

行政院國家科學委員會專題研究計畫 成果報告

醫院護理人員工作負荷相關因素與照護品質之探討 研究成果報告(精簡版)

計畫類別：個別型
計畫編號：NSC 99-2410-H-040-002-
執行期間：99年08月01日至100年07月31日
執行單位：中山醫學大學護理學系(所)

計畫主持人：徐明儀
共同主持人：陳文意
計畫參與人員：此計畫無其他參與人員

報告附件：出席國際會議研究心得報告及發表論文

處理方式：本計畫涉及專利或其他智慧財產權，2年後可公開查詢

中華民國 100 年 10 月 26 日

行政院國家科學委員會補助專題研究計畫 成果
報告

(計畫名稱)

醫院護理人員工作負荷相關因素與照護品質之探討

計畫類別： 個別型計畫 整合型計畫

計畫編號：NSC 99-2410-H-040-002

執行期間：99年08月01日至100年07月31日

執行機構及系所：中山醫學大學

計畫主持人：徐明儀 助理教授

共同主持人：陳文意 助理教授

計畫參與人員：

成果報告類型(依經費核定清單規定繳交)： 精簡報告

本計畫除繳交成果報告外，另須繳交以下出國心得報告：

赴國外出差或研習心得報告

赴大陸地區出差或研習心得報告

出席國際學術會議心得報告

國際合作研究計畫國外研究報告

處理方式：除列管計畫及下列情形者外，得立即公開查詢

涉及專利或其他智慧財產權， 二年後可公開查詢

中華民國 100 年 10 月 31 日

Background: In the past few years, the turnover rate for hospital nurses with less than three months service was from 30-70% in Taiwan. Considerable research in this area has investigated nurses' work stress, nurses' workload and work overloaded, intent to leave, career development, work place health promotion, working conditions, work-family conflict, and job satisfaction. Results showed that high turnover rate increase interpersonal conflict, job accidents, workload, and lower nursing care quality. Suggestions were made from these studies; however, problems still persist. Investigation nurses' everyday practice in terms of working time allocation to patients and work contents could help understand the problems. Therefore, It is important to explore how nurses' workload affects nursing care quality.

Purpose: The purpose of this research is to explore hospital nurses' workload related factors and quality of care.

Literature review:

Research how much people are satisfied with their jobs, how they feel in relation to opportunities as they see them and how they find fulfillment in their work has investigated nurses' work stress, nurses' workload, intent to leave, career development, work place health promotion, working conditions, work-family conflict, and job satisfaction (Haque and Zahirul, 1998; Chin et al, 1996; Chen, 1994; Chiang, 1994; Hsu, 1993). Results show that high turnover rate is associated with interpersonal conflict, accidents-at-work, workload, and poor nursing care. Some suggestions were made from these studies as to how these problems might be addressed; however, problems still persist. The International Council of Nurses (ICN)

and Pfizer Inc (2009) surveyed the “Nurses in the Workplace: Expectations and Needs” in 11 countries: Brazil, Canada, Colombia, Japan, Kenya, Portugal, South Africa, Taiwan, Uganda, the U.S.A., and the United Kingdom. It is an extensive global attitudinal survey, which asked more than 2,000 nurses about the opportunities and challenges that face their profession and themselves, individually. Their research showed that 46% of participated nurses considered their workload was heavier than 5 years ago and only 33% of participated Taiwan nurses considered staying in nursing for the following 5 years. From 2009 to 2010, the nurses’ vacancy rate in Taiwan has increased by 45% and some qualified nurses are unwilling to working as a nurse (The National Union Of Nurses’ Association, R.O.C. 2010).

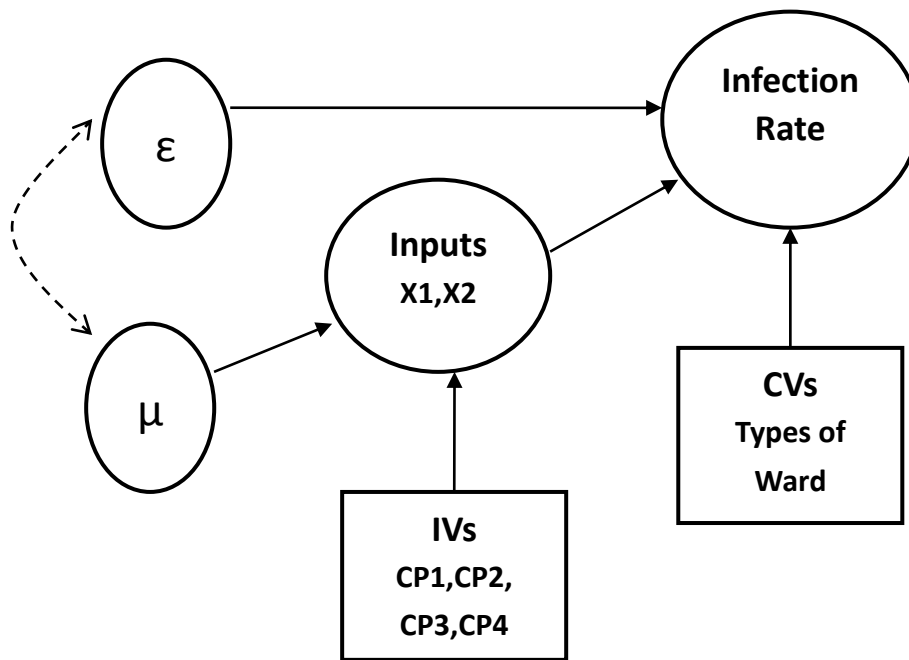
Methods: Data collection used the ‘nurses’ workload diary’ and nursing care quality indicators report. Sampling inclusion criteria were hospital nurses who worked in a Medical Centre, surgical and medical wards and position below nurse manager. Exclusion criteria were nurses who work in special nursing wards; for example operation room, pediatric wards, obstetrics and gynecology ward and psychiatric ward. Independent t-test, ANOVA, Pearson product moment correlation coefficient, chi-square, multivariate logistic regression and multivariate regression were used to determine the relationship among variables and to determine the contribution of factors to the final regression model.

Results: The results showed that nurses spend most of their time on nursing

care and communication which they considered they completed 50-70% of what they should do on these two types of nursing (Table 1). The research finding showed that increased accumulated nurses' working day will lead to a raise of infection rate. Figure 1 show that the average infection rate, accumulated nurses' working day and nursing time is 1.21%, 29.5 days and 2.92 hours respectively. Table 1 also shows a excessive nursing workload as the amount of nursing work could be competed is from 52.14 – 59.60% in daily basis.

Table1. Working time allocated on 4 nursing activities at medical and surgical wards

Nursing activities	Direct nursing care time(121'21")		Non-direct nursing care time(201'13")	
	Medical ward	Surgical ward	Medical ward	Surgical ward
Nursing care	102(26)	70	46(10)	57(20)
Communication	0(33)	2	158(50)	44(20)
Teaching	19(35)	32(36)	15(49)	0
Management	8(5)	6(36)	35(43)	43
Total	130(39)	111(12)	256(33)	144(40)



Note:
IVs=Instrumental Variables; CVs=Control Variables;
ε=unobserved heterogeneities that affect variation of infection rates
μ=unobserved heterogeneities that affect variation of inputs
Using IVs to replace inputs to estimate the effect of inputs on infection rates would prevent estimation biases from the correlation between ε and μ.

Figure 1: Regression model

Conclusion: The findings indicated the impact of deteriorated practice environment has made the nurses spending most of their time on basic routine care which diminished nursing competency maturity. Results also showed that the discrepancy between data collected by observation and nurses self-report indicated how ratio of different grading nurses in a ward, nurse-patient ratio and nursing assessment skills affect nursing care quality.

Contribution: The results help nurse managers understand the overall scope of nurses work contents and its relationship with nursing care quality. The results

also help to improve nurses work conditions and set up healthcare delivery enhancement programs.

References

- Chin, C. H., Lin, S. H., Wang, T. F., Yeh, M. C. and Li, S. M. (1996). Correlates of male nurses manpower turnover and work characteristics in Taiwan. *Journal of General Veteran Nursing*, **13** (3):278-288 [in Chinese].
- Haque, A. B. and Zahirul, B. M. (1998). Perceived quality of working life and job satisfaction of industrial workers in relation to certain demographic variables. *Bangladesh Journal of Psychology*, **13**:45-55.
- The National Union of Nurses' Association, R.O.C. (2010) An investigation of nurses work condition. *The National Union of Nurses' Association News*, 72: 6 °
- Chen, C. (1994). A study of the relationship between quality of work life, job satisfaction and intent to quit: high technology professionals. Thesis (MSc). National Chiao Tung University.
- Chiang, C. L. (1994). The relationship of the quality of working life, the individual characteristics of employee and performance: a comparison of Chinese American and Japanese businesses. Thesis(MSc). Chinese Culture University. [in Chinese]
- Hsu, C. H. (1993). The relation of employees' expectation and satisfaction of quality of work life and job performance. Thesis (MSc). National Chiao Tung University.

國科會補助專題研究計畫項下出席國際學術會議心得報告

日期：100 年 08 月 14 日

計畫編號	NSC 99-2410-H-040-002		
計畫名稱	醫院護理人員工作負荷相關因素與照護品質之探討		
出國人員姓名	徐明儀	服務機構及職稱	中山醫學大學護理系助理教授
會議時間	100 年 07 月 11 日至 100 年 07 月 15 日	會議地點	Cancun, Mexico
會議名稱	(中文) 第 22 屆國際護理研究研討會 (英文) 22nd International Nursing Research Congress		
發表論文題目	(中文) 護理工作負荷對護理實務影響的探討 (英文) An Exploration of How Nurses' Workload Affects Their Everyday Practice		

一、參加會議經過

今年台灣護理界組團參與在墨西哥坎昆舉辦的第 22 屆 International Nursing Research Conference，此次的大會於七月 11 日上午正式開幕，一連四天。緊接著還有 2nd International Nursing Research Conference for the World Academy of Nursing Science 會議。本會

此次組團有台北榮總、三總、彰化基督教醫院、嘉義長庚、北醫、馬偕醫院、高醫、中國醫大、陽明、台大、成大、耕莘管理健康學校、慈濟、中山醫大、義守大學、大同醫院、國立台南護. . .等。全台灣各地都有護理人員投稿參與此國際會議。台灣護理人員於研究上的努力正一步步被世界看見。

二、與會心得

此次會亦非常光榮的見證陳彰惠教授獲得國際護理榮譽學會國際護理研究者名人堂之殊榮，是台灣學術展露於國際的一個重要紀事，她非常感謝本會蔣理事長、台灣護理學會黃理事長、與英國伯明罕大學榮譽教授 Ian Brockington 的推薦。陳教授此次獲獎代表國際對台灣的肯定—台灣是國際學術樞紐之一，當然也是一種鞭策的力量，將竭盡所能傳承經驗、提攜後進，讓國際見證台灣軟實力的力量。

此次參與會議口頭報告，與其他國家交換不同國家護理人員工作負荷狀況與工作現況相關資訊，對發展未來研究發展方向及合作十分有幫助。

三、考察參觀活動(無是項活動者略)

四、建議

希望將來可以不受預算編列限制，予全額補助。

五、攜回資料名稱及內容

報告時間等相關訊息見下文

Presentations Scheduled for Sigma Theta Tau International's 22nd International Nursing Research Congress

machelle@stti.org <machelle@stti.org>

2011 年 4 月 18 日下午 9:17

回覆: machelle@stti.org

收件者: mingyi@csmu.edu.tw

Congratulations again on the selection of your Oral presentation entitled, "An Exploration of How Nurses' Workload Affects Their Everyday Practice," during the Sigma Theta Tau International's 22nd International Nursing Research Congress and the World Academy of Nursing Science (WANS) 2nd International Nursing Research Conference. We look forward to your participation in this global event. The opportunity to collaborate with nursing scholars from around the world involved in the advancement of nursing science promises to be rewarding and stimulating.

<u>Oral Presentation Scheduled</u>

- Abstract ID # 47661
- Abstract Title: An Exploration of How Nurses' Workload Affects Their Everyday Practice
- Date: Monday, July 11, 2011
- Session Time: 10:15 AM
- Session Title: Research Models Related to the Workplace

There will be a total of three presentations scheduled during the session and your total presentation time is 15 minutes with an additional 5 minutes for questions from the audience.

Additional information on oral presentation guidelines are available through our website at:

http://www.nursingsociety.org/STTIEvents/ResearchCongress/Pages/2011_22_INRC_PresenterInformation.aspx. If you should have specific questions, please contact our offices directly.

VIEW YOUR ABSTRACT

A detailed presentation schedule is available online at:

<http://stti.confex.com/stti/congrs11/webprogram/start.html>.

If you have any questions, please contact Machele Fisher (email: abstracts@stti.org; phone: [888.634.7575](tel:888.634.7575) US/Canada or [+1.317.634.8171](tel:+1.317.634.8171) International).

Thank you,

Cynthia Vlasich, MBA, BSN, RN

Director, Education and Leadership

Sigma Theta Tau International

An Exploration of How Nurses' Workload Affects Their Everyday Practice

Monday, July 11, 2011: 10:15 AM

Ming Yi Hsu, PhD, MSc, RPN, RN

School of Nursing, Chung Shan Medical University, Taichung, Taiwan

Learning Objective 1: The learner will be able to understand using observation and nurses self-report could reveal the degree of nursing practice environment deterioration.

Learning Objective 2: The learner will be able to understand the impact of deteriorated nursing practice environment on nursing competency maturity and care quality.

Background: In the past few years, the turnover rate for hospital nurses with less than three months service was from 30-70% in Taiwan. Considerable research in this area has investigated nurses' work stress, nurses' workload and work overloaded, intent to leave, career development, work place health promotion, working conditions, work-family conflict, and job satisfaction. **Results** showed that high turnover rate increase interpersonal conflict, job accidents, workload, and lower nursing care quality. Suggestions were made from these studies; however, problems still persist. Investigation nurses' everyday practice in terms of working time allocation to patients and nursing competency utilization could help understanding the problems. Therefore, it is important to explore how nurses' workload affects their everyday practice.

Purpose: The purpose of this research is to explore how nurses' workload affects their everyday practice.

Methods: Data collection used self-report nurses daily practice dairy and observer observation by using the nurses daily practice dairy. Sampling criteria were hospital nurses who work in surgical and medical wards and position below nurse manager. Content analysis was used for qualitative data analysis. Independent t-test, ANOVA, Pearson product moment correlation coefficient, chi-square were used to determine the relationship among variables.

Results: The findings indicated the impact of deteriorated practice environment has made the nurses spending most of their time on basic routine care which diminished nursing competency maturity. Results also showed that the discrepancy between data collected by observation and nurses self-report indicated how ratio of different grading nurses in a ward, nurse-patient ratio and nursing assessment skills affect nursing care quality.

Conclusion: The results help nurse managers understand the overall scope of nurses work contents and its relationship with nursing care quality. The results also help to improve nurses work conditions and set up healthcare delivery enhancement programs.

國科會補助計畫衍生研發成果推廣資料表

日期:2011/08/21

國科會補助計畫	計畫名稱: 醫院護理人員工作負荷相關因素與照護品質之探討
	計畫主持人: 徐明儀
	計畫編號: 99-2410-H-040-002- 學門領域: 人力資源管理
無研發成果推廣資料	

99 年度專題研究計畫研究成果彙整表

計畫主持人：徐明儀		計畫編號：99-2410-H-040-002-					
計畫名稱：醫院護理人員工作負荷相關因素與照護品質之探討							
成果項目		量化			單位	備註（質化說明：如數個計畫共同成果、成果列為該期刊之封面故事...等）	
		實際已達成數（被接受或已發表）	預期總達成數（含實際已達成數）	本計畫實際貢獻百分比			
國內	論文著作	期刊論文	0	1	100%	篇	
		研究報告/技術報告	1	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	0	0	100%		
國外	論文著作	期刊論文	0	1	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	1	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>	<p>無</p>
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	成果項目	量化	名稱或內容性質簡述
科 教 處 計 畫 加 填 項 目	測驗工具(含質性與量性)	0	
	課程/模組	0	
	電腦及網路系統或工具	0	
	教材	0	
	舉辦之活動/競賽	0	
	研討會/工作坊	0	
	電子報、網站	0	
	計畫成果推廣之參與(閱聽)人數	0	

國科會補助專題研究計畫成果報告自評表

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

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）

The results help nurse managers understand the overall scope of nurses work contents and its relationship with nursing care quality. The results also help to improve nurses work conditions and set up healthcare delivery enhancement programs.