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# Feasibility and Effects of a Tai Chi Self-Help Education Program for Korean Gastric Cancer Survivors

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Exercise has been recommended as an intervention to enhance physical functioning (Segal et al., 2001) and health-related quality of life (HRQOL) in cancer survivors (Courneya, 2003; Mustian et al., 2004; Mustian, Katula, & Zhao, 2006). Tai chi is a form of Chinese martial art that is considered to be a light to moderate form of exercise. Tai chi is a widely practiced movement exercise combining characteristics of meditative practice and aerobic exercise (Mansky et al., 2006). Tai chi exercise has been shown to have multiple positive effects on physical fitness (Audette et al., 2006; Brismee et al., 2007; Burke, Al-Adawi, Lee, & Audette, 2007; Li et al., 2005; Song, Lee, & Lee, 2002), HRQOL (Barrow, Bedford, Ives, O'Toole, & Channer, 2007; Mustian et al., 2004), and improved mood state (Chou et al., 2004; Jin, 1989, 1992). Tai chi also has been shown to improve depression in patients with heart failure (Barrow et al.) and older patients with depressive disorders (Chou et al.). Very little data exist on the potential for tai chi as a therapeutic intervention for patients with cancer or cancer survivors.

A limited number of studies suggest that tai chi influences immune function (e.g., natural killer [NK] cell activity), which may provide an additional benefit for patients with cancer as well as survivors. For example, Yeh, Chuang, Lin, Hsiao, and Eng (2006) demonstrated that tai chi had positive effects on regulatory T cells by increasing the ratio of T helper to suppressor cells in healthy middle-aged adults. Similar results were found in healthy older adults (Irwin, Olmstead, & Oxman, 2007). Tai chi may have potentially positive effects on overall health outcomes as well as immune function in cancer survivors, including patients with cancers of the gastrointestinal tract.

In the Republic of Korea, gastric cancer is the most common form of cancer. Gastric cancer is the leading cause of cancer death in Korean women and third most

**Purpose/Objectives:** To determine the feasibility of conducting a tai chi self-help education program in Korean adults with gastric cancer and to describe the effects of a six-month tai chi self-help education program on depression, health-related quality of life (HRQOL), and immune markers.

**Design:** One-group, pre- and post-test design.

**Setting:** Outpatient clinics of two large hospitals in the Republic of Korea.

**Sample:** Convenience sample of 33 Korean adults with gastric cancer diagnoses after gastrectomy.

**Methods:** The Korean gastric cancer survivors participated in a 24-week tai chi self-help education program. The participants completed the Center for Epidemiologic Studies–Depression (Korean version) and the Functional Assessment of Cancer Therapy–General (Korean version) for HRQOL and provided blood samples for immune markers. All measurements were conducted at baseline and at one week following the 24-week intervention.

**Main Research Variables:** Feasibility was determined as the percentage of participants completing the 24-week protocol. Preliminary data on depression, HRQOL, and immune markers were obtained.

**Findings:** The dropout rate was 36.4%; 21 of 33 survivors participated in the tai chi self-help education program for 24 weeks. No complications or injuries occurred to the participants during the program. No significant differences were noted in depression, HRQOL, and immune markers before and after the intervention.

**Conclusions:** Tai chi exercise, in combination with a self-help program, can be safe and feasible for Korean gastric cancer survivors. This feasibility study did not show that the tai chi self-help education program improves depression, HRQOL, and immune markers in Korean gastric cancer survivors.

**Implications for Nursing:** Additional studies are needed to determine the long-term impact relative to usual care.

common cause of death in Korean men (Korea National Statistical Office, 2007). If gastric cancer is detected in an early stage, the overall five-year survival rate in