The Effect of Patient-centered CPR Education for Family Caregivers of Patients with Cardiovascular Diseases.

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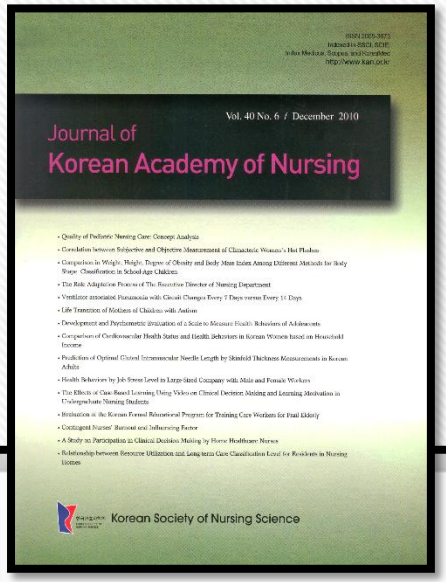
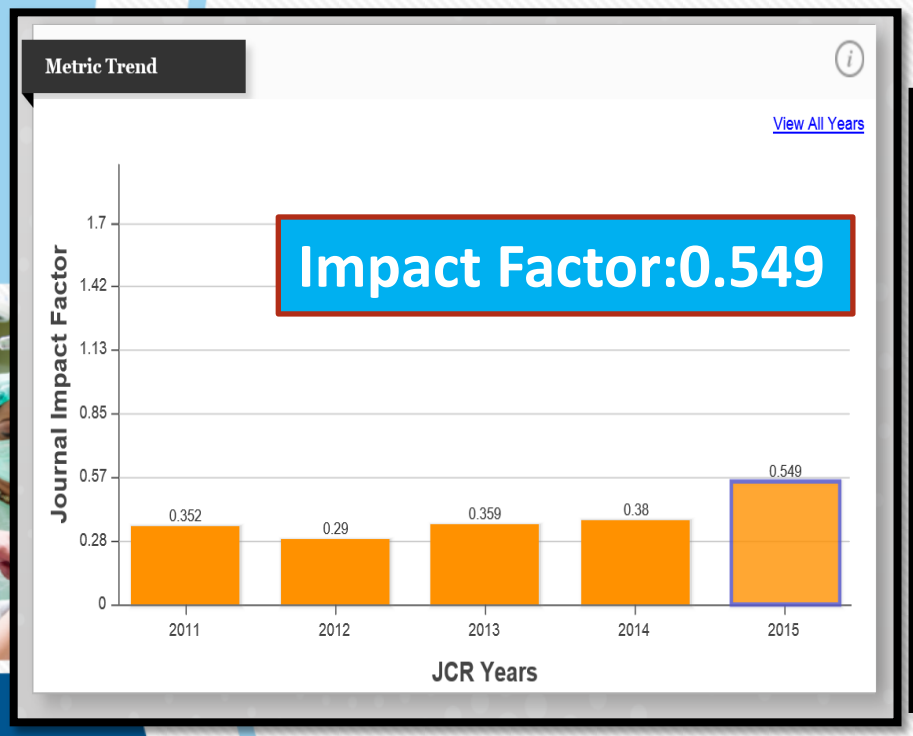


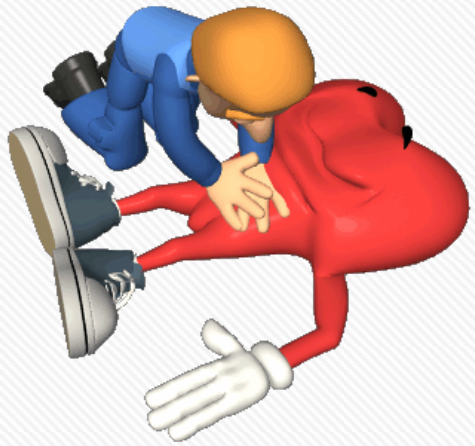


JCR Impact Factor

JCR Year	NURSING		
	Rank	Quartile	JIF Percentile
2015	97/114	Q4	15.351
2014	100/109	Q4	8.716
2013	97/105	Q4	8.095
2012	96/104	Q4	8.173
2011	88/97	Q4	9.794
2010	77/87	Q4	12.069

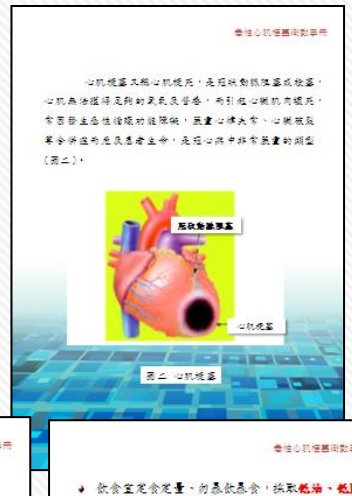
背景&動機

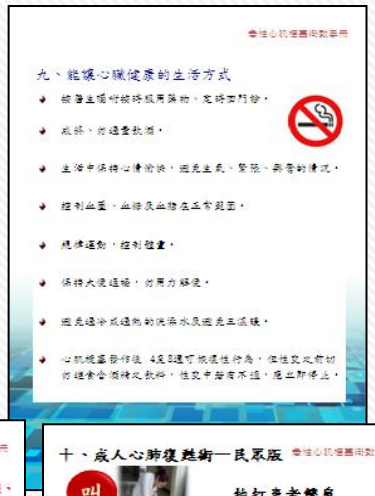
- 心血管疾病是全球死亡的頭號殺手，佔全球總死亡人數31% (世界衛生組織)
- 美國心臟學會(AHA)提到，早期高品質的心肺復甦術，可降低病人到院前的死亡率(Moran et al., 2014)。

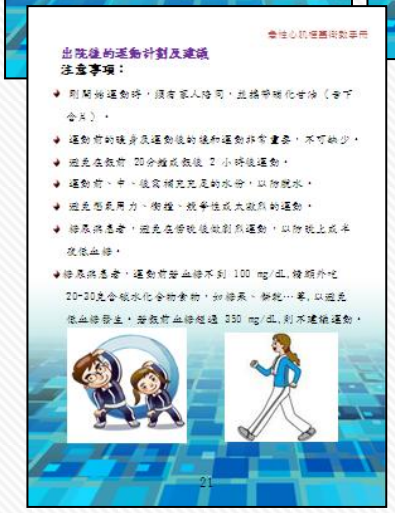


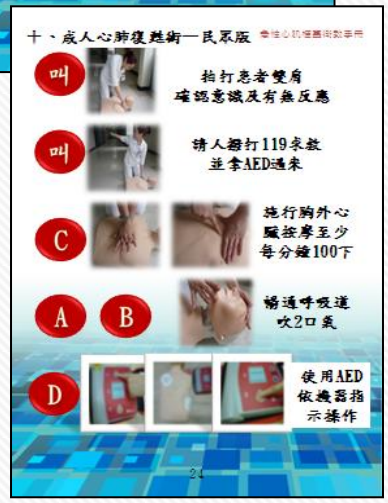
臨床現況[1]

- 使用心肌梗塞衛教手冊，由各團隊完成衛教









臨床現況[2] BLS技術指導流程

前測

看影片

手機輸入
影片網址

示範操作

回覆示教

手冊內容指導

後測

Critical Appraisal Sheet(CAT)

Critical Appraisal tools

[Randomised Controlled Trials]

步驟1：研究探討的問題為何? (PICO)

步驟2：研究的品質如何? (內在效度)

步驟3：研究結果之意義為何? (效益)

步驟1: 此篇文獻研究所探討的問題為何？

- family caregivers of outpatient cardiology patients (Cardiovascular Diseases)
- patient-centered CPR education (PCE)
- self-in-struction video-based CPR education without counseling and booklet.
- CPR knowledge, self- efficacy, Skills and performance of CPR

問題類型：●治療型　○預後型　○診斷型　○傷害型

Intervention Control

Table 1. Summary of the Patient-centered CPR Education (PCE)

Session	Topic	Specific activity	
		PCE group	Control group
1	Pre-test	·Knowledge of CPR and cardiovascular disease ·Self-efficacy of CPR ·Skills and performance of CPR	·Knowledge of CPR and cardiovascular disease ·Self-efficacy of CPR ·Skills and performance of CPR
2	Understanding cardiovascular disease and coping with emergency	Customized intervention ·Education on cardiac arrest, importance of first-responder, fundamentals of BLS, warning signs ·Individual counseling about patient-centered diet and exercise plan according to specific cardiovascular disease and each family's preference and feasibility	
3	CPR practice	Instructor-guided video-based CPR practice ·Instructor check the participants' performance and correct position ·Give real time feedback to enhance the skills and performance ·Make tailored CPR strategy for each family	Self-instruction video-based CPR practice ·The instructor observe during CPR practice
4	Post-test1	·Knowledge of CPR and cardiovascular disease ·Self-efficacy of CPR ·Skills and performance of CPR	·Knowledge of CPR and cardiovascular disease ·Self-efficacy of CPR ·Skills and performance of CPR
5 (2 weeks)	Telephone counseling and individual booster session	Individualized telephone-based counseling to consolidate the knowledge and increase family's self-efficacy	
6 (4 weeks)	Post-test2	·Knowledge of CPR and cardiovascular disease ·Self-efficacy of CPR	·Knowledge of CPR and cardiovascular disease ·Self-efficacy of CPR

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Critical Appraisal tools

[Randomised Controlled Trials]

步驟1：研究探討的問題為何? (PICO)

步驟2：研究的品質如何? (內在效度)

步驟3：研究結果之意義為何? (效益)

1.招募(Recruitment)----受試者是否具代表性 (收案族群、場所、納入/排出條件)

■ Yes

Participants were the family caregivers of outpatient cardiology patients who visited M hospital in Gyeonggi-do, South Korea, from July to September 2015. Potential participants were eligible for study participation in the study when they came for reserved cardiology outpatient care with their family. Interested participants were assessed by the researcher based on the following inclusion/ exclusion criteria: All participants were older than 18, voluntarily chose to participate, and did not have disabilities in cognitive function or physical activity that would prevent understanding or performing the PCE contents. Also, those who previously experienced cardiac arrest of their ill family member were excluded because the former experience might influence the treatment fidelity. The sample size was calculated to achieve

收案地點

納入條件
- ■ 年紀大於18歲
- ■ 自願參與
- ■ 沒有影響理解或執行PCE內容的認知功能
- ■ 身體活動的殘疾

排除條件
以前曾經歷過家人心臟驟停經驗的人

2.分派(Allocation)----分派方式是否隨機且隱匿性 (隨機分配)

■ Yes

5. Data Collection/Procedure

Randomization was accomplished using the table of random sampling digits ahead of the participant enrolment. The assignments were concealed in opaque envelopes. A research assistant, who was responsible for participant recruitment and blinded to the random assignment, enrolled the participants. Upon their participation agreement, the research assistant obtained a written consent from each participant and opened the envelope for group allocation. According to the result of group assignment, the participants were allocated into either PCE treatment or usual CPR education. The education and test sessions were performed

- 透過亂數表進行隨機分配

- 透過不透光信封，由研究員交給受試者
- 受試者完成同意書，再打開信封完成分組

2.分派(Allocation)-每組別，研究開始情況相同 (每一組條件相近)

Table 2. Homogeneity Test of Family Caregivers' Characteristics (*N*=54)

Characteristics	Categories	PG (n=28) n (%) or M±SD	CG (n=26) n (%) or M±SD	χ^2 or t	*p*
Gender	Male	13 (46.4)	17 (65.4)	1.96	.161
	Female	15 (53.6)	9 (34.6)		
Age	<40	2 (7.1)	1 (3.8)	3.07	.689
	40~49	6 (21.4)	3 (11.5)		
	50~59	10 (35.7)	9 (34.6)		
	60~69	7 (25.0)	11 (42.3)		
	70~79	3 (10.7)	2 (7.7)		
Marital status	Non-married	2 (7.1)	1 (3.8)	1.26	.532
	Married	25 (89.3)	25 (96.2)		
	Others	1 (3.6)	0 (0.0)		
Religion	Catholicism	10 (35.7)	7 (26.9)	3.76	.288
	Protestantism	11 (39.3)	6 (23.1)		
	Buddhism	3 (10.7)	5 (19.2)		
	Others	4 (14.3)	8 (30.8)		
Education	Elementary school	0 (0.0)	1 (3.8)	2.76	.430
	Middle school	3 (10.7)	6 (23.1)		
	High school	18 (64.3)	14 (53.8)		
	College or higher	7 (25.0)	5 (19.2)		
Occupation	Housewife	11 (39.3)	7 (26.9)	4.03	.672
	Self-employed	9 (32.1)	8 (30.8)		
	Professional/Office job	6 (21.4)	9 (34.6)		
	Student	1 (3.6)	0 (0.0)		
	None	1 (3.6)	2 (7.7)		
Relationship with patient	Spouse	22 (78.6)	24 (92.3)	5.35	.069
	Children	5 (17.9)	0 (0.0)		
	Brother or sister	0 (0.0)	0 (0.0)		
	Parents	1 (3.6)	2 (7.7)		

■ Yes

兩組間人口學無顯著差異

2.維持(Maintenance)-各組是否給予相同治療

■ Yes

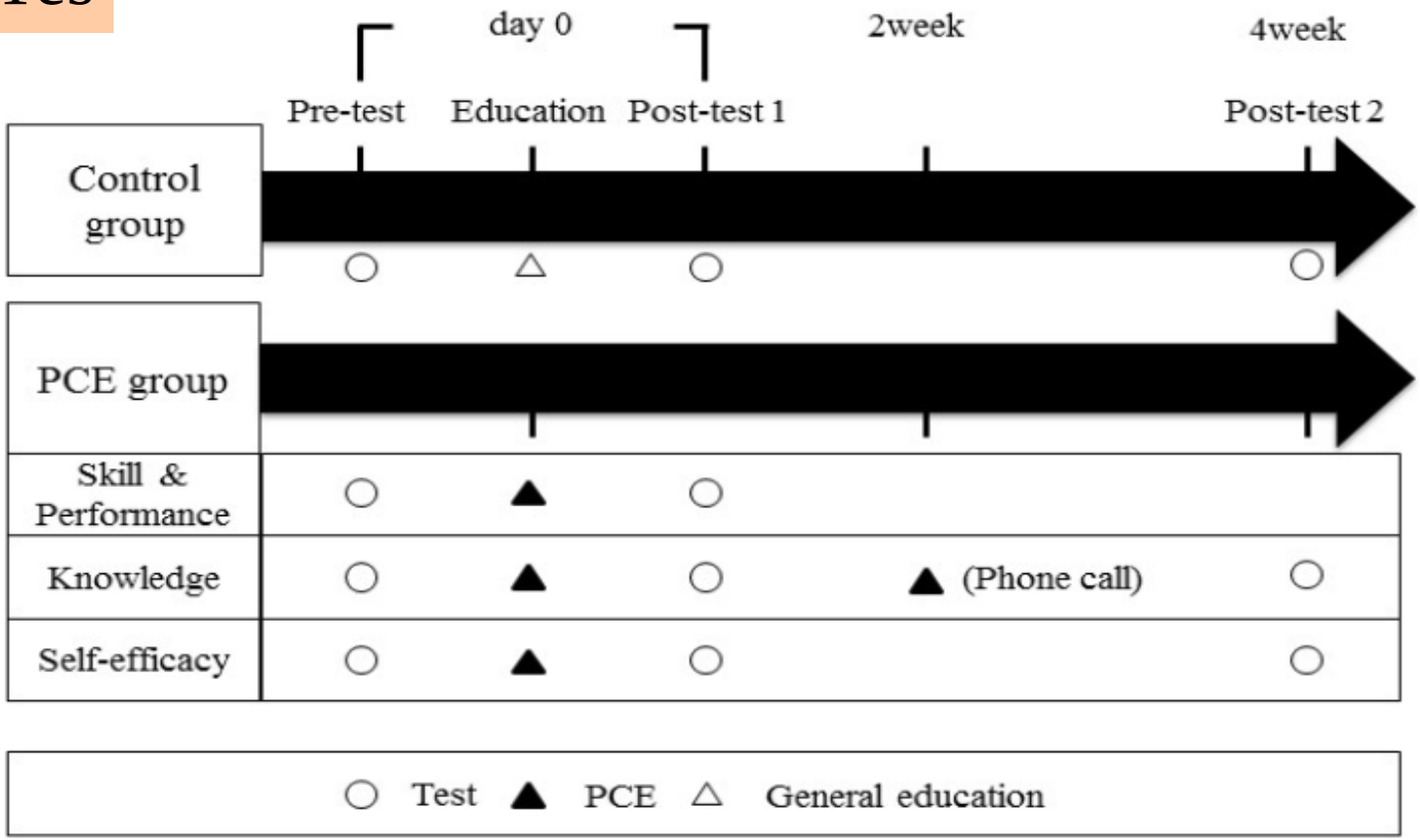


Figure 1. Research design for the study.

2.維持(Maintenance)---是否有足夠追蹤 (研究中個案流失率、ITT呈現)

[16], the priori sample size was calculated at 26 participants per group. Assuming an attrition rate of 14%, we planned to recruit 30 participants per group. Of the 60 participants, 2 in the PCE group and 4 in the control group withdrew from study involvement, 2 because they did not complete the intervention for business related reasons, 1 for giving up for physical fatigue, and 3 because they did not have a phone connection. Therefore, a total of 54 participants, 28 in the PCE group and 26 in the control group, completed the study.

■ NO

開始收案60人，但最後只有54人納入分析

病人流失 (loss follow-up)率10%，共6位

per-protocol analysis

2.評估(Measurement)—
-受試者與評估者對於治療方式或評估目的維持盲法

5. Data Collection/Procedure

Randomization was accomplished using the table of random sampling digits ahead of the participant enrolment. The assignments were concealed in opaque envelopes. A research assistant, who was responsible for participant recruitment and blinded to the random assignment, enrolled the participants. Upon their participation agreement, the research assistant obtained a written consent from each participant and opened the envelope for group allocation. According to the result of group assignment, the participants were allocated into either PCE treatment or usual CPR education. The education and test sessions were performed

■ NO

■研究助理負責參與召募和進行隨機分配 (盲法)
■病人 (非盲)

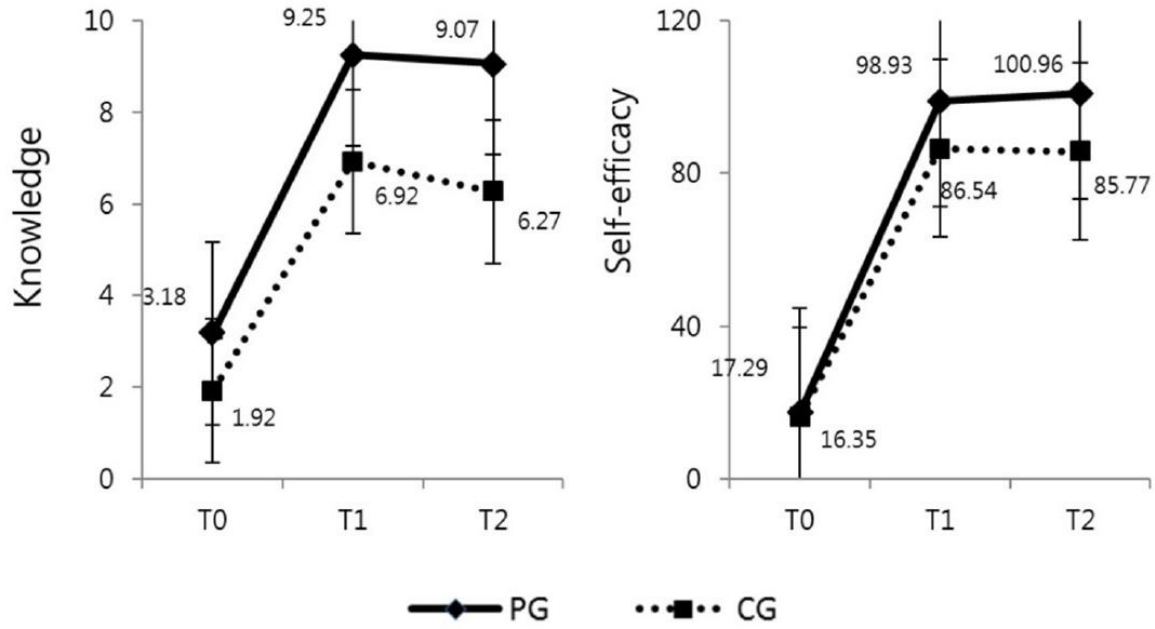
Critical Appraisal Sheet(CAT)

Critical Appraisal tools
[Randomised Controlled Trials]

步驟1：研究探討的問題為何? (PICO)

步驟2：研究的品質如何? (內在效度)

步驟3：研究結果之意義為何? (效益)



PG=PCE group; CG=control group; T0=0 day (before the intervention); T1=0 day (after the intervention); T2=4 weeks after

Figure 2. Group differences over time in outcome measures.

Table 3. Changes in CPR Knowledge, Self-efficacy, Skills and Performance Over Time (*N*=54)

Variables	Groups	Pre-test	Post-test1	Post-test2	Group	Time	GroupxTime
		M±SD	M±SD	M±SD	F or Z (*p*)	F or Z (*p*)	F or Z (*p*)
Knowledge*	PG (n=28)	3.18±0.95	9.25±0.80	9.07±0.72	91.09	364.25	8.10
	CG (n=26)	1.92±0.85	6.92±0.74	6.27±0.92	(<.001)	(<.001)	(.001)
Self-efficacy*	PG (n=28)	17.29±5.54	98.93±6.19	100.96±3.73	15.19	1162.28	4.30
	CG (n=26)	16.35±3.88	86.54±5.67	85.77±4.57	(<.001)	(<.001)	(.019)
Skills & performance*	PG (n=28)	0.89±0.83	8.79±0.42	-	8.10	1798.81	4.81
	CG (n=26)	0.58±0.50	8.27±0.53	-	(.008)	(<.001)	(.036)

PG=PCE group; CG=control group; *log transformation.

本院與文獻執行方式之比較

項目	文獻	本院
前測	1.CPR和心血管疾病的知識 2.CPR的自我效能 3.CPR的技能和性能	1.CPR的技能
措施	根據疾病和家庭的特性設計 1.教育心臟停止警訊、首先應變重要性、BLS的基本原理 2.針對病人進行個別諮詢建立飲食和鍛鍊計劃	1.教育心臟停止警訊、首先應變重要性。 2.針對病人進行個別諮詢建立飲食(營養師)和鍛鍊計劃(復健師)
	CPR影片觀看及操作指導 1.教師確認參加者執行的能力和矯正姿勢 2.適時提供反饋以增強技能和表現 3.為每個人制定特定的心肺復甦策略	CPR影片觀看及操作指導 1.教師確認參加者執行的能力和矯正姿勢 2.適時提供反饋以增強技能和表現
後測1	1.CPR和心血管疾病的知識 2.CPR的自我效能 3.CPR的技能和性能	1.CPR的技能和性能
電訪	1.電話諮詢及個別加強指導(2weeks)	無
後測2	1.CPR和心血管疾病的知識 2.CPR的自我效能	無

Q & A
討論時間

若將文獻應用於臨上...
效益、困難處...

針對AMI家屬執行CPR衛教?

- 同意:18人
- 懷疑:11人
- 不同意:1人


Thank You!