

# Lifestyle Modification To Reduce Constipation Among Adult Females At Alahsa City

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**Abstract**— Constipation is a common problem that means going to the toilet less often than usual to empty the bowels, or passing hard or painful stool. It can be caused by a few fibers, or fluids, or as a side-effect of certain medications. It is demarcated as three or fewer bowel movements per week. The research design of the study was a quasi-experimental research design. Setting: The study was conducted at Alahsa city. Subjects: the subjects of this study comprised 110 adult women who suffered from constipation. Tools for data collection: "structured questionnaire sheet". It includes items related to sociol-demographic characteristics as age, education, and residence. Also, it includes questions related to symptoms, causes, and lifestyle of the participants. Results revealed that the mean age of the sample was 49 years old. Participants had different health-related problems that cause constipation such as chronic diseases (50.9%) which must regular taking of medications (69.0%), colon problems (57.3%), thyroid disorders (8.2%), previous surgery (33.6%), stressors (69.1%) and anxiety (61.8%). Sample changes their lifestyle, do exercises (58.2%) and increased their daily intake of vegetables (98.2%), fruits (99.1%) and water (5.9 cups/day) to reduce constipation. Study recommended that quality of intestinal health affected by many factors such as healthy diet, exercise, and healthy bowel habits. Changes in lifestyle and increased the daily intake of vegetables, fruits and water are very important factors that help to reduce constipation.

**Index Terms**— Colonic and anorectal motility disorders, Chronic Constipation in Adults, Effectiveness of laxatives in adults, Functional bowel disorders, Gastroenterology, Managing constipation in adults, Quality of life in the elderly.

## 1 INTRODUCTION

Constipation is a chronic health problem in many patients all over the world [1]. It is unnecessary to have a bowel movement every day. As long as stools are soft and easy to pass, every two to three days is acceptable [2]. Constipation is infrequent and difficult evacuation of the bowels that is "reduced frequency of bowel movements than is normal for the person concerned, which may lead to pain and discomfort [3]. It is pass of three or fewer bowel movements per week [4] and more prevalent in women than in men [5] and in children than in adults [6]. Constipation has many risk factors, increasing with the growth of advancement and industrialization [7].

Constipation is a symptom, not a disease so, effective treatment of constipation may must first determining the cause. In a Swedish population study, it was found that the need to take laxatives was the most common idea of constipation. In the same study, women were twice as likely as men (21%) to regard infrequent bowel motion, where equal magnitudes of men and women regarded hard stools (43%), straining during bowel movements (24%), and pain when passing a motion (23%) [1]. Constipation is experienced often in 3.6% to 8.7% of women, and the prevalence increases with age [8]. The prevalence of constipation is much higher in people with neurological problems and it is very common in those who take opioids especially those with a life-threatening illness [9]. Constipation not only affects the quality of life of the sufferer [10] but also on drug-related costs to people and health services.

Chronic constipation includes primary and secondary types. Functional constipation divided into normal transit, slow transit, or outlet constipation. The causes of secondary chronic constipation include medication use and medical conditions such as hypothyroidism or irritable bowel syndrome [4]. However the symptoms associated with constipation are often irregular

and mild, they may be chronic, difficult to treat, and devastating [11]. The causes may be identified by a systematic history and clinical examination [12].

The risk factors for constipation include being a female, old age, sedentariness, low caloric intake, low-fiber diet, low income, low educational level, and taking a large number of medications [13],[14],[15],[16],[17], [18]. The evaluation of constipation includes a history and physical examination to rule out warning signs and symptoms. These include evidence of bleeding, weight loss, iron deficiency anemia, acute constipation in elderly patients, and rectal prolapse [4] So, referral for more evaluation and diagnosis may be necessary [4].

Nonpharmacologic treatments for chronic constipation include lifestyle measures, such as increased intake of fluid and fiber, fiber supplements and laxatives, biofeedback, and surgery [19]. So adequate fiber recommend including foods with a high fiber content [20]. Increasing physical activity can also promote colonic motility, so an active lifestyle can be encouraged. As constipation may be worsened by stress and depression, these factors should be addressed if they are present [21].

## 2 MATERIAL AND METHODS

### 2.1 Aims Of The Study

- To assess the risk factors for constipation.
- To evaluate the effect of lifestyle modifications on reducing constipation associated symptoms.

### 2.2 Research Design

The design of this study is a quasi-experimental pre-test post-test research design done to assess the risk factors for constipation and to evaluate the effect of lifestyle modifications on reducing constipation associated symptoms.

### 3 RESULTS

#### 2.3 Setting

The study was conducted at primary health care center and the general hospital of Alahsa city.

#### 2.4 Subjects

The population of this study consisted of a convenience sample of 110 adult women who suffered from constipation.

#### 2.5 Tools For Data Collection

one tool was used in the study called " structured questionnaire sheet ", It was developed by the researcher based on the review of related nursing and medical literature to assess the possible risk factors for constipation and to evaluate the effect of lifestyle modifications on reducing constipation associated symptoms, It consisted of two parts:

1. Part I: It included items related to socio-demographic characteristics of the studied women as age, education, occupation, and income.
2. Part II: Include questions related to symptoms, risk factors, and lifestyle of the clients.

#### 2.6 Methods Of Study

Before starting any step in the study, official letters were issued from the dean of the faculty of Medical Collage to the directors of the hospital and the PHC where the study was intended to be done. The letters explained the aim of the study and solicited permission to carry it out. Permission to conduct the study was obtained from the responsible authorities after explanation its purpose. Also, confidentiality of the information was assured by the researcher.

#### 2.7 Statistical Analysis

After data collection, they were coded and transformed into a specially designed format suitable for computer feeding. All entered data were verified for any errors. Data were analyzed using statistical package for social sciences ( SPSS version 20 ) windows and were presented in tables. Chi-square analyses were performed. Also, mean and standard deviations were computed to evaluate the precipitating factors. An alpha level of 0.05 was used to assess significant differences.

TABLE 1

DISTRIBUTION OF STUDIED SAMPLE ACCORDING TO SOCIO-DEMOGRAPHIC CHARACTERISTICS.

Variables		Studied sample N= 110	
		No	%
Age:		49.04± 16.7	
Marital status:	Married	48	43.6
	Single	24	21.8
	Widowed	26	23.7
	divorced	12	10.9
Educational level:	Illiterate	9	8.2
	Read and write	10	9.1
	Primary	27	24.5
	Secondary	13	11.8
	average &Above-average education	16	14.6
	University education	35	31.8
Working condition:	Work	46	41.8
	Not work	64	85.2
Income:	Low	22	20.0
	Moderate	59	53.6
	High	29	26.4

Table (1) Shows that the mean age of the studied sample was 49.04 years old. As regard to marital status, about half of the sample (43.6) were married. Also, the table shows that about two-thirds of the sample (31.8%) had a university education. In addition, there was an 85.2% of them were not working and 53.6% had a moderate income.

TABLE 2

DISTRIBUTION OF STUDIED SAMPLE ACCORDING TO THEIR HEALTH RELATED PROBLEMS FOR CONSTIPATION.

Variable	No	%
Chronic disease:	56	50.9
Colon problem	63	57.3
Thyroid problem	9	8.2
Previous surgery	37	33.6
Medications	66	69.0
Stressors	76	69.1
Anxiety	68	61.8

Table (2) shows that, the studied sample had different health-related problems that can cause constipation such as chronic diseases(50.9%) that must taking of medications(69.0%), colon problems(57.3%), thyroid problems(8.2%), previous surgery(33.6%) and stressors(69.1%) and anxiety(61.8%).

**TABLE 3**  
DISTRIBUTION OF STUDIED SAMPLE ACCORDING TO PRE AND POST PRESENCE OF SYMPTOMS.

Symptoms	Pre	Post	P - value
Hard stool:	104 (94.5)	7(6.4)	P< 0.001*
Flatulence	48(76.4)	4(3.6)	
Distension	92(83.6)	5(4.5)	
Headache	81(73.6)	6(5.5)	P< 0.001*
Pain during defecation	79(71.8)	4(3.6)	
Blood with stool	36(32.7)	1(0.9)	P< 0.001*

Table (3) illustrated that, the sample was suffered from passing of hard stool(94.5%), flatulence(76.4%), distension(83.6%), and pain during defecation(71.8%) with statistically significant difference between pre and post presence of the symptoms associated with constipation( $p < 0.001^*$ ).

**TABLE 4**  
DISTRIBUTION OF STUDIED SAMPLE ACCORDING TO PRE AND POST DAILY DIETARY HABITS.

Dietary habits	Pre	Post	P - value
Drinking water	2.8 ± 1.2	5.9 ± 1.5	P< 0.001*
Drinking tea	60.9	12.7	P< 0.001*
Drinking coffee	47.3	24.5	P< 0.001*
Vegetables	18.2	98.2	P< 0.001*
Fruits	20.0	99.1	P< 0.001*

Table (4) revealed that there was a statistically significant difference between pre and post dietary habits for the sample ( $P < 0.001^*$ ). The sample changes their lifestyle and increased the daily intake of vegetables(98.2%), fruits(99.1%) and water(5.9 cups/day).

**FIGURE 1**  
PRE AND POST CHANGES IN PRACTICING OF EXERCISES FOR STUDIED SAMPLE.

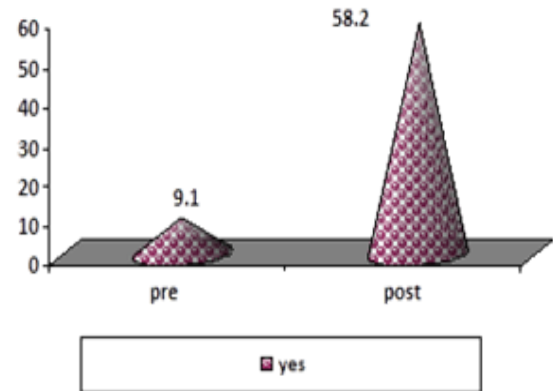


Figure (1) illustrated that only 9.1% of the sample do exercises in the pre-test, but they change their lifestyle and do exercises(58.2%) after the research instructions to them about the importance of performing the exercise to manage constipation.

**FIGURE 2**  
PRE AND POST CHANGES IN BOWEL HABITS FOR STUDIED SAMPLE

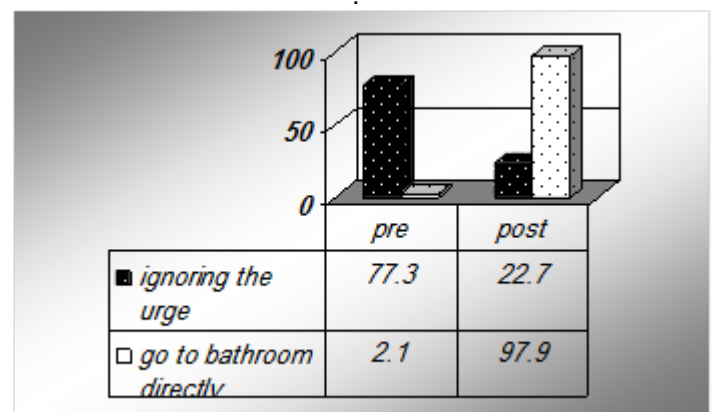


Figure (2) illustrated that more than three-quarters of the sample (77.3%) were ignored the urge of defecation and delayed it, but in the post-test, this percent reduced to 22.7% and most of them (97.9%) go to the bathroom directly when they feel the urge.

**FIGURE 3**  
PRE AND POST CHANGES IN NUMBER OF BOWEL ELIMINATION FOR STUDIED SAMPLE.

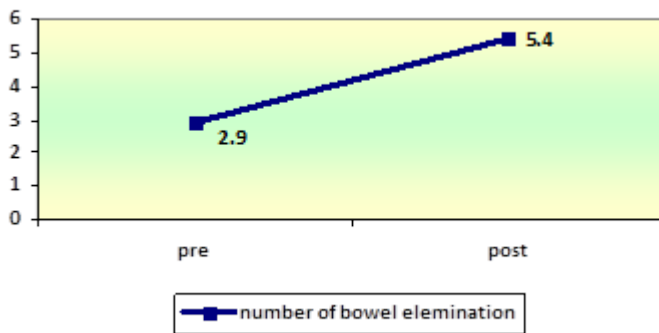


Figure (3) shows that there is an increase in the mean number of bowel elimination per week from the pre(2.9) and post-test(5.4).

## 4 DISCUSSION

Constipation refers to bowel movements that are infrequent or hard to pass. It is a common cause of painful defecation. The present study aimed to assess possible risk factors for constipation and to identify the effect of lifestyle modifications on reducing constipation associated symptoms.

Constipation is a symptom, not a disease, effective treatment of constipation may just first determining the cause. In the present study the most common associated symptoms with constipation were passing of hard stool (94.5%), flatulence (76.4%), distension (83.6%), and pain during defecation (71.8%) with statistically significant difference between pre and post presence of the symptoms associated with constipation ( $p < 0.001^*$ ). This comes in agreement with [1] who stated that forty-three percent of the sample had hard stools, straining during bowel movements (about one-quarter of the sample), and pain when passing a motion (23%) as representing of constipation.

There are many causes of colonic slow transit constipation which include diet, hormonal disorders such as hypothyroidism, side effects of medications, and rarely heavy metal toxicity. Because constipation is a symptom, not a disease, effective treatment for constipation may must first define the cause [23]. The studied sample of the current study had different health-related problems that can cause constipation such as chronic diseases (50.9%) that need regular taking of medications (69.0%), colon problems (57.3%), thyroid problems (8.2%), previous surgery (33.6%), stressors (69.1%) and anxiety (61.8%). Also, the present study illustrated that there was a statistically significant difference between pre and post dietary habits for the sample ( $P < 0.001^*$ ). The studied sample changes their lifestyle and increased the daily intake of vegetables (98.2%), fruits (99.1%) and water (5.9 cups/day). This

comes in agreement with [24] who mentioned that inadequate dietary fiber intake, inadequate fluid intake, decreased physical activity, side effects of medications, hypothyroidism, and obstruction by colorectal cancer are possible causes of constipation. Also, constipation can be exacerbated by a low fiber diet, low liquid intake, or dieting [25],[26]. In addition, constipation can occur as a side effect of using of many medications. Some include analgesics, diuretics, antidepressants, antihistamines, antispasmodics, anticonvulsants, and aluminum antacids [25],[27].

Regarding to ignoring the urge to have a bowel movement, the present study shows that, about three quarters of the sample were ignored the urge of defecation and delayed it, but in the post-test this percent reduced to twenty-two points seven percent and most of them (97.9%) go to the bathroom directly when they feel the urge. This comes in agreement with [22] who stated that people who ignore the urge to have a bowel movement may ultimately stop feeling the need to have one, which can lead to constipation. Some people delay having a bowel movement because they do not want to use toilets outside their home, particularly public restrooms, or they feel they are too busy.

Generally, Constipation is an infrequent and difficult evacuation of the bowels that is "reduced frequency of bowel movements than normal for the person concerned, which may lead to pain and discomfort [3]. It is traditionally identified as three or fewer bowel movements per week [4]. This comes in agreement with the present study that reported that the bowel elimination of the clients who suffered from constipation was 2.9 number per week. Also, there is an increase in the mean number of bowel elimination per week from the pre(2.9) and post-test(5.4).

## 5 CONCLUSION

Based on the results of the current study, the following was concluded: constipation is a highly discussed topic. It may occur for different reasons. Different health-related problems that predispose to constipation include chronic diseases(50.9%) that must taking of medications(69.0%) to manage it, colon problems(57.3%), thyroid problems(8.2%), previous surgery(33.6%) , stressors(69.1%) and anxiety(61.8%). Also, more than three-quarters of the sample (77.3%) were ignored the urge of defecation and delayed it. The studied sample changes their lifestyle and increased the daily intake of high fiber diets such as vegetables(98.2%), fruits(99.1%) and water(5.9 cups/day).

## 6 RECOMMENDATIONS

1. The quality of intestinal health depends upon many quantities. This may include a healthy diet, exercise, and healthy bowel habits.
2. Changes in lifestyle and increased the daily intake of vegetables, fruits and water are very important factors that help to reduce constipation.
3. Educating the clients to avoid ignoring the urge of defecation or delay it.

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