

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF ITEMS FOR
COMPREHENSIVE ORAL CARE
FOR PAEDIATRIC CANCER
PATIENT KNOWLEDGE
ASSESSMENT TOOL (COCPCP)
FOR USAGE AMONG
HEALTHCARE PROVIDERS**

NURNABIHA BINTI MOHD JABID

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ABSTRACT

Cancer, often known as tumour, refers to the abnormal cells growth or unregulated cells growth. According to the World Health Organization (WHO), 400,000 children and adolescents aged 0-19 develop cancer every year. The primary treatments for cancer include surgery, chemotherapy, and radiotherapy. Children undergoing cancer treatment are particularly vulnerable to dental issues such as mucositis and oral infections (American Academy of Pediatric Dentistry, 2018). Proper oral care is crucial for these patients as it can help prevent complications related to treatment, maintain the continuity of cancer therapy, reduce the risk of infections, and improve their overall quality of life. However, the lack of standardized guidelines and inconsistent management of oral care for paediatric cancer patients hinder effective treatment and care delivery. Comprehensive oral care for them should encompass pre-, intra-, and post-oncology treatment phases. Achieving this holistic approach necessitates healthcare providers' shared understanding of knowledge, attitudes, and perceptions. Developing a comprehensive guideline requires evaluating healthcare providers' knowledge and comprehension in managing oral care for these patients. A questionnaire survey proves to be an effective evaluation method. However, there is currently no validated questionnaire available for assessing healthcare providers' knowledge, attitudes, and perceptions managing oral care for children with cancer. Therefore, this study aims to develop items for the Comprehensive Oral Care for Paediatric Cancer Patients (COCPCP) assessment tool with the objective of determining optimal comprehensive dental care and treatment protocols for paediatric cancer patients. Overall, this study consisted of three phases. The first phase involved a meta-review of current guidelines on comprehensive oral care in paediatric cancer patients. In the second phase, items for the COCPCP assessment tools were identified through two stages. The initial step consisted of scoping reviews on oral care for paediatric cancer patients across the pre-, intra-, and post-oncology phases. The second stage involved conducting focus group discussions (FGD), which were held online via Zoom and recorded for accuracy. The third and final phase of the study focused on validating items for the COCPCP assessment tools. This validation process utilized a Delphi study design through a series of online questionnaires. Experts and panellists involved in second and third phases included paediatric dentists, paediatric oncologists, dental officers, and medical officers from both general and private hospitals and institutions. Result of search from the first phase yielded six available guidelines that met the criteria and were included in this review. These guidelines were assessed for quality using Appraisal of Guidelines for Research & Evaluation II (AGREE II) instruments, resulting in four guidelines classified as high quality with a score of > 70%. Each high- quality guideline focused on different areas. In the second phase, a compilation of items relevant to oral care in patients undergoing chemotherapy was generated. Themes and sub-themes were identified for dental referral, assessment, management, and follow-up of these patients. This phase resulted in a list of 44 items across 10 domains. After the third phase of the study, the final validated list comprised 33 items organized into 10 domains. All items achieved a minimum Content Validity Index (CVI) value of at least 0.78 (Lynn, 1985).

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CHAPTER 1

INTRODUCTION

1.1 Research Background

A tumour, more commonly known as cancer, can be diagnosed at any age. Although childhood cancer is less common than adult cancer, it remains a significant concern due to its profound impact on affected children and their families. According to World Health Organization (WHO), approximately 400,000 children and adolescents aged 0-19 develop cancer every year. In Malaysia, from year 2012 to 2016, there were 3,829 cases of childhood cancer in children aged 0 to 18, with 2,131 (55.7%) males and 1,698 (44.3%) females (Malaysia National Cancer Registry [MNCR], 2019). They also reveal the most common cancers in children under the age of 14 were leukaemia (41.4 % in males, 37.9% in females), followed by brain, nervous system (14.6 % in males, 15.8% in females), and lymphoma (13.4 % in males, 7.7 percent in females).

The Malaysian Society of Paediatric Haematology and Oncology (MASPHO) reports that with advancements in chemotherapy and radiotherapy, 70% of children diagnosed with cancer can be cured. However based on study by Lam C.G. et al. (2019), there is difference in five years survival rate for children with cancer between high-income and low-middle income countries. In high-income countries, where comprehensive healthcare services are typically available, over 80% of children with cancer are cured. In contrast, in low- to middle-income countries, the cure rate is estimated to be only around 15-45%.

Cancer treatment typically revolves around three main approaches: surgery, chemotherapy, and radiotherapy, which may be employed individually or in conjunction with each other. Chemotherapy is a type of cancer treatment where abnormal cells are targeted and eliminated using drugs. Elad, S. et al. (2015) note that chemotherapy is among the most effective modalities for treating various cancers, significantly improving survival rates. Chemotherapy drugs act systemically, affecting not only cancer cells but also high mitotic rate normal tissues such as the oral mucosa, gastrointestinal tract, and hematopoietic cells (Ribeiro, I. L. A. et al., 2017). In cases where intravenous administration is necessary, patients may require hospitalization. Furthermore, chemotherapy can be administered either in high doses over a short period