



Research Article

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Constipation Problem in Nursing Students and Effectiveness of Interventions used by them for its Management

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Received Date: November 14, 2018**Published Date:** November 28, 2018

Abstract

Aim: The purpose of this cross-sectional study is to determine the prevalence rate of constipation in nursing students and the effectiveness of nursing interventions used by them to manage constipation in their own lives.

Material and Method: 232 students who agreed to participate in the study were included in the sample. In the study, the data were collected in November 2017 using the Constipation Evaluation Scale and a questionnaire prepared by reviewing the relevant literature.

Results: While 87.5% of the students stated that they had no constipation during the study, 77.6% stated that they experienced constipation before. The students, who stated that they did not have constipation at that time, consumed pulpy food and these foods were effective [$\chi^2 = 10.99$; $p = 0.001$]. The students who stated that they had no constipation at that time drank at least 2 liters of water a day and this was effective [$\chi^2 = 15.89$; $p < 0.001$].

Conclusion: As a result of this study, it was observed that in the management of the constipation, the consumption of pulpy food, water consumption of 2 liters per day and exercise were effective nursing interventions that can be applied to individuals.

Keywords: Work Motivation; Factors; Nurse

Introduction

Constipation is a condition in which an individual feels an abnormality in her or his bowel functions and also experiences less defecation and feels the symptoms of distress, strain, and swelling in the lower abdominal region [1].

The studies have reported that the prevalence of constipation varies between 2.6% and 30.7% [2-5]. In another study, it was reported that the prevalence of constipation was 37.2% for women and 10.2% for men. In the same study, it was stated that the prevalence of constipation increased with increasing age [6]. In a study conducted in Turkey, it was reported that the prevalence of constipation was 20% and 73% of individuals constituting this rate were women and 30% were 60 years old and over [7]. In another study which was conducted in 20 provinces in Turkey and included 52% of the country's population, the prevalence of constipation was found to be 8.3% [8].

Constipation is encountered as an important healthcare problem because it impairs quality of life, causes the loss of energy, increases healthcare expenditures, and is prevalent with other medical problems [9,10]. As required by nursing practices; nurses play an important role in identifying constipation, determining the factors causing constipation, and developing effective coping strategies [11]. A detailed history to be received by nurses while evaluating constipation will shed light on practices for the solution of constipation [12]. Nurses, who play an important role in both care and treatment, are expected to comprehend the importance of promoting health, develop appropriate health behaviors, and set an example to society with these behaviors that they apply in their own lives as from their student years [13-15]. As the health team members of the future; nursing students are primarily required to realize the presence of constipation in themselves and

find a solution [16]. In Turkey, there is a limited number of studies evaluating the prevalence of constipation in nursing students and no study evaluating the constipation experience of nursing students in their own lives and nursing interventions that they apply has been found. Therefore, this cross-sectional study was conducted to determine the prevalence of constipation in nursing students and the effectiveness of nursing interventions applied by them to manage constipation in their own lives.

Material and Method

The purpose of this cross-sectional study was to determine the prevalence of constipation in nursing students and the effectiveness of nursing interventions used by them to manage constipation in their own lives. The population of this study conducted at a university in the Black Sea region consisted of 350 students studying in the department of nursing. The first-year students were not included in the study because they had just been learning nursing interventions and nursing. 232 students who agreed to participate in the study were included in the sample of the study. The data in the study were collected using a questionnaire which was prepared by examining the relevant literature, and Constipation Evaluation Scale in November, 2017.

Questionnaire

This form involves 11 questions examining socio-demographic characteristics. In addition, the students were asked whether or not they used 12 nursing interventions, used in constipation management, in their own lives and whether or not the interventions used by them were effective.

Constipation Assestment Scale (CAS)

The Constipation Assestment Scale whose Turkish validity and reliability study was conducted by Demir Doğan and Aktuğ has 8 items and each item is scored between 0-2 points. Total score of the scale is obtained by summing the scores obtained from all items. The scores to be obtained from the scale vary between 0 [no constipation] –16 [presence of severe constipation] points and as the score increases, the severity of constipation increases. The Cronbach's Alpha value of the scale is 0.784 [17]. In this study, on the other and, the Cronbach's Alpha value of the scale was found as 0.861. After receiving necessary permissions in the study, the students who participated in the study were informed and their verbal consent was received. The data were statistically evaluated using percentage, mean, and standard deviation. The significance was evaluated using t test, chi-square test, and Pearson's correlation analysis.

Result

Age average of the students was 20.73 ± 1.50 years and 73.3% were female students. It was observed that a great majority of the participants were single (98.3%) and unemployed (96.1%). Among the students; 39.7% were the second-year students, 34.5% were the third-year students, and 25.9% were the fourth-year students. A great majority of the students (74.6%) stated that they stayed in a dormitory (Table 1).

It was observed that 90.1% of the students had no health problem and the students who had health problems suffered from

asthma, anemia, renal failure, epilepsy, allergy, scoliosis, arrhythmia, and gastritis. It was also determined that majority of the students did not use cigarettes (82.8%) and alcohol (89.7%) (Table 1). While 87.5% of the students stated that they had no constipation during the study, 77.6% stated that they experienced constipation before. The mean score obtained from the Constipation Assestment Scale was determined as 2.91 ± 3.18 (Table 1).

Table 1: Socio-Demographic Characteristics of the Students.

	Number	%
Age	20.73 ± 1.50	
Gender		
Female	170	73.3
Male	62	26.7
Marital Status		
Married	4	1.7
Single	228	98.3
Class		
2	92	39.7
3	80	34.5
4	60	25.9
Working Condition		
Employed	9	3.9
Unemployed	223	96.1
Presence of a Health Problem		
Yes*	23	9.9
No	209	90.1
Residence Place		
With family	10	4.3
In a dormitory	173	74.6
At home with friends	43	18.5
With a relative	2	0.9
At home alone	4	1.7
Smoking		
Yes	36	15.5
No	192	82.8
Quitted smoking	4	1.7
Use of Alcohol		
Regularly	11	4.7
Sometimes	12	5.2
Seldomly	208	89.7
Never		
Presence of Constipation at that Time		
Yes	29	12.5
No	203	87.5
Experience of Constipation Before		
Yes	180	77.6
No	52	22.4

(*Health problems: Asthma; anemia; renal failure; epilepsy; allergy; scoliosis; arrhythmia; gastritis)

It was observed that 90.1% of the students had no health problem and the students who had health problems suffered from asthma, anemia, renal failure, epilepsy, allergy, scoliosis, arrhythmia, and gastritis. It was also determined that majority of the students did not use cigarettes (82.8%) and alcohol (89.7%) (Table 1). While 87.5% of the students stated that they had no constipation during the study, 77.6% stated that they experienced constipation before. The mean score obtained from the Constipation Assessment Scale was determined as 2.91 ± 3.18 (Table 1).

Table 2 shows the interventions used by the students to prevent or manage their own constipation and to what extent they found these interventions effective. While 92.1% of the students stated that pulpy foods were effective in constipation management; 93.8%

stated that at least 2 liters of fluid consumption a day was effective. While 91.5% of the students stated that walking was an effective intervention; 83.8% stated that drinking warm water half an hour before breakfast was effective (Table 2). As a result of the statistical analysis, it was seen that the female students had significantly higher total scores of CAS than the male students ($t=3.38$; $p=0.001$). It was also seen that the students who stated that they had constipation at that time had significantly higher total scores of CAS ($t=8.51$; $p<0.0001$). The students who stated that they had no constipation at that time stated that they consumed pulpy foods and this was effective ($\chi^2 = 10.99$; $p = 0.001$). The students who stated that they had no constipation at that time expressed that they had at least 2 liters of water a day and this was effective ($\chi^2 = 15.89$; $p < 0.001$).

Table 2: Interventions used by the students for their own constipation experiences and effectiveness of these interventions.

Intervention Used	Effective		Ineffective		P
	%	n	%	n	
I abundantly consume pulpy foods (n=190)	92.1	175	7.9	15	0.001
I drink at least 2 liters of water a day (n=177)	93.8	166	6.2	11	<0.001
I take a walk (n=177)	91.5	162	8.5	15	0.026
I drink warm water half an hour before breakfast (n=74)	83.8	62	16.2	12	0.602
I designate a regular time for evacuation and have an defecation around the same time every day (n=76)	82.9	63	17.1	13	0.333
I drink milk (n=135)	77.8	105	22.2	30	0.166
I consume yoghurt (n=173)	80.3	139	19.7	34	0.124
I consume kefir (n=43)	74.4	32	25.6	11	0.454
I consume yoghurt with probiotic (n=44)	75.0	33	25.0	11	0.699
I consume apricot juice or dried apricots (n=172)	89.5	154	10.5	18	0.170
I drink Turkish coffee (n=160)	70.0	112	30.0	48	0.049
I massage the lower abdominal area (n=131)	91.6	120	8.4	11	0.528

Discussion

As the health team members of the future; nursing students are primarily required to realize the presence of constipation in themselves and find a solution [16]. Therefore, the study was conducted to determine the prevalence of constipation in nursing students and the effectiveness of nursing interventions used by them to manage constipation in their own lives. In the present study, 12.5% of the students stated that they had constipation during the study. On the other hand, 77.6% of the students stated that they experienced constipation before. Similarly, the mean score obtained from the Constipation Evaluation Scale was determined as 2.91 ± 3.18 . When examining the results of population-based studies in Turkey; it has been seen that the prevalence of constipation varies between 22-40% [18]. Thus, the result of the present study supports the results of previous studies. As a result of the statistical analysis, it was seen that the female students had significantly higher total scores of CES than the male students. In a similar study conducted on nursing students, it was reported that female students experienced the problem of constipation more than male students and they had a lower life quality regarding constipation [19]. The studies [6,12,20] and systematic reviews [2,3,5,21] have reported that there is a strong correlation between the female gender and constipation. Thus, the determination of a correlation

between the female gender and constipation in the present study can be assessed as an expected result. This result can be associated with hormonal changes of women, as well as behavioral factors and digestive disorders. In a study, the prevalence of constipation was reported to be 31.3% in intern nurses working in regular shifts and 61.2% in intern nurses working in irregular shifts. As a result of the statistical analysis, it was determined that irregular shifts, poor sleep and having a difficulty in falling asleep significantly posed a risk for functional constipation [22]. This shows that nursing students are at the risk of having constipation and they need to diagnose and evaluate constipation that they may have. As a matter of fact, in the present study, the students who stated that they had constipation at that time had significantly higher total scores of CES. This result showed that the students could evaluate their constipation. It is known that a diet containing sufficient fiber, appropriate fluid intake, exercise and regular defecation habits is effective on preventing constipation [23,24]. As a matter of fact, the studies have shown that fiber-rich nutrition reduces the frequency of constipation [23,24,25,26,27,28]. Similarly, in two studies conducted with students, it was similarly reported that students consuming high-fiber foods experienced constipation-related pain problems less [18,19]. In the present study, it was also seen that the students who stated that they had no constipation at the time of the study consumed pulpy foods. In addition, the students consuming

pulpy foods stated that the aforesaid nursing intervention was effective on preventing constipation [$p=0.001$]. Thus, it is thought that providing our patients suffering from constipation with a fiber-rich nutrition as a nursing intervention will be an effective intervention. It was determined that the students who stated that they had no constipation during the study drank at least 2 liters of water a day. The students consuming 2 liters of water a day stated that it was effective on preventing constipation [$p < 0.001$]. In their study, Annells & Koch reported that an increase in fluid intake did not cause a distinct change in defecation [29]. In other studies, it was similarly seen that individuals adopting regular exercise habits and increasing fluid intake and fiber consumption experienced constipation less frequently [25,30,31].

Conclusion

As a consequence, this study showed that consumption of pulpy nutrients and 2 liters of water a day and exercise were an effective nursing intervention for the management of constipation.

Acknowledgement

None.

Conflict of Interest

No Conflict of Interest.

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