Life Satisfaction of Patients Waiting for Total Knee Replacement

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Abstract. This study was conducted in order to identify the characteristics of total knee replacement patients and analyze their knee life satisfaction. It surveyed the characteristics and life satisfaction of 60 patients diagnosed with osteoarthritis and waiting for TKR at the Joint Center of a university hospital during April and May in 2015. Collected data were statistically analyzed using SPSS 23.0. 90.4% were female, and the largest age group consisted of people in their 60s. BMI was over 25.0 in 58.3% of the patients. The mean score of life satisfaction was 1.94 out of 3, and it was significantly different according to age. Intensive care of the knee is required for people in their 60s, women, and those with high BMI.

Keywords: life satisfaction, total knee replacement

1 Introduction

1.1 The Necessity of Research

The number of total knee replacement (TKR) patients is increasing throughout the world [1] and it is believed that various factors are associated with this increase in addition to the aging of the population and the rise in the number of obese people [2]. In the U.S., 4.0 million adults are living with TKR and they have to pay costs for reoperation or continuous management [3]. Adequate prevention and management not only save costs but also affect individuals’ activity competence and quality of life significantly.

Patients waiting for knee replacement display deteriorated physical functions and have a low quality of life [4]. Even after the surgery, self-care is required throughout their lifetime, and adequate management is necessary on a continuous basis in order to maintain the knee function, activities of daily living (ADL), and life satisfaction [1].

For the individualized nursing of TKR patients, it is necessary to understand their characteristics and life satisfaction. Data on life satisfaction before surgery are
important for the follow-up care of patients. In order to prevent TKR, we need to identify the general characteristics of the populations in which TKR is conducted frequently and to analyze differences in life satisfaction according to the characteristics.

1.2 Purpose of Study

This study purposed to identify TKR patients’ characteristics (gender, age, BMI, residence type, and the number and type of comorbidities), and to analyze their life satisfaction according to these characteristics,

2 Methods

2.1 Research Participants

The purposes of this study were explained to patients who had been diagnosed with osteoarthritis and who were waiting for TKR at the Joint Center of a university hospital, and 60 patients who gave their consent participated in the research.

2.2 Data Collection

Data were collected at the Joint Center of a university hospital in April and May, 2015.

2.3 Research Tools

Life satisfaction. Life satisfaction was measured with LSI-Z (Life Satisfaction Index-Z) developed by Wood, Wylie & Heafer [5] and revised and supplemented by Kang [6]. This scale consists of 13 items asking about subjective feelings. The reliability (Cronbach’s α) of the scale was .79 on its development, and .91 in this study.

2.4 Data Analysis

Collected data were statistically analyzed using SPSS 23.0. Differences in their life satisfaction according to the characteristics were analyzed through independent t-test and ANOVA.
2.5 Ethical Considerations

The participants were given full explanations about the purposes and contents of this study, their right to refuse to participate, how the data would be protected, and compensation for their participation.

3 Results

3.1 Participants’ characteristics

Of the participants, 90.4% were female, and the largest age group consisted of those in their 60s. In addition, 58.3% lived together with a spouse, and 58.3% were classified as obese according to the BMI scale. As to residence type, the frequency was similar between apartment and house. Moreover, 35% of the subjects had two or more comorbidities, and the most common comorbidities were cardiovascular (50%) and endocrine (38.3%) diseases.

3.2 Differences in life satisfaction according to the participants’ characteristics

Life satisfaction was not different according to gender (t=1.61, \( p=0.112 \)), cohabitation (t=3.05, \( p=0.055 \)), BMI (t=0.05, \( p=0.953 \)), residence type (t=−0.35, \( p=0.729 \)), and the number of comorbidities (t=0.99, \( p=0.332 \)), but was statistically significantly different according to age (t=3.61, \( p=0.019 \)). In the results of posterior analysis on age, life satisfaction was statistically significantly higher in those in their 50s than among those in their 70s and 80s.

Table 1. Differences in life satisfaction according to the participants’ characteristics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category</th>
<th>N (%)</th>
<th>Life Satisfaction</th>
<th>t/F(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>5</td>
<td>2.12(0.28)</td>
<td>1.61(0.112)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>55(91.7)</td>
<td>1.93(0.26)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>50(^a)</td>
<td>6(10.0)</td>
<td>2.19(0.19)</td>
<td>3.61(0.019)</td>
</tr>
<tr>
<td></td>
<td>60(^b)</td>
<td>25(41.7)</td>
<td>1.99(0.22)</td>
<td>a&gt;c,d</td>
</tr>
<tr>
<td></td>
<td>70(^c)</td>
<td>23(38.3)</td>
<td>1.86(0.30)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>80(^d)</td>
<td>6(10.0)</td>
<td>1.82(0.18)</td>
<td></td>
</tr>
<tr>
<td>Cohabitatio (n)</td>
<td>Alone</td>
<td>14(23.3)</td>
<td>1.82(0.23)</td>
<td>3.05(0.055)</td>
</tr>
</tbody>
</table>
### Discussion

According to the results of this study, TKR is conducted more frequently in women than in men, and this is probably because women are more vulnerable to osteoarthritis. Because low postmenopausal estradiol concentration is a risk factor in regard to knee osteoarthritis [7], preventive care of the knee joints is required for preventing TKR in postmenopausal women. Of the participants, the largest age group was those in their 60s, and this is probably because these patients experience repeated aggravation and remission of osteoarthritis from a certain period after menopause and then receive TKR. BMI is closely related to knee osteoarthritis [8]. In this study, however, life satisfaction was not different according to BMI groups. This is possibly because BMI of 25 or higher was classified as obesity according to the Korean BMI classification system.
References


