



Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

journal homepage: [www.elsevier.com/locate/coll](http://www.elsevier.com/locate/coll)



# Gender differences in the relationship of lifestyle and depressive symptoms among Taiwanese older people



Shu-Hung Chang, PhD, RN<sup>a,\*</sup>, Miao-Chuan Chen, MSN, RN<sup>a,1</sup>,  
Nai-Hui Chien, MSN, RN<sup>a,2</sup>, Tzu-Yung Lin, PhD<sup>a,3</sup>,  
Yi-Ya Chang, MSc, RN<sup>a,b,4</sup>

<sup>a</sup> Department of Nursing, Chang Gung University of Science and Technology, Guishan Dist., Taoyuan City 33303, Taiwan

<sup>b</sup> Graduate Institute of Nursing, National Taiwan University, Taiwan

Received 7 October 2014; received in revised form 24 March 2015; accepted 18 April 2015

## KEYWORDS

Gender differences;  
Depressive symptoms;  
Lifestyle;  
Taiwan;  
Older people

## Summary

**Background:** Aging is a major risk for health issues, and it may relate to chronic illness, physical function degradation, and mental dysfunction. One of the critical health concerns is depressive disorders. However, very few studies examining depression among older people have focused on the combinations of different lifestyle factors.

**Objectives:** To examine the association between lifestyles and depressive symptoms in gender differences among older people in Taiwan.

**Methods:** A cross-sectional study and interviews were conducted to collect information. The participants were selected by using a probability proportional to size procedure. The participants ( $n=1020$ ) were community-dwelling adults who were aged 65 and older living in northern Taiwan. The list of items such as demographic characteristics, lifestyles, and depressive symptoms originated from the Center for Epidemiologic Studies Depression scale (CES-D) were applied for the interview in this study. This study used chi-square,  $t$ -test, and logistic regression to analysis the data.

**Results:** Men who exercised regularly and consumed enough vegetables had low depressive symptoms scores; women who exercised regularly had low depressive symptoms scores.

\* Corresponding author at: Department of Nursing, Chang Gung University of Science and Technology, 261 Wen-Hwa 1st Road, Kwei-Shan, Taoyuan 333, Taiwan. Tel.: +886 3 2118999x3239/2 28806360/939701790; fax: +886 3 2118866.

E-mail addresses: [shchang@gw.cgust.edu.tw](mailto:shchang@gw.cgust.edu.tw), [shchang5802@gmail.com](mailto:shchang5802@gmail.com) (S.-H. Chang), [mcchen@gw.cgust.edu.tw](mailto:mcchen@gw.cgust.edu.tw) (M.-C. Chen), [sychie@gw.cgust.edu.tw](mailto:sychie@gw.cgust.edu.tw) (N.-H. Chien), [tzylin@gw.cgust.edu.tw](mailto:tzylin@gw.cgust.edu.tw) (T.-Y. Lin), [yychang@gw.cgust.edu.tw](mailto:yychang@gw.cgust.edu.tw) (Y.-Y. Chang).

<sup>1</sup> Tel.: +886 3 2118999x3238.

<sup>2</sup> Tel.: +886 3 2118999x3232.

<sup>3</sup> Tel.: +886 3 2118999x5728.

<sup>4</sup> Tel.: +886 3 2118999x3222.

<http://dx.doi.org/10.1016/j.colegn.2015.04.005>

1322-7696/© 2015 Australian College of Nursing Ltd. Published by Elsevier Ltd.

*Conclusion:* Regular exercise and eating enough vegetables are important factors associated with depressive symptoms for men; regular exercise is an important factor associated with depressive symptoms for women. The study suggests that senior citizens need to be encouraged to exercise regularly and get enough vegetable consumption to promote good mental health.

© 2015 Australian College of Nursing Ltd. Published by Elsevier Ltd.

## 1. Introduction

It was estimated that people 65 years of age or older will constitute 22.5% of the total population in Taiwan by 2028 (Health Promotion Administration, 2011), and Taiwan will become one of aging societies in the world. Aging is a major risk for health issues, and it may relate to chronic illness, physical function degradation, and mental dysfunction. One of the critical health concerns is depressive disorders. The estimation of disability adjusted life years (DALY) for depressive disorders increased 37.5% between 1990 and 2010. In the year 2010, depressive disorder accounted for 3.0% of 2.5 billion DALY, population growth and aging were accounted for the increase of DALY (Ferrari et al., 2013).

According to some previous studies on community-dwelling elders, the prevalence rates of depression were 11–44% in the United States of America (Blazer, Burchett, Service, & George, 1991; Blazer et al., 1988; Harwood, Barker, Ownby, Mullan, & Duara, 1999; Pettit et al., 2008), 12.9% in Japan (Aihara, Minai, Aoyama, & Shimanouchi, 2011), and 21–40% in Taiwan (Lin, Chen, & Lin, 2010; Lin, Yang, & Yang, 2010; Lyu & Lin, 2000).

Lifestyle is an umbrella term which encompasses various elements such as exercise, diet, and smoking; several factors are found to associate with depressive symptoms in older people. Nevertheless, most researchers analyzed only the correlations between demographic characteristics and depressive symptoms. For instance, older people with low level of education, widows, widowers, and female were more likely to experience depression (Greer & Trivedi, 2009; Lin, Yang, et al., 2010b; Pettit et al., 2008). Some other research results showed depression in terms of its relationship to physical function, chronic disease, and pressure (Forlani et al., 2013; Katsumata et al., 2005). Yet, recent studies that have reviewed the correlation between lifestyle factors and depression are receiving more attentions than before (Gariballa & Forster, 2007; Greer & Trivedi, 2009; Hodge, Osvaldo, Dallas, Graham, & Flicker, 2013; Lin, Yang, et al., 2010; Pettit et al., 2008). Many studies indicated that exercise can help to reduce depressive symptoms (Greer & Trivedi, 2009; Lin, Chen, et al., 2010; Lin, Yang, et al., 2010; Pettit et al., 2008). Moreover, the higher rate of fish and fruit consumption was associated with a lower rate of depressive symptoms (Barberger-Gateau et al., 2005; Hodge et al., 2013). However, most research topics still primarily targeted on the connection between physical activity and depression or the connection between diet and depression. Very few studies examining depression have focused on the combinations of different lifestyle factors. To identify and develop effective interventions, it would be significant to evaluate the relationships between depression and the combinations of different lifestyle behaviors.

Several studies applied gender as an independent variable into the research design to examine if any critical difference could be discovered (Greer & Trivedi, 2009; Lin, Chen, et al., 2010; Lin, Yang, et al., 2010; Pettit et al., 2008). Some studies focused on the differences of prevalence of depressive symptoms and various signs of depressive symptoms among older males and females (Escobar Bravo, Botigué Satorra, Jürschik Giménez, Nuin Orrio, & Blanco Blanco, 2013; Forlani et al., 2013). Others studies discussed the differences of demographic characteristics (e.g. education level, marital status) and health status related of depressive symptoms among older men and women (Forlani et al., 2013; Jang, Kim, & Chiriboga, 2011). But mechanisms underlying the gender differences remain unclear. Until today, very few studies have analyzed the cause and effect relationship between different lifestyle factors and depressive symptoms by gender. Therefore, this study aims to investigate the association between the combination of lifestyles and depressive symptoms in gender differences among older people in Taiwan.

## 2. Subjects and methods

### 2.1. Design and sample

A cross-sectional survey was conducted to collect data on lifestyle variables including regular exercise (maintaining 20 min, heart rate above 130 beats/min and sweating at 3 times a week for one half hour), dietary habits, smoking, and other relevant factors influencing the depressive symptoms in older individuals. Trained interviewers conducted face-to-face interviews and collected the data during August and October 2011. This study was approved by the Medical Foundation Institutional Review Board. Individual written consents of participants were obtained before the interviews.

We used probability proportional to size sampling procedure to choose community-dwelling adults who were 65 years and older in northern Taiwan. The Primary Sampling Units were townships and the Secondary Sampling Units were villages (Taiwan National Health Research Institutes, 2001). The Basic Sampling Units were community-dwelling elders. The head officers from each village helped to recruit villagers to join this research survey. Older people who were over 65 years old living in northern Taiwan community-dwelling were included, and those who could not communicate orally were excluded. In 2011, older male to female ratio was 1.04:1 (Taoyuan County Government, 2014). At first, 539 male participants and 561 female potential participants were selected from 1100 participants. As a result, among 1020 participants, 454 men and 566 women

# دانلود مقاله



<http://daneshyari.com/article/2646491>



- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات