

PP 22

Perceived Barriers to the Use of Personal Protective Equipment in Handling Systemic Anti-Cancer Chemotherapy among Nurses at the National Cancer Institute, Sri Lanka

Senarath N.S.A.S.N.^{1#}, De Silva D.², Rathnayake R.W.M.W.K.³, Warnakulasuriya S.S.P.⁴,
Meegoda M.K.D.L.⁵, Jayasinghe S.S.⁶

¹Faculty of Graduate Studies, University of Sri Jayewardenepura, Sri Lanka

²Department of Pharmacology, Medical Research Institute, Sri Lanka

³National Cancer Institute, Sri Lanka

⁴Faculty of Nursing, University of Colombo, Sri Lanka

⁵Department of Nursing and Midwifery, Faculty of Allied Health Science, University of Sri Jayewardenepura, Sri Lanka

⁶Department of Pharmacology, Faculty of Medicine, University of Ruhuna, Sri Lanka

#Corresponding author: samanthi.nsas@gmail.com

Background: Systemic anti-cancer therapy (SACT) may adversely affect healthcare workers with chronic low-dose exposure. Nurses who work in cancer treatment units are at a higher risk of exposure. Personal Protective Equipment (PPE) provides key protection.

Objective: To assess the perceived barriers to the use of PPE in handling SACT among nurses

Methods: A descriptive cross-sectional study was conducted among randomly selected 250 nurses working at the National Cancer Institute in Sri Lanka. The barriers to the use of PPE in handling SACT were assessed by the validated Hazardous Drug Handling Questionnaire (HDHQ). Questionnaire on perceived barriers to the use of PPE met satisfactory reliability and validity requirements ($\alpha = 0.83$, KMO = 0.752, $\chi^2 = 2057.65$, and $p < 0.001$). Data were analyzed with descriptive and inferential statistics using SPSS version 25.0.

Results: The mean (\pm SD) age of the participants and working experience at the oncology unit were 35.93 (± 4.29) and 6.98 (± 3.1) years, respectively. The majority were females (81.0%) and educated up to Diploma level (73.6%). According to HDHQ, the majority reported perceived barriers, including not receiving training on the use of PPE (61.2%), being uncomfortable to wear (89.6%), and performing procedures (88.8%) with PPE, always not available (90.4%), unavailability of obtaining chemotherapy-designated PPE (94.8%), unavailability of policy to receive PPE (82.4%), high cost of PPE (84.8%), and feeling too hot with use of PPE (95.2%). However, the majority reported that PPE is necessary (97.2%), PPE is effective (93.6%), and there is sufficient time to use PPE (89.2%). The perceived barriers to the use of PPE were associated with gender ($p = 0.038$), experience in the oncology setting ($p = 0.029$), and patient count in the ward (0.001).

Conclusions: Commonly perceived barriers to the use of PPE in handling SACT were insufficient training, unavailability of chemotherapy-designed PPE, feeling too hot with the use of PPE, physical discomfort and difficulty in conducting nursing procedures, unavailability of policy to receive PPE and the high cost of PPE. Perceived barriers to the use of PPE were associated with gender, working experience, and patient count. The measures need to be taken to minimize the perceived barriers to the use of PPE in handling SACT.

Keywords: Anti-Cancer Chemotherapy (SACT), Barriers, Nurses, Systemic Personal Protective Equipment (PPE)