Analysis of Preferences and Needs
for Digital Health Management Services among Breast Cancer Survivors

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Introduction

- Breast cancer ranks as the most commonly diagnosed cancer among women in Korea.
- The 5-year survival rate for breast cancer from 2010 to 2014 is 86.6%.
- Therefore, a long-term management strategy is essential after breast cancer treatment.

Methods

- Questionnaire developers : Pusan National University Yangsan Hospital and Samsung Medical Center
- Questionnaire items : Modified from the comprehensive needs assessment tool in cancer and made based on a literature review and feedback from breast cancer survivors.
- Questionnaire compositions : Two modules with 54 questions measuring preferences and needs
- The first module : Preferences for services such as physical, psychological, social, and medical support that may be necessary during the treatment process for health recovery and quality of life improvement.
- The second module : The need for new health management contents.

Results

- Participants : Twenty-three breast cancer survivors, most be in their 50s, residing in metropolitan areas, with 82.6% currently undergoing treatment.
- The preferences for healthcare services at first module : Dietary habits and self-care methods feasible at home (Table 1).
- The preferences for new healthcare functionalities at second module : Tailored support for managing treatment-related symptoms and practical service assistance (Table 2).

Table 1. Preferences for services that may be necessary during the breast cancer treatment and management process

Ranking	Contents	Score
1	Information on dietary habits	4.17 ± 1.03
2	Information or educational materials on self-management methods feasible at home	4.09 ± 1.00
3	Information on economic support	3.96 ± 1.26
4	Self-examination methods and information on symptoms of secondary cancer	3.78 ± 1.17
5	Self-management methods and related services for physical symptoms/side effects due to treatment	3.78 ± 1.17
6	Information on the current status of my illness and future progression	3.74 ± 0.92
7	Counseling or coaching from medical professionals/experts on health management, lifestyle habits (exercise, sleep, nutrition, et cetera) during the post-discharge treatment process	3.70 ± 1.18
8	Community and related information where experiences and cases of other patients' coping can be shared	3.65 ± 1.34
9	Referral to or information on rehabilitation medical services for regaining physical function during or after treatment	3.61 ± 1.37
10	Information or service linkage regarding economic burden due to cancer (treatment costs, income loss, et cetera)	3.61 ± 1.20

Values are expressed as the mean ± standard deviation.

Table 2. The need for new health management contents

Ranking	Contents	Score
1	Providing goal setting and exercise programs tailored to my physical fitness level	2.39 ± 0.78
2	Providing self-management methods for treatment-related symptoms and side effects, along with hospital visit guidance if necessary	2.35 ± 0.78
3	Customized meal management program based on weight and treatment status (weight gain of over 5% during anti-cancer or anti-hormonal therapy)	2.35 ± 0.65
4	Self-assessment of treatment-related symptoms and side effects, along with providing scores for my physical condition	2.22 ± 1.05
5	Providing methods to assess the presence of swelling in the surgical arm (arm volume measurement, self-examination, et cetera)	2.22 ± 0.95
6	Pain diary feature (selecting types of pain - joint/muscle/nerve pain, recording pain intensity)	2.22 ± 0.80
7	Self-management methods and hospital visit guidance messages based on pain intensity	2.22 ± 0.74
8	Simple methods for assessing fitness levels at home	2.17 ± 0.72
9	Measuring shoulder/arm movements (angles) with a mobile phone camera after surgery	2.13 ± 1.01
10	Self-management methods and hospital visit guidance messages based on post-surgery arm movement status	2.13 ± 0.97
11	Content on preventing and managing arm swelling after surgery or managing systemic swelling	2.09 ± 1.08

Values are expressed as the mean ± standard deviation.

Conclusion

- For healthcare services at first module : Dietary habits and home-based self-care methods revealed a strong preference
- For new healthcare functionalities at second module : Information and education related services were highly preferred, followed by support for managing treatment-related physical symptoms and practical assistance
- These findings emphasize the importance of comprehensive management and active communication and reveal the varied requirements of healthcare services for breast cancer survivors
- Developing digital content programs including smartphone applications is needed to enhance comprehensive health management among breast cancer survivors

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