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# Preoperative Uncertainty and Anxiety Among Chinese Patients With Gynecologic Cancer

Zarina Ismail, MN, BN, RN, Winnie Kwok-wei So, PhD, MHA, BN, RN, and Polly Wai-chi Li, BN, RN

**A**nxiety is considered to be a common emotional response in most surgical patients (Welsh, 2000). Several studies have shown that women undergoing surgery experience a higher level of anxiety than men (Caumo et al., 2001; Karanci & Dirik, 2003). The evidence also has shown that patients receiving invasive treatment have higher levels of anxiety and more emotional reaction than those receiving noninvasive treatment (Hughes, 2002). Among women receiving surgery for gynecologic cancer, anxiety may be increased by the uncertainty of the diagnosis (Sukegawa et al., 2008) and lack of information about the treatment and its side effects (Carr, Brockbank, Allen, & Strike, 2006).

Uncertainty has been shown to affect levels of anxiety among hospitalized patients (Mishel, 1997) and to constitute a major source of stress (Mishel, 1984). However, research into the impact of uncertainty and other factors on anxiety in the Chinese cancer population has been limited. The aim of this study was to examine levels of anxiety and uncertainty among Hong Kong Chinese women prior to surgery for gynecologic cancer and to identify factors that might affect their levels of anxiety. The following research questions were investigated.

- What are the levels of anxiety and uncertainty in Hong Kong Chinese women with gynecologic cancer in need of surgery?
- What are the demographic and clinical factors that may affect the levels of anxiety in these women?
- Does an association exist between levels of uncertainty and levels of anxiety experienced by these women?

## Literature Review

Gynecologic cancer refers to any cancer that starts in a woman's reproductive organs. Five main types exist: cervical, ovarian, uterine, vaginal, and vulva (Centers for Disease Control and Prevention, 2008). According to statistics of the Hong Kong Cancer Registry (n.d.), three of the five types were ranked among the 10 most common cancers in Hong Kong: corpus uteri cancer (incident

**Purpose/Objectives:** To determine the levels of preoperative anxiety and uncertainty in Hong Kong Chinese women with gynecologic cancer, the demographic factors that may affect the intensity of anxiety, and the effects of uncertainty on the anxiety levels of these women.

**Design:** Cross-sectional.

**Setting:** The gynecologic oncology unit of a public hospital in Hong Kong.

**Sample:** 170 Chinese women with diagnosed (or suspected) gynecologic cancer who were scheduled for surgery and able to read Chinese.

**Methods:** A self-administered questionnaire consisting of the Chinese version of Mishel's Uncertainty in Illness Scale (MUIS-C), the State-Trait Anxiety Inventory, the Medical Outcomes Study Social Support Survey, and demographic data.

**Main Research Variables:** Gynecologic cancer, anxiety, and uncertainty.

**Findings:** The mean scores of state anxiety and on the MUIS-C were 48.3 (SD = 11.58) and 92.27 (SD = 13.49), respectively. A higher level of anxiety was significantly associated with inadequate social support ( $r = -0.189$ ,  $p = 0.014$ ) and a higher level of uncertainty ( $r = 0.405$ ,  $p < 0.001$ ).

**Conclusions:** Women perceiving a higher level of uncertainty are more likely to report a higher level of anxiety, although adequate social support may reduce this.

**Implications for Nursing:** Nurses should increase their awareness of the adverse effects of uncertainty on their patients' mental health. They can help to relieve anxiety by minimizing uncertainty levels of their patients through offering emotional support and providing information on the disease, treatment plans, and rehabilitation. Adequate social support should be provided to patients before surgery, which might help to reduce their anxiety.

rate = 4.6%), ovarian cancer (incident rate = 3.9%), and cervical cancer (incident rate = 3.6%), giving a summary incident rate of 12.1%. Such figures have drawn the attention of healthcare professionals and society in general toward women's health and the necessity of quality care and support for this particular population.

The primary treatment for most gynecologic cancer is surgery (Dorigo & Baker, 2003). Research has shown