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## PHYSICAL MEDICINE AND REHABILITATION

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**A simple method of the 7<sup>th</sup> cervical vertebra wall distance could indicate a risk of functional decline in elderly****Patcharawan Suwannarat<sup>1, 2</sup>, Sugalya Amatachaya<sup>1</sup>, Pipatana Amatachaya<sup>1, 2</sup>, Thiwabhorn Thaweewannakij<sup>1</sup>, Thanat Sooknuan<sup>1, 3</sup>, Nuttaset Manimmanakorn<sup>1</sup>, Lugkana Mato<sup>1</sup> and Sininat Wilaichit<sup>4</sup>**<sup>1</sup>Khon Kaen University, Thailand<sup>2</sup>Research and Researcher for Industries (RRI), Thailand<sup>3</sup>Rajamangala University of Technology, Thailand<sup>4</sup>Damnoen Saduak Hospital, Thailand

Advancing age attributes obvious effects of functional decline that can reduce levels of independence of elderly. The body systems decline due to age advancement also increases a risk of thoracic kyphosis that further affects levels of independence in elderly. Therefore, a simple and practical tool to indicate a risk of thoracic kyphosis may be able to detect a risk of functional decline of these individuals. This study evaluated an appropriate cut-off point of the 7<sup>th</sup> cervical vertebra wall distance (C7WD), a simple and practical kyphosis measure, to determine the risk of thoracic kyphosis and functional decline in 104 community-dwelling elderly, age at least 60 years who had different severity of kyphosis. The participants were assessed for their C7WD using two rulers and functional ability using timed up and go test, five times sit-to-stand test, 10 meter walk test and 6 minute walk test. Within seven days, all participants were at a hospital to complete a lateral plain radiograph (Cobb's method) which was used as a standard method to indicate thoracic kyphosis (Cobb angle >40 degrees). The findings indicated that the C7WD of at least 7.5 cm and 7.8 cm. had the best diagnostic properties to determine the risk of thoracic kyphosis and functional decline, respectively. The finding confirms the clinical utility of C7WD for clinical screening and monitoring thoracic kyphosis and functional decline in elderly.

**Biography**

Patcharawan Suwannarat is currently pursuing her PhD in the Human Movement Sciences program, Faculty of Associated Medical Sciences, Khon Kaen University, Khon Kaen, Thailand. As a Physiotherapist, she is interested in elderly patients with neurological conditions.

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