

# A Comprehensive Approach to Health Information Management for the Treatment of Finger Degenerative Arthritis

Seong-Ran Lee  
Dept. of Medical Information, Kongju National University  
e-mail:leesr@kongju.ac.kr

## 손가락 퇴행성 관절염 치료를 위한 보건정보관리의 포괄적인 접근

이성란  
공주대학교 의료정보학과

### Abstract

This study carries out a comprehensive approach to health information management for the treatment of degenerative arthritis of fingers. The subjects of the study were 68 patients who visited the osteopedic surgery of a general hospital in K area from February 3 through April 15, 2023. The comparison before and after the health information system of patients with finger degenerative arthritis was performed by the t-test. Symptoms of finger were measured as 9, 18, 27, and 36 days before and after health information management application. The results of this study are as follows. Firstly, stretching has been increased significantly after application than before the application of the health information management( $t=-5.73$ ,  $p<.05$ ). Secondly, finger pain continued to decrease after 9 days compared to before the application of the health information management. In conclusion, the application of health information system was effective in alleviating the difficulty of finger pain. These findings are expected to contribute to alleviating finger arthritis in the future.

## 1. Introduction

Finger degenerative arthritis occurs when people use their hands a lot. Housewives working in households, using computers a lot, and doing farm work usually occur. Finger arthritis can cause pain and keep your hands out. Pain and deformation can be observed when fingers are pressed. It occurs slowly over time, resulting in a lump called a knuckled nodule. Because of the aging of the joints or trauma, you should have a surgical examination

Finger degenerative arthritis lowers the quality of life by causing pain in the knuckles as you age. It is therefore necessary to adapt the method to this. Therefore, this study carries out a comprehensive approach to health information management for the treatment of degenerative arthritis of fingers

## 2. Materials and Methods

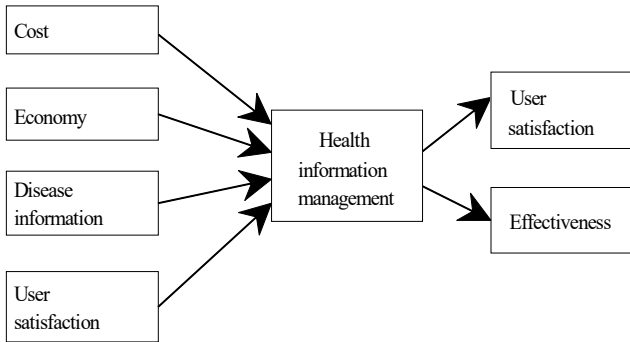
### 2.1 Materials

The subjects of the study were 68 patients who visited the osteopedic surgery of a general hospital in K area from February 3 through April 15, 2023. Figure 1 shows the elements of health information management to treat finger degenerative arthritis. It has excellent characteristics such as information, effectiveness, speed, convenience and user satisfaction.

### 2.2 Methods

The comparison before and after the health information management of patients with finger degenerative arthritis was performed by the t-test. Symptoms of finger were measured as 9, 18, 27, and 36 days before and after health information management application.

The experimental group is classified as the group that applied health information management, and the control group is classified as the group that did not apply health information nt.



[Fig. 1] Elements of Health Information Mangement to Treat Finger Degenerative Arthritides

### 3. Results

#### 3.1 Comparison of finger treatment according to the application of health information management.

Table 1 shows before and after the application of health information management for the treatment of finger degenerative arthritis. Stretching has been increased significantly after application than before the application of the health information management( $t=-5.73, p<.05$ ). Finger deformation has been decreased after application compared to before the health information management was applied.

[Table 1] Comparison of finger treatment according to the application of health information management

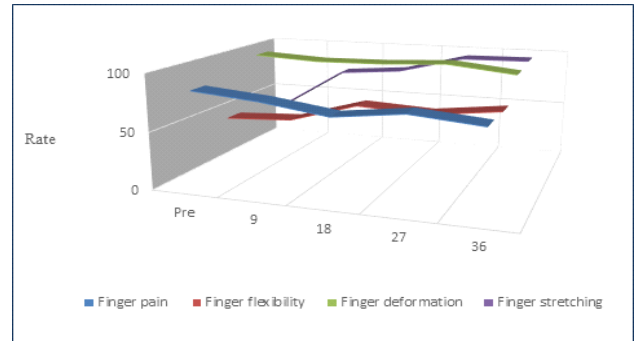
Variables	Before	After	t
Vegetable consumption	37.18±0.46	42.82±0.49	3.27
Fat intake	34.62±4.27	29.53±3.81	1.84
Finger stretching	15.40±0.62	48.26±0.85	-5.73**
Regular exercise	26.65±1.48	42.17±1.73	-3.28**
Correct posture	30.38±3.27	45.28±3.62	-0.54*
Hand overuse	44.71±0.49	42.63±0.75	1.69
Lifting heavy objects	39.63±4.25	34.18±3.84	0.72
Fingers getting thicker	42.49±2.91	40.37±2.65	5.78
Finger deformation	41.85±0.47	39.28±0.52	1.63
Pain in one's fingers	39.29±4.25	36.46±4.58	4.17

\*  $p<.05$  \*\*  $p<.01$

#### 3.2 Changes in finger condition over time

Figure 2 presents the change in finger condition over time. Finger pain continued to decrease after 9 days compared to before the application of the health information management. However,

after 18 days, finger pain has been increased again.



[Fig. 2] Changes in finger condition over time

### 4. Discussion

This study carries out a comprehensive approach to health information management for the treatment of degenerative arthritis of fingers

As a result, finger stretching was significantly increased after application compared to before health information management application. This study showed similar results to the disorder of arthritis in previous study[2],[4]. Patients with fat intake should eat a small amount of fat food at a regular basis.

In this study, the difficulty of finger deformation decreased after application than before health information management was applied. This is a similar result to the arthritis in previous studies[5],[6]. Inflammation of the pharyngeal muscles can cause symptoms of finger. Patients with vegetable consumption is recommended to prevent inflammation of the finger. Through the results of this study, the application of health information management was effective in alleviating the difficulty of finger pain. These findings are expected to contribute to alleviating finger pain and deformation in the future

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