



## International Journal of Gerontology

journal homepage: <http://www.sgecm.org.tw/ijge/>



### Editorial Comment

## Comment on “Influence of Self-Efficacy and Perceived Barriers on Physical Activity among Patients with Chronic Kidney Disease”

Chronic renal failure is a severe clinical disease which has some significant socioeconomic and medical impact worldwide.<sup>1</sup> Regular physical activity is associated with a range of health benefits in people with chronic kidney disease. Previous studies have demonstrated that physical activity can increase physical fitness and muscle strength, reduce of chronic inflammation, improve health-related quality, and prevent cardiovascular complications and disease progression.<sup>2</sup> Despite these demonstrable benefits, physical activity levels in patients with chronic kidney disease (CKD) are low. Increasing physical activity is therefore an essential aspect of disease prevention and management in CKD patients.<sup>3</sup>

Self-efficacy is a central component of the social cognitive theory, which refers to a person's belief regarding the individuals' capabilities to successfully carry out a course of action and to execute behaviors necessary to achieve desired outcomes.<sup>4</sup>

In this present issue of International Journal of Gerontology, Yu et al.<sup>5</sup> reported that self-efficacy and perceived barriers were individually and jointly correlated to physical activity in patients with CKD. Patients with higher self-efficacy and lower perceived barriers were more likely to achieve sufficient physical activity in patient with CKD. However, the directionality of the interaction between physical activity interventions and self-efficacy has not been clearly established. It is hypothesized that self-efficacy is reciprocally related to physical activity behavior. That is, patients with a higher sense of exercise self-efficacy are more likely to engage in physical activity,<sup>6</sup> and in turn, successful exercise and physical activity experiences are

effective in building a more potent sense of physical activity related self-efficacy.<sup>7</sup> Future large long-term follow-up studies are warranted to investigate the complex association between self-efficacy and physical activity level in patients with CKD.

### References

1. Meguid El Nahas A, Bello AK. Chronic kidney disease: the global challenge. *Lancet*. 2005;365:331–340.
2. Heiwe S, Jacobson SH. Exercise training for adults with chronic kidney disease. *Cochrane Database Syst Rev*. 2011:CD003236.
3. Kirkman DL, Lennon-Edwards S, Edwards DG. Patient Education. The importance of exercise for chronic kidney disease patients. *J Ren Nutr*. 2014;24:e51–e53.
4. Bandura A. Self-efficacy: toward a unifying theory of behavioral change. *Psychol Rev*. 1977;84:191–215.
5. Yu HK, Chen SC, Chen YC. Influence of self-efficacy and perceived barriers on physical activity among patients with chronic kidney disease. *Int J Gerontol*. 2020;14:315–319.
6. Linde JA, Rothman AJ, Baldwin AS, et al. The impact of self-efficacy on behavior change and weight change among overweight participants in a weight loss trial. *Health Psychol*. 2006;25:282–291.
7. Oh C, Kang H. Effects of Tai Chi exercise on the body composition, self-efficacy and life satisfaction of older adults in Korean local community. *Int J Gerontol*. 2019;13:134–138.

Gwo-Chi Hu, MD, PhD

Department of Rehabilitation Medicine, Mackay Memorial Hospital,  
Taipei, Taiwan