

ASSESSMENT OF DEPRESSION LEVELS AMONG CANCER PATIENTS AT A SELECTED ONCOLOGY UNIT, EGYPT

Nesrine A. Wadie¹, Liliane I. Narouz^{2*}

¹Lecturer, Psychiatric Mental Health Nursing, Cairo University, Egypt

²Lecturer, Medical-surgical Nursing, Faculty of Nursing, Cairo University, Egypt

*Corresponding Author Email: liliane_alex@hotmail.com

ABSTRACT

Introduction: Cancer burden is increasing worldwide with an estimated increase by the year 2025 (WHO factsheet, 2013). Different studies highlighted the relationship between cancer, distressing symptoms and level of depression. Nurses have a professional responsibility to care for the multi-dimensional needs of patients, by applying a holistic assessment.

Aim: The aim of the study was to assess depression levels among cancer patients at a selected Oncology Unit.

Design: A descriptive design was followed.

Methods: The study was carried out at a selected oncology unit. The study samples were 100 convenient patients diagnosed with cancer. A research questions were developed: what is the depression level among Cancer patients?

Tools: Demographic data sheet and Hamilton depression scale.

Results: Two thirds of the sample has been diagnosed with cancer for less than 6 months, majority was females, and more than half of the samples have income less than 1200 L.E. Almost more than half had very severe depression level, chi-square shows statistical significant association between depression level in comparison to demographic characteristic and medical data.

Conclusion: Cancer patients have severe depression level.

Recommendation: The psychosocial needs of the cancer patient must including as a main part the nursing assessment, diagnosis and designed intervention. This will help to improve the mental state of cancer patients.

Keywords: *Cancer patients, Depression levels*

INTRODUCTION

Cancer is seen as the ultimate existential crisis, which is one of the most feared of all diseases for many reasons such as occurrence without warning, uncontrolled spreading, incurability, association with pain and discomfort, social and professional attitudes of hopelessness, and multiple treatment. Added to, the majority of individuals who are diagnosed as having cancer will have some degree of psychological and social problems and they need to learn how to cope with the crisis (Kufe *et al.*, 2003).

Cancer in Egypt is estimated to increase 3-folds in its incident by the year 2050, relative to 2013. The

commonest sites are the liver (23.8%), breast (15.4%), and bladder (6.9%) (both sexes), liver (33.6%) and bladder (10.7%) among men, and breast (32.0%) and liver (13.5%) among women. These data are the only available cancer rates at national and regional levels of Egypt (Ibrahim *et al.*, 2014).

Cancer patients are burdened and face a lot of challenges that are typically not experienced by other terminally ill patients. For example, treatment regimens are difficult to balance with education, inadequate health insurance coverage or no coverage at all. Moreover often the cancer patient does not have a primary care provider. All these may lead to delay in

diagnosis (Adloff, 2009).

Additionally, cancer has the ability to affect person's emotional and psychological stability. It is also considered as a group of diseases with the highest potential of psychological difficulties and problems because it is perceived by the patients as a crisis (Bahar, 2007; Bag, 2013; Skoogh *et al.*, 2013).

About one third of patients with cancer, experience distress and the most common psychiatric disorders are depression, anxiety disorders and adjustment disorders, with the greatest rates of psychiatric morbidity being found in those receiving palliative treatment (Fallowfield *et al.*, 2001). However, some other studies suggest that the incidence of depression in cancer patients range from being no different than those without cancer (Keating *et al.*, 2005).

The detection of depression in cancer patients is difficult for many reasons, firstly, symptoms of cancer and its treatment resemble neurovegetative symptoms of depression, such as; fatigue, loss of appetite and sleep disturbance. Secondly it is difficult to detect depression in cancer patients because of the lack of specific skills, lack of time in busy oncological settings, and reluctance of patients to discuss emotional well-being (Krebber *et al.*, 2013).

Based on the previous information caregivers should be involved in the multidisciplinary treatment team who work with the cancer patients. Therefore in such cases nursing has a professional responsibility to care for the multi-dimensional needs of cancer patients which mean to collaborate with them in a holistic assessment addressing their physical, emotional, psychological, cognitive, social, spiritual, developmental, cultural, and educational needs (Reinhard *et al.*, 2008).

As a member of the healthcare team nurses should anticipate depression and psychological effect of cancer and also must be aware of its risk factors. Nurses should not only use specific and valid assessment tools to help in screening depression among cancer patients but also they can be involved in different management modalities for depressed cancer patients (Baxter, 2007). However, the nurse role in assessment and management of depression in cancer patients is not clearly defined in the literature. The nurse should be able to define precisely the state of health and disease to

facilitate the accommodation of the patient to the new condition. They should be able to evaluate the coping mechanisms of the patient and evaluate the effects of them. The nurses must plan and apply the nursing interventions in accordance with the information she/he has obtained.

Based on the previous information cancer patients are faced with many challenges, including psychological impairment and depression. As a result the aim of this article is to assess the depression level among cancer patients at a selected oncology unit.

Significance of the problem

Cancer is the second leading cause of death globally and accounted for 8.8 million deaths in 2015. People who have cancer may find the physical, emotional, and social effects of the disease to be stressful (WHO, 2014).

Oncology patients are also at a substantial risk of developing psychiatric disorders, and thus they should be comprehensively evaluated in terms of biopsychosocial dimensions (Pehlivan & Küçük, 2016). Advances in cancer treatments have improved the prognosis and quality of life of many patients, but cancer is still associated with an increased rate of depression and psychological distress. In a study that happened in Egypt reported on the seventh day news (2016) announced a case of suicide of a patient who was diagnosed as cancer.

Holistic care is a necessary component of quality nursing care which benefits the lives of cancer patient care. The Canadian Association of Psychosocial Oncology emerged with the multi disciplinary intention to research and care for the psychosocial needs of cancer patients. They characterize psychosocial oncology as that which strives to understand and treat the "social, psychological, emotional, spiritual, quality-of-life and functional aspects of cancer" (Canadian Association of Psychosocial Oncology, 2005). Other organizations that identify the holistic responsibilities of nurses are the Canadian Nurses Association (2002).

Nursing education should involve the psychological effects along with the burdens met by patients with cancer and their families, especially terminal bleak cases (Walker, Ristvedt & Haughey, 2003). They must also consider their psychiatric consequences that might

be developed as a result for such a fatal disease. Accordingly on the basis of evidence based practices different programs must be developed to prevent and limit such diseases. This would help those patients to deal with this terminally fatal disease peacefully and with dignity.

Aim of the study

This research aimed to assess depression levels among cancer patients in a selected oncology unit in Egypt.

Research Questions

Two research questions were utilized in the study:

1. What are depression levels among cancer patients at a selected oncology Unit?
2. What are relationship between depression and patients' socio-demographic data selected oncology units?

MATERIAL AND METHODS

Study Design

A descriptive design was used to explore the depression levels in adults diagnosed with cancer.

Tools

2 main tools were utilized in the study:

1. Hamilton depression scale:

Multiple item questionnaires used to provide an indication of depression, and as a guide to evaluate recovery. Max Hamilton originally published the scale in 1960 and revised it in 1966, 1967, 1969 and 1980. The questionnaire is designed for adults and is used to rate the severity of their depression by probing mood, feelings of guilt, suicide ideation, insomnia, agitation or retardation, anxiety, weight loss and somatic symptoms. Although Hamilton's original scale had 17 items, other versions were developed to include up to 29 items (HRSD-29). The patient is rated by a clinician among 17 to 29 dimensions (depending on version) with a score on a 3 or 5 point scale. A score of 0-7 is considered to be normal. Scores of 20 or higher indicate moderate, severe, or very severe depression, and are usually required for entry into a clinical trial. Questions 18-20 may be recorded to give further information about the depression (such as whether diurnal variation or paranoid symptoms are present), but

these are not part of the scale. A structured interview guide for the questionnaire was available.

2. Socio-demographic sheet:

Includes: age, sex, marital status, income, duration of illness, and type of treatment.

Procedure

1. Official permission was obtained from the oncology unit to conduct the research and to interview the patient.
2. Oral consent with detailed explanations was provided to each case to join the interview, assuring confidentiality and privacy for them.
3. All subjects informed that participation in current research is voluntary and they can withdraw at any time.
4. A diagnosis of major depression was made using the standard inclusive approach. All relevant symptoms were counted towards the diagnosis of depression without attempting to establish whether they should be attributed to depression or to cancer. This is the most reliable method and does not significantly overestimate depression in the medically ill patient. To minimize the misdiagnosis of major depression in patients who might have been more properly diagnosed with an adjustment disorder, major depression was only diagnosed if the patient described relevant symptoms of at least 4 weeks duration. If they reported symptoms between 2 weeks which is considered minimum duration required for a diagnosis of major depression.

RESULTS

Results of the study is presented in 2 main parts, Part I is a descriptive statistics about the sociodemographic characteristics of the subjects. It answered the first research question "what is the depression level among cancer patients at a selected oncology unit?" The descriptive demographic characteristics of the studied subjects showed that the higher percentage were 50 years old and more (66 %) among which married females 76 % and near to 15% were widowed. More than half (56 %) of the participants were housewives, and the same percentage (56%) was illiterates and about (57%) were having income less than 1,200 LE, with nearly half of them have their income ranged from 1200 to 2000 LE.

Regarding the duration of being diagnosed as having cancer, nearly half (49%) of the study subjects were diagnosed with cancer for less than 6 months and the other

half (43%) were diagnosed less than one year. While the most common cancer treatment used among the study subjects was chemotherapy alone (71%) without any combination.

Part II, is about the inferential statistics and it discusses the association between depression level and socio-demographic characteristics of the studied subjects. This part of the works answer the second research question, what is the relationship between depression level and sociodemographic characteristics of cancer patients?

Chi-square shows a statistical significant association between the level of depression and some of the demographic characteristics of the studied subjects (Age group, Gender, Marital status, Education level, Occupation and income corresponding to 24.080, 10.240, 140.880, 92.500, 61.920, 48.02, respectively at $p < 0.05$).

The results also shows a significant statistical association (Chi-Square) between the level of depression and medical data of the study subjects such as, duration of illness, site of cancer, and type of treatment used which is

Part I: Frequency distribution of the study subjects socio-demographic characteristics.

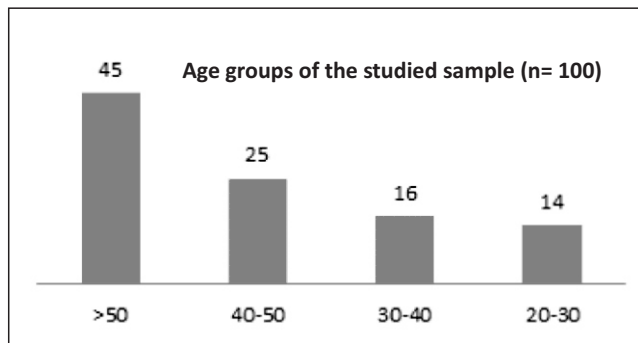


Figure 1: Age group distribution of the studied subjects (n=100)

Figure 1 showed that, the highest age group of the studied sample was higher than 50 years old.

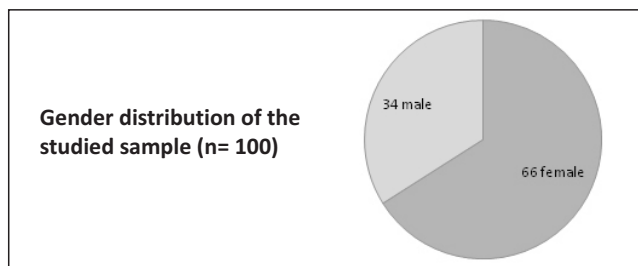


Figure 2: Gender distribution of the studied subjects (n=100)

Figure 2 showed that, more than two thirds (66%) of the studied group were females.

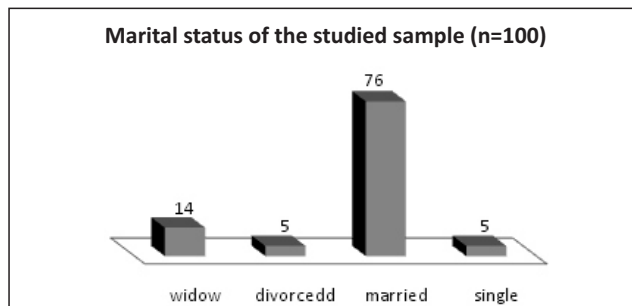


Figure 3: Distribution of marital status of the studied subjects (n=100)

Figure 3 showed that, three quarters (76%) of the studied subjects were married and near to 15% were widows.

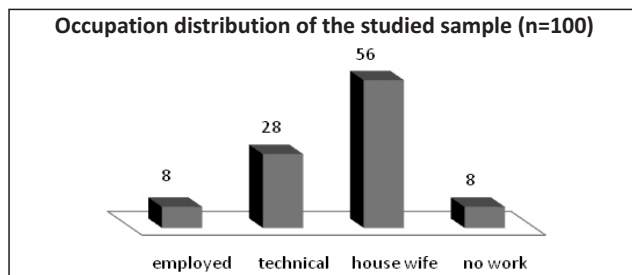


Figure 4: Occupation distribution of the studied subjects (n=100)

Figure 4 showed that, more than half (56%) of the participants were housewives.

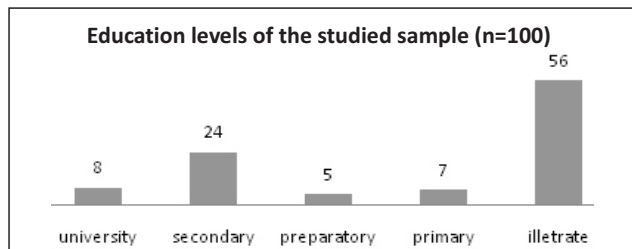


Figure 5: Distribution of the educational levels of the studied subjects (n=100)

Figure 5 showed that, more than half (56%) of the sample was illiterates.

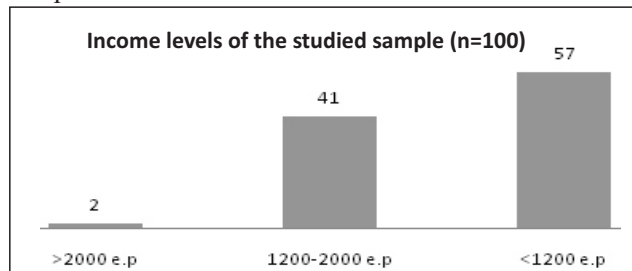


Figure 6: Income levels of the studied subjects (n=100)

Figure 6 showed that, more than half of the subjects (57%) were having income less than 1,200 LE, and nearly half of them have their income ranged from 1200 to 2000 LE.

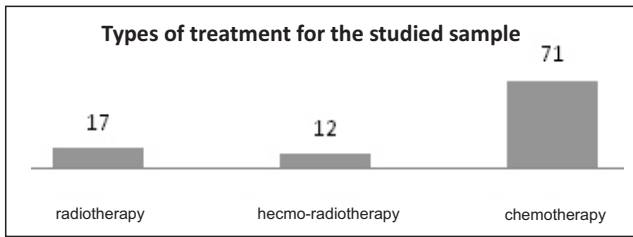


Figure 7: Distribution of the type of cancer treatment of the study subjects (n=100)

Figure 7 revealed that, regarding to type of treatment nearly three quarters (71%) were having chemotherapy only.

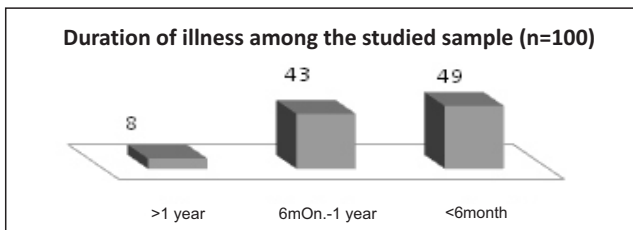


Figure 8: Distribution of the duration of illness among the studied subjects (n=100)

Figure 8 showed that, nearly half (49%) of the study subjects were diagnosed with cancer for less than 6 months and the other half (43%) were diagnosed less than one year.

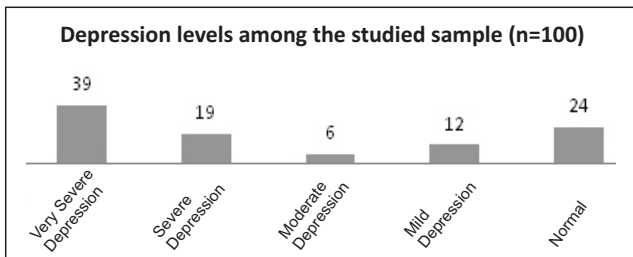


Figure 9: Distribution of the depression level among the study subjects (n=100)

Figure 9 showed that, more than two fifth (39%) of the studied sample was severely depressed, and near to one fifth (19%) was very depressed.

Part II: showed the association (chi-square) test between the level of depression and sociodemographic-characteristics.

Table 1 showed that there is significant association (Chi-square) between level of depression and demographic characteristics age groups, gender, marital status, education levels, occupation, income which were 24.080, 10.240, 140.880, 92.500, 61.920, 48.02 respectively at $p=0.000$. The table also showed that there is significant association (Chi-square) between level of depression and medical data,

duration of illness, site of cancer and type of treatment (29.420, 28.520, 64.220 respectively at $p \leq 0.05$).

Table 1: Chi-square test for the association of depression with demographic and medical characteristics (n=100)

	Depression level	
	Chi-square	Level of significance
Demographic characteristics:		
- Age group	24.080	0.000
- Gender	10.240	0.000
- Marital status	140.880	0.000
- Education level	92.500	0.000
- Occupation	61.920	0.000
- Income	48.02	0.000
Medical Data:		
- Duration of illness	29.420	0.000
- Site of Cancer	28.520	0.000
- Type of treatment	64.220	0.000

Discussion

The aim of the study was to assess the level of depression among cancer patients in a selected oncology unit, as cancer is prevailing worldwide with a lot of challenges that the patients might face after the diagnosis specially the psychosocial effect of cancer that is traumatic with a strong association between cancer depression.

The demographic characteristics of the study subjects showed that, nearly half of the sample were 50 years old and more. This is in congruence with the results of the National Population-Based Cancer Registry Program in Egypt that was done to calculate the incidence of Cancer in Egypt. They found that Cancer Rate is increasing by age and that starting from 45 years old (Ibrahim *et al.*, 2014). Moreover two third of the study group were females, this may be due to the fact that females are able to adhere more to treatment regimen and have more compliance than male. This is typical to many studies that examined gender differences with compliance to treatment and it was found that women show more compliance with treatment (Ahmed & Aslani, 2014; Lykarios, 2012).

More than half of the study subjects were having low income less than 1, 200 LE. This may be because the sample of the study were collected from a governmental hospital that provide free and cheap medical services for low income and people who are unable to afford the high expenses of private medical services.

All the study subjects were on chemotherapy, radiotherapy or both of them but the majority was on

chemotherapy only. This could be related that chemotherapy is the most commonly used adjuvant treatment especially before surgery. One more explanation was that breast cancer is regarded as one of the most common diagnoses in the study subject and its preferred treatment is chemotherapy. Chemotherapy is used in the treatment of all stages of breast cancer.

More than half of the study subjects were categorized as having severe and very severe depression according to the Hamilton depression scale. These results are in congruence with Nikbakhsh *et al.*, (2014), who found that in their study regarding the prevalence of depression among cancer patients, about 26.7 % of the total of 150 patients had symptoms of depression and that patients with Cancer has higher level of depression than those with other chronic condition. This may be due to the threat that a patient with cancer considered it as terminal illness.

Regarding the association between depression and other demographic characteristic it was found that there is a significant association (chi-square) between the level of depression and the patient's age, gender, level of education, marital status and occupation. This could be because age increase the duration of disease and with increased duration person is more likely to get desperate and depressed. These findings is in line with the study done to assess the demographic characteristics with depression among cancer patients and its result revealed that Younger age (<65 years), employment status, proximity to family, and multiple symptoms due to cancer or treatment were independent predictors of depression (Agarwal *et al.*, 2010).

In addition to the previous finding, a significant association was found between level of depression with the duration of having cancer, and the anatomical site affected with cancer, this come in congruence with Nikbakhsh *et al.*, (2014). This study found that breast and stomach cancer patients has higher level of depression which prove that site of cancer can affect the level of depression.

Regarding the type of treatment given, the higher percentage were on chemotherapy alone while the other were undergoing radiotherapy and combination of both treatments. The association between depression and type of treatment is congruent with, the study that who found that higher percentage of depression was among those who received chemotherapy alone (Nikbakhsh *et al.*, 2014; Vardy *et al.*, 2007).

CONCLUSION AND RECOMMENDATION

Continuous screening for depression and other psychological problems is recommended as a necessary approach for good cancer care. On the other hand, after the diagnosis of clinically important psychological disorders, proper treatment interventions must be performed to improve the quality of life in these patients.

Based on the findings of the study it is recommended that holistic nursing assessment should be done to cancer patients for their psychological wellbeing as the majority suffered from severe depression, with a well-developed nursing protocol in order to address their needs during the treatment process.

REFERENCES

- Adloff, K. (2009). A Pilot Study of A psychosocial Assessment Tool for young Adults with Cancer. Unpublished thesis Boston University, USA.
- Agarwal, M., Hamilton, J. B., Moore, C. E. & Crandell, J. L. (2010). Predictors of depression among older African American cancer patients. *Cancer nursing*, 33(2), pp156-163.
- Ahmed, R. & Aslani, P. (2014). Impact of gender on adherence to therapy. *Journal of the Malta College of Pharmacy Practice*, 20, pp 21-23.
- Bag, B. (2013). Psychosocial problems in cancer patients seen in the long term. *Current Approaches in Psychiatry*, 5(1), pp 109-126.
- Bahar, A. (2007). Psychosocial interventions for cancer patients. *Journal of Ataturk University School of Nursing*, 10(1), pp 105-111.
- Baxter, P. (2007). The CCARE model of clinical supervision: Bridging the theory–practice gap. *Nurse education in practice*, 7(2), pp 103-111.

- Canadian Association of Psychosocial Oncology (CAPO) and Enbridge Inc (2012). *The Emotional Facts of Life with Cancer: A Guide to Counselling and Support for Patients, Families and Friends*. 4th Edition. Canadian Association of Psychosocial Oncology, Canada.
- Canadian Nurses Association (2008). *Advanced nursing practice: A national framework*. Publisher: Ottawa, Canadian Nurses Association, Association des infirmières et infirmiers du Canada, 2002.
- Fallowfield, L., Ratcliffe, D., Jenkins, V. & Saul, J. (2001). Psychiatric morbidity and its recognition by doctors in patients with cancer. *British journal of cancer*, 84(8), pp 1011-10115.
- Ibrahim, A. S., Khaled, H. M., Mikhail, N. N., Baraka, H. & Kamel, H. (2014). Cancer incidence in Egypt: results of the national population-based cancer registry program. *Journal of cancer epidemiology*, 2014 (2014), Article ID 437971, pages 18.
- Keating, N. L., Nørredam, M., Landrum, M. B., Huskamp, H. A. & Meara, E. (2005). Physical and mental health status of older long-term cancer survivors. *Journal of the American Geriatrics Society*, 53(12), pp 2145-2152.
- Krebber, A. M. H., Buffart, L. M., Kleijn, G., Riepma, I. C., Bree, R., Leemans, C. R., Becker, A., Brug, J., Straten, A., Cuijpers, P. & Verdonck-de Leeuw, I. M. (2014). Prevalence of depression in cancer patients: a meta-analysis of diagnostic interviews and self-report instruments. *Psycho-Oncology*, 23(2), pp 121-130.
- Kufe, D. W., Pollock, R. E., Weichselbaum, R. R., Bast Jr, R. C., Gansier, T. S. & Holland, J. F. & Frei, E. (2003). 3rd edition. *Cancer medicine* 6. Hamilton (ON): BC Decker Inc., pp 221-228.
- Lyrakos, G. N., Spyropoulos, I., Goundella, A., Emmanouilidou, G. & Spinaris, B. (2012). P-689-Gender differences in compliance with the psychiatric therapy in patients and outpatients of a greek psychiatric ward one year study. *European Psychiatry*, 27(1), page 1.
- Nikbakhsh, N., Moudi, S., Abbasian, S. & Khafri, S. (2014). Prevalence of depression and anxiety among cancer patients. *Caspian Journal of Internal Medicine*, 5(3), pp 167-170.
- Pehlivan, T. & Küçük, L. (2016). Skills of Oncology Nurses in Diagnosing the Psychosocial Needs of the Patients. *International Journal of Caring Sciences*, 9(2), pp 284-295.
- Reinhard, S. C., Given, B., Petlick, N. H. & Bemis, A. (2008). *Supporting family caregivers in providing care. Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Rockville (MD), Agency for Healthcare Research and Quality, USA.
- Skoogh, J., Steineck, G., Johansson, B., Wilderang, U. & Stierner, U. (2013). Psychological needs when diagnosed with testicular cancer: findings from a population-based study with long-term follow-up. *Journal of the British Association of Urological Surgeons*, 111(8), pp 1287-1293.
- Vardy, J. L., Rourke, S., Pond, G. R., Galica, J., Park, A., Dhillon, H., Clarke, S. J. & Tannock, I. F. (2007). Cognitive function and fatigue in cancer patients after chemotherapy: A longitudinal cohort study in patients with colorectal cancer (CRC). *Journal of Clinical Oncology*, 25(90180), pp 9099-9099.
- Walker, M. S., Ristvedt, S. L. & Haughey, B. H. (2003). Patient care in multidisciplinary cancer clinics: Does attention to psychosocial needs predict patient satisfaction? *Psycho-Oncology*, 12(3), pp 291-300.
- World Health Organization (2014). *Health Statistics and Information Systems: WHO Mortality Database*. Available at: who.int/healthinfo/mortality_data/en