

The Effectiveness of SET based Foot Care Education Intervention Programme in Vietnamese Patients with Type 2 Diabetes: Preliminary results



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Diabetic foot ulcers – Facts and figures

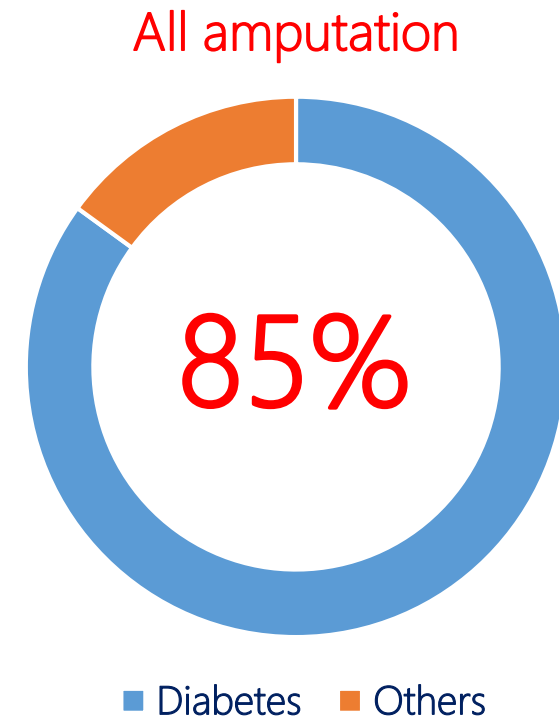


1 in 4

adults with diabetes
will develop a
foot ulcer



Every 20sec., a
limb is lost as a
consequence of
diabetes



1 Million

Lower limbs lost among
diabetics annually

(Bartus &
Margolis, 2004;
RNAO, 2013b).

Diabetic foot ulcers – Facts and figures



Individuals

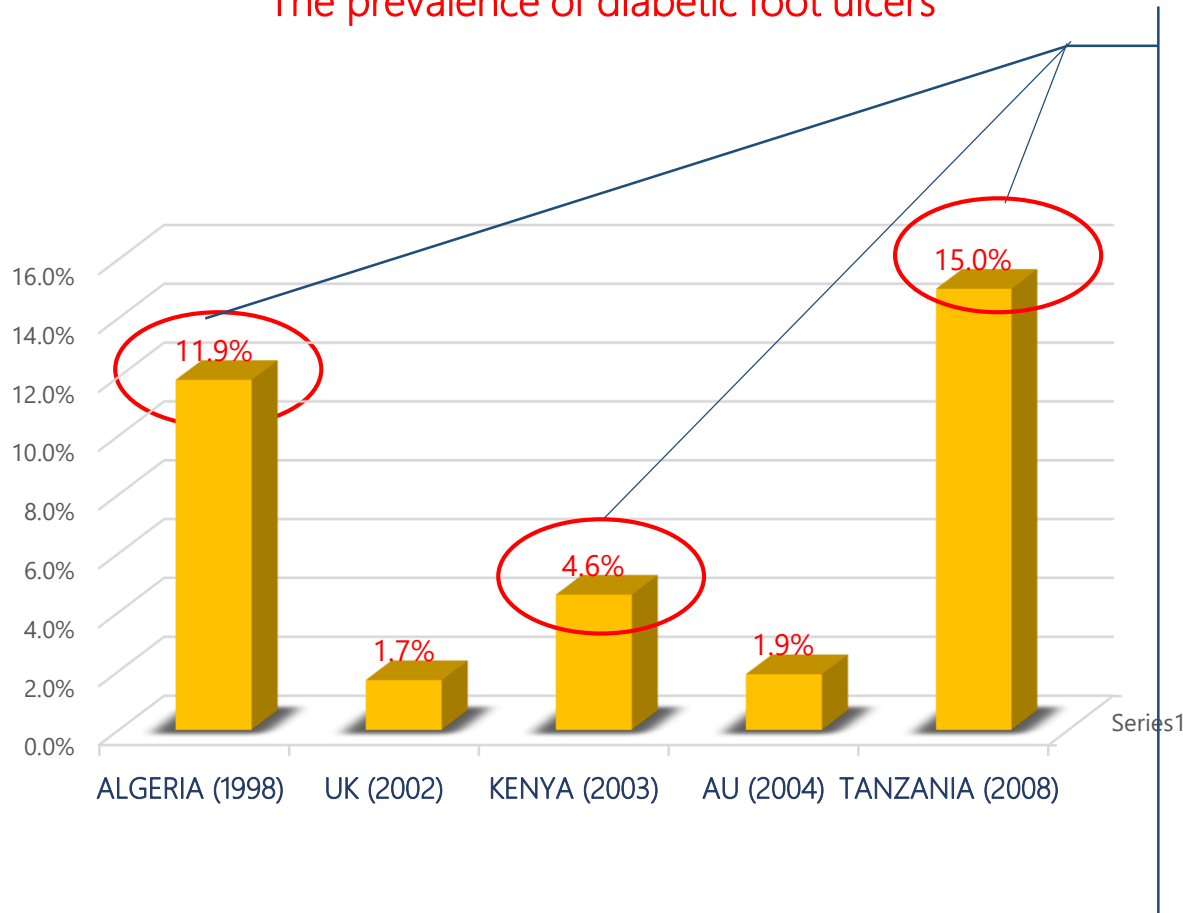
Families

Society

(Valk, Kriegsman, & Assendelft, 2002; Williams & Airey, 2000, NHMRC, 2011; Ray et al., 2005, G. Reiber, 2001)

Diabetic foot ulcers – Facts and figures (cont)

The prevalence of diabetic foot ulcers



(AIHW, 2008b; A. J. Boulton et al., 2005; Chiwanga, 2008; Nyamu, Otieno, Amayo, & McLigeyo, 2003)



Diabetic foot ulcers – Vietnamese picture



Diabetic foot ulcers – Vietnamese picture



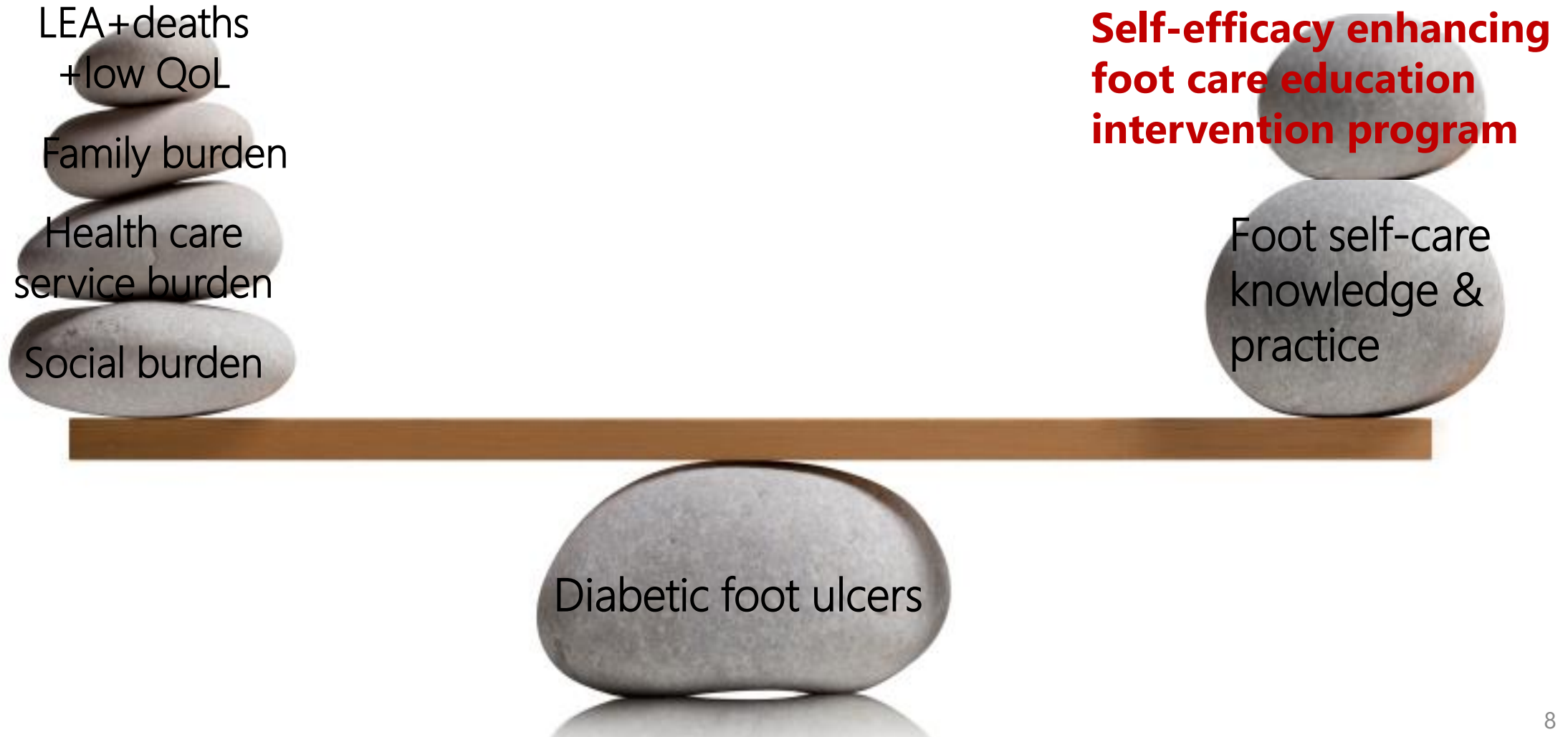
- Prevalence of diabetic foot ulcers: ???
- >40% -85% foot ulcers → Lower extremity amputation (LEA) (AASD, 2010)
- 34.7% had diabetes < 5 yrs
- 11.1% had undiagnosed diabetes.
- only 1.4% of the patients got diabetes over 20 years

Hospitalisation: 25% to 35%

n or Freedom



What is our program is trying to do?

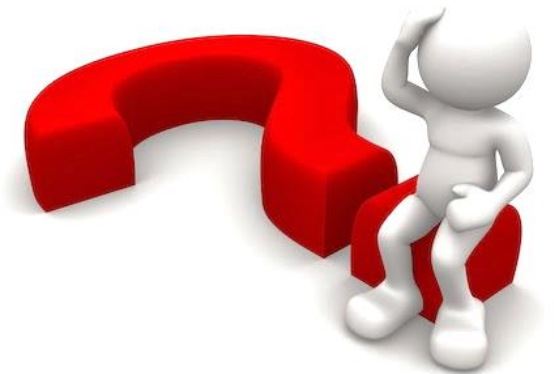


RESEARCH QUESTION

What is the impact of Self-efficacy theory (SET) based foot care education intervention program on

- foot self-care practice
- the occurrence of minor foot problems

of people with type 2 diabetes at low risks in Ho Chi Minh city, Vietnam?

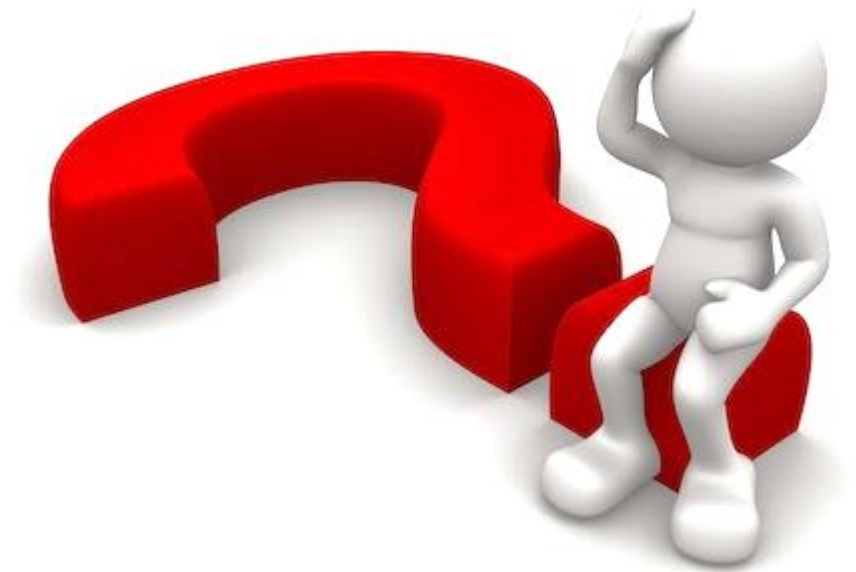


RESEARCH QUESTION

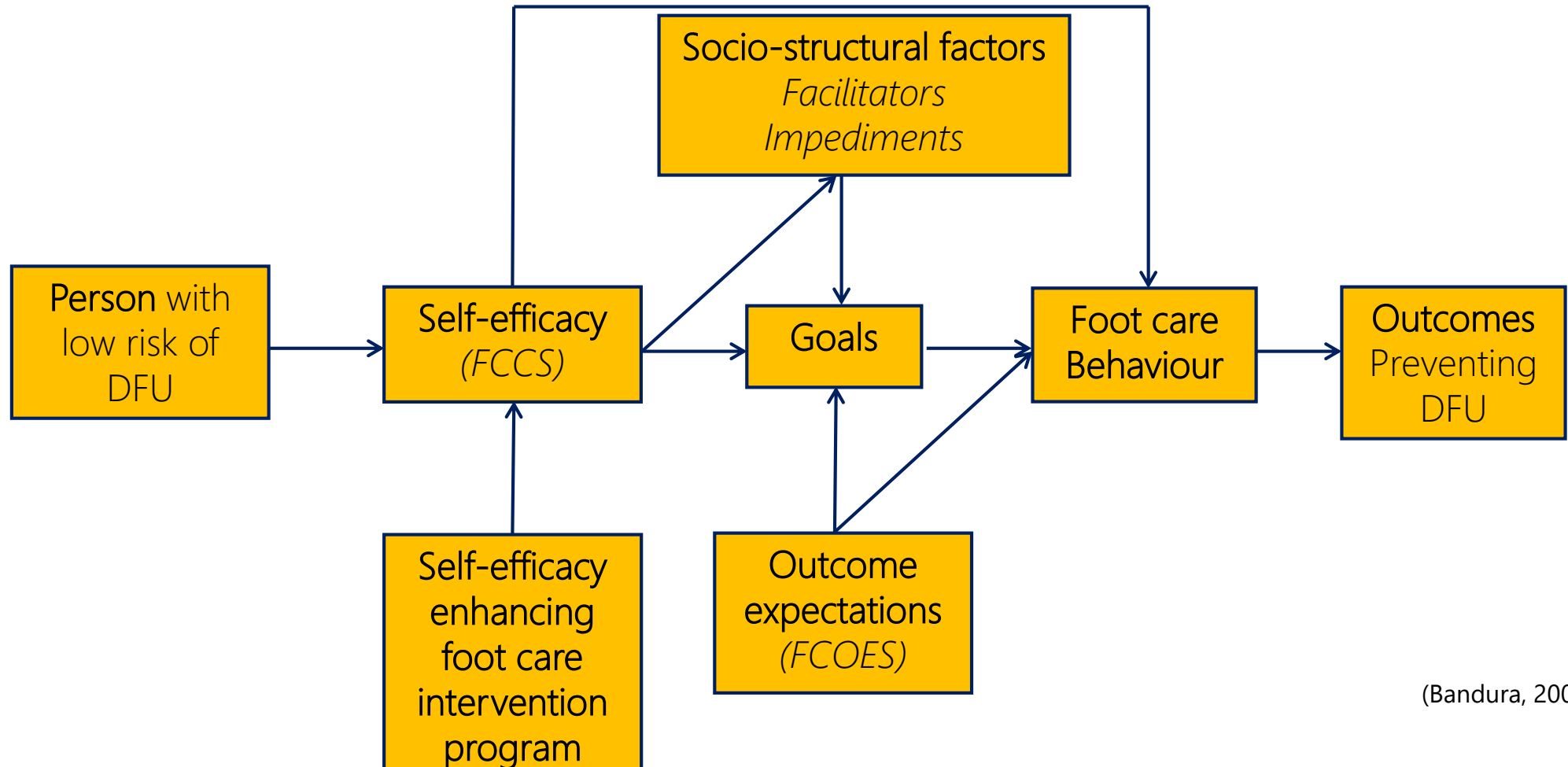
What is the impact of SET based foot care education intervention program on

- foot self-care knowledge
- foot self-care practice
- foot care self-efficacy
- foot care outcome expectations
- the occurrence of minor foot problems

of people with type 2 diabetes at low risk of developing a foot ulcer in Ho Chi Minh city, Vietnam?



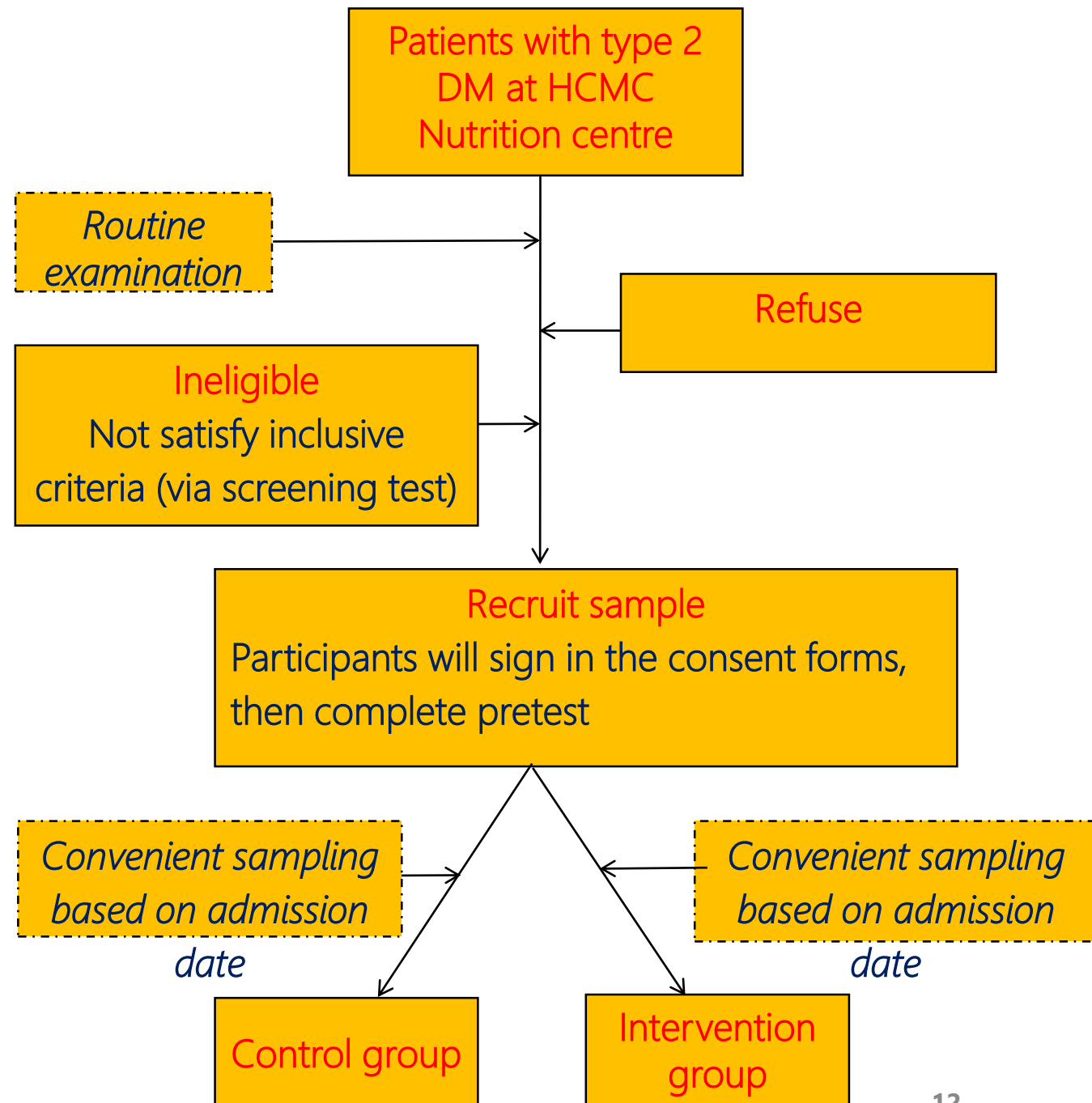
Modified framework



(Bandura, 2004)

Methodology

- Quasi-experimental design (2x3)
- Convenient sampling



Population, sample and settings

➤ Inclusion criteria:

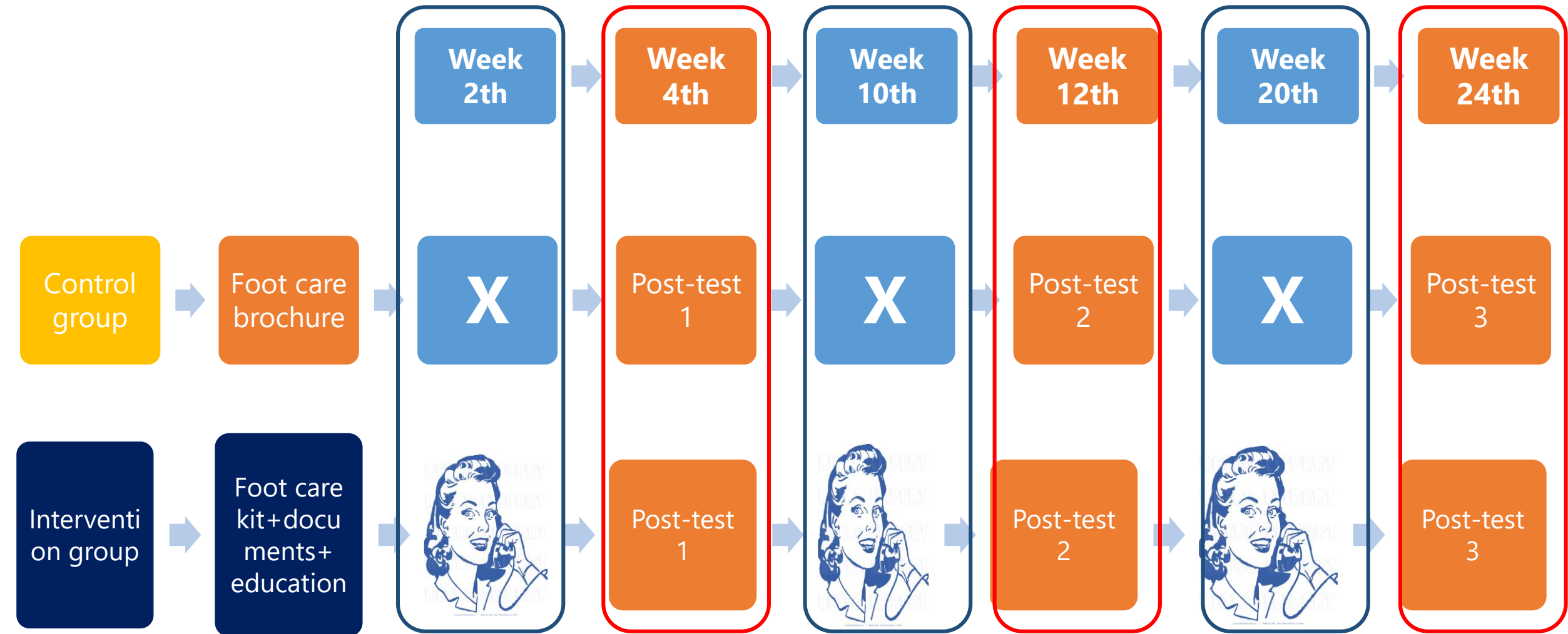
- Pts DM, ≥ 18 years old
- ≥ 2 months follow-up treatment history
- Normal results of screening test (ALL items):
 - Normal protective sensation
 - Normal lower extremities circulation
 - No foot deformity
 - No history of previous or current foot ulcer(s)
- Vietnamese literacy
- Be contactable by phone follow-up

➤ Exclusion criteria:

- Unable or unwilling to give the informed consent
- Abnormal results of screening test (ANY item)
- Cognitive impairment/ serious co-morbidity
- Can not hear/ speak Vietnamese



Intervention process



Những dấu hiệu cần lưu ý

Nếu phát hiện những dấu hiệu sau, cần đến khám bác sĩ ngay

- » Vết thương, vết trầy xước, tổn thương ở bàn chân
- » Mất cảm giác ở bàn chân
- » Thay đổi màu sắc bàn chân
- » Có nốt, cục chai ở bàn chân, ngón chân
- » Thay đổi hình dạng bàn chân, ngón chân



Cục chai chân



Biến dạng bàn chân



Bóng nước



Vết bầm hay vết cắt

Hỗ trợ thông tin

Hãy đến gặp bác sĩ ngay nếu có bất kì vấn đề lo lắng về bàn chân!

Điện thoại liên lạc:

Tài liệu tham khảo:

- Steed DL et al. Guidelines for the treatment of diabetic ulcers. Wound Repair and Regeneration 2006. 14(6):680-692
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- Preventing Foot Complications—A guide for people with diabetes (type 1 or type 2)[brochure]. The National Health and Medical Research Council [NHMRC] 2011
- Diabetic Australia -Vic. My feet and diabetes – A pictorial guide 2014

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Chăm sóc bàn chân Đái tháo đường



**Hãy hành động
trước khi quá muộn!**

QUT

Institute of Health and
Biomedical Innovation



Loét bàn chân đái tháo đường

- Loét bàn chân là nguyên nhân nhập viện hàng đầu của người bệnh đái tháo đường.
- Loét bàn chân thường xảy ra ở lòng bàn chân, những vùng nhô xương như mắt cá chân.
- Nguyên nhân: chấn thương, đè ép, trầy xước da (khi mang giày dép chật)
- Các vết loét không điều trị tốt có thể dẫn đến cắt cụt chi.
- Hầu hết các trường hợp loét bàn chân đều **CÓ THỂ PHÒNG NGỪA** được.
- Loét bàn chân có thể lành tốt nếu được phát hiện và điều trị sớm.

✓ 12 điều nên làm

- Kiểm tra bàn chân và ngón chân hàng ngày.
- Đến cơ sở y tế để được khám và tư vấn nếu phát hiện các vùng đỏ da, bóng nước, vết cắt, trầy xước hay vết loét.
- Rửa và lau khô bàn chân cẩn thận, đặc biệt ở kẽ ngón chân.
- Kiểm tra nhiệt độ nước trước khi tắm, rửa chân.
- Thoa kem, dầu dưỡng ẩm ở bàn chân. Không thoa ở kẽ ngón chân.
- Cắt móng chân cẩn thận, không cắt khước móng.
- Kiểm tra giày dép trước khi mang.
- Thay vớ mỗi ngày.
- Kiểm soát đường huyết thường xuyên. Đường huyết ổn định giúp phòng ngừa loét.
- Tuân thủ chế độ dinh dưỡng hợp lý.
- Không hút thuốc lá.
- Tái khám định kỳ để được khám bàn chân và tư vấn về cách chăm sóc bàn chân.



✗ 5 điều nên tránh

- Không đi chân đất (trần) kể cả trong nhà.
- Không tự ý sử dụng các loại thuốc dán, dao để loại bỏ vết chai.
- Không dùng túi chườm hay chai nước nóng để làm ấm chân.
- Không nên mang giày dép, vớ quá chật hoặc quá rộng.
- Không mang vớ có nhiều mối ráp







INTENSIVE EDUCATION + HANDS ON PRACTICE

- Small groups (8-10 pts)
- Provide knowledge + practice
- Foster participants' self-motivation
- Identify and correct misconceptions
- Teaching plan: objectives, contents, teaching strategies and time frame for each activity



Tell



Show



Do



Teaching
strategies





Discussion session and sharing experiences



Demonstration: practice session



Telephone follow-up



- Purposes:

- Reviewing & Reminding & motivating
- Identify issues and problem solving
- Provide support

performance
accomplishments,
verbal persuasion
and psychological
information



Practice



Review

FORMAT OF TELEPHONE BOOSTER FOLLOW-UP

Pt's name: _____

CODE: _____ Phone number: _____

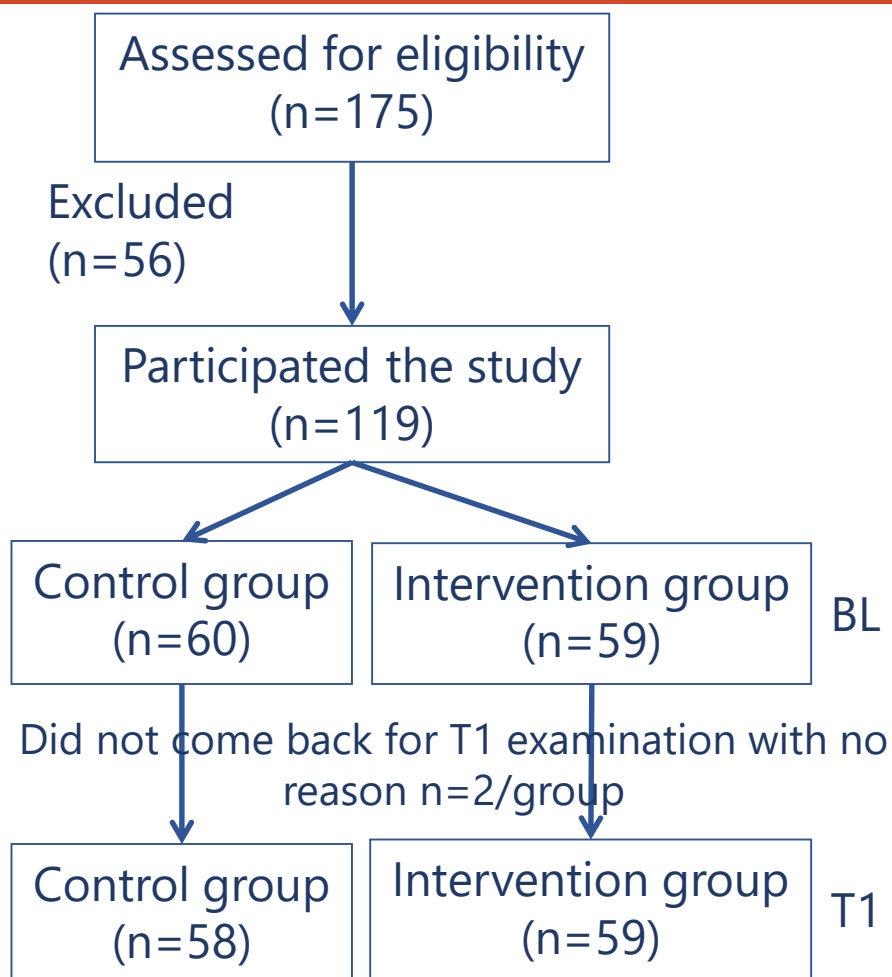
Minor foot problems at baseline: _____

No	Content	Time 1 (Date ____ / ____ / ____)	Time 2 (Date ____ / ____ / ____)	Time 3 (Date ____ / ____ / ____)
1	Time	From: _____ to _____ Mins: _____	From: _____ to _____ Mins: _____	From: _____ to _____ Mins: _____
2	- Asking about patient's health status			
3	- Answers any queries related to last education session	Q: _____ A: _____	Q: _____ A: _____	Q: _____ A: _____
4	- Remind steps of foot care			
5	- Exploring about pt's foot care practice: frequency, level of getting objectives (any improvement of foot problems from baseline), any difficulties or barriers in performing foot care and giving consultations or suggestion for pts to those problems if having any.	Frequency: _____ Pt's practice and Barriers: _____ ➔ Solving: _____ Improvement? _____	Frequency: _____ Pt's practice and Barriers: _____ ➔ Solving: _____ Improvement? _____	Frequency: _____ Pt's practice and Barriers: _____ ➔ Solving: _____ Improvement? _____
6	- Goals for next stage (Eg: Maintaining the foot care (if their foot care behavior was good))			
7	- Encourage pts to continue performing foot care behavior - Remind the next appointment and persuade pts come to see doctor as the appointed time.			

RESULTS

- Sample characteristics
- Behaviors
- Minor foot problems

SAMPLE CHARACTERISTICS



Characteristics		Control (n=60)	Intervention (n=59)	P value
Age (yrs± mean, sd)		61.51 ± 8.68	61.93 ± 9.97	0.74
Gender, n(%)				
	Male	23 (38.3%)	10 (16.9%)	0.02
	Female	37 (61.7%)	49 (83.1%)	
Education level				
	Lower high school	37 (61.7%)	19 (32.2%)	0.001
	High school or higher	23 (38.3%)	40 (67.8%)	
Income adequacy				
	Insufficient/ just right	23 (39%)	51(86.4%)	<0.001
	≥enough	36 (61%)	8 (13.6%)	

SAMPLE CHARACTERISTICS (cont)

Characteristics (Min – Max)	Control (n=60)	Intervention (n=59)	P value
	Median, IQR		
FBG (4.2 – 16.28)	8.05 (7.03 - 9.20)	7.72 (6.8-9.1)	0.53
HbA1C (4.7-11.20)	6.9 (6.3 - 7.5)	7 (6.38-7.53)	0.52
Duration of diabetes (1-30)	10 (7 – 14.75)	10 (5-12.25)	0.24
	N (%)		
BMI			0.13
<18.5	1 (1.7%)	1 (1.7%)	
25-29.9	19 (32.2%)	9 (15.5%)	
≥ 30	1 (1.7%)	0 (0%)	
Control diet	54 (90%)	38 (64.4%)	0.002
Retinopathy	6 (10%)	18 (30.5%)	0.01

FOOT SELF-CARE BEHAVIORS

Characteristics	Control (n=60)		Intervention (n=59)		P value
	Mean (SD)				
Preventive behaviors - BL	26.80	(6.32)	28.97	(7.14)	0.08 ^a
Damage behaviors - BL	30.15	(3.36)	31.24	(4.29)	0.13 ^a
Preventive behaviors – T1	29.79	(5.71)	35.32	(4.18)	<0.001 ^a
Damage behaviors – T1	30.43	(3.30)	32.98	(3.58)	<0.001 ^a
P value (before – after)	Preventive	<0.001 ^b	Preventive	<0.001 ^b	
	Damage	0.60 ^b	Damage	0.01 ^b	

^a T-test

^b paired T-test

FOOT SELF-CARE BEHAVIORS ~ FOOT CARE SELF-EFFICACY

		Pearson correlation	P value (2-tailed)
Baseline	FCSE ~ Preventive behaviors	0.57	<0.001 ^a
	FCSE ~ Damage behaviors	0.14	0.13
T1	FCSE ~ Preventive behaviors	0.6	<0.001 ^b
	FCSE ~ Damage behaviors	0.08	0.42

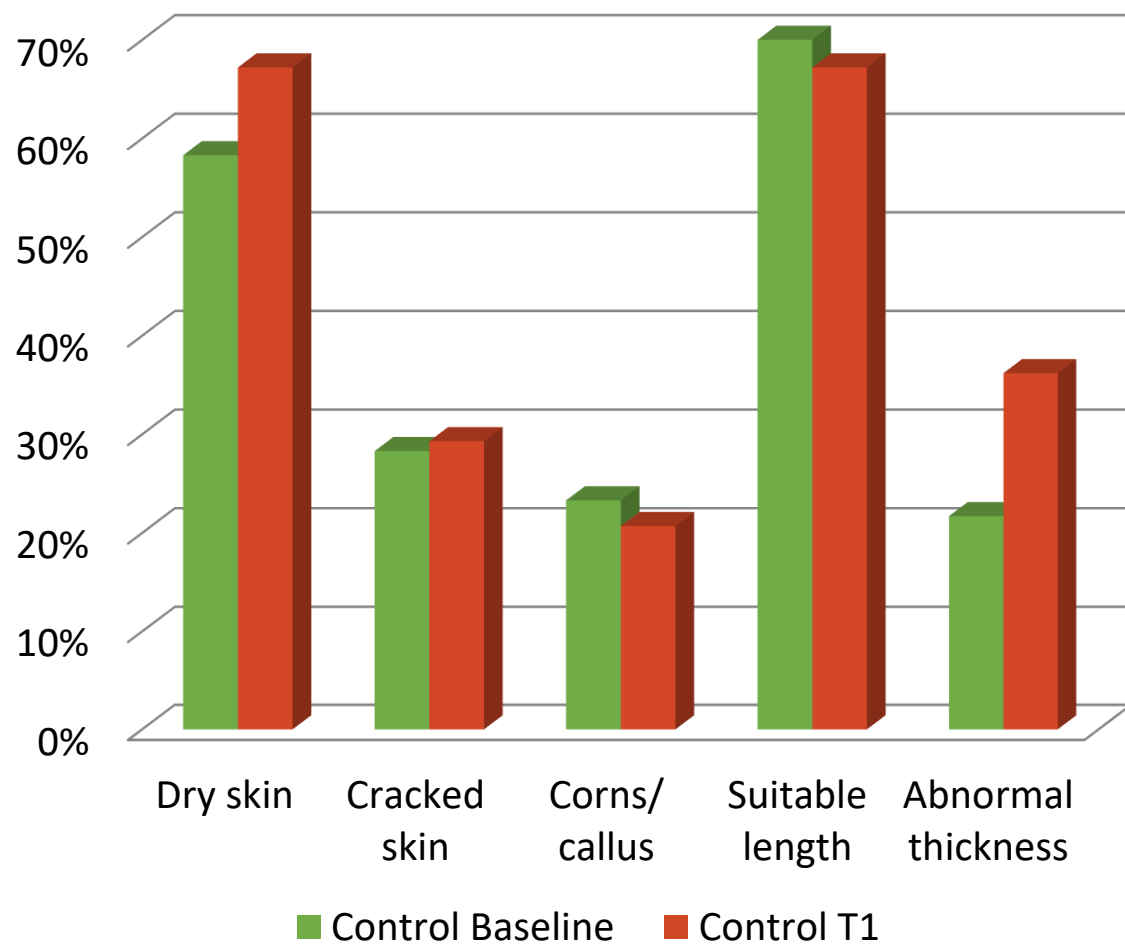
^a Significantly in 2 groups

^b Significantly in Intervention group only

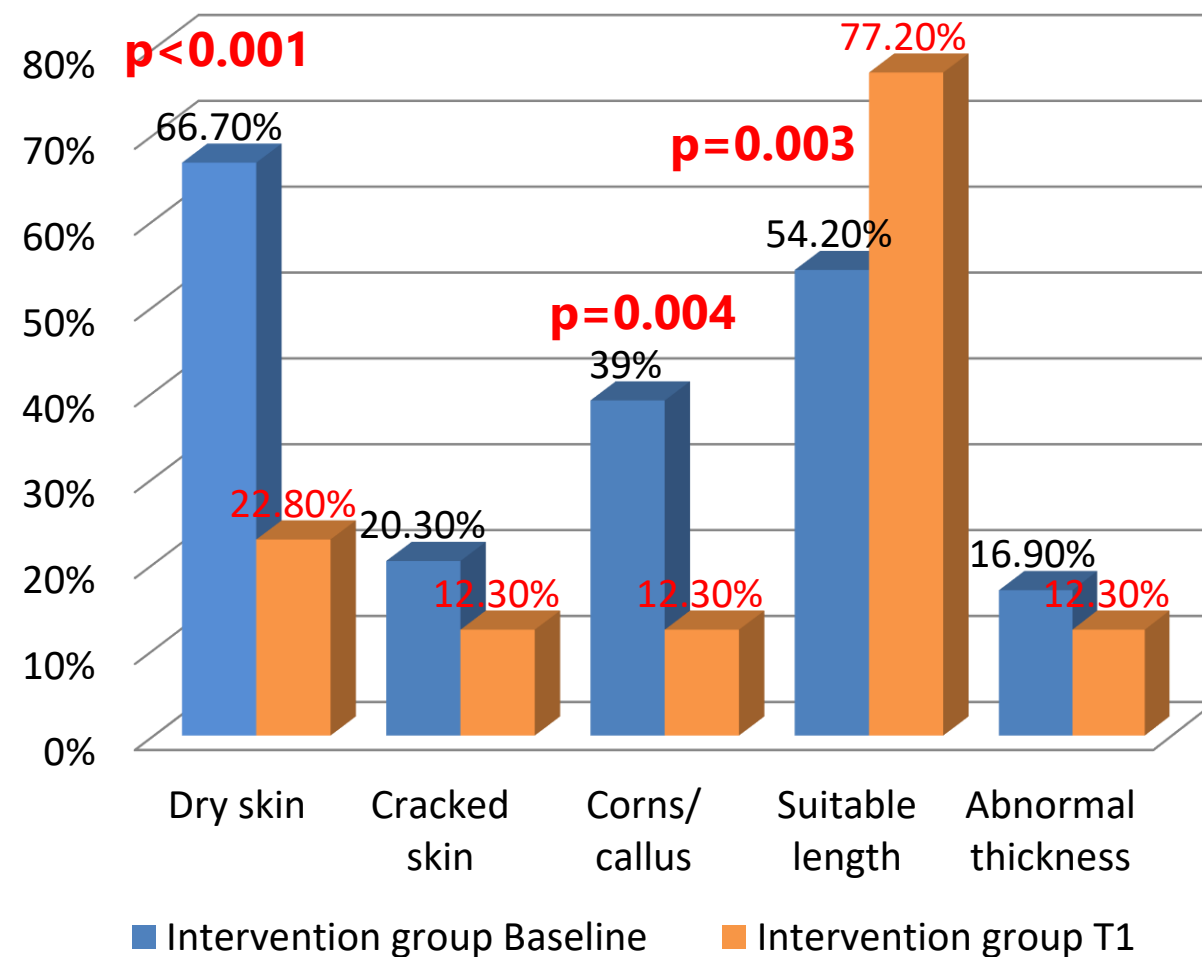
MINOR FOOT PROBLEMS

Minor foot problems	BASELINE			T1			Before vs After	
	Control n (%)	Intervention n (%)	p value (χ^2)	Control n (%)	Intervention n (%)	p value (χ^2)	p value (McNemar test)	
							Control	Intervention
Dry skin	35 (58.3%)	38 (66.7%)	0.46	39 (67.2%)	13 (22.8%)	<0.001	0.13	<0.001
Cracked skin	17 (28.3%)	12 (20.3%)	0.42	17 (29.3%)	7 (12.3%)	0.04		
Corns/callus	14 (23.3%)	23 (39%)	0.1	12 (20.7%)	7 (12.3%)	0.23	0.73	0.004
Suitable length	42 (70%)	32 (54.2%)	0.11	39 (67.2%)	44 (77.2%)	0.23	~1	0.003
Abnormal thickness	13 (21.7%)	10 (16.9%)	0.68	21 (36.2%)	7 (12.3%)	0.003		

Minor foot problems – control group



Minor foot problems - intervention



DISCUSSION

➤ Results:

- Consistent to results of other studies

➤ Strengths:

- Comprehensive model
- Low attrition rate (3.4% - 13.4%)

➤ Limitations:

- Design: control biases
- Evaluation: actual behaviors?, scale for minor foot problems assessment ?

CONCLUSION

- Effectiveness of the SET based foot care education intervention program on:
 - ↑ foot self-care behavior
 - ↓ common minor foot problems (skin dry, skin cracked, corns/callus)
- Further: RCT design, larger sample, longer time ~ incidence rate of foot ulcers



Prevention is better than cure



**THANK
YOU
FOR
LISTENING**

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