



The Impact of an 8 Week Out-patient Cancer Nutrition Rehabilitation Program on Fatigue

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BACKGROUND

- Fatigue is the symptom most frequently reported by patients with cancer.¹
- Patients referred to the McGill Cancer Nutrition Rehabilitation Program (CNRP) often report elevated levels of fatigue and other symptoms at their initial assessment.
- The program is provided by an interdisciplinary team who, using a time-limited approach, collaborate to empower patients to function optimally, thereby improving their quality of life.
- One of the goals of the CNRP is to decrease the level of fatigue experienced by its patients through
 - biweekly physiotherapy sessions
 - fortnightly (or more frequent) visits to the
 - dietician
 - occupational therapist
 - nurse
 - physician
 - psycho-social and psychology interventions if required
 - weekly psycho-educational sessions

OBJECTIVE

- To measure the effectiveness of an 8 week out-patient CNRP to decrease the level of fatigue experienced by patients with cancer.

METHOD

- Participants:** Sixty nine patients who were enrolled and completed the CNRP between September 2008 to April 2010 (Table 1).
- Measure:** The Multidimensional Fatigue Inventory (MFI) was administered pre and post CNRP.
The MFI is a validated and reliable 20-item self-report questionnaire designed to measure five dimensions of fatigue: general fatigue, physical fatigue, decreased activity, decreased motivation and mental fatigue. Each dimension yields a score out of twenty.²
- Statistical analyses**
 - Paired t-tests were used to compare pre and post CNRP fatigue scores.
 - Multiple regression was used to determine the effect of age, adjusted for gender, stage of disease and C-reactive protein (CRP), on the changes in each dimension of fatigue after participation in the CNRP.

DISCUSSION

- Patients with cancer participating in an 8 week interdisciplinary CNRP report a statistically significant and clinically relevant reduction in all dimensions of fatigue, regardless of age, gender, stage of disease and CRP.
- The reduction in general fatigue is greater in younger patients.
- Using the MFI as a repeated measure (pre-post) in a clinical program was feasible and acceptable for our patients.
- The MFI provided information about patients' perceived level of fatigue in five dimensions. This specific information was used by the team for planning of fatigue management interventions and re-evaluation.

RESULTS

TABLE 1. DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF PARTICIPANTS (N = 69)

VARIABLE		n (%)
AGE	<29 yrs	3 (4.3)
	30-39 yrs	6 (8.7)
	40-49 yrs	19 (27.5)
	50-59 yrs	17 (24.7)
	60-69 yrs	14 (20.3)
	>=70 yrs	10 (14.5)
GENDER	Female	38 (55.1)
C-REACTIVE PROTEIN	≤ 10 mg	13 (18.8)
CANCER DIAGNOSIS	Brain	2 (2.9)
	Head & neck	12 (17.4)
	Breast	12 (17.4)
	Lung	6 (8.7)
	Oesophagus	1 (1.4)
	Hepato-biliary	2 (2.9)
	Pancreas	2 (2.9)
	Colorectal	8 (11.6)
	Prostate	3 (4.3)
	Uterine-cervix	2 (2.9)
	Ovary	3 (4.3)
	Unknown primary	1 (1.4)
	Hematological	8 (11.6)
	Other/NA	7 (10.1)

FIGURE 1. EFFECT OF CNRP ON FATIGUE

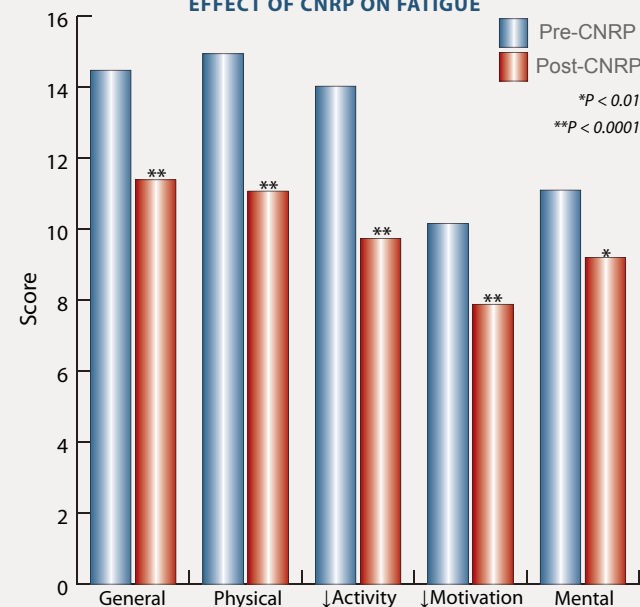
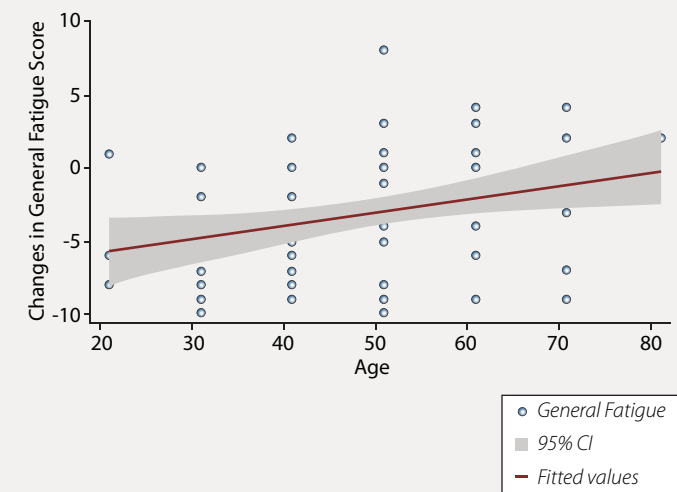


TABLE 2. EFFECT OF CNRP ON FATIGUE

FATIGUE DIMENSION	SCORE IMPROVEMENT	MINIMAL CLINICALLY IMPORTANT DIFFERENCE OF THE MFI ³
General Fatigue	3	2.06
Physical Fatigue	4	2.04
Decreased Activity	4	2.39
Decreased Motivation	2	1.60
Mental Fatigue	2	1.36

- All dimensions of fatigue significantly improved after participation in the CNRP

FIGURE 2. EFFECT OF AGE ON THE CHANGE IN GENERAL FATIGUE



- Age, adjusted for gender, stage of disease and CRP, affected the change in general fatigue after participation in the CNRP.
 - Younger patients experienced a significantly greater reduction of their general fatigue than older patients ($P = 0.011$).
- However, age, gender, stage of disease and CRP did not affect the changes in physical fatigue, decreased activity, decreased motivation, and mental fatigue.

LIMITATIONS

- Thirty-six participants in this study were francophone. The French translation of the decreased motivation subscale of the MFI has been shown to be less valid and reliable than the English version.⁴ This may have impacted the results obtained in this study.

CONCLUSION

- Patients with cancer participating in an 8 week CNRP report a clinically and statistically significant decrease in all dimensions of fatigue measured by the MFI.
- This type of program can assist patients of all ages to effectively reduce the fatigue they experience and learn fatigue management strategies.

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