



# The effectiveness of using logic model for weight management among obese older adults in a community in northern Taiwan

YaFang Chen M.S.<sup>1</sup>, SungYun Chen M.S.<sup>2,3</sup>, MeiLing Lin M.S.<sup>4</sup>, ShuNuen Chen M.S.<sup>4</sup>, TsuiYao Liu M.S.<sup>5</sup>

<sup>1</sup> Head Nurse, Community health nursing, Taipei City Hospital YangMing Branch, Taipei, Taiwan  
<sup>2</sup> Doctoral student in Department of Nursing, National Taipei University of Nursing and Health Sciences, Taiwan  
<sup>3</sup> RN, Nursing Department, Taipei City Hospital YangMing Branch, Taipei, Taiwan  
<sup>4</sup> Nursing Supervisor, Department of Nursing, Taipei City Hospital YangMing Branch, Taipei, Taiwan  
<sup>5</sup> Director of Nursing, Nursing Department, Taipei City Hospital YangMing Branch, Taipei, Taiwan



## Introduction

According to an analysis by Taiwan's Ministry of Health and Welfare, the overweight and **obesity rate among people over 65 years old is 58.3% in 2024**. Obesity is associated with increased risk for mortality and a range of diseases including hypertension, coronary heart disease and type 2 diabetes.

## Purpose

Our hospital is a healthy community and age-friendly environment in northern Taiwan and our staff includes weight management nurses. **This study arm to conduct an effectiveness analysis on weight management among obese older adults in the community by using a logic model.**

## Methods

The following strategies are used to intervene in the obese older adults over 60 years old with a BMI greater than 27kg/m<sup>2</sup> who come to the study hospital.

### Logic model process:

- ◆ **Input**, our hospital combines village office to conduct analysis of manpower, materials and resources.
- ◆ **Activities**, by conducting **power walking classes**, invite successful people to share their success experiences, families encouraging each other to lose weight, rewards will be given for participating in the complete course, fill out a **diet diary** and have a 30-minute weekly consultation with the participate from a hospital nutritionist.
- ◆ **As a result**, changing elders' perceptions of obesity and improving health behaviors.
- ◆ **Long-term results**, **BMI and waist circumference** were measured every 2 months for a total of **6 months**. And explore the relevant influencing factors of this study.

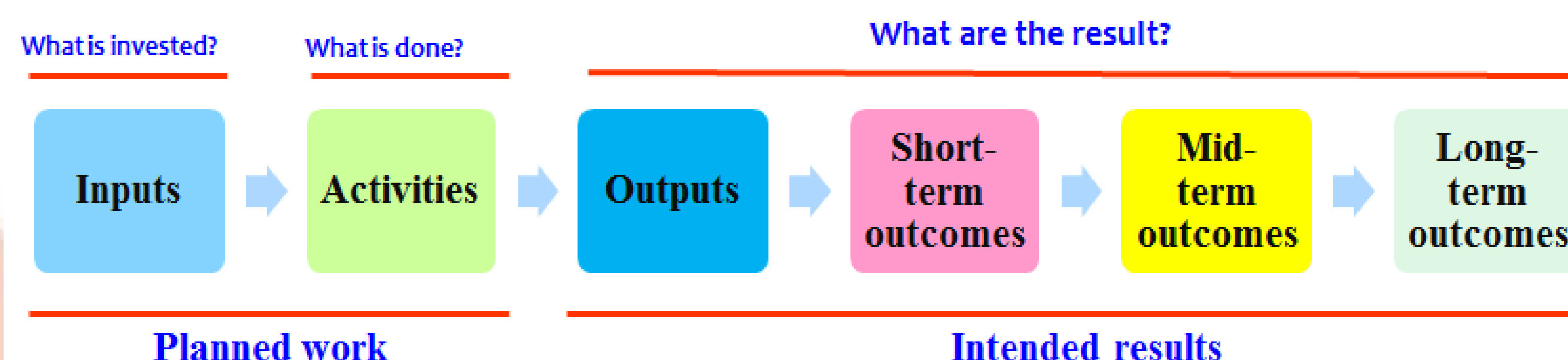
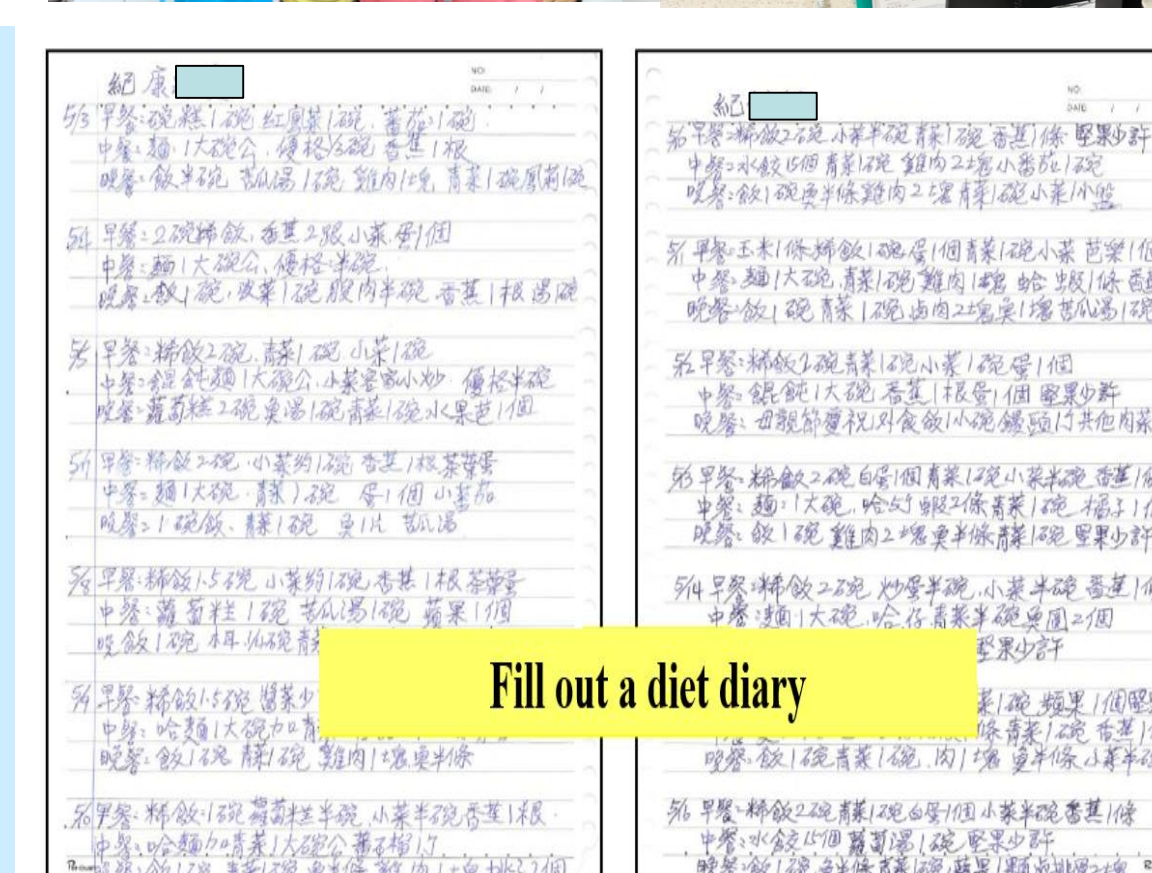
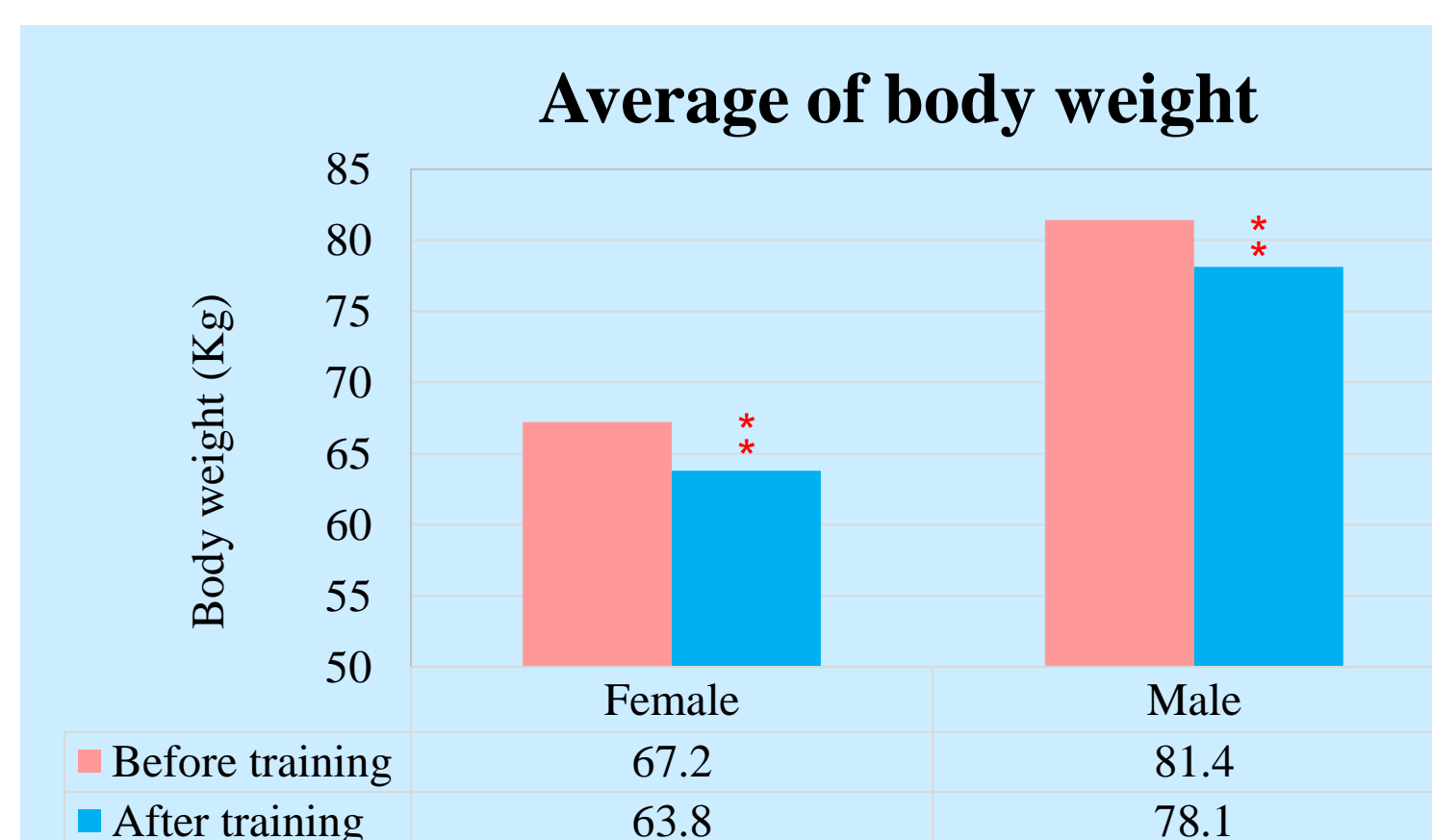
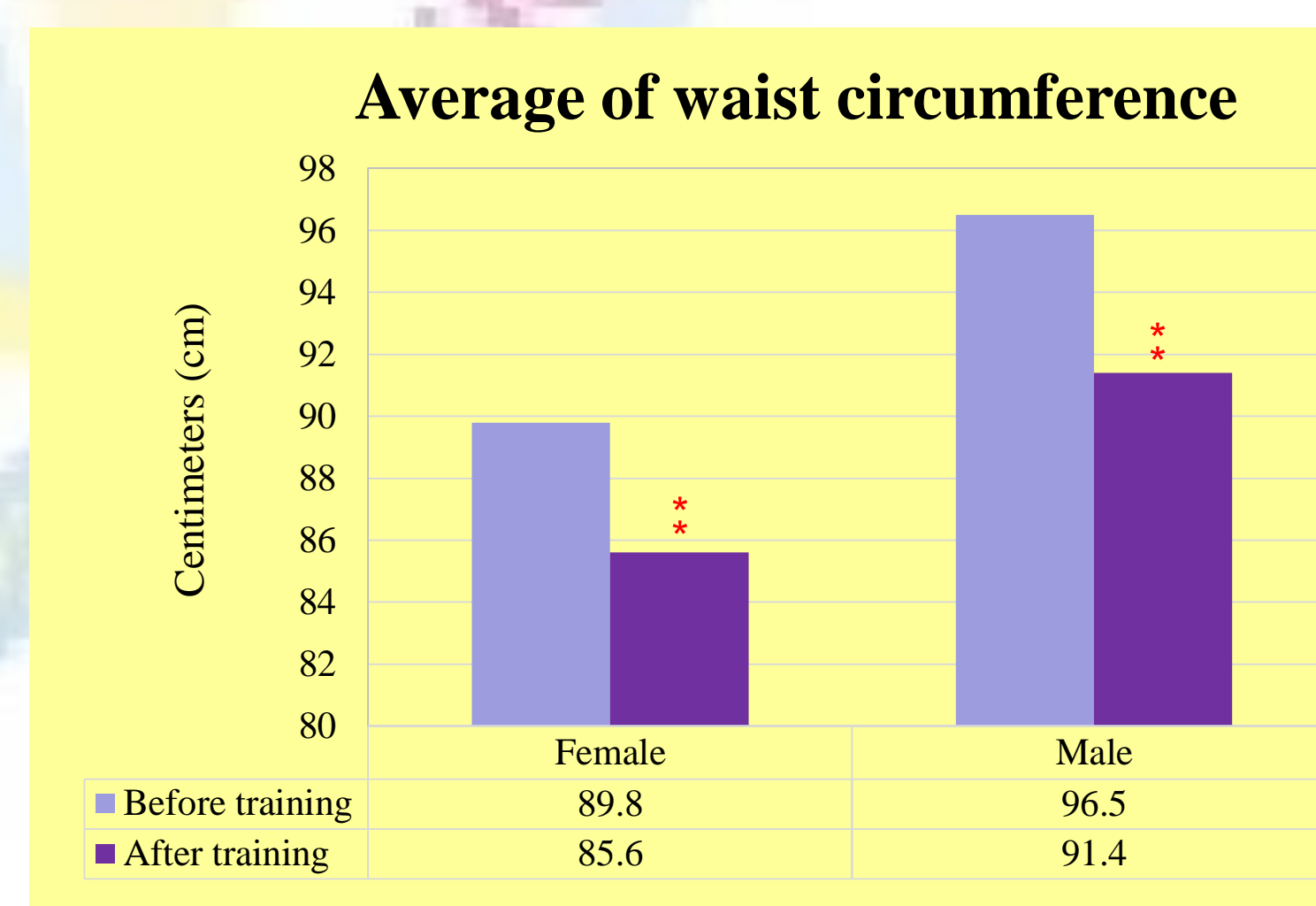


Figure 1 Logic model process and included elements



## Results

- ◆ The study period is from August 2023 to April 2024. A total of 30 older adults (20 female, 10 male) were included, with the average age of the cases being 65.8±3.9 years old. Average class attendance rate is 85.7%.
- ◆ According to the research results, it was found that the elderly's understanding of the importance of exercise to physical health increased from 60% to 100%, their understanding of the importance of diet to weight control increased from 50% to 90%.
- ◆ Their weekly exercise time reached 150 minutes. Exercise at least 3 times a week, the success rate is 100%, and the overall course satisfaction is 95%.
- ◆ After the intervention, the **waist circumference was reduced by an average of 4.5 cm (p=0.02)**, the **weight was reduced by an average of 3.3 kg (p<0.01)**.
- ◆ The **BMI was significantly improved** before and after the intervention (p<0.05).
- ◆ According to the studies it was found that the **support and companionship of family members** was the most successful main factors.



## Conclusion

The study results show that the use of **logical models can achieve significant results in weight control for obese elderly community residents**. By fully integrating hospital and community resources, the elderly can develop correct healthy eating and regular exercise habits to prevent chronic diseases caused by obesity. In daily life, **"walking" is the beginning of exercise**. It does not cost money or special equipment. It can be done anytime and anywhere. It is the easiest to integrate into daily life and it is easier to achieve the sustainable development of community activities.

## Relevance to HPH

This study allows the older adults in the community to achieve weight control, and also trains many weight management volunteers to participate in the training program, more obese older adults in the community can receive services and achieve sustainable development, which is in line with the theme of this conference "Interventions for health promotion in the local community and for the population served".



**Keywords:** Weight management  
 Body mass index (BMI), Obese older adults  
 Logic model, Power walking, Diet diary



### Contact Details

**YaFang Chen**

TEL : 886-2-2835-3456 ext: 6306

E-mail : B1655@tpech.gov.tw

Community health nursing, Taipei City Hospital YangMing Branch

