The Effect of The Evidence-based Practice Program For Nurses Who Care For Pediatric Stem Cell Transplant Patients on Oral Mucositis Diagnosis Status

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Aim: The study was aimed at investigating the effect of an evidence-based practice program held for nurses providing care for pediatric stem cell transplant patients on their skills to diagnose oral mucositis.

Method: This quasi-experimental, single-group study with a pre- and post-repeated measures design was carried out at the Bone Marrow Transplant Unit of Ege University Hospital between January 2017 and June 2017.

- ✓ Six patients who were admitted to the clinic and started chemotherapy were followed-up for a maximum of one month during their hospitalization to find out whether oral mucositis was diagnosed or not.
- ✓ During the intervention stage, the researcher provided nurses with training on the importance of the use of evidence-based research results in clinics, and evidence regarding oral mucositis. The Children's International Mucositis Evaluation Scale whose Turkish version's validity and reliability study was conducted by Yavuz (2012) and the Treatment-Specific Daily Mouth Care Protocol for Children Receiving Chemotherapy used by Yavuz for the management of oral mucositis in her study were made ready to use in the clinic. (Algorithm was printed in large font size and hung in patient rooms and nurse stations, and Oral Mucositis Diagnosis and Intervention Monitoring Forms were duplicated and put on the nurses' desk).
- ✓ After the training, the records of 6 patients who were admitted to the clinic and started chemotherapy were tracked for up to one month during their hospitalization to find out whether the diagnosis of oral mucositis was made.

Table 1. Comparison of Pre- and Post-Program Oral Mucositis Diagnosis Rates of Nurses (N = 360/300)

Diagnosis of Mucositis	Pre-Intervention		Post-Intervention		χ^2 / p	RRI (%95 CI)	Z / p
	N	%	N	%			
Performed	10	2.8	26	8.7	$\chi^2: 11.004$	3.12	Z: 3.128
Not performed	350	97.2	274	91.3	p: .001	(1.53-6.37)	p: .002

Table 2. Comparison of Pre- and Post-Program Oral Mucositis Diagnosis Rates of Nurses According to Daily Diagnosis Schedule

Daily Diagnosis Schedule (hour)	Before the program				After the program				χ^2 / p	RRI (%95 CI)	Z / p
	Performed		Not performed		Performed		Not performed				
	N	%	N	%	N	%	N	%			
Morning 08.00-16.00	6	3.3	174	96.7	16	10.7	134	89.3	7.071/.08	3.20 (1.28-7.97)	2.497/.13
Evening 16.00-08.00	4	2.2	176	97.8	10	6.7	140	93.3	3.978/.46	3.00 (0.96-9.37)	1.890/.59
χ^2	.411				1.516						
P	.521				.218						

Results: Of the nurses participating in the study, **83.3% (n: 10)** had a bachelor's degree and **66.7% (n: 8)** worked day and night alternately. The mean age of the participating nurses was **30.58 ± 4.21** (minimum: 25, maximum: 39). The participating nurses' mean length of service in profession and in the pediatric stem cell transplant unit was **6.75 ± 3.73** (minimum: 2, maximum: 12) and **4.08 ± 2.67** (min: 1 max: 10) respectively. The mean number of shifts per month was **7.17 ± 3.41** (Min: 0 Maximum: 11).

Among the reasons of not performing oral mucositis diagnosis were the absence of standard oral mucositis diagnosis parameters in the clinic (**88.9%**), intensive working environment (excessive workload) (**33.3%**) and lack of knowledge (**11.1%**).

Conclusion: The rate of oral mucositis diagnosis by nurses who provided care for pediatric stem cell transplantation patients which was **2.8%** before the evidence-based oral mucositis management program increased to **8.7%** after the program. The difference between the percentages of oral mucositis diagnosis performed by nurses before and after the program was **5.9%**, and the difference was considered significant ($\chi^2: 11.004, p<.01$). The rate of oral mucositis diagnosis performed by the nurses after the program was **3.12** times (**212%** increase) higher than the rate before the program. (**p <.01**).