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**Karam, Erin**

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Erin Karam
568152

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Supervisors: Prof Demitri Constantinou & Miss Natalia Neophytou

# A survey to assess patient and health care providers' knowledge, attitudes and perceptions of cancer-related fatigue and exercise

# Abstract:

**Background:**

Cancer is a complex non-communicable disease which can occur almost anywhere in the human body. Cancer causes abnormal cells to divide uncontrollably and destroy body tissue. The Cancer Association of South Africa (CANSA) assists the National Cancer Registry (NCR) to provide statistics and confirms that there is an increasing cancer epidemic in South Africa. In South Africa the NRC reported a 31% increase in new cancer cases from 74577 in 2018 to 108168 new cancer cases in 2020. The continuous rise in cancer cases each year in South Africa is a cause of concern and therefore, more studies are needed in the area of cancer management.

Cancer related fatigue is multidimensional, and negatively affects patients' physical function, social and mental wellbeing, quality of life and may be a predictor for survival. It has been reported that over 80% of patients with cancer experienced cancer related fatigue. Exercise is a non-pharmacological treatment for cancer and the effects of cancer treatment, which is inexpensive and accessible. Structured multimodal individualised exercises can be used throughout the stages of cancer to reduce the effects of fatigue. Exercise assists in reducing cancer risk promoting health and may be used after recovery as secondary preventative cancer measure. In South Africa

there is a need to determine the knowledge, attitudes and perceptions of cancer related fatigue as well as understand possible barriers people face in not leading an active healthy life.

**AIM:**

This study aimed to determine the knowledge, attitudes and perceptions of oncology health professionals and people who have cancer related fatigue as well as determine the use of exercise for treatment in these population groups.

**OBJECTIVES:**

To determine the extent of knowledge, current attitudes and perceptions of health professionals and individuals with cancer in Gauteng, regarding cancer related fatigue and exercise-based therapies to reduce cancer related fatigue using a survey. To determine the extent that exercise is currently being prescribed by health care professionals for individuals with cancer related fatigue and the extent that individuals use exercise to treat cancer related fatigue in Gauteng, using a survey.

**METHODS:**

This cross-sectional descriptive study was employed to evaluate the knowledge, attitudes and perceptions health professionals and patients on Cancer related fatigue and exercise-based therapies. Two separate surveys were used. The first survey, "Survey for Health Professionals on cancer related fatigue and exercise" was a modified version of the survey from La Trobe University, "Clinical perspectives on cancer-related fatigue". The second survey, "Survey on cancer related fatigue and exercise for individuals who have been diagnosed with cancer" was modified from Macmillian et al. (2011) survey, "Cancer and physical activity standard evaluation framework baseline". This study was carried out over 3 months and allowed participants to complete the surveys via email through google forms and print copies.

The surveys were available in both print and online formats for participants to complete. The health professionals (oncologists, nurses, biokineticists, physiotherapists, dieticians, occupational therapists, and psychologists) survey took approximately 15 minutes to complete and comprised of 25 questions. The survey for patients who had been diagnosed with cancer took approximately 30 minutes to complete comprised of 22 questions. An information document was sent via email link

and print copies were available at survey site. Consent was deemed to have been given/automatic as the participant agreed to complete the survey for the online and printed versions of the survey. This study used a sample of convenience for both, health professionals as well as patients diagnosed with cancer in the Gauteng region. Participants were excluded if their surveys were less than 90% completed.

**RESULTS:**

All participants included in the final analysis of this study met our inclusion criteria. **Biographical data:** Nighty-three health professionals participants comprising, of medical professional/oncologists; nurses; dieticians, biokineticists, physiotherapists and other. There ages ranged from 23 to 62 years and 12.35 mean years in practice. The health professionals comprised of 87 working in urban and 7 working in a rural environment in Gauteng. Fifty-two individuals diagnosed with cancer took part in this study, this population group comprised of 37 female and 15 male participants. The ages ranged from 40 to 82 years, with the mean age of 65.38. In this study 15.4% of this sample population had a long term-illness or disability that limits their physical activity. The types of cancers participants had: 18 breast; 12 prostate; 6 bladder, 6 cervix, 5 skin, 4 uterus, 4 lymph; 2 kidney, 2 throat and 1 participant had head and neck cancer. **Knowledge of cancer related fatigue & Exercise:** Eighty-one percent of Health professionals stated that they had knowledge on cancer related fatigue and gained their knowledge from: 40 from self-knowledge (the knowledge gained through years of practice and working with cancer patients), 23 from information off the internet, 8 from courses on cancer related fatigue and exercise, and 6 participants gained their knowledge from the guidelines set out by ACSM. Fifteen percent of cancer patients in this study said they had heard of cancer related fatigue and 85% had not. Participants with cancer reported that the majority (n=44) did not know of non-medical treatments for cancer related fatigue and (n=8) reported that they did know of non-medical treatments to treat cancer related fatigue. **Current attitudes of cancer related fatigue & exercise:** Health professionals were asked if exercise-based therapies were made available to treat cancer related fatigue, would they use them. The majority of health professionals (96%) and individuals diagnosed with cancer (92%) stated that they would prescribe and use exercise to treat cancer related fatigue. **Current perception of cancer related fatigue and exercise:** Participants were asked how they felt cancer related fatigue would affect an individual's cancer

treatment/ recovery. Health care professionals' majority (n=40) felt that cancer related fatigue would "very much" affect individuals cancer treatment/recovery. The individuals diagnosed with cancer in this study perceived that cancer related fatigue would affect their treatment/ recovery "quite a bit" (48%) and a "moderate" amount (46%). Health care professionals were also asked if they felt that their patients with cancer related fatigue symptoms were identified and managed. The results show that only 22% said yes and that 78% of health professionals felt that their patients cancer related fatigue symptoms weren't identified and managed.

**Extent that exercise is prescribed to individuals with cancer related fatigue:** Health care professionals were asked if they prescribe exercise to their patients with cancer related fatigue, only 17,4% selected "no" stating that they don't prescribe exercise and 82,6% selected "yes", they do prescribe exercise to patients with cancer related fatigue. Of the participants that do prescribe exercise to their patients the majority, 39,5% selected that they often prescribe exercise to their patients with cancer related fatigue. **The extent that exercise is being used by individuals to treat cancer related fatigue:** The participants in the study were asked if they felt fatigued in a 7-day cycle. Majority of participants in the study felt "a little bit" and "somewhat" fatigued the most at 28,9% each. Physically active participants: Individuals diagnosed with cancer were asked if they took part in any sport over the past 7 days. The results show that 50% did no sport last week, 11,5% took part in sport for 1 day, 13,5% participated twice last week, 15,4% of participants were active for 3 days and 9,6% did sport 6 days last week. The majority of participants (57,7%) stated that this was the typical amount of physical activity they usually do.

**CONCLUSION:**

In this study, there was no evidence of statistical significance for the knowledge, attitudes and perceptions of both health professionals and individuals with a cancer diagnosis in Gauteng on cancer related fatigue and exercise-based therapies for treatment.

Evidence of knowledge on cancer related fatigue was found to be higher in health professionals and less so in individuals with cancer diagnosis in Gauteng. However, with most of the knowledge gained by Health professionals was through their own experience in practice with patients, the extent of their knowledge on cancer related

fatigue is unknown. Health professionals in this study (21.7%) mostly felt that they did not identify or manage their patients cancer related fatigue. However, 48% of cancer individuals in this study perceived that cancer related fatigue would “quite a bit” affect their treatment/recovery. Health professionals and cancer individuals in this study had a positive attitude towards using exercise-based therapy to treat cancer related fatigue. Evidence in this study show that majority of health professionals and cancer individuals would select exercise as a modality to treat cancer related fatigue.

With over 80% of clinicians of the sample using exercises for treatment of cancer related fatigue there are 34% said that the “rarely” prescribe exercise to their patients. The majority of cancer individuals in this study (96.2%) stated they felt fatigued and 50% took part in physical activity in the past week. The result of this study indicates that both health professionals and cancer patients would use exercise to treat cancer related fatigue and that individuals with cancer related fatigue feel that exercise would reduce their fatigue. An intervention study should be done for assessing the accuracy of fatigue and the use of structured exercise to effectively treat cancer related fatigue in cancer individuals pre and post cancer treatment.