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Effectiveness of Weight Control Program on Nutritional Status and Knee Pain in Overweight Older Adults

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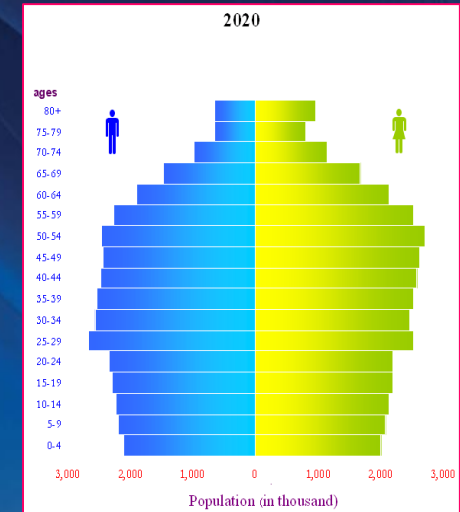
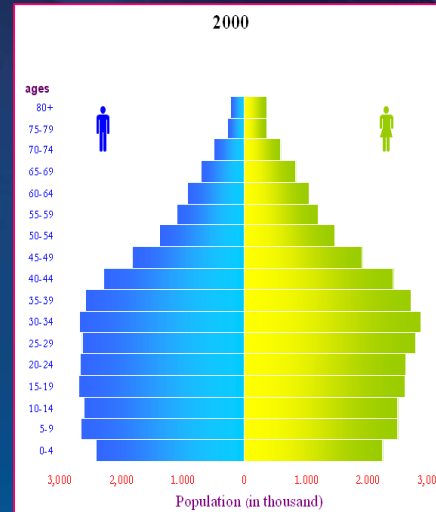
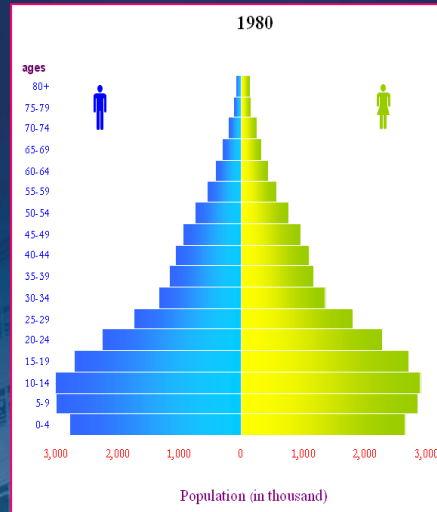
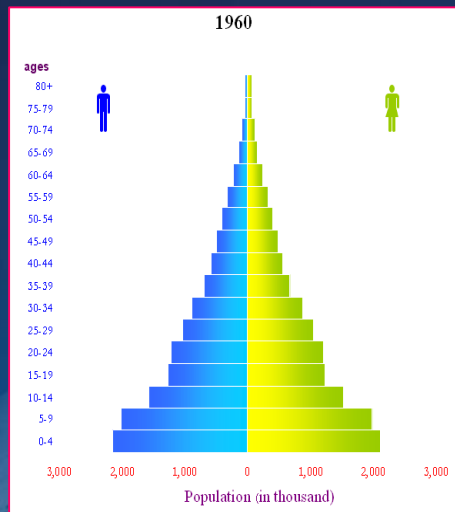


Significance





Population of Thailand



1960

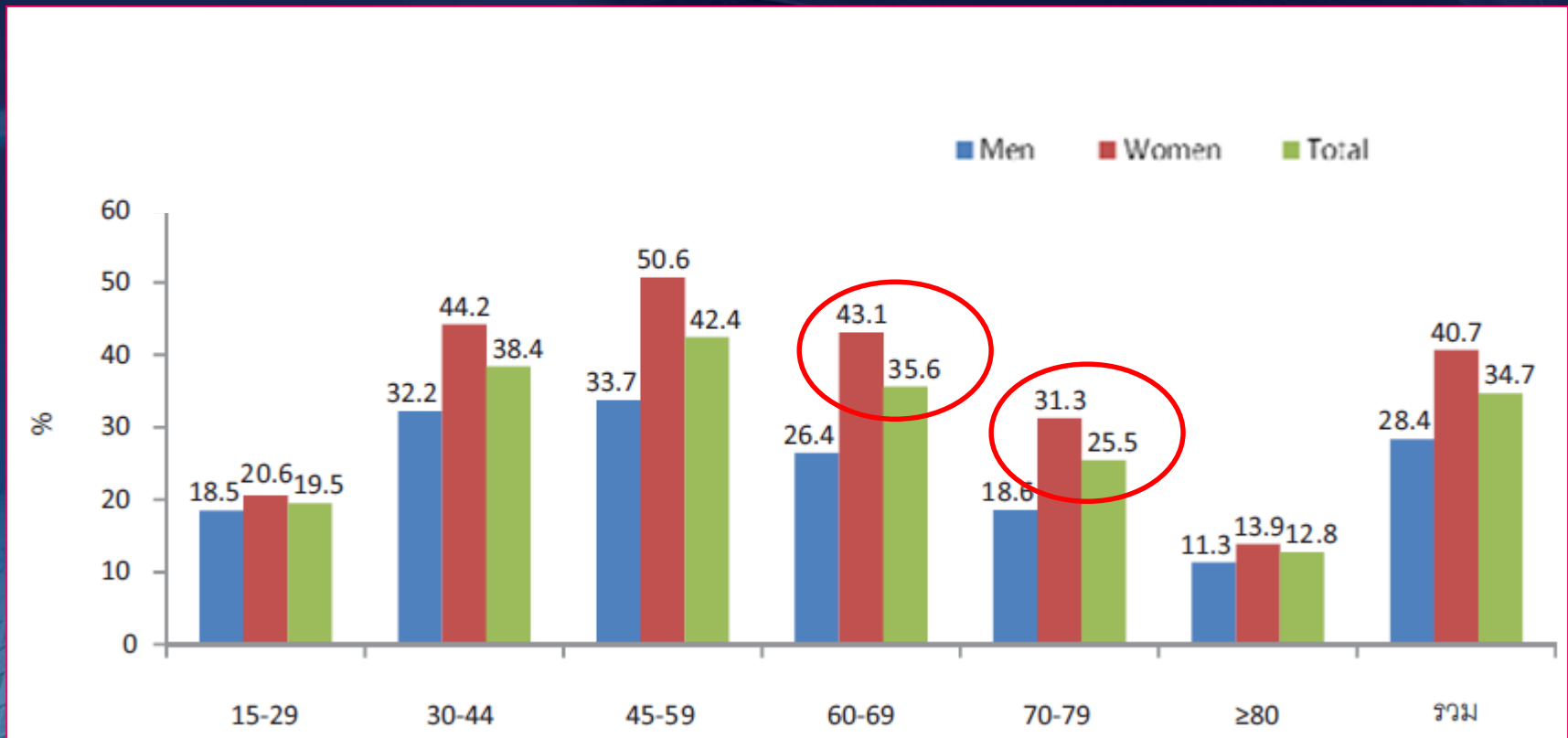
1980

2000

2020



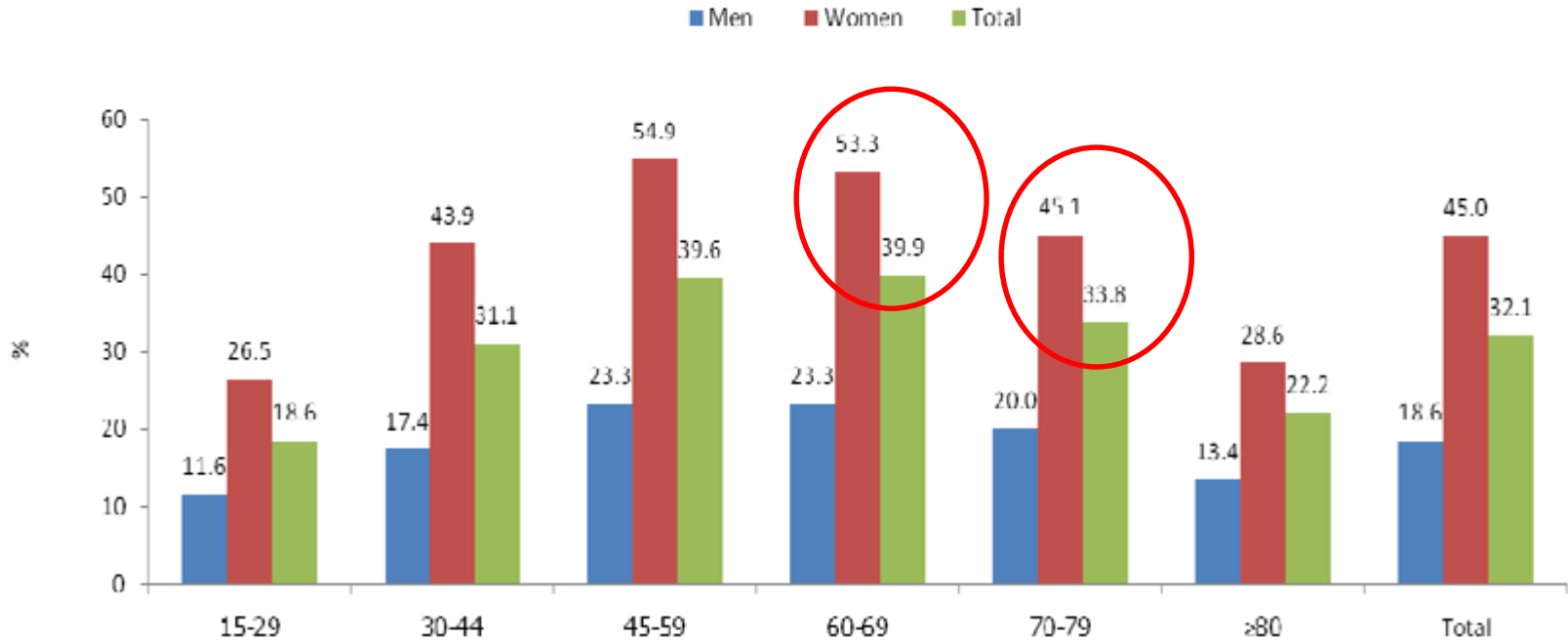
Prevalence of obesity



National Health Examination Survey, 2014



Prevalence of Metabolic syndrome



National Health Examination Survey, 2014



Common health problem





Objective

- To examine the effects of weight control program using community and group support on nutritional status and knee pain in overweight older adults with knee pain



Conceptual framework

Structure

- Characteristics of older adults, family, community
- Community resources
- Health team
- Policy
- Cultural environment

Process

RAMA Model (12 weeks)

- **R**aising community awareness
- **A**iming at targeted health outcome
- **M**obilizing change and innovation
- **A**ssuring synergy and sustainability

Outcome

- **Nutritional status**
 - **Body Mass Index**
 - **Waist circumference**
- **Knee pain**



Design

- Quasi-experimental research with 2-group pre-post design



Sample

- Overweight older adults with knee pain living in 2 communities in Bangkok who met the inclusion criteria:
 - BMI ≥ 23 kg/m²
 - Waist circumference ≥ 80 cms in female and ≥ 90 cms in male
 - Score for knee pain > 4
- They were assigned into control group (n = 30) and experimental group (n = 30)



The program consisted of 14 activities addressing food exchange and behavioral modification for food consumption, arm swing exercise, knee exercise, modification of postures in daily living and arrangement of the surrounding environment in the community as well as monitor of body mass index and waist circumference. The control group received only leaflets and booklets.



Instrument & Measurement

- Pain scale
- Nutritional assessment
- The 12-week weight control program
 - Raising community awareness
 - Aiming at target health outcome
 - Mobilizing change
 - Assuring synergy through group activities





Instrument & Measurement

The program consisted of 14 activities addressing

- food exchange and behavioral modification for food consumption
- arm swing exercise
- knee exercise, modification of postures in daily living
- arrangement of the environment in the community.



Data analysis

- Descriptive statistics
- Inferential statistics:
 - Chi-square test
 - Paired t-test
 - Independent t-test
 - Wilcoxon Signed Ranks test



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Results





Sample characteristics

Variable	Control group	Experimental group
Gender	Female (93.3%)	Female (90.0%)
Age	60-70 years (60.0%) mean 69.3, SD 5.5	60-70 years (6.7%) Mean 71.9, SD = 5.8
Occupation	No (86.7%)	No (96.7%)
Monthly income	< 143 USD (50.0%)	< 143 USD (46.7%)
Health problem	Yes (86.7%)	Yes (86.7%)



Nutritional status at baseline

Variable	Control group	Experimental group
BMI (kg/m ²)	min-max: 23.1-36.3 mean 27.2, SD 3.5	min-max: 23.2-36.6 mean 27.9, SD 3.5
WC (cms)	min-max: 82.5-115.0 mean 94.6, SD 9.5	min-max: 82.0-114.5 mean 95.3, SD = 8.8



Knee pain at baseline

Variable	Control group	Experimental group
Pain score	mean 5.4, SD 1.6	mean 6.8, SD 1.9



Comparison of nutritional status and knee pain between control and experimental groups

Variable	Independent t-test				
	Mean difference	t	p		
BMI					
Control	.01	2.124	.038		
Exp	-.69				
WC					
Control	.44	7.209	<.001		
Exp	-1.74				
Pain score					
Control	.13	7.447	<.001		
Exp	-2.4				



Conclusion

- The weight control program was effective.
- The results suggested approaches to behavioral modification on food consumption behaviors and group support for arm swing exercise and knee exercise as appropriate for the overweight older adults with knee pain.



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Thank you

