

Improving Cancer Related Fatigue Management through Ergonomic Workshops

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Abstract The ergonomics workshop on Cancer Related Fatigue (CRF) management is a method for designing an ergonomic approach to meet the physical and psychological needs of breast cancer patients who experience CRF and return to work. Through workshops, improvement of work procedures can be carried out in a comprehensive way because it involves the participation of all components involved in the approach to be carried out. The purpose of this research is to get the best working procedures for CRF management and to analyze the knowledge of the respondents before and after the workshop. This is a quantitative study with a pre and post-test approach. Focus Group Discussions are conducted to collect data. Workshops for handling CRF in breast cancer patients who return to work are carried out by involving oncology nurses, oncologists, ergonomic experts, nutritionists, health sciences students and breast cancer patients who return to work and heads of work units. Respondents were divided into 3 groups and 12 stages of the workshop were carried out. The results show that work comfort, programs that facilitate physical activity and being able to meet cancer sufferers, work attitudes, physical activity, social support are expected components of work procedures. Respondents' knowledge before and after the workshop differed significantly with $p=0.0001$. This workshop can help increase patient and healthcare workers' knowledge about CRF and help find the best therapy and work procedures for CRF management.

Index Terms— workshop, ergonomics, cancer related fatigue

I. INTRODUCTION

Cancer Related Fatigue (CRF) is a complaint or symptom of weakness, fatigue, reduced energy levels that arise both as a result of disease pathology and the process of cancer therapy. CRF is experienced by breast cancer patients with a very varied range; 30-70%. This condition can interfere with individual physical and psychological functions in carrying out daily activities including work [1,2,4]. Management of CRF in breast cancer patients who return to work requires a comprehensive approach based on patient needs and based on aspects of a total ergonomic approach. Ergonomic workshops can help patients to identify the need for appropriate CRF management [1,3,6,15].

Workshop is a form of problem solving by finding the best solution and involving all parties. Workshops can also be interpreted as a form of scientific meeting to discuss a topic that is relevant to the scientific field. Ergonomics workshop is the first step before the application of the total ergonomics approach. Workshops in ergonomics are conducted to find solutions to the problems and to make the

analysis related to the application of the total ergonomic approach [14,16].

An ergonomics program is needed to facilitate breast cancer patients who have been declared cured and return to work to be able to work comfortably and not lose productivity. This approach seeks to harmonize the tools, methods and work environment with the abilities, appearance and limitations of the workforce so as to create healthy, safe, secure, comfortable and efficient working conditions. The application of ergonomics in various development sectors has been proven not only to be able to increase work efficiency and productivity, but also to prevent negative impacts such as fatigue, musculoskeletal complaints, work accidents and work-related illnesses [15,25,26].

The total ergonomics approach strives for humans to be in harmony with work and the environment. The work process, the design must also match the conditions and size of the human body that uses it. This approach begins with a Systematic, Holistic, Interdisciplinary, Participatory (SHIP) approach through a workshop to explore various problems that occur in breast cancer patients who return to work,

especially those related to harmony between tasks, organization and work environment. Work fatigue both due to CRF and working conditions need to be studied more deeply in these patients. Appropriate Technology is also a form of technology application based on ergonomic studies for patient work effectiveness and comfort [14,15]. Appropriate technology is important to be applied based on condition and readiness of breast cancer patients to return to work in its integration with comprehensive methods integrated with social and educational support. This approach can be used as an integrated comprehensive therapy to treat CRF in breast cancer patients who return to work [19,20].

II. METHOD

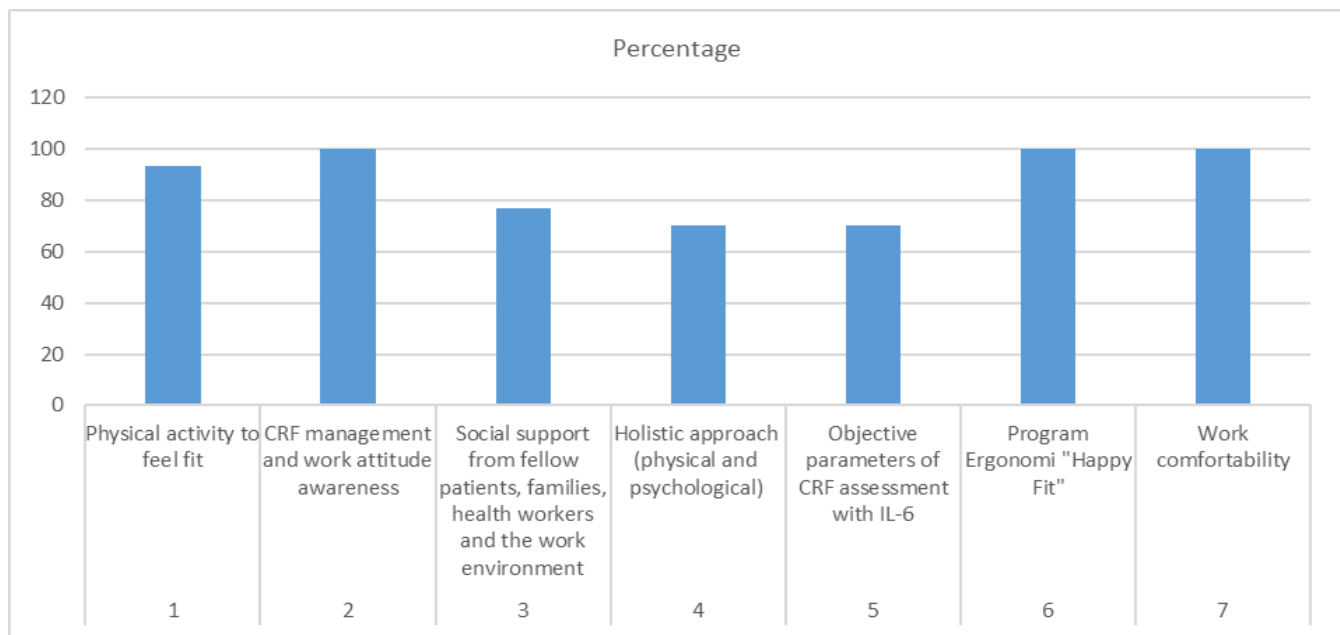
This is a quantitative study with a pre and post-test approach. Focus Group Discussions (FGD) are conducted to collect data on ergonomic workshops. This workshops for handling CRF in breast cancer patients who return to work are did by involving oncology nurses, oncologists,

ergonomic experts, nutritionists, health students and breast cancer patients who return to work and heads of work units where breast cancer patients return to work. Respondents were divided into 3 groups. The stages of the workshop are starting with counseling (awareness program), placement of discussion participants, introduction, identify problems (negative sentences), prioritize problems, positive sentences, analyze current work procedures based on the criteria of strengths, weaknesses, benefits and risks, making work plans, making action plans, outreach and adaptation, implementing action plans and evaluations. Respondents' knowledge was assessed before and after the FGD. Workshop results will also be displayed in descriptive form.

III. RESULT

The results of the study show that there are 7 things that are a priority for treating patients with CRF according to the following table:

TABLE I PRIORITY FOR TREATING PATIENTS WITH CRF



Based on the table above the priorities in the management of CRF in breast cancer patients who return to work are comfortable work, programs that facilitate physical activity work attitudes, physical activity, social support, a holistic approach and objective assessment of CRF. A happy fit ergonomics program was developed. This program is a holistic care that can facilitate breast cancer patients with CRF who return to work to do physical activities, get social support and knowledge about CRF management and understand good work attitudes.

The Wilcoxon test shows that there is the significant difference of the knowledge of the respondents before and after the ergonomic workshop, the p-value obtained is 0.001, which is less than 0.05. This workshop discusses

CRF from various perspectives. The workshops conducted can provide additional knowledge for both patients, students and health workers related to CRF. The patient's wishes as a focus of service can provide insight for health workers to develop an ergonomic program that appropriate to the needs and conditions of the patient. This program is not only a physical exercise but also an integrated comprehensive therapy for patients with breast cancer who return to work to overcome CRF and improve individual work comfort. This therapy is based on a self-management program and uses a total ergonomics approach. Patient empowerment method used to improve lifestyle changes and disease management. It is based on a problem-solving method that increases the patient's confidence in controlling the patient's

condition and abilities and empowers breast cancer patients to overcome various problems related to the disease including CRF.

Self-management interventions provide patients with the necessary knowledge and encourage them to learn or improve coping skills and reduce symptoms and achieve a higher quality of life. This self-management method needs to be further studied and strengthened by various studies, especially related to the ability and support for patients to carry out disease symptom management and therapy. Many studies show that exercise is the main therapy for CRF, but comprehensive management requires more than just physical activity but also social support and comfort [7,8,10,12].

The ergonomic workshops found that there are several steps in compiling an ergonomic program in dealing with CRF in breast cancer patients who have been declared cured and returned to work:

- Establishing a physical activity for breast cancer patients returning to work
- CRF Management Education
- Facilitating social Support from fellow patients, families, health workers and the work environment
- Doing a holistic approach (physical and psychological)
- Education awareness of work attitude

Based on the results of the discussion on the ergonomic program that will be carried out is the "Happy Fit Ergonomics Program" where CRF management will be done for breast cancer patients who return to work with comprehensive and holistic therapy in the form of physical activity according to the patient's ability, education about CRF and awareness of work attitudes, facilitating support from fellow cancer survivors, health workers, co-workers and families. The advantages of this program are: Using a holistic approach that not only pays attention to the physical aspects but also the psychological aspects of the patient, the application is based on audiovisual technology in the form of video and it can be done on patients with a variety of occupations.

Appropriate CRF management is needed so that patients can restore their energy levels to return to work optimally. Various therapies have been developed to treat this condition, especially those based on physical activity. Various physical activities that are suitable for dealing with CRF include running, walking, riding a bicycle, swimming, range of motion exercises, stretching, yoga [21,22,23]. Physical activity in cancer patients can not only overcome physical problems but also psychological problems so as to improve the patient's quality of life [4,8,7,9].

IV. CONCLUSION

Ergonomic CRF management workshop based on focus group discussion involving breast cancer patients who were declared cured and returned to work, oncology doctors, oncology nurses, health students, nutritionists and ergonomics experts. This workshop can help increase

patient and healthcare worker knowledge about CRF and help find the best therapy and work procedures for CRF management.

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