UNIVERSITI PUTRA MALAYSIA

PREVALENCE AND PREDICTORS OF DEPRESSION AND ANXIETY AMONG ONCOLOGY PATIENTS RECEIVING CHEMOTHERAPY IN PUBLIC HOSPITALS IN PENINSULAR MALAYSIA

MAMTA VESUDAVE A/P REMESH KUMAR

FPSK(M) 2018 27
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By

MAMTA VESUDAVE A/P REMESH KUMAR

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Master of Science

March 2018
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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Master of Science

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By

MAMTA VESUDAVE A/P REMESH KUMAR

March 2018

Chairman: Professor Sherina Mohd Sidik, PhD
Faculty: Medicine and Health Sciences

Background: The number of cancer cases in Malaysia has increased from 2008 with 32,000 cases to 37,000 new cases in 2012. Cancer patients undergoing chemotherapy experienced high level of depression and anxiety.

Objectives: To determine the prevalence and predictors of depression and anxiety among oncology patients receiving chemotherapy in public hospitals in Peninsular Malaysia.

Methodology: A cross-sectional study was conducted in public hospitals in Peninsular Malaysia. All (N=1356) cancer patients who were Malaysian citizens undergoing chemotherapy were included in this study. The data were collected using self-administered questionnaires. Data were analysed using the Statistical Package for Social Sciences Software (version 22.0). Descriptive statistics was conducted to obtain frequency and percentage of variables. Inferential analysis was done by using chi square or Fisher’s exact test to determine the association between variables at level of significance, p<0.05. Simple logistic regression was used to determine the crude odd ratio and variables with p value <0.25 were entered into the multivariate logistic regression model to determine significant predictors for depression and anxiety. The best predictor was based on adjusted odds ratio.
Results: Out of 1356 respondents, all respondents participated in this study. The prevalence of depression was 34.0%. The prevalence of anxiety was 54.8%. The best predictor for depression and anxiety were level of social support.

Conclusion: This present study’s finding indicates that the cancer care services should improve in management and intervention on depression and anxiety.
Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

PREVALENS DAN PERAMAL KEMURUNGAN DAN KEBIMBANGAN DI KALANGAN PESAKIT ONKOLOGI MENERIMA KEMOTERAPI DI HOSPITAL AWAM DI SEMENANJUNG MALAYSIA

Oleh

MAMTA VESUDAVE A/P REMESH KUMAR

Mac 2018

Pengerusi: Professor Sherina Mohd Sidik, PhD
Fakulti: Perubatan dan Sains Kesihatan

Latar Belakang: Jumlah kes kanser di Malaysia meningkat daripada tahun 2008 dengan 32,000 kes kepada 37,000 kes baru pada tahun 2012. Pesakit kanser menjalani kemoterapi mengalami tahap kemurungan dan kebimbangan yang tinggi.

Objektif: Menentukan prevalens dan peramal kemurungan dan kebimbangan di kalangan pesakit onkologi menerima kemoterapi di hospital awam di Semenanjung Malaysia.

Metodologi: Satu kajian keratan rentastelahdijalankan di hospital awam, Semenanjung Malaysia. Semua (N=1356) pesakit kanser yang merupakan warganegara Malaysia yang menjalani kemoterapi diambil untuk menyertai kajian ini. Data telah dikumpul dengan menggunakan soal selidik yang dijawab sendiri. Data telah dianalisis dengan menggunakan Statistical Package for Social Sciences Software (versi 22.0). Statistik deskriptif telah dijalankan untuk mendapatkan kekerapan dan peratusan pembolehubah. Analisis inferensi dilakukan dengan menggunakan kah kuasa dua atau Fisher’s exact test untuk menentukan hubungan antara pembolehubah pada tahap signifikan, p<0.05. Pembolehubah dengan p-value kurang daripada
0.25 telah dipilih untuk analisis regresi logistik multivariate bagi menentukan peramal kemurungan dan kebimbangan. Ramalan terbaik adalah berdasarkan nisbah odds diselaraskan.

Keputusan: Daripada 1356 responden, semua responden menyertai kajian ini. Prevalens kemurungan adalah 34.0%. Prevalens kebimbangan adalah 54.8%. Peramal yang terbaik untuk kemurungan dan kebimbangan adalah tahap sokongan sosial.

Kesimpulan: Penemuan kajian ini menunjukkan bahawa perkhidmatan penjagaan kanser perlu ditingkatkan dalam pengurusan dan intervensi pada kemurungan dan kebimbangan.
ACKNOWLEDGEMENTS

I would like to express my upmost gratitude to my supervisor, Professor Dr. Sherina Mohd Sidik for her great support, assistance, guidance and motivation throughout this study, my co-supervisors, Professor Dr. Lekhraj Rampal and Dr Siti Irma Fadhilah, for their encouragement, advice and assistance and my examiners Dr Huda binti Zainuddin, Dr Firdaus binti Mamat and Y. Bhg. Prof. Dr Khairani Omar. I would also like to specially thank Dr Ummavathy for her precious time in helping me complete my project.

I extend my sincere gratitude to all the Government Hospitals Director, Head of Pharmacy Department and Pharmacist in charge of Oncology Departments who have contributed directly or indirectly to this project. I also thank all the authors for their permission to use their questionnaires in this study and also my working colleagues (Hospital Sultanah Hajjah Kalsom) for their understanding and kindness.

A special thanks to my friend Vidthya Sivaperumal, Suhashinee, classmates and Universiti Putra Malaysia (UPM) staffs for their unlimited help and kindness.

Last but not least, I would like to thank my husband and my daughter (Thanabalan Sengoda, Isha Thanabalan), parents (Mr. Remesh Kumar and Madam Rita Kumari), my in laws (Mr Sengoda and Madam Parumai), siblings (Levenya Vasdave, Tharvik Vasdave, Haresh Vasdave) for all their moral support, motivation, patience and understanding throughout this challenging period.
I certify that a Thesis Examination Committee has met on 14 March 2018 to conduct the final examination of Mamta Vesudave a/p Remesh Kumar on her thesis entitled "Prevalence and Predictors of Depression and Anxiety among Oncology Patients Receiving Chemotherapy in Public Hospitals in Peninsular Malaysia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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<td>CDR</td>
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<td>MDD</td>
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<td>Multidimensional Scale of Perceived Social Support</td>
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<td>NCI</td>
<td>National Cancer Institute</td>
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<td>NHMS IV</td>
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<td>NMRR</td>
<td>National Medical Research Register</td>
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CHAPTER 1

INTRODUCTION

This chapter provides an overview on the background of cancer, depression and anxiety. It clearly states the significance of this study, study objectives and research hypotheses conducted among chemotherapy patients.

1.1 Background

The National Cancer Council Malaysia stated that the theme for 2016 is “We Can, I Can” which mainly focuses on taking a proactive approach in the fight against cancer (National Cancer Council Malaysia, 2016). Cancer is a global problem not specific to any country (National Cancer Council Malaysia, 2016). Cancer occurs when our cells begin to reproduce in an uncontrollable manner (World Health Organization (WHO), 2012). Once cancer has manifested, it eventually spreads to other parts of the body (WHO, 2012). The consequences of cancer is various with the most severe being death (WHO, 2012). There were 14.1 million new cases of cancer, 8.2 million cancer deaths, 32.6 million people living with cancer within five years of diagnosis (Ferlay et al., 2015). In term of burden of disease there were 14.9 million cancer cases, 8.2 million deaths, and 196.3 million disability-adjusted life-years (DALYs) (Fitzmaurice, Naghavi & Murray, 2015). Factors such as unhealthy diet and physical inactivity, contributes to increase in number of new cancer cases up to 70% in the next 20 years. Men are greatly affected by lung, prostate, colorectal, stomach and liver cancer while in women, the common cancers are breast, colorectal, lung, cervix and stomach cancer (WHO, 2012). In Malaysia, cancer has been identified as among the top five causes of death (Ministry of Health Malaysia (MOH), 2013). The number of cancer cases in Malaysia has increased from 2008 with 32, 000 cases to 37,000 new cases in 2012. In year 2014, cancer death was higher in male 11,200 death compare to female 10,300 deaths (WHO, 2014).

Cancer patients undergoing chemotherapy experienced high level of depression and anxiety (Saniah & Zainal, 2010). Cancer patients have depression and anxiety due to many reasons such as reaction to cancer diagnosis, symptoms associated with cancer and worrying about the progression of cancer. Besides that, the treatment for cancer patients such as radiotherapy and chemotherapy also contributes to anxiety and depression (Zhang, Yin, You, & Dong, 2007).
Depression is a state of mental disorder and the usual signs of depression are tiredness, loss of appetite, depressed mood and followed by sadness (WHO, 2012). Clinical depression is a serious illness as it can cause patients to feel distressed and it is harder for a patient to function as well as follow treatment plans. Individuals who suffer from depression even prior to diagnosis of cancer are more likely to have suicidal thoughts (American Cancer Society, 2015). Depression is common not only among cancer patients but also among an immediate family member of those coping with cancer (Khamechian, Alizargar, & Mazoochi, 2013).

Anxiety is defined as a feeling of nervous and worried (American Psychiatric Association (APA), 2013). In Malaysia, the prevalence of anxiety among breast cancer patient undergoing chemotherapy was 24.1% (Saniah & Zainal, 2010). Meanwhile, in China, the prevalence of anxiety in cancer patients was 32% - 40% (Li, Xu, Bao, & Tang, 2007). While in most cancer cases patients undergo high levels of anxiety and depression which may prolong for weeks or months if left untreated. Eventually leading to poor compliance to treatment; prolonged recovery time and impaired quality of life (Jadoon, Munir, Shahzad, & Choudhry, 2010).

1.2 Problem Statement

In the year 2012, cancer related deaths were reported to be 8.2 million deaths (Ferlay et al., 2015). This is alarmingly higher compared to 7.6 million deaths in the year 2008 (Ferlay et al., 2010).

Facing the diagnosis of cancer itself can be an extremely stressful and emotionally upsetting experience. Approximately 40 million adults in the United States are affected with anxiety between ages of 18 and older (Anxiety and Depression Association of America, 2017). A study was conducted among 1217 cancer patients in China to determine the level of depression and anxiety. The result showed that the prevalence of depression was 66.72% and prevalence of anxiety was 6.49% (Hong, & Tian, 2014). In another study done on prevalence and correlates of anxiety and depression among cancer patients in the University of Gondar Comprehensive Specialized Hospital, Northwest Ethiopia among 77 participants showed that the prevalence of depression was 58.44% and prevalence of anxiety was 51% (Berihun, Haile, Abawa, Mulatie, & Shimeka, 2017).

Cancer is also an alarming health issue in Malaysia, as it is one of the five major causes of deaths (MOH, 2013). The annual incidence of cancer is an estimated 30,000 cases, making it an important public health concern. In Peninsular Malaysia a total of 18,219 patients were diagnosed with
The prevalence of anxiety and depression among the breast cancer patients in Malaysia were 31.7% and 22.0% respectively (Hassan et al., 2015). In a study done in Hospital Kuala Lumpur among 111 cancer patients undergoing chemotherapy showed that 24.3% had high level of depression (Yusof, Zakaria, Hashim, & Dasiman, 2016).

Cancer patients receiving chemotherapy need information about their disease and treatment. This will prevent from serious complications. In order for self management to be effective, cancer patients are required to know the side effects they are likely to experience; they also need precise instruction on how to manage it (Periasamy et al., 2017). Pharmacist play a role in increasing chemotherapy-related knowledge, improving patients’ positive emotions, dealing with chemotherapy adverse reactions, and improving the quality of life of patients (Wang, Wu, & Xu, 2015).

To our understanding there is lacking information regarding the prevalence and predictors of depression and anxiety among oncology patients undergoing chemotherapy. Several studies have been conducted on depression and anxiety among cancer patients in Malaysia focusing specifically on certain types of cancer and study locations (Hassan et al., 2015; Saniah & Zainal, 2010; Tee et al., 2013; Zainal, Hui, Hang, & Bustam, 2007).

The researcher therefore intends to investigate the prevalence and predictors of depression and anxiety among oncology patients receiving chemotherapy in public hospitals in Peninsular Malaysia.
1.3 Significance of Study

This study provides information on prevalence and predictors of depression and anxiety among chemotherapy patients in Peninsular Malaysia. Other than that, this study enhances our understanding of the relationship between chemotherapy and how it is affecting depression and anxiety. The outcome of this study benefits the pharmacists to counsel oncology patients accordingly and provide proper information regarding disease, treatment and factor associated with depression and anxiety. Researchers or staffs in clinical setting can use the outcome of this research in preparation of intervention programs for cancer patients with depression and anxiety.

1.4 Objectives

1.4.1 General Objective

To determine the prevalence and predictors of depression and anxiety among oncology patients receiving chemotherapy in public hospitals in Peninsular Malaysia.

1.4.2 Specific Objectives

I. To determine the social-demographic characteristics (age, gender, ethnicity, religion, marital status, family member living together, education level) and severity of cancer (stage of cancer, number of chemotherapy cycle, family history of cancer, pain due to chemotherapy, depressed due to cancer, treating with any anti-depressant, worried of the adverse effect due to cancer treatment and joined cancer support society) among oncology patients receiving chemotherapy.

II. To determine the level of social support and level of hopelessness among oncology patients receiving chemotherapy.

III. To determine the prevalence of depression and anxiety among oncology patients receiving chemotherapy.
IV. To determine the association between the social-demographic characteristics, severity of cancer, level of social support and level of hopelessness with depression among oncology patients receiving chemotherapy.

V. To determine the association between the social-demographic characteristics, severity of cancer, level of social support and level of hopelessness with anxiety among oncology patients receiving chemotherapy.

VI. To determine the predictors of depression and anxiety among oncology patients receiving chemotherapy.

1.5 Research Hypotheses

I. The prevalence of depression and anxiety among oncology patients receiving chemotherapy is high.

II. There is a significant association between depression and social-demographic characteristics, severity of cancer, level of social support and level of hopelessness among oncology patients receiving chemotherapy.

III. There is a significant association between anxiety and social-demographic characteristics, severity of cancer, level of social support and level of hopelessness among oncology patients receiving chemotherapy.
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