Health Behaviors of Family members of Patients with Cancer

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Abstract

Objective: This study aimed to determine the health behaviors of family members of patients with cancer.

Methods: This cross-sectional study collected data from 100 respondents (age, 18–75 years) at the RSPAD Gatot Soebroto surgical clinic using a questionnaire survey. The respondents were identified through consecutive sampling technique to collect data regarding the health behaviors of the family members of patients with cancer.

Results: The results of univariate analysis showed increased dietary behavior, decreased moderate physical activity, and good smoking cessation.

Conclusion: The family members of patients with cancer exhibit good dietary behavior and smoking cessation. However, the decrease in physical activities of family members of patients with cancer after the diagnosis of cancer was not significant.

Keywords: cancer; dietary behavior; physical activity; smoking behavior

Introduction

Cancer has varied effects both on the patients and their family members. In addition to exhibiting high mortality, cancer also changes the health behavior of family members of patients with cancer. Several studies have discussed changes in health behaviors occurring in the family members of patients with cancer. This study focused on smoking behavior, physical activity, and dietary behavior of family members before and after knowing that a family member was diagnosed with cancer. This was supported by varied changes in health behaviors reported among Indonesians.

Family members are greatly affected by the cancer diagnosis of another family member, as they have a high risk of getting the same cancer. Individual health can affect the overall functioning of the family¹. This was supported by a study that demonstrated that family members of patients with breast cancer have a considerable risk of acquiring the same cancer². Therefore, the family members of patients with cancer tend to undergo significant changes, especially related to lifestyle. Several studies have addressed changes in families living with patients with cancer and showed a 24% increase in physical activity, significant dietary changes, and positive health behaviors in sisters (40%) during the first 6 months of diagnosing cancer². In addition, there was a significant increase in the intention and confidence in performing dietary and physical activities for 30 min daily and increased awareness regarding cancer health, prevention, and early detection¹. However, other studies showed that many family members, especially women with cancer risk, have an unhealthy lifestyle, especially regarding the consumption of vegetables and fruits³.

In Indonesia, the rate of high-risk health behavior is still high. Such behaviors include smoking (29.3%), sedentary behavior (42.0%), less physical activity (26.1%), and less vegetables and fruit consumption (93.5%). In addition, 53.1% of individuals consumed sweet foods/beverages; 40.7% consumed fatty, cholesterol-rich, and fried foods; and 77.3% consumed flavor enhancers⁴. Such behaviors can increase the risk of cancer.

Methods

This cross-sectional study enrolled 100 respondents (age, 18–75 years) at the RSPAD Gatot Soebroto surgical clinic. They were identified through consecutive sampling technique. A questionnaire survey was conducted to collect information on the health behaviors of the family members of patients with cancer. The questionnaire comprised 19 questions that generally described the current family health status (six questions), stress level
(one question), the influence of family experience with cancer (three questions), intentions (three questions), perceived benefits (three questions), and the confidence to perform (three questions) moderate physical activity, consume healthy diet, and discontinue smoking. For statistical analyses, this study used frequency distribution and median values. This research was conducted in accordance with the ethical guidelines of FKUI UI and FKUI RSCM.

The questionnaire was evaluated for validity and reliability at the Cancer Information Center Information Center with 18 respondents; content validity was confirmed by two experts. Results were analyzed using the SPSS 21.0 (SPSS Inc., Chicago, IL, USA) using \( r = 0.468 \). Results obtained were invalid for questions 9, 12, and 15 as these questions concerned quitting smoking. Meanwhile, only 1 of 18 respondents underwent the evaluation for smoking validity. Therefore, the questions 9, 12, and 15 were repeatedly included in the research questionnaire. In this study, content validity was analyzed using the following values: I-CVI = 1.00 and Scale-CVI = 1.00. Thus, the health-behavior survey questionnaire was deemed valid and applicable. Cronbach’s alpha was used to test reliability; the obtained value was 0.880, indicating that this instrument was reliable.

Results and Discussions

Respondent Characteristics and Stress Levels

The average age of family members was 42.98 (range, 40.13–45.83) years, with more female members (53%) than men (47%). For analyzing stress levels (Table 2), data were not normally distributed; thus, a median value of 6 was used as the cutoff point. The stress level of the family members was categorized into high and low stress levels. The stress score represented stress experienced by family members within the past week.

Based on the stress-level distribution, nuclear family members, especially husbands (73.9%) and children (61%), had the highest stress level (46%). In this study, breast cancer (46%) was the most commonly observed cancer. Moreover, husbands had high levels of stress upon learning the diagnosis and living with respective wives with breast cancer, particularly during the preoperative period and within 3–12 months after surgery.

Sex analysis revealed that women had higher stress levels (53.5%) (see Table 1). Sex influences stress levels, particularly among women. Other studies demonstrated that women can easily become anxious, guilty, sleep deprived, and experience eating disorders compared with men. Supported by the analysis of sex and stress levels, this study found that almost half of the women (45%) experience higher stress levels than men (29.8%).

| Table 1. Respondents Characteristic Data (N = 100) |
|----------|--------|--------|
| Relationship | n | % |
| Main family | 90 | 90 |
| Extended family | 10 | 10 |

The analysis for the type of cancer and stress levels associated with it revealed that breast cancer had the highest frequency and was associated with the lowest stress levels (67.4%) among all cancer types. This can be observed in patients with stage III cancer because of various prognosis and treatments. In this study, other types of cancer identified were stage II bladder, stage III stomach, and stage IV bone cancers (one patient each). These types of cancer were also associated with high stress levels.

The prognosis of bladder cancer is determined based on its stage; patients with regional malignancies have a better prognosis than those with malignancies spreading to other organs. This explains the fairly poor prognosis of bladder cancer, which results in considerably exhausts patients and their families physically and emotionally. The prognosis of stomach and bone cancers is based on the degree of metastasis and location of cancer. Stage IV bone cancer metastasizes to the lungs or other organs and therefore has poor prognosis.
Table 2. Intention, Perceived Benefit, Confidence, and Extent of Cancer Experience (N = 100)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention for</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate physical activity</td>
<td>5.17</td>
<td>1.557</td>
<td>5</td>
<td>1–7</td>
</tr>
<tr>
<td>Healthy diet</td>
<td>6.08</td>
<td>1.116</td>
<td>7</td>
<td>1–7</td>
</tr>
<tr>
<td>Smoking cessation</td>
<td>4.32</td>
<td>1.937</td>
<td>4.5</td>
<td>1–7</td>
</tr>
<tr>
<td>Perceived benefit of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate physical activity</td>
<td>6.11</td>
<td>1.333</td>
<td>7</td>
<td>1–7</td>
</tr>
<tr>
<td>Smoking cessation</td>
<td>6.51</td>
<td>0.893</td>
<td>7</td>
<td>1–7</td>
</tr>
<tr>
<td>Healthy diet</td>
<td>5.45</td>
<td>1.945</td>
<td>6.5</td>
<td>1–7</td>
</tr>
<tr>
<td>Confidence in performing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate physical activity</td>
<td>5.54</td>
<td>1.388</td>
<td>6</td>
<td>1–7</td>
</tr>
<tr>
<td>Healthy diet</td>
<td>6.13</td>
<td>1.098</td>
<td>7</td>
<td>1–7</td>
</tr>
<tr>
<td>Smoking cessation</td>
<td>3.86</td>
<td>2.007</td>
<td>3.5</td>
<td>1–7</td>
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<td>Extent of cancer experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Led to consideration of screening test</td>
<td>4.79</td>
<td>2.081</td>
<td>5</td>
<td>1–7</td>
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<tr>
<td>Raised awareness of cancer risk</td>
<td>5.66</td>
<td>1.665</td>
<td>6</td>
<td>1–7</td>
</tr>
<tr>
<td>Changed healthcare behaviors</td>
<td>5.89</td>
<td>1.180</td>
<td>6</td>
<td>1–7</td>
</tr>
<tr>
<td>Stress level</td>
<td>5.34</td>
<td>2.797</td>
<td>6</td>
<td>1–10</td>
</tr>
</tbody>
</table>

Physical Activity of the Family Members of Patients with Cancer

Family members demonstrated a decrease in moderate physical activity after another family member was diagnosed with cancer. In the previous month, there was an increase in the number of respondents who answered “never” for performing moderate physical activity for 30 min (27%) compared with that before the diagnosis of cancer (19%). A study conducted in Australia demonstrated an increase in physical activity by 24.3% and significant dietary changes.

In case of cervical cancer, families should care for their loved ones during diagnosis, treatment, and the occurrence of treatment side effects. Thus, family members cannot make time for themselves as they are more focused on patient treatment. Family members spend almost all their time heeding to patient care activities, such as assisting them when eating, drinking, and resting.

Diet Behavior of Family Members of Patients with Cancer

The family members of patients with cancer who “usually” consumed healthy food in the last month increased by 82% compared with that before diagnosing a family member with cancer (77%). The analysis of healthy dietary behavior (Table 2) revealed that 7 was the highest median value of each variable. Moreover, the results showed that on a scale of 1–7, the highest average was 5.89, which indicated the experience of family members with patients with cancer.

Patients with cancer and their companion always eat together. Eating with a companion prevents loneliness and increases appetite. Similarly, healthy dietary behavior in family members improved because most family members are primary caregivers of patients. Thus, family members are well aware of the healthy dietary behaviors that are essential for patients with cancer. Consequently, the dietary behavior of family members also followed the healthy dietary behavior of patients with cancer.

Smoking Cessation of Family Members of Patients with Cancer

In this study, as much as 23% of family members were smokers. Meanwhile, more than half of the family members (66%) reported to have never smoked. In addition, 17.94% of family members did not smoke at the time of the study. These data illustrate that this study represents smoking behavior to a less extent because 66% of family members who participated in the study had not smoked before or after another family member was diagnosed with cancer.

Meanwhile, the results of the analysis on smoking behavior in family members had a small median value for self-confidence variables and the intention to quit smoking. Although respondents rated quitting smoking as beneficial (median 6.5, scale 1–7, Table 2), the result was much less compared with that of other median variables. Most family members assumed that quitting smoking was very difficult. Some individuals who had the intention to quit smoking found it very difficult to do so because of addiction. Several factors, such as the knowledge of risks and issues related to health, recognition and self-awareness that smoking causes many diseases, families, beliefs to quit smoking, and self-certainty to quit smoking, can affect one’s behavior to quit smoking.

Effects of Cancer Diagnosis on Family Experiences

This study also determined the effect cancer diagnosis on family experiences such as increased awareness to cancer screening and cancer risk and healthier living habits (Table 2). Families with patients with cancer exhibit increased awareness to treatment and demonstrate the elimination of the risk of cancer through early detection.

In this study, almost all family members had changed and improved lifestyle habits, mostly regarding diet and physical-activity patterns, and more family members were found to never smoke before cancer diagnosis.

Conclusions

Based on the results of this study, changes were observed in the health behaviors of family members of patients with cancer, particularly concerning a decrease in the frequency of performing moderate physical activity. However, there was an increase in healthy dietary behavior among family members after the diagnosis of cancer. Regarding smoking behavior of family members, more family members were found to have never or stopped smoking. However, the incidence of cancer does not affect the intention of family members to discontinue smoking. The diagnosis of cancer influenced the healthy lifestyle habits of family members and increased the awareness for cancer screening and cancer risk. Therefore, nurses should revise their understanding regarding the concept of interdependence within a family. Any change in one individual can affect the roles and beliefs of all family members.
family members. The role of a nurse as an educator is crucial to improve family health and prevent diseases, especially cancer, through education regarding stress management and adopting healthy lifestyle.

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