

**CN56** When symptom complexity is the norm: A mediation analysis between pain, anxiety, depression and fatigue

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**Background:** The treatment phase for cancer is a particularly stressful period for the patient. The patient frequently experiences simultaneously various somatic and psychological side-effects resulting in a diminishing of the patient's health related quality of life-HRQoL. The study provides evidence on the co-occurrence and interrelations between pain, anxiety, depression and fatigue in patients diagnosed with breast and prostate cancer.

**Methods:** Data used for the analysis came from patients (n = 208) recruited in a Randomised Control Trial designed to test the effectiveness of Guided Imagery and Progressive Muscle Relaxation on pain, fatigue, anxiety and depression. Non-parametric bootstrapping analyses were used to test the mediational model of Anxiety, Fatigue and Depression as parallel mediators of the relationship between Pain and HRQoL.

**Results:** The three mediators fully mediate the relationship between Pain and HRQoL ( $IE_{\text{overall}} = -0.3839$ , 95% C.I.: LL = -0.5073, UL = -0.2825) indicating that patients with increased Pain are more likely to have higher levels of Anxiety, Fatigue and Depression. Gender significantly moderated the mediational effect of Fatigue (IMM = -0.2867 SE = 0.1526, LL = -0.6127, UL = -0.0226) but did not moderate mediational effect of Anxiety (IMM = -0.0709, SE = 0.1414, LL = -0.3459, UL = +0.2089). The results show that the three mediators in a serial causal order fully mediate the relationship between Pain and HRQoL ( $IE_{\text{overall}} = -0.384$ , 95% C.I.: LL = -0.51, UL = -0.284) and the ratio of the overall indirect effect to the total effect, is 0.8315 (95% CI: LL = 0.5683, UL = 1.1718).

**Conclusions:** This work provides evidence that targeting fatigue, anxiety and depression may have a meaningful effect on pain as a related symptom and potentially have a positive impact on HRQoL of patients with breast cancer and prostate cancer.

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