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組蛋白去乙酰酶抑制劑對纖維蛋白分解過程之影響

陳偉玲

中文摘要：

肺炎性肋膜積液是由於肺炎所引起的一種感染性肋膜疾病。在感染狀態下，細菌可以從肺進入肋膜腔，引起急性炎症反應，促使纖維溶酶原激活物抑制劑和膠原蛋白的過量產生，導致肋膜腔室化和纖維化，進而增加發病率和死亡率。

肋膜間皮細胞位於肋膜表面，可以直接接觸入侵的微生物，如鍊球菌或葡萄球菌，是主要引起肺炎旁積液的病原菌。脂磷壁酸是革蘭氏陽性細菌外膜的主要成分，其可誘導炎症反應，並分泌一些因子參與纖維蛋白沉積和清除。纖維溶酶原激活物抑制劑在纖維蛋白溶解系統中扮演著重要的角色。纖維溶酶原激活物抑制劑濃度升高促使纖維溶酶原激活物失去活性，增加纖維酶的產生和細胞外基質的沉積，其中以膠原蛋白為最主要。過去的研究證實，纖維溶酶原激活物抑制劑濃度在肺炎性肋膜積液的病人會增加且肋膜增厚的情形也顯著高於沒有肺炎性肋膜積液的病人。我們最近的研究亦顯示，脂磷壁酸在肋膜間皮細胞中是透過 JNK 訊息路徑調控纖維溶酶原激活物抑制劑的表現。這意味著革蘭氏陽性菌可能透過改變纖維蛋白溶解途徑而引起肋膜纖維化。此外，透過抑制成纖維細胞中纖維溶酶原激活物抑制劑的表現可以恢復膠原蛋白的降解，暗示脂磷壁酸可能透過誘導纖維溶酶原激活物抑制劑和膠原蛋白而改變纖維蛋白溶解系統的平衡。

組蛋白去乙酰酶抑制劑藉由調控細胞不同的過程而影響基因的表現，並可減輕心、肺、腎、肝和皮膚等不同器官的纖維化。我們之前的研究證實，組蛋白去乙酰酶抑制劑，CBHA 透過人類間皮細胞中的 smad 和 JNK 訊息路徑顯著降低由 TGF- β 1 和 TNF- α 誘導的纖維溶酶原激活物抑制劑的表現。此外，組蛋白去乙酰酶抑制劑 TSA 可以阻斷人類皮膚纖維母細胞中 TGF- β 1 誘導膠原蛋白的表現，暗示組蛋白去乙酰酶抑制劑對於纖維化的治療是重要的。然而，目前尚不清楚組蛋白去乙酰酶抑制劑是否可以影響脂磷壁酸在體外和體內誘導的纖維蛋白溶解。因此，在本研究中，我們使用 CBHA 來研究其對脂磷壁酸刺激人類間皮細胞表現纖維溶酶原激活物抑制劑和膠原蛋白的影響及其潛在機制。此外，我們進一步使用動物模式來證實 CBHA 對獨克士黴素(癌性肋膜積液患者執行肋膜沾黏術的有效藥物)誘導纖維化之影響。

關鍵字：膠原蛋白、脂磷壁酸、組蛋白去乙酰酶抑制劑、第一型纖維蛋白溶解酶原活化抑制劑、肋膜纖維化。

英文摘要：

Parapneumonic effusion (PPE) is an infectious disease of pleura and most common follow pneumonia. Under infectious states, the bacteria can enter the pleural cavity from the lung which initiates acute inflammatory response leading to pleura loculation and fibrosis by overproduction of plasminogen activator inhibitor (PAI)-1 and collagen, resulting a significant morbidity and mortality.

Pleural mesothelial cells (PMCs) line the pleura surface are direct contact with the invading microorganisms, such as streptococcal or staphylococcal species, are a common cause of PPE. Lipoteichoic acid (LTA) an outer membrane component of gram positive bacteria, was shown to induce inflammatory response that may secrete some factors to participate in the fibrin deposition and clearance. PAI-1 plays an important role in fibrinolytic system. The elevation of PAI-1 level is the inactivation of plasminogen activator, resulting in increased generation of plasmin and deposition of extracellular matrix (ECM), of which collagens are major component. Previous study showed that in patients with PPE can increase the level of PAI-1 and is significantly higher in PPE of those with residual pleural thickening. Recent study by our laboratory demonstrate that LTA induced PAI-1 expression by means of activating phosphorylation of JNK pathway in human PMC. Moreover, degradation of collagen may be restored by inhibition of PAI-1 expression in fibroblasts, implicating that LTA may contributor to the altered fibrinolytic system balance through induction of PAI-1 and collagen.

The histone deacetylase inhibitor (HDACi), which has potential effects on gene expression by regulating multiple cellular processes, had been reported to attenuate fibrosis in different organs including the heart, lung, kidney, liver and skin. Our group previously showed that HDACi, m-carboxycinnamic acid bis- hydroxamide (CBHA) significantly reduced PAI-1 expression triggered by TGF- β 1 and TNF- α via smad and JNK signaling pathway in human PMC. Additionally, inhibition of histone deacetylases by TSA was reported to reduce expression of collagen in skin fibroblasts, indicating HDACi is an important for the therapeutic control of fibrosis. However, at present it is unknown, whether HDACi can influence fibrinolysis induced by LTA in vitro and in vivo. Therefore, the aim of the present study was to explore the effect of CBHA on PAI-1 and collagen expression expose to LTA in human PMCs and the underlying mechanisms. Furthermore, we used animal models to determine the effects of CBHA on fibrotic changes induced by doxycycline, is an effective agent for pleurodesis in patients with malignant pleural effusions.

Key words: collagen, lipoteichoic acid, histone deacetylase inhibitor, plasminogen activator inhibitor, pleural fibrosis

中文摘要：

土壤中添加生物炭可增強土壤肥力和農作物生產力，同時也可能影響土壤微生物活性和微生物群落結構。然而，很少有研究對生物炭添加對土壤酵素活性和微生物群落組成的影響以及驅動因素作探討。因此本實驗，主要探討不同溫度處理過（350°C 和 600°C）和不同施用率的雞糞生物炭（分別為 0、0.5% 和 1.0%）、雞糞（RPL）和雞糞堆肥（CC）對旱田土壤養分、微生物活性和微生物群落的影響。結果表明，添加生物炭的總氮（TN）和 pH 值與施用化學肥料（CF）相比具有顯著影響，但對土壤有機碳（SOC）和電導率（EC）沒有顯著影響。隨著添加生物炭，土壤鹼性磷酸酶顯著增加，但是酸性磷酸酶則降低。生物炭（600°C 處理）和雞糞堆肥處理其總 PLFA 濃度分別比化學肥料施用（CF）分別增加了 55% 和 123%。此外，與 CF 和 350°C 處理過的生物炭相比，600°C 生物炭處理明顯增加了土壤細菌和真菌的豐富度。土壤細菌的組成主要由 Proteobacteria, Actinobacteria 和 Chloroflex 組成，其中 Acidobacteria 和 Proteobacteria 的比例佔細菌群落的 45% 以上。添加生物炭（350°C 和 600°C）時，Acidobacteria 的比例增加，而 Actinobacteria 的比例和 Chloroflex 比例降低。PLFA 和 16S 高通量測序的主成分分析顯示，微生物群落結構在很大程度上取決於生物炭的添加，而土壤總氮和 pH 值的提高是影響其群落差異的關鍵因素。綜合上面結果，生物炭（600°C）和雞糞堆肥可以減輕土壤酸化，增加土壤總氮。這兩種管理策略均可提高土壤微生物活性和生物量，並改善微生物群落結構。

關鍵字：土壤酵素、微生物生質量、微生物族群、磷脂質脂肪酸、16S rRNA。

英文摘要：

Biochar addition to soil has been known to enhance soil fertility and crop productivity, which may also affect soil microbial activity and microbial community structure. However, the response of soil enzymes and microbial community composition to biochar addition and the main factors that drive their consequent behavior have rarely been studied. Therefore, to investigate the combined effect of different temperatures (350 °C, and 600 °C) and different amounts of chicken manure biochar (0, 0.5 and 1.0% by mass), chicken manure (RPL) and Chicken compost (CC) on soil nutrients, enzymatic activities and microbial community in an upland field study. The results showed that the contents of total nitrogen (TN) and pH significantly with biochar addition compared with fertilizer (CF), but no significant effect on soil organic carbon (SOC) and electrical conductivity (EC). Soil alkaline phosphatase significantly increase with biochar addition, however, acid phosphatase decrease after biochar addition. The total PLFA concentrations in the biochar (600 °C treatment) and chicken compost treatments were significantly increased by 55% and 123% than that in the fertilizers application (CF). In addition, 600 °C biochar treatments significantly increased soil bacterial and fungal abundance compared with CF and 350 °C biochar treatments. Soil bacteria composition mainly consisted of Proteobacteria, Actinobacteria, and Chloroflex, and the proportion of Acidobacteria, and Proteobacteria proportion represented >45% of the bacterial community. The Acidobacteria proportion increased, but Actinobacteria and chloroflex proportions decreased with biochar addition (350 °C and 600 °C). Principal components analysis of PLFA and 16S high-throughput sequencing suggested that the microbial community structures were largely dependent of biochar addition, and that improved soil total nitrogen and pH were key factors shaping them. In conclusion, biochar (600 °C) and chicken compost could alleviate soil acidification, enhance soil total nitrogen. Both management strategies could increase the soil microbial activity and biomass, and improve the microbial community structure.

Key words: Soil enzyme; microbial biomass; microbial community; phospholipid fatty acid; 16S DNA.

蔥屬植物有效成分與其生化性質之研究

張讚昌

中文摘要：

蔥屬植物(*Allium* sp.)被歸屬於蔥科(Alliaceae)，是一種多年生鱗莖植物，包括青蔥、大蒜、洋蔥、韭菜等，是吾人在日常烹煮食物所不可缺的重要調味食材。蔥屬植物大都具有強烈的特殊氣味，主要是來自含有硫化物的大蒜素所引起。在過去數年對青蔥、大蒜及黑蒜的研究結果顯示，蔥屬植物具有良好的抗氧化活性，並具有抑制細菌及真菌能力的效果，這些生化活性與蔥屬植物所含的硫化物含量有關。此外，在面對臨床上常見致病菌的抗藥性愈加猖獗，如何找出有效抑菌成分作為藥物以外之另一選擇，選擇利用蔥屬植物之萃取物作為新的抗氧化及抑菌食材，實為可預期且具有未來性之選擇。

為深入探討蔥屬植物所含有效成分與其生化性質之相關性，本研究以過去對蔥屬植物的相關研究為基礎，並選用台灣本土所生產之青蔥、大蒜、洋蔥、紅蔥頭及韭菜等蔥屬植物為試驗材料，除進行抗氧化活性及抑菌能力探討外，更進一步分析試驗材料中所含之大蒜素與胺基酸等有效成分之含量，與其生化性質之相關性研究，期能將研究成果發表於國際期刊，以提供蔥屬植物作為未來開發成機能性食品之依據。結果顯示，蔥屬植物之大蒜素含量以大蒜>韭菜>青蔥>洋蔥>紅蔥頭；而不同蔥屬植物萃取物所含常見 20 種胺基酸含量，則是以大蒜>韭菜>青蔥>紅蔥頭>洋蔥。

關鍵字：蔥屬植物、青蔥、大蒜、洋蔥、韭菜、大蒜素、生化性質。

英文摘要：

Allium species are assigned to Alliaceae, they are perennial bulb plants. Alliaceae plants including *Allium fistulosum*, *Allium sativum*, *Allium cepa*, *Allium tuberosum*, etc., were important seasoning ingredients that are indispensable to our daily cooking. All Alliaceae plants have a strong special smell, mainly from the sulfide containing allicin caused. In our past studied on the green onions, garlic and black garlic research shows that the content of allicin not only with the Alliaceae plants antioxidant, more inhibition of bacteria, fungi and other effects. In the face of the hospital clinically common pathogen resistance is rampant, how to find effective antibacterial ingredients as a drug alternative to the choice of the use of the plant extracts of this genus as new antioxidant and antibacterial ingredients. In order to further explore the correlation between the active ingredients contained in allium plants and their biochemical properties, this study is based on the previous research on allium plants, and selected onions, garlic, onions, shallots and leeks produced in Taiwan. The genus is a test material. In addition to the anti-oxidation activity and antibacterial activity, the content of the active ingredients such as allicin and amino acid contained in the test materials is further analyzed, and the correlation between its biochemical properties and the biochemical properties will be studied. The research results were published in international journals to provide allium plants as the basis for future development into functional foods. The results show that the allicin content of allium plants is as follows: garlic>leeks>shallots>onions>shallots; while the content of 20 common amino acids in different allium extracts is as follows: garlic>leeks>shallots>shallots >onions.

Key words: Alliaceae plants, *Allium fistulosum*, *Allium sativum*, *Allium cepa*, *Allium tuberosum*, antimicrobial activity, allicin, biochemical properties

探討 Mangiferin 在大鼠糖尿病併發高脂血症之調控機制

張靜雯

中文摘要：

臨床上常見有糖尿病合併高脂血症等疾病，目前能有效的兼顧此複合性疾病的藥物不多，近年來肥胖和代謝性疾病發生率都有大幅度增加的趨勢，主要病徵是脂肪組織過度增生，導致糖尿病與心血管疾病罹患率快速升高，除了飲食控制與規律運動外，避免肥胖者併發高血糖是非常重要的預防策略。

本研究主要在探討 Mangiferin (MGF) 對糖尿病和高脂血症代謝失衡時的影響及其機制。本實驗利用高脂飲食 (High Fat Diet, HFD) 5 週與 Streptozotocin (STZ) 4 週誘發大鼠血糖及血脂升高，實驗結果顯示，芒果苷可以降低 HFD 合併 STZ 誘導之高血糖及高血脂，並且提升胰島素含量，改善肝臟損傷及血脂異常。通過血清檢測生化數值 (胰島素 (Insulin)、游離脂肪酸 (FFA)、脂蛋白脂酶 (LPL)、動脈硬化指數 (AI)、天冬氨酸氨基轉移酶 (AST)、丙氨酸氨基轉移酶 (ALT)、胰島素阻抗性 (HOMA-IR)、丙二醛 (MDA))。此外，利用 real-time PCR 的方法分析脂質代謝相關基因 Fatty acid translocase (FAT/CD36)、Carnitine palmitoyltransferase I (CPT1)、lecithin cholesterol acyltransferase (LCAT)、scavenger receptor class B type I (SR-BI) 的表現。實驗結果發現，MGF 150mg/kg，可顯著提升胰島素、HOMA- β 及 LPL 含量，降低血清中 FFA、HOMA-IR、AI、ALT、AST，以及 FAT/CD36、CPT1、LCAT、SR-BI mRNA 的表現量，同時減少肝臟中葡萄糖及游離脂肪酸的表現。

關鍵字：高脂血症、高血糖症、脂質代謝、芒果苷。

英文摘要：

Diabetes combined with hyperlipidemia is a very common clinical disease. However, few drugs can effectively take this combined disease into account. In recent years, the incidence of obesity and metabolic diseases has rapidly increased. The main symptom is the excessive proliferation of adipose tissue, leading to a rapid increase in the prevalence of diabetes and cardiovascular diseases. In addition to diet and exercise control, avoiding obesity associated with hyperglycemia is an extremely important strategy. This study aimed to investigate the effects of Mangiferin (MGF) and its molecular mechanisms of diabetes and hyperlipidemia metabolic imbalance. In this experiment, high fat diet (HFD) for 5 weeks and Streptozotocin (STZ) for 4 weeks were used to induce blood glucose and blood lipid elevation in rats. The results showed indicated that MGF can reduce HFD and STZ induced hyperglycemia, dyslipidemia and liver injury. Treatment with mangiferin significantly increase insuline, HOMA- β , LPL and decreases in FFA, AI, ALT, AST, NO, MDA, Glucose and the mRNA expression of adipogenic factors such as Fatty acid translocase (FAT/CD36) 、 Carnitine palmitoyltransferase I (CPT1)、lecithin cholesterol acyltransferase (LCAT)、scavenger receptor class B type I (SR-BI) expression was increased.

Key words: Hyperlipidemia, Hyperglycemia, Lipid Metabolism, Mangiferin

山葵萃取液應用於化妝品之最適萃取條件與抗菌活性研究

陳觀彬

中文摘要：

隨著社會的進步和發展，化妝品已經成為人們生活不可或缺的日用品，與此同時，人們對化妝品的質量、效能和安全要求越來越高。含有植物提取物的化妝品在許多的功效上獨霸一方如祛斑美白、抗衰老、保濕和抗皺等，深受國內外消費者喜愛，因此植物提取物在化妝品中的應用每年不斷增加。同時，許多化妝品企業以“天然”為宣傳口號，主打含有天然成分的化妝品，以滿足人們對綠色生活、養生、健康、安全等方面的需求。所以人們對含有植物提取物之化妝品的功效的研究成為研究的重點。

本研究計畫針對山葵(*Wasabi japonica* Matsum, 俗稱哇沙米)產於台灣山上特有品種植物，首先將取得之山葵之植物利用不同的條件之萃取方式，例如溶劑種類、萃取時間、萃取溫度等萃取出山葵中的異硫氰酸酯(Isothiocyanate)，探討找出最佳之萃取條件。萃取結果則是以高效能液相層析法(High-performance liquid chromatography, HPLC)進行定量分析。

另一方面，針對異硫氰酸酯所具備之抗菌性，依據化妝品法規中針對金黃色葡萄球菌(革蘭氏陽性菌.SA)、綠膿桿菌(革蘭氏陰性菌.PA)、大腸桿菌(革蘭氏陰性菌.EC)、白色念珠菌(酵母菌.CA)、黑麴菌(黴菌.AB)進行抗菌測試。期望能以天然植物萃取液之方式逐漸能取代目前傳統防腐劑之市場需求。

關鍵字：天然防腐劑、山葵、異硫氰酸酯、抗菌性。

英文摘要：

With the progress and development of the society, cosmetics have become indispensable daily necessities in people's life. At the same time, people have higher and higher requirements on the quality, efficacy and safety of cosmetics. Cosmetics containing plant extracts are dominant in many functions, such as freckle whitening, anti-aging, moisturizing and anti-wrinkle, deeply loved by consumers at home and abroad, so the application of plant extracts in cosmetics continues to increase every year. At the same time, many cosmetics enterprises to "natural" as a slogan, the main contains natural ingredients of cosmetics, to meet people's green life, health, health, safety and other aspects of demand. Therefore, the research on the efficacy of cosmetics containing plant extracts has become the focus of research.

This study plan for *Wasabi japonica* Matsum, native to Taiwan endemic plants on the mountain, the first will get the horseradish plants with different conditions of extraction ways, such as the kinds of solvent, extraction time, extraction temperature, extraction of *Wasabi japonica* Matsum of isothiocyanates, find out the best extraction conditions are discussed. The extraction results were determined by high-performance liquid chromatography (HPLC).

On the other hand, the antibacterial properties of isothiocyanates were tested for *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Candida albicans* and *Aspergillus Niger* according to the cosmetics regulations. It is expected that natural plant extracts can gradually replace the current market demand for traditional preservatives.

Key words: Natural preservatives, *Wasabi japonica* Matsum, Isothiocyanate, Antibacterial.

Tropisetron Hydrochloride 舌下滴丸劑型之開發

陳睿能

中文摘要：

噁心、嘔吐是在化學治療的過程中最常出現的副作用，不但干擾病人日常生活作息也影響癌症病人對於治療的順從性，止吐劑的給予在化學治療中扮演了一個很重要的角色，它對支持癌症病人完成化學治療的周期有其不可或缺的重要性。Tropisetron Hydrochloride 是一種效價高，具選擇性競爭血清素(5-HT₃)受體拮抗劑，現今止吐劑以口服給藥及靜脈注射為主。然而靜脈注射相當不方便且病人的順從性低，而口服劑型亦會受到首渡效應而且服藥後還未產生藥效時，癌症病患即吐出藥物。為解決口服藥物生體可用率小於 60% 的缺點，以舌下遞送系統的劑型進行開發，其原理為藥物在舌下溶解並直接通過黏膜達到快速吸收之成效，且可以避免首度效應。以處方 DP-8、DP-9 與 DP-10 改變崩散劑量來評估在溶離試驗是否會增加崩散速度與市售品 Kytril® 之 f₂ 值是否相似，結果顯示 DP-8 在溶離試驗中與 Kytril® 最為相似，在溶離試驗中以 10 分鐘可以快速崩解且能在 30 分鐘內達到完全釋放。

關鍵字：止吐劑、Tropisetron、滴丸。

英文摘要：

Nausea and vomiting are the most common side effects in the course of chemotherapy. They not only interfere with the daily routine of patients, but also affect the compliance of cancer patients during treatment. The administration of antiemetics plays an important role in chemotherapy treatment cycles. It is indispensable for supporting cancer patients during the cycles of cancer treatment. Tropisetron Hydrochloride is a potent, selective competitive serotonin (5-HT₃) receptor antagonist. Today's antiemetics are mainly designed to be administered orally and intravenously. However, intravenous injection is quite inconvenient and leads to poor patient compliance. Drugs administered orally are known to undergo first pass metabolism and the cancer patient soon vomits the drug before the it reaches the site of action. In order to solve the shortcomings of oral drug bioavailability of less than 60%, the formulation of the sublingual delivery system are to be developed because of the drug dissolves under the tongue and directly passes through the mucosa to achieve rapid absorption, and the first pass effect can be avoided. The similarity factor method (f_2) in the non-model dependent method was adopted to calculate and explore various formulations. Results showed in the dissolution testing, the pills of formulation DP-8 disintegrated rapidly within 10 min. In comparison with the commercial product Kytril® , the dissolution curve and the original manufactures' dissolution curve were the most similar.

Key words: antiemetics, Tropisetron, dripping pill.

探究多元文化教育課程對五專幼兒保育科學生多元文化素養影響之研究

周佩諭

中文摘要：

本研究旨在探究國內五專幼兒保育科學生在修習多元文化教育課程後，對其多元文化素養的影響。五專幼兒保育科學生畢業後進入幼兒園任職，屬幼兒園教保服務人員類別中的教保員身分，在幼兒園教學現場中，與幼兒園教師同樣賦有對幼兒的教保責任。過去研究以討論幼兒園教師多元文化素養情形，提出困難點在師資培育階段有無接受多元文化教育課程之修授，而相對地同屬幼兒園教保服務人員類別的教保員，卻未受相關研究討論，因此，引發本研究期望能透過問卷調查，探究五專幼兒保育科學生是否修習多元文化教育課程，對其多元文化素養的變化情形。研究結果則顯示五專幼兒保育科學生，在修習多元文化教育課程後，對其多元文化素養產生正面效益，此值得作為未來在研究與教學上的參考建議。

關鍵字：多元文化教育、多元文化素養、教保人員。

英文摘要：

The study aims to explore the impact of multicultural competence after multicultural curriculum learned on 5 years college students of department of early childhood education. The pre-caregivers have the same education affairs for early preschool children as teachers, but they have not to be inquired for any research topic past to present. The study adopt the questionnaire to investigate their multicultural competence, and related to the course of multicultural education studied. According the questionnaire data, the study use the descriptive statistic, correlation analysis and multiple regression as statistic methods. Above these research findings to suggest on educational institutes and future researches.

Key words: multicultural education, multicuktural competence, kindergarten caregivers

中文摘要：

醫護人員需以電子病歷方式來傳遞交班訊息，因此，交班訊息的傳遞過程中不正確、中斷、遺漏或不完整，將影響到病人治療方針，甚至危害患者安全。大多數教師對於資訊科技在教學的應用抱持消極心態，護理教學策略仍採用傳統講授方式居多。數位學習科技的發展已成為提升教育環境的重點。藉由數位化介面，結合網路與多媒體教材學習，能將資訊整合增進知識，並提升學習成效。

本研究已建立一套虛擬臨床電子病歷，運用自我導向學習教學策略，融入電子病歷數位學習環境，提供學生學習互動式教學系統，提升學生臨床反應能力，進而提升臨床護理的照護品質。研究採類實驗設計之非隨機分派的「實驗組與控制組前、後測」設計；研究對象以方便取樣選取北部某五專護理學生為對象共計 116 位實驗組介入自我導向學習法進行電子病歷數位學習結合情境模擬教學課程，控制組採取傳統紙本病歷訓練模式授課。全部研究對象接受「護生自我導向學習傾向量表」、前、後測，資料以 Paired t-test、t test、Pearson's correlation、ANOVA 及 Repeated Measure 等推論性統計分析。

研究顯示介入自我導向學習法進行電子病歷數位情境模擬教學成效優於傳統教學。在虛擬臨床電子病歷介入對於整體學習傾向之成效分析顯著高於控制組。在虛擬臨床電子病歷介入對於電子病歷交班認知之成效分析，研究對象介入對於護生在成就測驗上具有良好的成效。藉由數位化介面，結合網際網路、多媒體教材於學習內容上可統整資訊和延展知識，提升學生學習動機與學習成效。

關鍵字：虛擬電子病歷、自我導向學習、學習成效、自我導向學習法。

英文摘要：

Background: The medical personnel have used electronic medical records (EMR) to transmit messages. Therefore, the handover-induced inaccurate, disconnected, missing, or incomplete messages would affect treatment guidelines and even endanger patient life. Additionally, most teachers hold a passive attitude towards the application of information and communication technologies in teaching. Traditional instruction methods are largely adopted as nursing teaching strategies. The development of e-learning technology has become the focus of educational improvement. The digital interface, the internet, and multimedia teaching materials can help students integrate information and knowledge, and enhance their learning performance.

Purpose: The purpose of this study was to apply PBL (problem-based learning) strategy into the virtual electronic medical records learning system to provide students a self-learning interactive instruction for promoting their ability in the thinking of nursing problems and clinical nursing care.

Methods: This was a quasi-experimental design study with the pre-test and post-test for experiment group and control group. The design of this study is based on convenience sampling to select nursing college in the northern of Taiwan participated this study. The experimental group apply PBL(problem-based learning) strategy into the virtual electronic medical records learning system to provide students a self-learning interactive instruction course combined with online teaching for a total of four hours, whereas the control group studied a conventional Paper Medical record course for a total of six hours . All of the research members received “Self-Directed Learning Readiness Scale (SDLRS) ” tests, those were before and just after teaching class. Data were analyzed by SPSS Statistics with Paired t-test, t-test, Pearson’s correction coefficient, ANOVA and Repeated Measure.

Results: The findings of this study revealed that nursing students participating in the SDL(Self-directed learning)strategy course had statistically significant higher scores than those studied a conventional Paper Medical record course traditional group students.

Key words: virtual electronic medical records, Problem-based learning, learning effectiveness, Self-Directed Learning.

五專護生感恩態度與關懷行為相關性之探討

侯本昕

中文摘要：

- 一、背景:了解護生感恩態度對關懷行為之影響，可做為關懷教育施行之參考。
- 二、目的:了解五專護理科學生感恩態度、關懷行為之概況及其關係，並探討感恩態度對關懷行為之影響。
- 三、方法:橫斷式研究，研究對象為北部某專科學校護理科四、五年級學生共 524 位，研究工具為大學生感恩量表及關懷行為量表，採百分比、平均數、獨立樣本 t 檢驗、單因子變異數分析、Pearson 相關分析及階層複迴歸進行資料分析。
- 四、結果: 1.照顧過罹病親友($t=3.186, p=.002$ 、 $t=2.414, p=.016$)、對護理的興趣($F=19.537, p<.000$ 、 $F=7.122, P=.001$)對感恩特質及關懷行為皆產生差異 2.母親年紀大於 50 歲($F=4.007, p=.019$)、不同年級($t=.553, p=.002$)、課堂學業成績($F=4.471, P=.004$)、實習經驗($F=3.922, P=.020$)、實習成績($F=10.668, p<.000$)等在關懷行為有顯著差異 3.基本屬性可解釋關懷行為變異中 11.3%($F=4.31, p<.000$)，感恩特質可增加 18.2%變異($F=11.10, p<.000$)。 4.感恩特質與關懷行為的平均得分，分別為 123.84 (SD = 17.88) 及 56.04 (SD = 13.23)，次構面感謝他人 4.91 最高，感謝恩典 4.50 最低，關懷行為次構面以了解病人得分 2.11 最高。5.年紀與關懷行為中的瞭解病人和協助病人度過疾病不平順的過程呈現顯著正相關($r=.104, r=.090$)。 6.感恩特質與關懷行為所有分量表皆呈現顯著正相關。
- 五、結論:護生感恩特質影響其關懷行為，建議可透過班級經營及課程，融入感恩教育，內化感恩素養以提升關懷行為。

關鍵字：護生、感恩、關懷。

英文摘要：

- 1 Background: To understand the influence of gratitude attitude on caring behavior of nursing students, which can be used as a reference for the implementation of caring education.
2. Aim: To understand the general situation and relationship of gratitude attitude and caring behavior of nursing students in five colleges, and to explore the influence of gratitude attitude on caring behavior.
- 3.Methods: a cross-sectional study was conducted among 524 nursing students of grade 4 and grade 5 in a college in northern China. The research tools were the gratitude scale and caring behavior scale. The data were analyzed by percentage, mean, independent sample t-test, one-way ANOVA, Pearson correlation analysis and hierarchical multiple regression.
- 4.Results: (1). Took care of the sick relatives and friends ($t = 3.186, P = .002, t = 2.414, P = .016$), and was interested in nursing ($F = 19.537, P < 0.05, 000, f = 7.122, P = .001$). (2)Mothers older than 50 years old ($F = 4.007, P = .019$), different grades ($t = .553, P = .002$), classroom academic performance ($F = 4.471, P = .004$), internship experience ($F = 3.922, P = .020$), internship performance ($F = 10.668, P < .000$) had significant differences in caring behavior. (3)Basic attributes could explain 11.3% ($F = 4.31, P < 0.000$) of the variation of caring behavior Gratitude trait increased the variation by 18.2% ($F = 11.10, P < 0.000$). (4). The average scores of gratitude trait and caring behavior were 123.84 ($SD = 17.88$) and 56.04 ($SD = 13.23$), respectively. The sub-dimension of gratitude 4.91 was the highest, the gratitude 4.50 was the lowest, and the sub-dimension of caring behavior 2.11 was the highest. (5). There was a significant positive correlation between age and the process of understanding the patient and helping the patient through the disease ($r = .104, r = .090$). (6). There was a significant positive correlation between gratitude traits and all subscales of caring behavior.
- (6) Conclusion: the gratitude characteristics of nursing students affect their caring behavior. It is suggested that through class management and curriculum, Thanksgiving education can

be integrated, and gratitude quality can be internalized to improve their caring behavior.

Key words: nursing students, gratitude, caring.

中文摘要：

2020 健康國民白皮書衰弱及失能之防治的指標，其中一項：加強老人及家屬/照顧者之衰弱察覺與照護，另一項為從生活層面包括活動和參與。本研究以士林北投地區 65 歲女性長輩居多，人數有 26 人，比例為 86.7%；教育程度以大專居多，佔 36.7%；婚姻狀況以分居或重組等其他型態居多；家庭居住狀況以三代同堂居多；一半以上的人無跌倒經驗；疼痛程度以偶爾居多；骨折病史以無居多，佔 90%。50%的老人慢性病患者有高血壓、高血脂，受試者 SOF 衰弱評估在前後測上的差異並沒有明顯的改變。研究結果：(一)左右腳站立與各變數皆無顯著相關，其相關係數介於-0.204 至 0.355 之間。(二)2.44 公尺坐走與 Minerals、SMI 達顯著正相關，表示此兩變數與 2.44 公尺間有正向共變，有可能會相互正向影響。(三)SOF 衰弱評估與各變數無顯著相關。(四)除了變數 PBF 之外，BMI 等身體變數之間存在顯著的正相關，表示這些數值皆會隨著 BMI 而有所變動。SOF 衰弱量表的後測分數當作依變數，自變數為 TBW、SMM、MCA、SMI 等四個自變數進行預測，由於依變數為二元變數(僅有 01 兩個項目)，故本研究採用邏輯式迴歸進行分析。Cox&Snell R² 及 Nagelkerke R² 皆未達 0.15 的標準，表示模型的解釋力稍嫌偏低，而 Hosmer & Lemeshow 的卡方檢定未達顯著，表示模型適配度並未被違反。成對樣本 t 檢定結果，可知各變數前後測皆未達顯著。各預測變數對 SOF 衰弱的部分皆未達顯著，此四個變數無法有效的預測 SOF 衰弱的機率。適時降低受試者的防備科技用品抗拒心理，強化他們接觸現代化科技的新鮮感，提高參與；當膝力環連結網路的自信與能力被建立，生活層面包括活動和參與滿意度也會增加，供社區延緩衰弱策略參考。

關鍵字：膝力環、延緩衰弱。

英文摘要：

Due to the decline of physiological functions in the elderly, the signs of the disease are not obvious. Most of elderly people with chronic diseases suffer from hypertension and hyperlipidemia, and there is no significant change in the difference in the SOF frailty assessment of the subjects. Pearson correlation analysis: (1) There is no significant correlation between left and right foot standing and each variable, and the correlation coefficient is between -0.204 and 0.355. (2) Sitting and walking at 2.44 meters are significantly positively correlated with Minerals and SMI, indicating that there is a positive co-variation between these two variables and 2.44 meters, which may have a positive influence on each other. (3) There is no significant correlation between SOF frailty assessment and each variable. (4) Except for the variable PBF, there is a significant positive correlation between BMI and other physical variables, which means that these values will change with BMI. The post-test score of the SOF Weakness Scale is used as the dependent variable. The independent variables are TBW, SMM, MCA, SMI and other four independent variables for prediction. Since the dependent variable is a binary variable, this study Logistic regression was used for analysis. The Chi-square test of Hosmer & Lemeshow is not significant, indicating that the model fit has not been violated. The result of the paired sample t test shows that each variable is not significant before and after the test. Each predictive variable is not significant for the SOF weakening part, and these four variables cannot effectively predict the probability of SOF weakening.

Timely reduce the subject's resistance to defense technology supplies, strengthen their freshness in exposure to modern technology, and increase their participation in research; when the knee loop is connected to the Internet, it is easy to build confidence for the community to delay debilitating strategies.

Key words: Knee impower band, postpone frail.

中文摘要：

嬰兒潮世代人口已逐漸邁入老年，全球人口正快速老化，其照顧、基本生活的維持與滿足已成為各國重視的議題。依據聯合國報告指出，預估至 2050 年將增至 20 億，老年人口比例達 21%，而未來 50 年老年人口增加將近四倍，尤其是 80 歲以上老老人增加的速度更快，可能將近五倍。因之，老年的社會保障問題是各國所共有的社會問題，其發生乃因老年人口自勞動市場退出時，可能發生所得中斷之社會風險，而傳統上家庭對老年人口的經濟支柱功能，因少子化現象、平均壽命的延長、人口結構的改變及人口老化的加速等原因而漸趨式微。老人社會生活之需求，除由家庭、社區提供關懷照顧外，國家社會能提供適宜且符合老年需求之社會保障制度，維持暨滿足老年生活實為重要。故檢視社會保障體系的提供模式與現況、強化社會安全措施，使人民能做好適當老年準備，為高齡社會的個人與政府的重要議題。本研究期以探察兩岸老年人口發展趨勢、對社會保障制度的需求、推動現況、制度措施與內容並進行比較分析，並探討兩岸老年社會保障相關政策面臨之挑戰，提供學術研究及政策精進之參酌。

本研究顯示，因應高齡化社會來臨，兩岸皆逐步規劃建置養老經濟保障措施，且兩岸於社會保障制度呈現趨同現象，都以老年基本經濟維持為主要關鍵。其中臺灣由各社會保險的退休、養老制度、國民年金老人給付、輔以社會福利與救助津貼制度，以近乎普及之全面方式，涵蓋各層面之老年人口，致力維持國民老年基本經濟保障。中國大陸則推動城鄉一體政策及社會保險制度，積極發展鄉城之健康保險與社會保險制度，由養老保險支應老年基本經濟需求，惟其幅員廣闊、制度普及性不足、推動不易，加上城鄉差距大，雖已制定該國社會保險法，但推動上尚有城鄉、職業別之差異。故兩岸於政治、經濟及文化交流密切情況下，老年社會保障制度之推動、保險財務制度運用與管理制度等經驗交流亦可為未來交流之主軸之一。兩岸之老年人口均快速成長，臺灣之老年經濟保障制度及推動方式，可提供其相當之參酌。

關鍵字：高齡化社會、社會保障、養老保險、年金保險。

英文摘要：

The population of baby boom generation has gradually stepped to gerontism. Global population is speedily aging; therefore, caring, maintaining and satisfying essential life become the critical issues in the world. According to the United Nations report, the estimated aged population will increase to 2 billion in 2050 which is duly 21% to the ratio of the whole. In the future coming 50 years, aged population will increase 4 times as before; especially those at the age above 80, it will be 5 times as it was, so incredibly going up. Hence, old aged social security is a problem of the world in common. When aged people withdraw from labor market, a social risk of income breakdown will possibly be happened apparently. However, the economic function toward aged population in traditional family will gradually be declined because of the decreasing birth rate phenomenon, the average life span extension, the population structure changed, and the aging population accelerated. In addition to the support of caring and concerns from family and community, government should provide the aged a more appropriate social security to meet the need of aging social life and to maintain and satisfy elder's living, that is an important indeed. In response to this trend, reviewing the model and current situation of social security system and strengthening social security measures to prepare well for aging people is a critical issue to individual and government in the aging society. This study will explore the aging population developed trend from Cross-Straits between Taiwan and China, the needs of social security, current situation expansion, and the institutional measures and contents to proceed to the comparative analysis; it also examines the challenges facing to the related social security policies in between the Cross-Straits. The results can be a reference for future academic research and policy upgrading.

This study demonstrated that adapting to the coming of ageing society. Taiwan and Mainland China progressively plan and establish old-age pension measures. In addition, the social security system in both Cross-Strait countries presents convergence, which mainly focusing on the maintenance of old-age economy. Among these, Taiwan adopted the way of close to overall popularization which includes all aspects of aged population for maintaining their basic economy security from retirement and an old-age pension system of per social insurance, national pension insurance, social welfare and rescue subsidy. Similarly, Mainland China promoted the urban and rural integration policy, which referred to actively develop health and social insurance system from endowment insurance for supporting old-age basic economy demand. However, due to the broad of Mainland China territories, the insurance system is difficult to be popularized and promoted. Additionally, the large discrepancy between urban and rural caused the old-age social security policy to be without consistency and with

no ensured system. To response, for the reason of closely interflowing on politics, economy, and culture in both sides; the experience interflow in promoting old-age social security system, applying and managing of insurance pension system can be a key issue for future discussion.

Key words: aging society, social security, endowment insurance, annuity insurance

探討乳癌婦女生殖道症狀與生活品質的相關性

李月卿

中文摘要：

乳癌婦女可能因接受治療而導致停經，造成外陰陰道萎縮(Vulvovaginal atrophy, VVA)。外陰陰道症狀主要因停經後婦女缺乏雌激素所導致，因此婦女有陰道乾燥、缺乏潤滑、性交疼痛，甚至外陰有搔癢、灼熱、刺痛等症狀。鑒於歐美國家的研究發現停經後婦女普遍發生外陰陰道萎縮的症狀，而且會對女性的生活品質造成負面影響，但卻未獲得適當的醫療處置。因此，本研究目的在探討乳癌婦女生殖道症狀與生活品質的相關性。本研究採相關性研究橫斷式調查法(crosssectional)，問卷包含外陰陰道症狀量表(vulvovaginal symptoms questionnaire, VSQ)及生活品質 EORTC QLQ-C30 & BR23 量表。採立意取樣，樣本來自台北某醫學中心門診，招募符合收案條件的乳癌婦女 131 位參與本研究。統計方法包括次數分配、描述性統計、皮爾遜積差相關分析。本研究可提升照護者對此議題重要性的了解，並做為未來臨床外陰陰道萎縮症狀的評估、治療與介入措施研究的根基。

關鍵字：外陰陰道症狀、生活品質、乳癌婦女。

英文摘要：

Women with breast cancer may experience menopause due to treatment, resulting in vulvovaginal atrophy (VVA). Vaginal and vaginal symptoms are mainly caused by the lack of estrogen in women after menopause. Therefore, women have vaginal dryness, lack of lubrication, pain during intercourse, and even vulva itch, burning, and tingling. In view of the research in Europe and the United States, the symptoms of vulvovaginal atrophy are common in women after menopause, and it will negatively affect the quality of life of women, but they have not been properly treated. Therefore, the purpose of this study was to explore the correlation between reproductive tract symptoms and quality of life in women with breast cancer. In this study, a correlation study cross-sectional survey method was used. The questionnaire included the vulvovaginal symptoms questionnaire (VSQ) and the quality of life EORTC QLQ-C30 & BR23 scale. Sampling was conducted by sampling. The sample was from an outpatient clinic of a medical center in Taipei. 131 women with breast cancer who met the conditions for admission were recruited to participate in this study. Statistical methods include Pearson product correlation analysis. This study can enhance the caregivers' understanding of the importance of this issue and serve as the foundation for future clinical vulvovaginal atrophy symptoms evaluation, treatment and intervention measures.

Key words: Vulvovaginal symptoms, quality of life, women with breast cancer.

探討懷孕與新生兒照護體驗課程對增進護生同理心之成效

傅雅麟

中文摘要：

背景:護理人員需要同理心，方能提供照護的對象更適合的專業照護及關懷，故設計懷孕及新生兒照護的體驗課程。

目的:探討懷孕及新生兒照護體驗介入課程的同理心學習成效。

方法:採橫斷性調查。研究工具為自行設計之「基本資料」、「懷孕同理心量表」與「親職同理心量表」。研究進行前，給予研究及體驗進行方式說明，並提供重量約 7 公斤重的懷孕模型，以及擬真新生兒，每項目進行一天的模擬體驗。共計 342 位五專四年級護生參與，並於體驗前、後及一個月後完成相關量表填答。

結果:懷孕同理心量表及親職同理心量表的 Cronbach 內在一致性係數各為 0.928、0.929，可信度相當高。懷孕及新生兒照護體驗後之懷孕及親職同理心分數前後測比較、前再測比較，以及後再測比較皆達顯著上升，可見藉由體驗課程提升護生之同理心成效良好。有關懷孕同理心總量表，性別與家庭背景之再測達顯著差異，男性與家庭背景為雙親者分數較低；親職同理心總量表，性別之後測達顯著差異，男性的分數低於女性。

結論:本研究成果確認模擬體驗懷孕及新生兒照護課程可達提升護生之同理心。並可做為未來推廣模擬體驗懷孕及新生兒照護活動的評量依據。

關鍵字：懷孕、親職、模擬體驗、同理心。

英文摘要：

Background: Empathy is an essential trait in nursing personnel, enabling them to provide appropriate professional care and concern for patients. We designed a pregnancy and neonatal care experience course for nursing students with the aim of improving their empathy.

Objective: To discuss the learning outcomes in terms of empathy from the course.

Method: A cross-sectional study was performed using a homemade demographic information survey, pregnancy empathy scale, and parental empathy scale. The nursing students were briefed about the research and experience processes, and then provided with a 7-kg pregnancy model and a simulated newborn. The students completed one day of simulated pregnancy for each item. The participants were 342 fourth-year nursing students in 5-year nursing programs. They completed the scales in the month before and after the course experience.

Results: The Cronbach's α values of the pregnancy and parental empathy scales were 0.928 and 0.929, respectively, demonstrating high reliability. Pretest–posttest, pretest–retest, and posttest–retest comparisons revealed a significant increase in the participants' scores on both scales after the experience course, implying that it effectively increased empathy in these nursing students. A retest of the pregnancy empathy scale indicated a significant difference in the gender and family background dimensions; specifically, male students and students living with two parents had significantly lower scores. Additionally, a significant difference was found in the retest of the parental empathy scale in the gender dimension, in that male students exhibited lower scores.

Conclusion: Our results indicated that the simulated experiences in the pregnancy and neonatal care course improved empathy in the nursing students. Our findings can serve as a reference for evaluating future implementations of pregnancy experience simulations and neonatal care activities.

Key words: pregnancy, parental, simulation experience, empathy

中文摘要：

研究背景：護理人力短缺已是全球性現象，且受到 WHO 及 ICN 等國際重要組織的高度重視。中華民國護理師護士公會聯合會 2017 年統計，國內近六年來護理人員執業率僅達六成。台灣護理學會(2015)針對全國護理教育概況調查結果顯示，102 學年度畢業一年的畢業生就業率五專 34.05%，顯示護理科系畢業之護生中仍有許多學生未選擇進入護理臨床工作甚或短期就離職，究竟其職涯規劃及護理職涯決策影響因素是值得進一步探討，以提供適切之護理職涯規劃輔導與教育。故本研究目的為探討應屆畢業護生是否選擇至臨床護理工作之護理職涯決策因素變化及其相關因素。

研究設計：本研究採調查性、相關性研究設計。選樣：以北部某專校三~五年級護生為研究對象，採分層叢聚取樣方式。研究工具：以自擬之基本屬性資料表、護理職涯決策因素量表、護理職涯決策自我效能量表、護理職涯行為意向量表及等進行資料蒐集。資料分析：以 SPSS20.0 版套裝軟體進行資料建檔及統計分析。研究結果：應屆畢業護生護理職涯行為(是否選擇臨床工作)之迴歸分析結果顯示：學制、參加護理就業學程、參加銜接護理就業實習、臨床護理工作職涯信心程度、護理職涯決策因素--家庭及社會因素、護理職涯決策因素--經濟與職涯因素；五專應屆畢業護生護理職涯行為(是否選擇臨床工作)之迴歸分析結果顯示：參加就業學程者、公費生、護理職涯決策因素--經濟與職涯因素、「護理職涯決自我效能」等項為應屆畢業護生臨床護理職涯決策之主要相關因素。結論：本研究結果可供未來護生之護理職涯規畫輔導之參考。

關鍵字：護生、護理職涯、職涯自我效能。

英文摘要：

Introduction

While nurses predominate in the healthcare institution workforce, Taiwan continues to face a chronic nursing shortage. Nursing program graduation candidates are a critical human resource and their selection of an institution appropriate to their career interests and needs is an important issue.

Methods

This cross-sectional design with cluster random sampling used a valid and reliable self-designed questionnaire to investigate the factors associated with career decision to become an RN among graduating nursing students.

Results

The major findings of this study were: 1) only 39.8% of junior college graduating nursing students intended to employ in clinical settings. 2) the top three reasons for their choice of clinical nursing as a career were “the hospital provides better salary and welfare”, “the working atmosphere of the hospital is very cordial”, “the hospital provides better newly employed training program” 3) significant variables associated with career decision to become an RN were: school system, last-mile curriculum, career decision self-efficacy, clinical nursing as a career—economic subscale scores and social-family subscale scores. 4) significant variables associated with career decision to become an RN among junior college graduating nursing students were financed student, last-mile curriculum career decision self-efficacy, clinical nursing as a career—economic subscale scores.

Conclusions and Recommendations

Most graduating nurse students are willing to participate in clinical work after graduating. This study could help teachers to identify types of decision making

toward nursing career on graduating nurse students and further provide suitable career guidance or measures. The constructive suggestions in the conclusion could serve for improving the decision making toward nursing career of nurse students.

Key words: nursing student, nursing career, career self-efficacy

中文摘要：

Purpose: 臨床實習是護理教育的核心課程，目的在幫助學生培養對護理專業的認同。實習指導教師面對 Z 世代的護生特質與表現，產生巨大挑戰。本研究目的即是在探究臨床實習老師指導 Z 世代護生的經驗，藉以了解面對 Z 世代的護生的臨床教學過程經驗，提供未來在建構臨床教育計畫之參考資料。

Methods: 本研究為質性研究設計，立意取樣。藉由實習指導教師一對一訪談，收集臨床教學的經驗，共 10 位。資料收集前，經專家審核訪談指引。訪談內容均經由同意後予以錄音，於訪談結束後將內容逐句轉寫成文字記錄。The rigor of this study was determined by four criteria: credibility, transferability, dependability and confirmability (Lincoln & Guba 1985). 使用 Colaizzi (1978) 的現象學分析法進行分析。

Result: 歸納出六項主題 theme (1)衝擊:指實習教師面對護生學習表現與預期的能力有顯著落差的現象。(2)疏理:實習教師進行自我檢討反思，分析現況找出問題的過程(3)重置:指實習教師重新調整教學方針與目標的經驗。(4)引領:指實習教師示範、親教、領導正確學習方向的經驗(5)塑模:指實習教師奠定學生能力並嘗試予其獨立的經驗(6)交融:實習教師與學生能交會融合，產成緊密的師生學習關係

Conclusion: 本研究以現象學的方法描述了臨床實習老師指導 Z 世代護生的經驗，經驗內容包括六個概念：「衝擊」、「疏理」、「重置」、「引領」、「塑模」、「交融」。提供實習指導教師在指導 Z 世代護生參考，也作為實習照師指導訓練計劃以及臨床實習教學規劃的參考依據。

關鍵字：臨床實習指導老師、Z 世代護生、實習指導經驗。

英文摘要：

Purpose: Clinical practice is a core component of the nursing education curriculum which aims to assist students in identifying with the nursing profession. Clinical nursing teachers face a daunting task with regard to managing the characteristics and performance of Generation Z nursing students. Hence, this study aims to investigate the experiences of clinical nursing teachers in teaching Generation Z nursing students. Understanding such experiences can serve as a reference for developing clinical education proposals in the future.

Methods: Purposive sampling was adopted in this qualitative study. One-on-one interviews were conducted with ten clinical nursing teachers to understand their experiences with teaching clinical nursing. Prior to data collection, the interview guidelines were reviewed by a panel of experts. The contents of the interviews were recorded after obtaining approval from the interviewees and were transcribed afterwards. The rigor of this study was determined by four criteria: credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Colaizzi (1978)'s phenomenological method was used in our analysis.

Result: Six themes were summarized as follows: (1) Impact: Refers to the significant gap observed by clinical nursing teachers with respect to the actual performances and the expected capabilities of nursing students. (2) Clarification: Refers to the clinical nursing teachers' process of self-reflection, reasoning, and determining problems by analyzing their current situations. (3) Revision: Refers to the clinical nursing teachers' experiences of revising their teaching guidelines and targets. (4) Guidance: Refers to the clinical nursing teachers' experiences of demonstrating, teaching, and guiding students in the right learning direction. (5) Modeling: Refers to the clinical nursing teachers' experiences of establishing the students' capabilities and their attempts at allowing the students to be independent. (6) Relationship building: Interactions between teachers and students aimed at fostering close teacher-student relationships.

Conclusion: In this study, a phenomenological method was utilized to delineate the experiences of clinical nursing teachers in teaching Generation Z nursing students. The contents of the experiences consist of six themes: Impact, Clarification, Revision, Guidance, Modeling, and Relationship Building. These results not only provide a reference for clinical nursing teachers in teaching Generation Z nursing students, but also serve as a reference for clinical nursing teacher training proposals and clinical nursing teaching programs.

Key words: clinical nursing teacher, Generation Z nursing students, experiences of teaching clinical practice.

中文摘要：

台灣護理學會在 2004 年曾指出：「護理專業不能獨立生存在社會上，透過專業間、專業內、專業外的夥伴關係建立，才能共同依存。」美國醫學研究所（2011）在最近的“護理未來”建議中得出結論，護理教育必須進行無縫轉型，以賦權，教育和投入護理教育資源，以提供具有高品質的護理(Institute of Medicine Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, 2011)；護理教育由課室學理教學和臨床實習培訓兩部分組成(Borzu, Safari, Khodavisi, & Torkaman, 2008)，臨床護理教學是護理教育的主要組成部分之一，護理學生通過這種方式在專業角色中進行社會化，並學習護理專業的獨特行為、態度和價值觀(Thomas et al., 2015)。傳統教學上，有關護理技術的教學大多採課室或臨床實習老師邊帶邊教方式，易偏重單一面向的學習，當學生實際面對臨床情境時，其統合知能—技能—態度的護理專業行為、團隊合作和溝通技巧是生澀、不週全的，且臨床實習老師往往以處理病人照護問題為優先，無法兼顧教學品質與即時回饋學員的困境與需求(李、高、詹，2016)。

另由文獻中(Chan, Tang, Choi, Liu, & Taylor-Piliae, 2018; Lewinski et al., 2017; Newton et al., 2011; Tang & Chan, 2019; Zanchetta et al., 2017)發現夥伴關係應用在護理教學中，主要以個別教學需要所進行個案計畫為主，對伙伴關係概念及實際應用未有明確的定義，故運用質性研究法深入探討夥伴關係在在臨床護理教師護理臨床教學的經驗，以進一步找出護理教學的夥伴關係策略，來增加護理教學成效。

研究北部一所護理專科學校臨床護理實習教師共 8 位，年齡介於 30-42 歲間，平均 36.6 歲，其中 75% 年齡在 35-40 歲，擔任實習教師年資為 8.9 年，87.5% 為碩士畢業者，75% 具講師資格者，均在台灣北部一所醫學中心教學。

本研究結果展示出四個主題之臨床護理教師夥伴關係經驗的本質結構，包括：

- 一、建立信任關係
- 二、持續溝通
- 三、創造平衡
- 四、成長、互助

由此了解如何建立及維持信任夥伴關係，此關係是雙向且呈現動態的，夥伴關係對象是多元的，需要持續溝通不斷互動，以創造臨床教學與照護個案，臨床與教學上平衡，且雙方分享資源，共同推動更成長、正向臨床教學情境與經驗，互動中的提供專業的資源及協助，提升夥伴的能力。

關鍵字：夥伴關係、臨床護理教師、護理臨床教學。

英文摘要：

The Taiwan Nursing Association pointed out in 2004: "The nursing profession cannot survive independently in society, but can be established through professional, professional internal and non-professional partnerships." Facing today's diversified and internationalized era, medical needs and systems The changes in the public's awareness of rights, the complications of diseases, the complexity and high pressure of the clinical nursing environment remind nursing educators that they cannot use "past education" today's students' experience of adapting to the future society. Teachers must break through traditional norms and thinking and get rid of their own habits. Professional confinement, establish a government, professional, and non-governmental partnerships to find more hope and opportunities.

Nursing education consists of classroom science teaching and clinical practice training (Borzu, Safari, Khodavisi, and Torkaman, 2008), Clinical nursing faculty is one of the main components of nursing education, in which nursing students socialize in professional roles and learn the unique behaviors, attitudes and values of nursing (Thomas et al., 2015). In traditional teaching, the teaching of nursing technology is mostly taking the classroom or clinical nursing faculties with side-learning methods, easy to focus on single-oriented learning, when students actually face the clinical situation, its integrated knowledge -skills- the attitude of nursing professional behavior, teamwork and communication skills are raw, incomplete, and clinical nursing faculties often take patient care as a priority, unable to balance the quality of teaching with real-time feedback on the plight and needs of students (Gao Liru, and Zhan Shuhui, 2016). The article points out that both hospitals and universities are the main, there are clinical nursing faculties who have the problem of deficiencies (Chan et al., 2018; Tang and Chan, 2019).

Also in the literature (Chan, Tang, Choi, Liu, and Taylor-Piliae, 2018; Lewinski et al., 2017; Newton et al., 2011; Tang and Chan, 2019; Zanchetta et al., 2017) found that partnerships are applied in nursing teaching, focusing primarily on case-by-case planning for individual teaching needs, with out-of-the-way definitions of partnership concepts and practical applications. Therefore, we want to explore in-depth the experience of partnership in clinical faculties in clinical nursing, so as to further identify the partnership strategy of clinical nursing teaching to increase the effectiveness of nursing teaching.

A total of 8 clinical nursing faculties, aged between 30 and 42 years old, were 36.6 years old, of whom 75% were aged 35-40 years, 8.9 years were internship teachers, 87.5% were master's graduates and 75% were qualified lecturers, all of whom were teaching at a medical center in northern Taiwan. The results of this study show the essential structure of clinical nursing faculties nursing clinical teaching partnership experience on four theme, including:

Build a trust relationship, Continuous communication, Create balance, Growth.

The results of this study show the basic structure of the partnership relationship of the four main topics, including:

1. Establishing a relationship of trust.
2. Continuous communication.
3. Create balance.
4. Growth and mutual assistance.

In this way, we can learn how to establish and maintain a trusted partnership, which is dynamic and dynamic, and the partners need to continue to interact with each other in order to create a balance between bed teaching and learning and to share resources, jointly promote a growing and positive bed teaching situation and experience, provide professional resources and assistance in interaction, and enhance the ability of partners.

Key words: partnership, clinical nursing faculties, clinical nursing teaching.

中文摘要：

教育部 2010 年起為了推動技職教育課程與產業接軌，補助技職校院透過與實務界的合作聘請「業界專家」協同教學，加強教師與學生之實務技能，避免學校和產業實務間的差距，強化學生的學習成效。臨床實習(含夜班)課程結合業師協同指導學生臨床實習，藉由臨床經驗豐富之業師協同教學，對於學生的學習成效是否具影響?學生的實務學習是否存在不同的感受，是值得探究的。

本研究為非隨機之立意抽樣，以 104 學年度入學之 5 年級及 105 學年度入學之四、五年級、已完成臨床實習(含夜班)之實習課程且實習指導教師為業界教師之護理科學生共 110 人為研究對象。以量化調查研究為主，質性半結構訪談為輔。研究目的:1. 探討業師協同教學學生對臨床實習(含夜班)的學習成效。2. 了解學生對臨床實習(含夜班)業師協同教學的感受及想法。為達研究目的，使用的研究工具有「學習成效」問卷、質性半結構訪談內容、個人基本資料。研究所得資料予以描述統計、獨立樣本 t 檢定及單因子變異數分析並以 Scheffé 法進行事後比較進行統計分析。

研究對象之基本資料中，「入學管道」、「臨床實習單位科別」及「實習前會預習，實習後會複習」的統計量達顯著水準 ($p < .05$)，亦即會影響學生臨床實習(含夜班)的學習成效及感受；而性別、臨床實習年級、臨床實習梯次、學業總成績、未來規劃則未達顯著差異水準。

本研究結果顯示，研究對象在「學習成效」各向度平均得分由高至低排序依序為「成果」、「行為」、「反應」、「學習」，各學習成效向度及整體平均落在 3 至 4 分之間，顯示學生知覺業師協同教學對於其學習成效是良好的。

進一步輔以質性問卷，了解學生對業師協同教學的感受與想法，多數學生肯定業師協同教學學習到更多，符合心中預期的想像，及對自己的學習有相當大的幫助，獲得更正向的成就感。

關鍵字：協同教學、臨床實習(含夜班)、學習成效。

英文摘要：

To promote vocational courses in universities and achieve industry-academic linkage, the Ministry of Education from 2010 onwards began to subsidize vocational colleges to recruit industry professionals to engage in team teaching as a part of industry-academia collaboration. This approach strengthens the practical skills of both instructors and students, bridges the industry-academia gap, and elevates the students' learning outcomes. A clinical internship program with night shifts was designed in this study. The program provided an opportunity for the students to become interns in clinical settings and was co-instructed by the clinical professionals. In this regard, it is exploring whether implementing team teaching with the experienced clinical professionals affect the students' learning outcomes, as well as whether different perceptions exist among the students with regard to their practical learning.

Purposive sampling, a non-random sampling approach, was employed in this study. The participants were 110 fifth-year university students enrolled in the 2015 academic year and fourth- and fifth-year students enrolled in the 2016 academic year. The students had to have concluded the clinical internship program and completed a nursing science course instructed by clinical professionals who also served as their instructors during the internship program. This study was primarily designed as a quantitative research and complemented by qualitative semi-structured interviews. The objectives of this study were as follows: (1) To explore the learning outcomes of the students with regard to their internships in the context of the clinical professionals' team teaching; (2) To highlight the students' perceptions and opinions about the clinical professionals' implementation of team teaching in their internships. To achieve these objectives, several research tools were utilized, which included a learning outcomes questionnaire, the contents of qualitative semi-structured interviews, and the students' basic information. The data obtained was analyzed by means of descriptive statistics, independent sample t-tests, and one-way ANOVA; the Scheffé method was also employed to perform post-hoc comparisons for subsequent statistical analysis.

In terms of the students' basic data, significant differences ($p < .05$) were observed in their enrollment method, department served during their internship, as well as preparing before and revising after an internship session. These would affect the students' learning outcomes and feelings toward their clinical internships. No significant differences were observed in their gender, clinical internship grade, clinical internship batch, overall academic grade, and plans for the future.

Based on the results, the dimensions of the students' learning outcomes in decreasing order of average score were achievement, behavior, response, and learning. In general, the

average score of each learning outcomes-related dimension ranged from 3 to 4 points, which indicated that the students perceived that team teaching implemented by the clinical professionals was beneficial toward their learning outcomes.

Furthermore, a complementary qualitative questionnaire was designed to highlight the students' perceptions and opinions about the clinical professionals' implementation of team teaching. The results demonstrated that many students agreed that the team teaching approach allowed them to learn more and had lived up to their expectations. They perceived that team teaching substantially benefited their learning and generated a more positive sense of achievement within them.

Key words: Team teaching, clinical internship program with night shifts, learning outcomes

芳香精油與色彩情感作用之關聯性

吳育安

中文摘要：

現代人在養生觀念下積極回歸自然風，對於「芳香療法植物所提供的自然能量」逐漸重視與喜愛。嗅覺是五種感官中唯一不經過中途站，直接到杏仁核的一個感官。杏仁核是大腦中掌管情緒的中心。好的氣味可以帶來正能量，嗅覺是會牽動情緒變化和行為能力。

本研究之目的是探討色彩情感和芳香精油氣味是否具有緊密的關聯性，主要研究的目的為：1.探討色彩的情感作用。2.探討香味的情感作用。3.探討色彩情感與氣味作用之間的關聯性。4.探討色彩與精油氣味感覺之適合度與否。5.探討精油氣味與色彩適合度之色彩情感作用上的差異。

研究結果如下：柔和色系最能引發情緒的「甜美的」，飽和色系最容易引發情緒的「優雅的」。與氣味最適合的色系是粉紅色、黃色、橘色、綠色，最不適合的色系是黑、灰、紫。原本情感作用較低的氣味，在加入適合與不適合色彩組合後，其作用度提高。色彩的情感作用評量在受測者性別、年齡、教育程度間皆存在顯著差異，而香味的情感作用評量則在受測者性別間存在差異：色彩比氣味的情感作用存在更多受測者組別間的差異。色彩情感特性收集與氣味結合設計要素以現況調查與研究所得，透過人們視覺的情感感受及感官嗅覺結合，可做為與氣味相關市場產品設計構思與理念。分析氣味與色彩情感感受表現的結果，有助益於化妝產業香水及包裝色彩的開發。

關鍵字：色彩情感、精油、氣味。

英文摘要：

Modern people actively return to the natural wind under the concept of health care, for "the natural energy provided by aromatherapy plants" gradually attach importance to and love. The sense of smell is the only one of the five senses that doesn't go through a stopover and doesn't go directly to the amygdala. The amygdala is the center of the brain's emotions. Good smells bring positive energy, and smell can affect mood changes and behavior.

The purpose of this study is to explore whether color emotion and aromatic essential oil odor are closely related, and the main purpose of this study is: 1. To explore the emotional effect of color. 2. Explore the emotional effects of fragrance. 3. Explore the correlation between color emotion and smell effect. 4. Explore the suitability of color and essential oil odor. 5. To explore the difference between the smell of essential oils and the emotional effect of color suitability.

The results are as follows: Soft colors are the most "sweet" ones that can trigger emotions, and saturated colors are the "elegant" ones that can easily trigger emotions. The most suitable color system with odor is pink, yellow, orange, green, the most suitable color system is black, gray, purple. The original low emotional effect of the odor, after adding suitable and unsuitable color combination, its effect increased. There were significant differences in the emotional effect assessment of color between the sex, age and educational level of the subjects, while there were differences between the sexes of the subjects in the evaluation of the emotional effects of scents: there were more differences between the groups of subjects than the emotional effects of color. Color emotional characteristics collection and smell combined with design elements, to the current situation survey and research, through people's visual emotional feelings and sensory sense of smell combination, can be used as smell-related market product design ideas and concepts. Analysis of the results of smell and color emotional expression will help the cosmetic industry perfume and packaging color development.

Key words: color emotion, essential oil, smell.

中文摘要：

台灣地區老人失智症盛行率為 8%，推估目前臺灣失智症人口已逾 26 萬人。隨著疾病歷程變化，照顧負荷逐漸加重，其中失智症者出現複雜多元的精神問題行為往往是入住機構的主因，也挑戰專業照顧者的能力。近年來已有研究指出芳香療法有助於改善失智案主的激躁行為，本研究擬針對中重度失智案主，進行芳香療法介入計畫，探討芳香療法對失智案主的精神行為症狀以及睡眠的改善情形。

本研究採類實驗研究，採立意取樣，以台北市某失智專責養護機構為研究場域，實驗組進行芳香療法介入，持續 6 個星期，對照組則無。研究工具神經精神症狀及認知功能障礙患者睡眠障礙評估表進行檢測，以重複量數進行分析。

結果：共 62 名長輩參加，其中 3 名因轉院而未執行完畢。實驗組 30 人，對照組 29 人。研究參與者平均年齡 82.36 ± 8.04 (66-95)，失智程度皆為中重程度，Bristol ADL 32.42 ± 12.34 (12-60)。芳療介入後，實驗組與控制組的神經精神症狀無顯著差異。睡眠障礙出現頻率無顯著差異；睡眠障礙嚴重程度有差異；照顧者困擾程度有差異。本芳香療法介入方案雖對中重度的失智住民的精神行為出現的頻率沒顯著影響，但能改善睡眠障礙的嚴重度，並降低對照顧人員的困擾程度。

結論：在不改變既有照顧模式下，提供芳香療法雖對失智長輩的精神激躁行為頻率沒有顯著改變，但能減輕其症狀表現的嚴重度並降低對照顧者的困擾程度。而且，照顧者普遍認為芳香療法有助於提升照顧環境氛圍，優化工作環境，值得推廣。

關鍵字：芳香療法、精神行為症狀、睡眠、失智。

英文摘要：

The prevalence rate of dementia of the elders is 8% in Taiwan, and it is estimated that the current population of dementia has exceeded 260,000. As the course of the disease changes, the burden of care gradually increases. Among them, the complex and diverse mental behaviors of people with dementia are often the main reason for admission to institutions, which also challenge the ability of professional caregivers. In recent years, studies have indicated that aromatherapy helps to improve the agitation behavior of dementia patients. This study intends to carry out aromatherapy intervention plans for patients with moderate to severe dementia to explore the effects of aromatherapy on psycho-behavioral symptoms and improvement of sleep for dementia patients.

This study adopts a type of experimental study, and a deliberate sampling was adopted. Taking a dementia care institution in Taipei City as the research field, the experimental group received aromatherapy intervention for 6 weeks, while the comparison group did not. The research tool was used to test the sleep disorder assessment form for patients with neuropsychiatric symptoms and cognitive dysfunction, and analyze it by repeating measures.

Result: A total of 62 elders participated, 3 of them were not completed due to transfer. There were 30 people in the experimental group and 29 people in the comparison group. The average age of the participants in the study was 82.36 ± 8.04 (66-95). The degree of dementia was moderate to severe, Bristol ADL 32.42 ± 12.34 (12-60). After the intervention of aromatherapy, there was no significant difference in neuropsychiatric symptoms between the experimental group and the control group. There was no significant difference in the frequency of sleep disturbance; the severity of sleep disturbance was different; and the degree of caregiver distress was different. Although this aromatherapy intervention program has no significant effect on the frequency of mental behavior of residents with moderate to severe dementia, it can improve the severity of sleep disorders and reduce the degree of trouble for caregivers.

Conclusion: Without changing the existing care model, the provision of aromatherapy does not significantly change the frequency of mental agitation behaviors of demented elders, but it can reduce the severity of their symptoms and reduce the degree of distress to caregivers. Moreover, caregivers generally believe that aromatherapy helps to enhance the atmosphere of the care environment and optimize the working environment, and it is worthy of promotion..

Key words: aromatherapy, behavioral and psychological symptoms, sleep, Dementia.

中文摘要：

因為老化、牙齒缺損或中風的高齡者，大都以流質食物為生，容易缺乏蛋白質、纖維、蔬果攝食，容易造成許多健康問題。本研究將含高蛋白質和纖維的海鮮、魚肉、蔬果運用物理（蒸煮）或化學（酵素）原理處理硬度，組合出五種合適軟硬度多元機能性創意食品製備；配合活躍老化讓高齡咀嚼障礙者享受咀嚼自然味的創意軟質食物，促進營養、免疫和腸-腦軸系健康。讓咀嚼障礙長者有自然美味的細碎和細軟飲食，並且進行消費者的接受度與滿意度調查。肉類經過鳳梨酵素和木瓜酵素處理可以顯著軟化肌肉組織。結果經由兩地區里民之消費者感官品評，餐飲的整體喜好均落在可接受的範圍內，但是不同地區里民對餐飲的喜好有顯著的差異。未來進一步延伸實際老人咀嚼障礙營養餐，並且搭配傳統其他軟食：豆漿、牛奶、肉鬆、優格組合成營養、維生素與纖維均衡的老人餐，做為開發冷凍保存或常溫鋁箔裝產品的參考。

關鍵字：高齡飲食、軟化食品、蒸汽加熱、酶。

英文摘要：

Elders in aging, teeth deficiency or stroke receiving liquid diets are susceptible to shortage of protein, fiber, fruit, vegetable and grain resulting in health problem. We postulate that a collaboration of physical (steam heating) and chemical (enzyme) specialties to make seafood, meat, vegetable and fruit soften suitable to eat by elders without teeth. These softened foods in conjunction with active aging program could make elders with chewing problem enjoy softened natural foods and promote better nutrition, immunity and healthy gut-brain axis. Seafood and meat treatment with steam heating or enzyme that can significantly soften the muscle tissue. The results of consumer sensory evaluation are within the acceptable range. These softened foods could be in combination with traditional elders' liquid and soft diets: soybean juice, milk, meat floss and yogurt for balanced recipes of geriatric diets. This project will use these products to provide functional meals with suitable nutrition, vitamins and fibers for proper acceptance and efficiency. To further extend the innovative functional foods made in frozen or aluminum foil package for better uses in storage.

Key words: geriatric diets, softened foods, steam heating, enzyme

Searching Optimum Organic-Inorganic Ingredient Combinations and Power Conversion Efficiency (PCE) for A Perovskite-Photovoltaic Cell Manufactured via Stereolithography 3D Printing Processes.

陳明雄

中文摘要：

繼去年的研究成果之後，本次研究完成了製備雜鈣鈦礦有機-無機異質交結光伏電池樣品板的任務。主要使用丙烯腈丁二烯苯乙烯 (ABS) 樹脂為光固化基材的 SLA 3D 列印技術製備了十個包含 ICBA 和 P3HT 等兩種光伏材料結合一種鈣鈦礦化合物 ($\text{CH}_3\text{NH}_3\text{PbI}_3$) 的原型樣品板。使用高精度電表量測所製備樣品，獲得了肯定的結果，包括每個樣品的短路電流 (I_{sc})，開路電壓 (V_{oc}) 和 I-V 曲線圖，並從圖中確定最大功率輸出和填充係數 (FF)。大多數樣品的 I_{sc} 平均值達到 $0.02\mu\text{A}$ ，而具體 V_{oc} 則取決於每個樣品的結構從最大的 2.5 mV 至 0.6 mV ，並根據測量數據計算出短路電流密度 J_{sc} 為 $0.0008 (\mu\text{A}/\text{cm}^2)$ ，最大輸出功率填充係數 (FF) 為 0.72 。因此，一旦光源輸入樣品的功率能夠被確定，就可以計算出樣品的光伏效能 (PCE)。總體結果顯示，最佳性能發生在樣品夾層結構的中心層中僅包含 MaPbI_3 或與 ICBA 或 P3HT 或兩者混合，並且需要避免夾層結構的中含有 P3HT 或 ICBA 與 TiO_2 混合的成分。

關鍵字：丙烯腈丁二烯苯乙烯 (ABS) 樹脂光固化 3D 列印, ICBA, P3HT, 鈣鈦礦化合物 ($\text{CH}_3\text{NH}_3\text{PbI}_3$)。

英文摘要：

This research following the outcome from the previous year has accomplished the task for preparing a prototype sample plate as the hybrid-perovskite organic-inorganic hetero-conjunction photovoltaic cells. Ten prototype sample plates containing the photovoltaic materials- ICBA, and P3HT combined with the Perovskite materials-CH₃NH₃PbI₃ primarily have been prepared using Acrylonitrile butadiene styrene (ABS) resins-based SLA 3D printing processing.

Affirmative results have obtained including both the short-circuit current (I_{sc}), the open-circuit voltage (V_{oc}), and the I-V curves for each of the samples from which both the maximum power output and the fill factor (FF) were determined. The I_{sc} is 0.02 A in average for most samples and the V_{oc} is from 2.5 mV to 0.6 mV, depending on the structure of each of the samples. The short-circuit current density J_{sc} is calculated to be 0.0008 (A/cm²), and the maximum power output -the fill factor (FF) is 0.72. The PCEs for the samples are therefore able to be calculated once the power of the light source is assured. The overall results indicate the optimum performance was discovered as the sample contains MaPbI₃ alone or mix with ICBA or P3HT or both in the central layer of the sandwich structure and avoid components that mix either P3HT or ICBA with TiO₂.

Key words: hybrid-perovskite organic-inorganic hetero-conjunction photovoltaic cells, ICBA, P3HT, Perovskite materials-CH₃NH₃PbI₃, Acrylonitrile butadiene styrene (ABS) resins-based SLA 3D printing

吳錦雲與台灣女子軟式網球運動(1964~1971)

陳建森

中文摘要：

本計畫以歷史研究法、訪談法的方式，分析和探討 1960-1971 年臺灣女子軟式網球的發展過程，並以臺灣女子網球界中，曾當選多次亞洲杯女子軟式網球國手的選手吳錦雲做為主軸，共同呈現台灣軟式網球運動的文化面貌與形成軌跡。

研究得知：吳錦雲在台灣被尊稱為「田徑媽媽」，許多田徑好手受教在她門下，因為對學生的愛心和嚴謹訓練態度，造就許多優秀人才，2016 年獲教育部頒終身成就獎。她在 1956 年創下了鐵餅、鉛球、標槍三個項目的全國紀錄，成了名符其實的三鐵皇后，這個成就使她在 1960 年代幾乎是家喻戶曉的人物。

1962 年吳錦雲就讀臺灣省立體專，與學姊巫昭美共同參與軟式網球活動，進而入選了四次國手，是前排選手中，入選次數最多的一位。吳錦雲雖然較晚從事軟式網球運動，但是，她以田徑訓練所培養出的肌力與全身協調性，加上她努力練習軟式網球的基本動作，成為 1965-1971 年間，臺灣最優秀的軟式網球前排選手。

關鍵字：吳錦雲、軟式網球、亞洲杯軟式網球賽。

英文摘要：

Wu Jin-Yun and Taiwan Female Soft Tennis Sport (1964-1971)

The project is carried out by historical research and interviews and aims to analyze Taiwanese female tennis sport development from 1960 to 1971. Among these female players, Wu Jin-Yun, who was selected to join the national team many times, will be the main theme of this discussion to present the faces and historical track of Taiwan soft tennis sport.

According to studies, Wu Jin-Yu was respectfully called "The Mother of Athletics" in Taiwan. A lot of famous athletes were trained by her. With her patient and strict training, lots of her students became great athletes. Therefore, she was honored a lifetime achievement award by the Ministry of Education in 2016. She broke the national record in the women's shot put, discus throw, and javelin in 1956, becoming the triathlon queen. This achievement made her a well-known figure in the 1960s.

In 1962, Wu Jin-Yu started studying in the Taiwan Provincial College of Physical Education and joined the soft tennis activities with the senior, Wu, Zhao-Mei. Wu Jin-Yu made it into the national team four times, and she was the most selected player among the former tennis players. Although Wu Jin-Yu engaged in the soft tennis sport later than others, she became the greatest former tennis player from 1965 to 1971 by the muscular strength and body coordination built by prior training for the sport of athletics and hard work she dedicated to tennis basic motion training.

Key words: Wu Jin-Yu, Soft Tennis, Asia Soft Tennis Championship.

為何他們選擇去運動-高齡者運動參與及活躍老化效益因素之分析

顏政通

中文摘要：

內政部表示 2018 年臺灣 65 歲以上老年人口佔總人口比率的 14.05%，達到世界衛生組織定義的「高齡社會」；並向世界宣告臺灣預估在 8 年內將可能成為超高齡社會（內政部，2018）。

國人平均壽命為 80.7 歲，其中男性 77.5 歲、女性 84 歲，都創歷年新高。行政院主計總處指出，2016 年國人平均壽命雖達 80.0 歲，但健康的平均餘命僅 71.2 歲，不健康的存活年數達 8.8 年。且世界衛生組織(WHO)指出身體活動不足已成為影響全球死亡率的第四大危險因子，依據行政院體育委員會 2011 年運動城市調查結果顯示，國人無規律運動習慣之比率高達 72.2%。

本研究擬針對台北市及新北市地區 60 歲以上高齡者，具有自主行動能力者 40 位進行訪談。研究方法採半結構式問卷，問卷架構內容包括人口統計變項、IPAQ 身體活動量、自覺滿意度、運動體驗及活躍老化三面向發展、運動阻礙因素、參與運動關鍵因素分析等。分析方法採用 IPA 現象學及社會生態學模式。預期結果將提出高齡者運動參與的關鍵因素、重要效益及導致高齡運動的阻礙及挑戰分析。

關鍵字：運動習慣、運動參與、健康老化、成功老化。

英文摘要：

Ministry of the Interior (MOI) stated that, in Taiwan, the proportion of the elders over 65 years old was 14.05% among total population in 2018, in accordance with the standard of aging society defined by World Health Organization (WHO). MOI also estimated that Taiwan was going toward aged society (MOI, 2018). The average life span of nationals is 80.7 years old, with 77.5 years old in male and 84 years old in female, both hit record high. Directorate-General of Budget, Accounting and Statistics, Executive Yuan (DGBAS) indicated that, although the average life span of the nationals is 80 years old in 2016, only 71.2 years are in healthy condition, the rest 8.8 years remain unhealthy. WHO pointed out that insufficiency of physical exercises has become the fourth risk factor of global mortality; besides, according to the survey of Sports City by Sports Administration, Ministry of Education (SA), nationals without regular exercise habits is at a high percentage of 72.2%. This study interviews 40 elders over 60 in Taipei City and New Taipei city with autonomous mobility. The survey is taken with semi-structured questionnaire, this questionnaire contains demographic variable, International Physical Activity Questionnaire (IPAQ), self-satisfaction, exercise experience and active aging, factors of exercise obstruction, key factors of participation, and etc. The analysis uses Interpretative Phenomenological Analysis (IPA) and Social ecology as a method. The conclusion is predicted to show the key factors of participating, efficacy, and obstruction/challenging analysis in aging exercises.

Key words: exercise habits, exercise participation, healthy aging, successful aging

中文摘要：

國際志工服務的學習價值，可以讓學生透過對異地文化的全新認知，建構對異地文化的新感知與新知識，國際服務學習活動已成為全球護理很普遍的學術活動課程。然而，國內文獻較少探討護理科學生參與國際志工服務學習的經驗，因此，擬探討五專護生參與國際志工服務的動機、需求滿足及其相關經驗。

本研究採立意取樣，以北部專科學校護生為樣本，採混合式研究設計，量性設計「國際志工服務動機量表」及「基本需求滿足量表」評估 43 位五專護理科參與國際志工服務學習學生，除 2 部份量表外、另包含社會人口學變項等，進行護生參與國際志工服務的動機與需求滿足調查與分析。同時質性設計以服務學習心得及半結構式訪談進行資料收集。

研究結果發現，本校國際志工基本需求達「高度」滿足，其中以關係感滿足為最高。海外服務的次數及從事護理工作的意願，於需求滿足上有顯著差異。國際志工動機自我調節類型多數偏向內在調節。志工之關係感於基本需求滿足及內在動機扮演重要角色，在質性結果中，發現國際志工的經驗，提供護生成長歷程包含拉近世界距離、滋養生命寶貴的動力、突破自我及心靈成長、創造雙贏的經驗。

因此，建議海外志工籌備期間，需要透過培訓活動、學長姐分享及會議，增加彼此的溝通與信任，才能建立彼此間的合作氣氛，提升關係感的建立。另外，海外服務活動可增加定點服務時間長度或內容使用次數多，以提升其勝任感。

關鍵字：國際志工、服務學習、動機。

英文摘要：

The value of International service-learning allows the students to gain a new understanding of cross-culture as well as construct new perceptions and new knowledge of cross-culture. Consequently International service-learning activities are becoming more popular in academic programs. But the experiences of the International volunteering learning service of the nursing is a poorly researched area in Taiwan. Therefore, the purpose of this research is to explore the motivation and need satisfaction of the International volunteering learning service of the nursing students from the five year nursing programs.

For purpose of the study, a purposeful sample of volunteer included 43 nursing students from a college of North Taiwan. The data for the study were gained through the use of questionnaires, reflective diary and semi structured interview. SPSS 20 software was used to analysis the data in the questionnaires. Transcripts of their stories were analyzed using content analysis.

The need satisfaction of international youth volunteers reached high degrees, in which the relatedness satisfaction was the highest. There were significant differences in needs satisfaction, due to the diversity of international youth volunteers' service times and their intention of nursing work. Most international youth volunteers' motivation self-regulation intended to intrinsic regulation. The relatedness satisfaction of international youth volunteers played an important role in need satisfaction and intrinsic motivation. From qualitative finding, the nursing students shared their experiences which emerged four themes: shortening the distance between people around the world, self-breakthrough and the growth of the mind, precious the power of life, creating a win-win experience.

Therefore, it is recommended that during the preparation period of overseas volunteers, it is necessary to increase mutual communication and trust through training activities, senior volunteers sharing and meetings, in order to establish an atmosphere of cooperation and enhance the establishment of a sense of relationship. In addition, overseas service activities can increase the length of fixed-point service time or repeat their service activities in different groups to enhance their sense of competence.

Key words: International volunteering service-learning, motivation, need satisfaction, nursing student

中文摘要：

傳染病學是研究各種傳染病在人體中發展傳播、診斷、治療和預防的學科，隨著社會的發展與科學的進步，雖然傳染病不是主要造成人類死亡的主因，但仍嚴重威脅人類的健康；傳染病學課程目的在於拓展學生知識領域，著重講述傳染病的基本概念、發生過程、主要傳播途徑、診斷和有效的預防方法，並幫助學生隨時了解及認識傳染病最新流行狀況，讓學生在照顧病患時免於恐慌安心工作，進而提升病人的照護品質。五專二年級學生修習傳染病學往往會將同類別的傳染病症狀及治療方式混淆，本研究探討桌遊的設計融入五專二年級傳染病課程教材之可行性，透過自我導向學習能力量表、自編單元能力測驗卷及與學生之訪談等相關資料，分析探討透過桌遊融入傳染病課程後，學生的自我導向學習能力及學業成績轉變的情形，並根據前後測試問卷、教學省思、觀察記錄、訪談紀錄等資料進行量化及質性之分析。研究結果發現在自我導向學習方面：學習動機($t = 3.442, p < .05$)、計劃和實施($t = 2.689, p < .05$)、自我監控($t = 4.45, p < .05$)、人際溝通($t = 2.089, p < .05$)、整體學習傾向($t = 2.765, p < .05$)及自編單元能力($t = 2.698, p < .05$)以上各項 t 檢定皆達顯著水準 ($p < .05$)，表示於桌遊介入後在學生的自我導向學習能力和學業成績具有顯著差異，顯示桌遊融入課程對於學生在學習成就及自我導向學習具有良好的成效。

關鍵字：桌遊、傳染病學。

英文摘要：

Infectious diseases is a discipline that studies the development, transmission, diagnosis, treatment and prevention of various infectious diseases in humans. With the development of society and scientific progress, although infectious diseases are not the main cause of human death, they still pose serious threats to human health. The purpose of the Infectious Diseases course is to expand the knowledge area of students, The junior college second grand students' will often confuse the symptoms and treatments of the same type of infectious diseases. This study explores the feasibility of designing a board game into the infectious disease course. After observation and record, interview and other data for quantitative and qualitative analysis, explore the feasibility of integrating board games into infectious disease teaching.

Results: The observed endpoints were better in the experimental group.

Key words: board games, Infectious Diseases

中文摘要：

本研究旨在探討護生基本護理學臨床實習之學習態度、實習壓力及因應行為對其學習成效之影響。使用橫斷式調查法，以便利取樣方式，招募某台北市醫護管理專科學校之護理學生共 300 位為研究對象，進行問卷調查，回收有效問卷 266 份(88.6%)，以 SPSS20.0 for window 統計軟體做分析。研究結果指出：家庭社經地位在「專業知識與技能之壓力」上達到顯著差異 ($F=3.58, p<.05$)。基本變項在學習態度量表與壓力因應上都沒有顯著差異存在。自覺健康狀況在「護生對實習單位醫護人員滿意度」與「實習滿意度整體平均」達到顯著差異 ($t=2.69, p<.01; t=2.02, p<.05$)。另外入學方式為聯合登記者比申請入學或其他管道者會有較高的整體實習滿意度 ($\beta = .13, p<.05$)，基本護理學臨床實習成績越佳者則有越高的整體實習滿意度 ($\beta = .18, p<.01$)，實習壓力量表整體平均越高則整體實習滿意度越低 ($\beta = -.12, p<.05$)，學習態度量表整體平均越高則整體實習滿意度越高 ($\beta = .46, p<.001$)，然而壓力因應整體平均無法顯著預測整體實習滿意度。整體的迴歸解釋力為 29.4%。

本研究結果建議學校及臨床場域做為未來研究指引及指標。藉由此研究發表，讓授課老師及臨床實習老師可以隨時理解護生在實習過程中會遇到的困境，試時給予良好的學習具體方法，進而協助護生達到良好臨床實習成果。

關鍵字：護生、基本護理學臨床實習、學習態度、實習壓力、因應行為、學習成效。

英文摘要：

This study aims to explore the impact of nursing students' learning attitudes, internship pressures and coping behaviors on their learning effectiveness in basic nursing clinical practice. The methodology of this study was a survey . This study was based on research purposes and literature reference, the questionnaire is divided into five parts, namely the "personal background factors" , " Clinical Practice Satisfaction Scale " , " Clinical Practice Stress Scale " , " Coping Behaviors Scale "and " Clinical Practice Learning Attitudes Scale ". The data were analyzed by descriptive statistics. There were significant differences among family socioeconomic status and stress from professional knowledge and skills ; There is no significant difference in the basic variables in the learning attitude scale and stress response ; Conscious health status has reached a significant difference between the “satisfaction of nursing students with the medical staff of the internship unit” and the “overall average internship satisfaction ”nursing interests is significantly related to learning attitude and coping behavior. In addition, those who are enrolled in joint enrollment will have higher overall internship satisfaction ($\beta = .13, p <.05$) than those who apply for admission or other channels. The better the basic nursing clinical internship, the higher the overall Internship satisfaction ($\beta = .18, p <.01$), the higher the overall average internship pressure scale, the lower the overall intern satisfaction ($\beta = -.12, p <.05$), the higher the overall average learning attitude scale The higher the overall internship satisfaction is ($\beta = .46, p <.001$), but the overall average stress response cannot significantly predict the overall internship satisfaction. The overall regression explanatory power is 29.4%.

The results of this study suggest schools and clinical fields as future research guidelines and indicators. Through this research and publication, teachers and clinical intern teachers can understand the difficulties that nursing students will encounter during internship at any time, and provide good learning specific methods during the trial, so as to help nursing students achieve good clinical internship results.

Key words: Student Nurse, Practice of Fundamental of Nursing, Learning Attitudes, Clinical Practice Stress, Coping Behaviors, Learning Achievement.

主動式音樂療法對五專護生創造力之成效研究*

駱天惠

中文摘要：

創造力的培育是國家教育的趨勢，融入各科課程教學是教育部四大重要策略之一，而音樂與創造力之培養有著一定的內在關係。許多研究發現主動式音樂療法的效果較被動式更有療效，但國內外研究多以被動性音樂活動設計為主。故本研究目的為探討主動式音樂療法對五專護生創造力之成效研究。研究方法採雙組前後測之類實驗設計，以立意取樣選取北市某五專護理科 25 名學生為研究對象，依據主動式音樂療法概念及設計架構，針對護生進行主動式音樂療法活動。研究對象分別於介入前及介入後自填「威廉斯創造性傾向態度量表」問卷前測及後測，以測量以 Likert 5 分法測量主動式音樂療法對自我創造力之幫助程度。結果顯示 83.5% 學生喜歡主動式音樂療法。有 54.3% 的同學覺得主動式音樂療法能激發新穎和奇特的情緒反應，而有 47.2% 的學生得在過程中經歷及表達的方式有助於建立與他人關係。大多數學生認為主動式音樂療法對於其創造力（81.6%）與情緒發展（83.4%）有幫助；82% 的學生希望往後能再參與主動式音樂療法活動。本研究成果可作為相關課程規劃、設計與創意教學技巧上的參考，以提升學生創造力及情緒發展能力。

關鍵字：護生、創造力、主動式音樂療法。

英文摘要：

To cultivate the creativity is a trend of national education. The integration into the courses of teaching is one of the four important strategies of Ministry of Education. Music and creativity have a certain internal relationship. Many studies have found that the effect of active music therapy is more effective than passive, but most of the research is based on passive music activities. Therefore, the purpose of this study is to explore the effectiveness of active music therapy on the creativity of nursing students in senior college. The research method adopts the quasi-experimental design of the two groups before and after the test, and selects 20-30 students from the senior nursing students in a senior college as the research object. According to the active music therapy concept and design framework, the active nursing method is adopted. Then fill in“ The Willians Assessment of Creative Tendency ” before and after the participation to measure the level of help with active music therapy for self-creation. To measure the help of active music therapy on self-creativity by the Likert 5-point method. The results show that 83.5% of students like active music therapy. 54.3% of students feel that active music therapy can stimulate novel and peculiar emotional responses, and 47.2% of students have to experience and express in the process to help build relationships with others. Most students think that active music therapy is helpful to their creativity (81.6%) and emotional development (83.4%); 82% of students hope to participate in active music therapy activities in the future. The results of this research can be used as a reference for relevant curriculum planning, design and creative teaching techniques to enhance students' creativity.

Key words: nursing students, creativity, active music therapy.