

Identifying variables associated with self-reported fatigue among cancer patients

Inger Thormodsen^a, Cecilia Arving^{a,b}, Sveinung Berntsen^c, Karin Nordin^{a,b,d}.

^a Cancer Centre for Education and Rehabilitation, Department of Oncology and Medical Physics, Haukeland University Hospital, Bergen, Norway

^b Department of Public Health and Caring Sciences, Uppsala University, Uppsala, Sweden

^c Department of Public Health, Sport and Nutrition, Faculty of Health and Sport Sciences, University of Agder, Kristiansand, Norway

^d Department of Public Health and Primary Care, University of Bergen, Norway

E-mail: inger.thormodsen@helse-bergen.no

Conclusion

Fatigue was associated with:

1. Depression
2. Younger age
3. Co-morbidity
4. Breast cancer

Aim

To identify variables, before start of an individual stress management intervention, associated with fatigue among patients with different cancer diagnosis

Patients

Consecutive 291 patients (≥ 18 years) with a recent diagnosis of cancer were included [Table 1]. They were scheduled for adjuvant oncology treatment

Data collection

Data were collected by self-report questionnaires including background data, the Hospital and Anxiety Scale (HADS), the Impact of Event Scale (IES) and the Chalder's Fatigue Questionnaire (FQ)

Independent variables for the model was selected according to results from previous studies and clinical expediencies

Table 1: Descriptive results for dependent and independent variables

Total N=291(%)	Breast cancer N=123(42%)	Prostate cancer N=124(43%)	Colorectal cancer N=24(8%)	Testis cancer N=11(4%)	Lymphoma N=9(3%)
Co-morbidities Missing	45(38) 4(3)	60(49) 2(2)	8(33)	4(36)	3(33)
Age Mean (SD) Minimum(Maximum)	57(9) 30(81)	68(5) 55(77)	59(10) 35(76)	37(11) 22(55)	58(12) 32(68)
Marital status Married/co-habited Widow/separated /divorced/single	90(73) 33(27)	104(84) 20(16)	19(79) 5(21)	8(73) 3(27)	7(78) 2(22)
Household ≥ 2 Missing	98(81) 2	104(85) 1	20(83) 2	11(100) 1	8(89) 3
Children<18 year living at home Missing	31(28) 13	4(4) 29	6(27) 2	5(50) 1	2(33) 3
Income - Nkr Mean (SD)	799.000 (609.000)	598.000 (329.000)	764.000 (548.000)	843.000 (468.000)	553.000 (272.000)
Physical Activity – fitness centres /sports team Missing	37(30) 2	17(49) 2	7((29)	2(18)	4(44)
HADS-Anxiety Mean(SD)	5(4)	3(3)	4(3)	5(2)	5(3)
HADS-Depression Mean(SD)	3(10)	2(2)	2(2)	4(3)	2(1)
IES-Intrusion Mean(SD) Missing	9(7) 1	6(6) 1	9(8)	10(8)	9(4)
IES-Avoidance Mean(SD) Missing	11(8) 1	8(7) 1	10(7)	9(7)	9(5)
FQ-Total Mean(SD)	16(5)	13(4)	16(5)	18(5)	17(4)
FQ-Physical Fatigue Mean(SD)	11(5)	8(3)	11(4)	13(4)	13(4)
FQ-Mental Fatigue Mean(SD)	5(2)	4(1)	5(2)	5(1)	4(1)

Table 2: Results of the stepwise regression analyses

FATIGUE	Unstandardized coefficients B	95% Confidence Interval for B	Standardized coefficients Beta
HADS-Depression	.865	.662 – 1.069	.493***
HADS-Depression	.785	.590 - .981	.447***
Age	-.122	-.171 - -.074	-.281***
HADS-Depression	.766	.574 - .958	.436***
Age	-.138	-.186 - -.089	-.317***
Co-morbidities (=1 and no co-morbidities=0)	1.806	.729 – 2.882	.184**
HADS-Depression	.739	.549 - .930	.421***
Age	-.119	-.169 - -.070	-.275***
Co-morbidities	1.877	.813 – 2.942	.191**
Diagnosis (breast =0 and prostate =1)	-1.401	-2.495 - -.308	-.145*

Abbreviation: *p \leq .05; **p \leq .01; ***p \leq .0001

Result

Descriptive results are presented in Table 1

A stepwise regression analysis were performed to determine how much of the variance in self-rated fatigue at baseline could be explained by the independent variables

Fatigue was primarily associated with depression [Table 2] which explained 24% of the variance and thereafter with age (7%), co-morbidities (3%) and diagnosis (2%) [Table 2]

Trial registration

ClinicalTrials.gov
no.: NCT01588262

Regional committees for medical and health research ethics, Norway no.: 2010/1911

Acknowledgment

This research has been made possible by grants from the Grieg Foundation and the Norwegian Cancer Society