body image, facial disfigurement, performance status, and demographic and disease-related information. A total of forty-five eligible subjects were recruited, with twenty-three women in the control group and twenty-two in the experimental group.

Results. Patients in both groups had significantly lower levels of facial disfigurement and depression at four weeks after beginning CTP compare to baseline. The levels of facial disfigurement and

depression were significantly better for participants in the experimental group compared to those in the control group at posttest. The program promotes better facial disfigurement and depression in female patients with head and neck cancer receiving RT or CCRT in the four after CTP.

Conclusions. The skin camouflage therapy program should be used for facial care and to promote appearance and depression in female with HNCs.

英文關鍵詞：
Multi-cultural ethnic. Women, Head and neck cancer,
Skin camouflage, Disfigurement, Body image,
Depression, Self-esteem, Social anxiety.

科技部補助專題研究計畫成果報告

(期中進度報告/期末報告)

遮瑕修容於改善女性頭頸癌病人外觀毀損與社交功能之成效

(A09)(第三年)

計畫類別：個別型計畫 整合型計畫

計畫編號：MOST103-2629-B-255-001

執行期間：103 年 8 月 1 日至 104 年 7 月 31 日

執行機構及系所：長庚學校財團法人長庚科技大學護理系

計畫主持人：陳淑卿

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計畫參與人員：潘美娟

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中 華 民 國 104 年 8 月 28 日

報告內容

中文摘要

研究目的

試遮暇修容在多元族群女性頭頸癌病人存活期憂鬱、自尊、社交功能、及外觀毀損的成效（縱貫性調查）。

研究方法

研究採隨機控制臨床試驗研究設計，以“醫院焦慮憂鬱量表-憂鬱次量表”、“自尊量表”、“社交焦慮量表”、“身體心像量表”、“毀損量表”、“身體活動功能”及“基本資料表”收集資料。收案地點於北部某醫學中心放射腫瘤科門診及癌症中心，針對符合收案條件之女性頭頸癌病人進行方便取樣。資料以混合憲性模式進行分析，共收得 45 位個案，23 位實驗組，22 位控制組。

研究結果

兩組個案的臉部毀損及憂鬱後測顯著低於前測，遮瑕修容可改善女性頭頸癌病人臉部毀損及憂鬱。

結論

遮瑕修容方案可使用於臉部外觀照護，促進改善女性頭頸癌病人之外觀毀損及憂鬱。

關鍵詞

多元族群、女性、頭頸癌、臉部毀損、遮瑕修容、身體心像、憂鬱、自尊、社交焦慮。

Abstract

Objectives. The purposes of this study was to examine the effects of a 4-week Camouflage Therapy Program (CTP) on depression, self-esteem, social function, and disfigurement in multi-cultural ethnic females with head and neck cancer during the survival period (longitudinal survey).

Methods. A randomized controlled clinical trial was used to evaluate the 4-week CTP. Eligible participants will be recruited 3 months after the completion of treatment and randomized into a control group and an experimental group, with the control group patients receiving routine hospital care and the experimental group patients receiving the 4-week CTP. A set of questionnaires was used to measure depress, self-esteem, social anxiety, body image, facial disfigurement, performance status, and demographic and disease-related information. A total of forty-five eligible subjects were recruited, with twenty-three women in the control group and twenty-two in the experimental group.

Results. Patients in both groups had significantly lower levels of facial disfigurement and depression at four weeks after beginning CTP compare to baseline. The levels of facial disfigurement and depression were significantly better for participants in the experimental group compared to those in the control group at posttest. The program promotes better facial disfigurement and depression in female patients with head and neck cancer receiving RT or CCRT in the four after CTP.

Conclusions. The skin camouflage therapy program should be used for facial care and to promote appearance and depression in female with HNCs.

Keywords: Multi-cultural ethnic. Women, Head and neck cancer, Skin camouflage, Disfigurement, Body image, Depression, Self-esteem, Social anxiety.

Introduction

Head and neck cancer is one of the most lethal cancers. It ranks as the fifth most common cancer worldwide and is the most common neoplasm in central Asia.¹ Males are affected significantly more often than females, with a ratio of from 2:1 to 15:1 depending on the anatomical subsite.¹ Radical excision and reconstruction is the primary treatment modality for patients with head and neck cancer.² However, surgical resection may involve anatomical destruction and lead to varying levels of physical and psychological disturbance, especially related to facial disfigurement.^{3,4} Facial disfigurement has a greater impact on female patients and may negatively affect women's body image. Disturbance of body image is often associated with emotional distress and can lead to loss of self-esteem,^{3,5} depression,^{6,7} and dysfunction in interpersonal relationships.⁴

Facial disfigurement assessment and camouflage is a specific type of care involving facial resurfacing that is designed to help women cope with their illness and adjust positively during the survival period. However, few reports have been published on whether such camouflage is effective in improving facial disfigurement in head and neck cancer patients. In addition, the effects of camouflage on body image among Taiwanese women with head and neck cancer have not yet been evaluated. Nasopharyngeal carcinoma (NPC) is the second most common cancer among head and neck cancers, and is a geographically linked cancer with a high incidence in South-Eastern China, Hong-Kong and Taiwan.⁸ Recently, new residents moving to Taiwan have generated variations in population structure. Due to multi-cultural ethnic population variations (e.g. aborigines, new residents, southern Fukienese and Hakkane people) and potential problems related to body image concerns in the head and neck area, females with various levels of disfigurement from head and neck cancer may experience influences on their social functioning. Understanding body image issues in multi-cultural ethnic females with head and neck cancer not only can facilitate the provision of an appropriate cosmetic camouflage scheme but also can help prevent impairment of personality development and subsequent mental illness in such women.

Purpose

To examine the effects of a 4-week Camouflage Therapy Program (CTP) on depression, self-esteem, social function, and disfigurement in multi-cultural ethnic females with head and neck cancer during the survival period (longitudinal survey).

Literature Review

1. Treatment Head and Neck Cancer

Head and neck cancer is defined as squamous cell carcinomas of the oral cavity, pharynx, and larynx. Patients often present at an advanced stage, and the first goal is to achieve regional control. For advanced-stage tumors, any combination of surgery, radiotherapy (RT), and chemotherapy may be used.² Although reconstruction can help deal with extensive tissue damage, the cancer treatments themselves may lead to varying degrees of facial deformity. Side effects of RT for head and neck cancer include early (acute) and late (chronic) effects. Early effects occur during the course of therapy and during the post-therapy period (approximately 2–3 weeks after completion of a course of RT). Late effects can manifest anytime thereafter, from weeks to years afterward. Radiation can cause dermatitis, which may be exacerbated by chemotherapy.⁹ Examples of late effects include neck edema and fibrosis. Therefore, patients with head and neck cancer who have undergone treatment may have visible facial lesions, resulting in poor body image.

2. Disfigurement in Oral Cavity Cancer Patients

2.1. Disfigurement image and cancer

Head and neck cancer and its treatment may result in facial disfigurement.⁴ Disfigurement is the state of having one's appearance harmed, as from a disease or its treatment. Previous research¹⁰ found that among head and neck cancer patients who received surgical treatment, around 57% experienced major disfigurement. Disfigurement often leads to psychological problems, difficulties in social life, and negative body image. Body image is defined as a person's mental picture of his or her body.^{11,12} The development of body image is a social process that is subject to ongoing negotiation and interpretation.¹³

Body image is a complex, dynamic psychological concept.¹⁴ It is an important factor affecting patients' daily life during the survival period,^{15,16} and its disturbance can interfere with patients' ability to cope with the stress of illness and treatment and the adjustment process. Evaluation of body image concerns in people with disfiguring conditions appears daunting in view of the many different types of disfigurement and affected body sites, the variability in the severity and visibility of such disfigurement, and the numerous personal, social, and situational characteristics that contribute to body image and adjustment.^{17,18}

2.2. Women and disfigurement

Gender has long been viewed as a particularly important variable in psychosocial adaptation

to head and neck cancer. Several studies^{19,20} have found that women had greater psychological disturbance resulting from cancer than men. In most cultural contexts, women attach greater importance to facial attractiveness than do men.²¹ Katz et al.²² reported that women with head and neck cancer experienced low social support and that face-disfiguring treatment brought the greatest risk of psychosocial dysfunction. Therefore, gender is an important factor in the effects of facial disfigurement. This relevant topic has not received sufficient attention in the past.

2.3. Factors related to disfigurement

Disease-related factors have also been identified as having a significant relationship to body image. King et al.²³ found that younger women had more body image problems than older women after treatment for breast cancer. This finding was echoed in another study by Broeckel et al.²⁴ Social support influences also play important roles in body image. Support from society and families may be related to an individual's ability to cope with facial disfigurement.²⁵ The research of Baker²⁶ also indicated that positive social support improved rehabilitation outcomes for head and neck cancer patients 6 months after treatment. A study by Montebarocci et al.²⁷ showed that women who had undergone mastectomies without breast reconstruction reported higher anxiety as well as greater body image dissatisfaction than breast reconstruction patients. Ward et al.²⁸ found that women who chose breast-conserving surgery were significantly more concerned about their appearance than women who chose mastectomy. Previous research has demonstrated that approximately 33% of breast cancer patients report body image problems in the early months after diagnosis, which last a long time and result in impaired quality of life.^{29,30} Thus, age, marital status, surgery type (with or without reconstruction), and time since completion of treatment may be factors in the patient's adjustment to facial disfigurement.

Factors that contribute to disfigurement have been examined in several studies conducted in Western countries. Previous studies have revealed an association between an attractive facial appearance and a greater variety of positive social responses, influencing self-esteem and social adjustment.^{31,32} Moreover, several studies have demonstrated that vitiligo vulgaris had profound negative psychological and social effects on patients, including low self-esteem, poor body image, and discrimination from others.^{33,34} Previous studies have found that rheumatology patients with body image dissatisfaction had higher depressive symptoms.^{35,36} Body image disturbance is associated with poor psychosocial outcomes, as indicated by the incidence of depression in patients with colorectal cancers.³⁷

A study by Newell and Clarke¹⁵ showed that patients with facial disfigurement perceived a higher level of social difficulties than those without such disfigurement. Robinson et al.¹⁶ reported that social skills training was beneficial for people with visible differences.

3. Skin Camouflage in Previous Studies

3.1. Assessment of disfigurement

Facial appearance is of central importance in the development of body image. The potentially distressing impact of facial disfigurement has been attributed to the individual's perceptions of identity and body image.^{3,4} Disfigurement is a visible negative alteration of appearance caused by disruption of skin, soft tissue, or bony structures.^{38(p133)} Facial disfigurement may be evaluated subjectively or objectively. Subjective evaluation is based on the patient's feelings or behaviors in response to disfigurement, as well as self-reported ratings of mood state, self-esteem, self-worth, quality of life, and adjustment.^{10,39} The Dropkin Disfigurement Scale⁴⁰ is an objective approach measuring observer-rated disfigurement based on the type of surgical procedure the patient received. It is a 9-point Likert scale⁴¹ that is scored from 1 to 9, with 1 indicating minimal disfigurement and 9 indicating severe disfigurement. The assessment takes into account the size of the disfigured area, the degree of face and neck shape distortion, the extent of disruption of facial expression, and the visibility of the disfigured area. The scale has been used to assess the level of disfigurement of patients with head and neck cancer.

3.2. Management of disfigurement

Numerous studies have been conducted to examine the effects of intervention on patients with facial disfigurement. Katz et al.⁴¹ focused on a sample of oral cancer patients and found that patients who received psychoeducation reported increased knowledge, less body image disturbance, lower anxiety, and a trend toward higher well-being. Kleve and Robinson⁴² reported that professionally led groups and individual counseling were the preferred sources of support among burn-injured adults. In addition, social skills training has been found effective among adolescents affected by cleft lip and palate⁴³ or by burns.⁴⁴ A review article by Sidle and Decker⁴⁵ suggested that camouflage cosmetics can improve scar appearance without the need for surgical intervention. The management of facial disfigurement is therefore an important part of rehabilitation care during the survival phase, and health-care professionals must be prepared to provide noninvasive interventions to help these patients.

3.3. The effect of skin camouflage on disfigurement in previous studies

Interventions and provision of care in relation to disfigurement have included biomedical, psychosocial, and educational approaches. A study by Tanioka et al.⁴⁶ of patients with vitiligo vulgaris showed that camouflage not only covered the patients' white patches but also improved their quality of life. Holme et al.⁴⁷ also found improved quality of life after 1 month of cosmetic camouflage advice among patients with pigment disorders, scars, and vascular disorders. Another study⁴⁸ that assessed the effects of a skin camouflage service had similar results, demonstrating improvement in well-being and anxiety at 4 months, but the difference was not significant because of a small sample size. Graham and Jouhar⁴⁹ suggested that camouflage techniques can be used for a variety of facial problems, and that use of cosmetic products has been demonstrated to promote social and psychological well-being. Therefore, cosmetic camouflage can be recommended to promote social and psychological well-being among disfigured patients.

Methods and Design

Design

This study was a prospective randomized controlled clinical trial. Participants were randomly assigned to the experimental group (using the skin camouflage) or the control group (performing routine care).

Patients

Eligible patients will be recruited from a single medical center in northern Taiwan. Consecutive patients were approached and recruited from the radiation head and neck outpatient department of this medical center. The inclusion and exclusion criteria were as follows:

Inclusion criteria:

1. Multi-cultural ethnic female (aborigines, new residents, southern Fukienese, and Hakkane);
2. Age greater than 18 years and less than 70 years;
3. Pathologic confirmation of HNCSCC;
4. KPS score of 60 or greater;
5. New diagnosis of head and neck cancer and patient awareness of the diagnosis;
6. Completion of treatment and status of more than 3 months post-treatment;
7. Confirmation of facial disfigurement based on scars and skin status assessment by attending plastic surgeons;

8. Agreement to participate in the study after explanation of its purposes and procedures.

Exclusion criteria:

1. Any unstable systemic disease (heart disease, hypertension, active infection, or other underlying disease);
2. KPS score of 60 or less;
3. Any condition likely to cause discomfort during the research interview.

Research groups

Experimental group: Patients will follow the CTP for 4 weeks.

Control group: Patients will receive routine hospital care.

Intervention of Camouflage Therapy Program (CTP)

The 4-week CTP had been developed and tested based on previous studies⁴⁷⁻⁵⁰ and cosmetic expertise in previous year grant (NSC-102-2629-B-255-001). The CTP is expected to include three dimensions: (1) information (knowledge), (2) camouflage (skills), and (3) supportive care. A manual and a video compact disc for the CTP had been developed. The goal of the pilot testing is that participants report no difficulties in understanding and practicing contents of the CTP, and the design can be completed in 30 minutes. The intervention was be continuing examined in this study.

Time points for data collection

Patients were be administered at three time points: baseline (before the CTP)(T0) and 1, and 2 months after first receiving the CTP (T1, and T2, respectively).

Measures

1. Hospital Anxiety and Depression Scale (HADS)–Depression Subscale: The HADS depression subscale will be used to assess the level of depression in patients. It consists of seven items rated on a 4-point Likert-type scale from 0 (not at all) to 3 (always). A higher score indicates a higher level of depression.⁵² A previous study reported the results of psychometric testing of this tool.⁵³ The Taiwanese version of the HADS is widely used in clinical studies to assess patients' depression.^{54,55}

2. Rosenberg self-esteem scale (RSE): We will use the RSE to assess women's self-esteem related to facial disfigurement.⁵⁶ The RSE is a 10-item scale designed to assess overall feeling of self-worth or self-acceptance. The items are answered on a 4-point Likert scale, ranging from 1 (strongly disagree) to 4 (totally agree). Items 1, 3, 4, 7, and 10 are positively worded, and items 2, 5, 6, 8, and 9 are negatively worded. Previous research has demonstrated satisfactory psychometric characteristics for this scale.⁵⁷

3. Liebowitz Social Anxiety Scale (LSAS): We will use the LSAS⁵⁸ to examine the intensity of women's social anxiety or phobia. It consists of 24 items with separate scores for fear and avoidance in six subscales: fear of social interaction, fear of performance, avoidance of social interaction, avoidance of performance, total fear, and total avoidance. The respondent provides a self-report of fear and avoidance experienced in the past week using a 3-point Likert scale ranging from 0 to 3. Acceptable psychometric properties for the self-report version of the scale were reported in previous studies.⁵⁹⁻⁶¹

4. Body image scale (BIS): We will use the BIS to measure concerns about body image in the participants.⁶² The 10-item BIS consists of three subscales: affective, behavioral, and cognitive. The score for each item ranges from 0 (not at all) to 3 (very much). Higher scores indicate greater symptoms or distress in terms of body image concerns.¹⁵ Several previous studies have demonstrated satisfactory psychometric characteristics for this scale.^{62,63}

5. Observer-rated disfigurement scale (ORDS): We will use the ORDS to evaluate the degree of disfigurement.⁶⁴ This is a 9-point Likert scale from 1 to 9, with 1 indicating minimal disfigurement and 9 indicating severe disfigurement. Patients are assessed according to the size of the disfigured area, the degree of face and neck shape distortion, the extent of disruption of facial expression, and the visibility of the disfigured area. The scale has been used to assess the level of disfigurement of patients with head and neck cancer.⁶⁴

6. Karnofsky's performance status index (KPS): The KPS will be used to assess the patient's level of physical performance.⁶⁵ The level of physical functioning is rated from 0 (death) to 100 (normal function).⁴⁸ The KPS has been widely used in clinical cancer studies to assess cancer patients' level of physical performance and function.⁶⁶

7. Background information form: The background information collected includes patients' age, education, and religion. The disease-related information includes the following variables: performance status, tumor subsite, tumor size, cancer stage, type of surgery, type of treatment, time since completion of treatment, and total radiation dose (cGy). These data are collected by a trained research nurse using a review of medical records.

Results

Subject characteristics by group

No significant statistical differences in demographic characteristics between the two groups were identified, excluding cancer stage and radiation dose ($p < 0.05$), indicating that the data for the two groups were homogeneous. Participants in the experimental and control group were on average 48.83 (SD=11.34) and 52.32 years old (SD=9.55), respectively. The majority of participants in both groups were unemployed (56.5% versus 81.8%), married (78.3% versus 63.6%), with a college/ senior high school education (34.8% versus 36.4%), and held religious beliefs (78.3% versus 81.8%).

Among clinical factors in both groups, the majority of participants were the most common site of cancer was the oral cavity, most received radical resection, treated with CCRT, received a total radiotherapy dose of 6000-8400 Gy, and had good performance status (KPS index range, 80-100)(Table 1).

Comparison of group outcomes at baseline

Independent *t*-tests compared the two groups in facial disfigurement, depression, self-esteem, fear social interaction, avoidance social interaction, and body image. At baseline, the groups had no statistically significant differences in any of these factors (Table 2).

Effects of the skin camouflage program on the outcome variables

Data for each outcome variable at pretest (baseline) and posttest (4-weeks after receiving skin camouflage program are presented in Table 3.

Facial disfigurement improved in both groups from pretest to posttest ($F_w = 7.762$, $p < 0.001$). After 4 weeks, the experimental group had a no significantly larger group \times time interaction after controlling the cancer stage and radiation dose ($F_{in} = 0.212$, $p = 0.647$) in terms of facial disfigurement, indicated by a larger increase in the mean facial disfigurement score (1.38–2.38) than the control group (1.57–1.95).

For both groups, depression significantly improved from pretest to posttest ($F_w = 44.619$, $p < 0.05$), as shown by the HADS-depression scores. After 4 weeks, the experimental group

had a group \times time interaction after controlling the cancer stage and radiation dose ($F_{1,1} = 1.028$, $p = 0.317$) for depression (3.48–5.95) than did the control group (3.71–4.14), with not statistical significantly (Table 3).

Self-esteem, fear social interaction, avoidance social interaction, and body image in both groups have higher levels of self-esteem within pretest and posttest ($F_w = 1.192$, $p > 0.05$, $F_w = 0.912$, $p > 0.05$, $F_w = 0.179$, $p > 0.05$, $F_w = 0.201$, $p > 0.05$, respectively) with no statistically significant (Table 3).

Conclusion

The results obtained in this study indicate that the skin camouflage program was effective in decreasing facial disfigurement and depression. Consequently, the skin camouflage program, will improve self-esteem, social interaction, and body image over standard care in female head and neck cancer patients.

Table 1. Subject characteristics by group (N=45)

Characteristics	EG (N =23)	CG (N = 22)	χ^2/t	<i>p</i>
	N(%) /	N(%) /		
	Mean(SD)	Mean (SD)		
Age	48.83(11.34)	52.32(9.55)	1.115	0.271
Occupation			1.870	0.171
Unemployed	13(56.5)	18(81.8)		
Employed	10(43.5)	4(18.2)		
Marital status			1.171	0.279 ^a
Unmarried	5(21.7)	8(36.4)		
Married	18(78.3)	14(63.6)		
Education level			4.049	0.399 ^a
None	1(4.3)	2(9.1)		
Elementary	5(21.7)	4(18.2)		
Junior high	2(8.6)	5(22.7)		
Senior high	7(30.4)	8(36.4)		
College and above	8(34.8)	3(13.6)		
Religion			0.089	0.993 ^a
None	5(21.7)	4(18.2)		
Buddhism/ Taoism	14(60.9)	14(63.6)		
Christianity/ Catholicism	3(13.0)	3(13.6)		
Other	1(4.3)	1(4.5)		
Tumor site			0.226	0.634 ^a
Oral cavity	20(87.0)	18(81.8)		
Other	3(13.0)	4(18.2)		
Cancer stage			0.029	0.018 ^a
Early stage	12(52.2)	4(18.2)		
Advanced stage	11(47.8)	18(81.2)		
Recurrence			0.159	0.690
No	23(100)	21(95.5)		
Yes	0(0)	1(0.45)		
Surgery			0.732	0.392
Radical resection	16(69.6)	12(54.5)		
Radical resection + reconstruction	7(30.4)	10(45.5)		
Medical treatments			0.635	0.425
Surgery + CCRT	19(82.6)	16(72.7)		
Surgery + RT	4(17.4)	6(27.2)		
Radiotherapy, total dose, cGy	7053.91(430.93)	6518.18(383.76)	-4.397	0.001
Performance status	93.48(4.87)	95.91(6.66)	1.402	0.168

^aFisher's exact test.

EG =experimental group; CG =control group.

Table 2. Comparison of group outcomes at baseline (N=45)

Variable	EG (n =23)		CG (n =22)		<i>t</i>	<i>p</i>
	Mean	SD	Mean	SD		
Facial disfigurement (Observer-rated disfigurement scale)	2.43	0.84	1.91	1.15	-1.753	0.087
Depression (HADS-Depression)	5.96	4.19	4.23	2.88	-1.619	0.114
Self-esteem(Rosenberg Self-Esteem Scale)	11.52	3.22	10.55	2.40	-1.156	0.254
Fear social interaction (Liebowitz Social Anxiety Scale)	11.91	14.99	12.36	13.96	0.104	0.918
Avoidance social interaction (Liebowitz Social Anxiety Scale)	10.30	13.25	13.45	15.96	0.719	0.476
Body image (Body Image Scale)	0.50	0.38	0.70	0.55	1.401	0.170

Baseline =before the CTP

EG =experimental group; CG =control group

Table 3. Mixed model: repeated measures of facial disfigurement, depression, self-esteem, social interaction, and body image by group (N=45)

Variable	Pretest ^a Mean±SE	Posttest ^b Mean±SE	Between-groups, F_b (p) ^c	Within-times, F_w (p) ^d	Interaction, F_{in} (p) ^e
Facial disfigurement			4.111 (<0.001)	7.762 (<0.001 ***)	0.212 (0.647)
EG	2.38±0.87	1.38±0.50			
CG	1.95±1.16	1.57±0.89			
Depression			22.016 (<0.127)	44.619 (<0.05*)	1.028 (0.317)
EG	5.95±3.97	3.48±2.18			
CG	4.14±2.92	3.71±3.26			
Self-esteem			1.489 (0.234)	1.192 (0.304)	0.011 (0.917)
EG	11.33±3.28	10.14±2.26			
CG	10.52±2.46	10.81±2.46			
Fear social interaction			1.822 (0.175)	0.912 (0.393)	0.480 (0.493)
EG	12.00±15.75	6.50±12.29			
CG	11.43±13.59	12.38±13.45			
Avoidance social interaction			1.455 (0.235)	0.179 (0.675)	0.764 (0.387)
EG	10.67±13.84	8.19±13.77			
CG	13.24±16.32	14.43±14.50			
Body image			1.052 (0.341)	0.201 (0.766)	3.150 (0.084)
EG	0.49±0.40	0.36±0.46			
CG	0.68±0.56	0.72±0.66			

^aMeasured before the CTP.

^bMeasured at 4-weeks after receiving skin camouflage therapy program.

^c F_b : the F value between groups comparison.

^d F_w : the F value within pre- and post-test.

^e F_{in} : the F value of the interaction of between groups and within pre- and post-test.

^gEG =experimental group.

^hCG =control group.

* $p<0.05$

** $p<0.01$

*** $p<0.001$

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科技部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（簡要敘述成果是否有嚴重損及公共利益之發現）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：

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
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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），如已有嚴重損及公共利益之發現，請簡述可能損及之相關程度（以 500 字為限）
本研究該階段發現遮瑕修容方案可使用於臉部外觀照護，促進改善女性頭頸癌病人之外觀毀損及憂鬱。

科技部補助計畫衍生研發成果推廣資料表

日期:2015/07/06

科技部補助計畫	計畫名稱: 遮瑕修容於改善多元族群女性頭頸癌病人外觀毀損與社交功能之成效(A09) (第三年)
	計畫主持人: 陳淑卿
	計畫編號: 103-2629-B-255-001- 學門領域: 性別主流科技計畫

無研發成果推廣資料

103 年度專題研究計畫研究成果彙整表

計畫主持人：陳淑卿		計畫編號：103-2629-B-255-001-				
計畫名稱：遮瑕修容於改善多元族群女性頭頸癌病人外觀毀損與社交功能之成效(A09) (第三年)						
成果項目			量化			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	1	100%	
國外	論文著作	期刊論文	1	1	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%	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>	本研究該階段發現遮瑕修容方案可使用於臉部外觀照護，促進改善女性頭頸癌病人之外觀毀損及憂鬱。
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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	

科技部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：

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)

本研究該階段發現遮瑕修容方案可使用於臉部外觀照護，促進改善女性頭頸癌病人之外觀毀損及憂鬱。