

▪ Basic Research

Impact of Educational Intervention for Pregnant Diabetic Women on their Awareness Regarding Diet and Exercise

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Abstract

Background: Gestational diabetes mellitus prevention efforts related to weight control and healthy lifestyle can potentially decrease risks of adverse outcomes for mothers and their children. For up to 85% of women who already have a diagnosis of GDM. Women with GDM who received dietary intervention, physical activity , self-monitoring of blood glucose (BG), and insulin therapy had significantly lower risks of macrosomia, shoulder dystocia 5.9%, cesarean delivery 26.9% , and preeclampsia or gestational hypertension 8.6% than those who received standard care only . **Aim:** Evaluate the impact of educational intervention for pregnant diabetic women on their awareness regarding diet and exercise. **Subjects and methods:** Quasi experimental Research – design was carried out in this study, Sample size was estimated to be 100 individuals divided into two groups, one control group (50 case) and one study group (50 case) conducted at the Obstetrics and Gynecology department (Antenatal clinics) in Suez Canal University Hospital . **Results:** This study revealed that there are no statistical significant difference between two groups (control and study) according their knowledge and practice about diet and exercises in pre intervention , the majority of pregnant diabetic women had a poor knowledge and bad practice toward diet and exercises. Also revealed that there high statistical significant difference in study group post intervention regarding to their knowledge and practice about diet and exercises compared to the control group that there are no statistical significant difference regarding to their knowledge and practice about diet and exercises post intervention. **Conclusion:** This study results showed that lifestyle of women with gestational

diabetes was different from that of healthy pregnant women, so that dietary style, physical activity, prenatal self-care was more favorable in healthy pregnant women and pregnant diabetic women. **Recommendations:** it is important to counsel diabetic women regarding the pregnancy should be planned in women with preexisting diabetes, a strict metabolic control with near or near-normal glucose levels, reached through lifestyle modifications, a healthy diet, and an exercise planning program to avoid short and long term complications for maternal and perinatal complications .

Keywords: Diabetes, Exercise, Diet, Pregnancy, knowledge, practice.

Introduction

Normal pregnancy is a non-pathological condition characterized by a series of complex hormonal adaptations that occur to ensure that sufficient glucose is available to meet the nutritional requirements of the growing fetus without causing maternal hypoglycemia. Hyperglycemia, a hallmark of diabetes, it is an important cause of maternal and fetal complications in pregnancies of women with any type of diabetes. Generally, the pregnancy in women with diabetes is associated with high risk of obstetric and neonatal complications, morbidity and mortality (*Valk and Visser,2017*).

Nutritional therapy should include the provision of adequate calories and nutrients to meet the needs of pregnancy and should be consistent with the maternal blood glucose goals that have been established. Non caloric sweeteners may be used in moderation. For obese women (BMI >30 kg/m²), a 30–33% calorie restriction (to 25 kcal/kg actual weight per day) has been shown to reduce hyperglycemia. Restriction of carbohydrates to 35–40% of calories has been shown to decrease maternal glucose levels and improve maternal and fetal outcomes (*ADA, 2017*).

Pregnant diabetic women should have a clinical evaluation prior to starting an exercise, to ensure that there are no medical contraindications, and that women was encouraged to participate in walking , aerobic and strength-

conditioning exercises. Before starting exercises should wear loose fitting, breathable clothing and supportive shoes, warm up before exercise, exercise stopped when woman feeling with dyspnea, sweating (ACOG,2015). Exercise frequently 4to5 days per week to get the blood glucose advantages of an exercise program. Those moderate intensity activities such as walking for 20–30 minutes each day (*Health line.com,2018*).

The role of the nurse in delivering for women with gestational diabetes is considered an essential part in managing client's condition. As nurses working with gestational diabetic women, a number of responsibilities are involved in care of client with gestational diabetes including assessment and providing optimal intervention. Effective assessment will enable the nurse to create appropriate plan regarding client's condition and provide best care. the nurse assesses other factors that could affect client's health such as safety of living environment. types of daily living activities, medication awareness and compliance, and parenteral nutrition (Tieu et al ,2017)

In 2015, there were an estimated 199,5 million women worldwide with diabetes. By 2030, this number is expected to rise to 313,3 million women worldwide, two out of every five women with diabetes are of reproductive age, accounting for over 60 million women worldwide (Morrish et al.,2017)

Aim of study:

Evaluate the impact of educational intervention for pregnant diabetic women on their awareness regarding diet and exercise.

Technical design

Study design: The design of this study a quasi- experimental design was used to achieve the aim of the study

Setting: The study was conducted at the Obstetrics and Gynecology department (Antenatal clinics) in Suez Canal University Hospital, Maternal and child Health Centers in Ismailia City These places provide free services to women who are resident in Ismailia city.

Subjects: A purposive sample of pregnant diabetic women attended out-patient clinics of the maternity hospitals of Suez canal University were chosen over a period of one year ,the sample of this study was included 100 women according inclusion and exclusion criteria and was divided into two equal groups {study group ,control group} each group included 50 women, according to the following criteria.

Target population: pregnant diabetic women.

Inclusion criteria: Women from (18-45) years,. Women at second trimester of pregnancy, & Women have blood glucose level more than normal.

Exclusion criteria. Women with any chronic or acute diseases as cardiac disease , restrictive lung disease., Women with incompetent cervix or cerclage, multiple gestation at risk of preterm birth, persistent second or third trimester bleeding, placenta previa after 26 weeks' gestation, preterm labor ruptured membranes, pre-eclampsia or pregnancy-induced hypertension, severe anemia (**The American College of Obstetricians and Gynecologists ,2015**).

Sample size: The sample size for through one year was chosen in compliance according to the total number ratio through of women attending in outpatient clinic, the study sample will comprise 10% equally (100) of the total number of women attended in out –patient clinic

Tools of data collection

First tool: An interviewing questioner (Appendix I): This tool was used before starting study intervention. it includes 2 parts: **Part (1) Socio demographic characteristics** as age, age at marriage, residence, level of education, occupation, (8 questions) **Part (2) it** concerning with history of pregnant diabetic women which include the following:

- a- **Obstetrical history** as number of gravidities, Parity, abortion. (4 questions)
- b- **Past medical history** as onset of diabetes, family history of diabetes, type of diabetes. (23 questions)
- c- **Present history:** as measurement of blood glucose level, type of treatment, and present complains. (21questions)

Second tool: Knowledge and practice assessment sheet (Appendix II):

It was used pre - post starting study intervention , it include 4 parts: **part (1) knowledge about diabetes mellitus disease** as meaning of gestational diabetes, causes of gestational diabetes, complications for mother, complications for infant, how to avoid complications, signs of hyperglycemia, signs of hypoglycemia,.....(11 questions) **part (2) knowledge, practice about diet and eating** as nutritional needs, number and regularity of meals, foods avoided,(14 questions) **part (3) knowledge and practice about exercises** as regularity and type of exercise performed, points to keep in mind before starting exercises as "wear loose fitting, breathable clothing and supportive shoes, warm up before exercise", recommended exercise during pregnancy, exercises to avoid during pregnancy, and benefits of exercise during pregnancy, (16 questions). **Part (4) Assessment degree of satisfaction** of gestational diabetic women post program (3 questions)

Third tool: physical assessment sheet for observation (Appendix III):

It was used pre - post starting study intervention, it includes 3 parts: **part (1)** Assessment of body mass index .**part (2)** Assessment of blood pressure level .**part (3)** Assessment of blood glucose level.

Classification of body mass index = weight in (kg)

$$\text{Height (m)}^2$$

Item	BMI
Normal	18.5-24.9
Overweight	25-29.9
Obese	30-
Morbidly	40 or

Classification of blood pressure for adults

	Systolic BP	Diastolic BP
Normal	110-139	60-89
Hypertension	140-159	90-99
Hypotension	<110	<60

Classification of blood glucose levels

Blood glucose level	mg/dL
Normal	70 mg/dL to 140 mg/dL
Hyperglycemia	Above 180 mg/dL
Hypoglycemia	Below 70 mg/dL

Operational design

A- Pilot study: It was carried out 10% (10) of pregnant women with gestational diabetes to evaluate the validity, reliability and applicability of the tool, these women was excluded from the study sample, According to the results of the pilot, tools modifications was done therefore, the rewording or rephrasing of statements was done, also, any modification in the protocol. It also helped in the estimation of the time needed to fill the form.

B – Field of work: -Data collection for this study was carried out through one year from January 2018 to January 2019. - The sample was collected in the

antenatal clinics for pregnant diabetic women according the inclusion and exclusion criteria at the **second trimester** (4th or 5th or 6th month of gestation) by researcher through three days per week. The researcher was attended to the hospital at 9:00 am to 3:00 pm. The studied sample fulfilling the research criteria was assigned into two groups (study group and control group) by systemic allocation where the first 2 women was assigned into study group, then the other 2 women was assigned into control group.

- After introducing myself and explain the purpose of the study to the subjects and the written consent from every participant to share in the study. An interviewing questionnaire was done & physical assessment was done by measurement weight & height to assess body mass index, also measured blood pressure and blood sugar. Assessed knowledge about diabetes, diet and exercises for pregnant diabetic women.
- All tools lasted 30 – 35 minutes for each women included in the study.
- Face to face interview by using structured questionnaire was done by the researcher for all women (at 4th or 5th or 6th month of gestation) in the two groups in the antenatal clinics, In antenatal clinics all women in the study and control groups will be assessed using antenatal assessment check list to evaluate maternal and fetal outcomes during pregnancy .
- Face to face interview by using structured questionnaire was done by the researcher for all women (at 4th or 5th or 6th month of gestation) in the two groups in the antenatal clinics, **The control group** received standard prenatal care only according Suez Canal University Hospital. **The study group** in addition, standard prenatal care, received nutritional and exercise protocol (intervention) which include four sessions (two sessions about exercises and two session about diet regime).
- In antenatal clinics all women in the study and control groups will be assessed using antenatal assessment check list to evaluate maternal and fetal outcomes during pregnancy.
- The educational program was developed and implemented by researcher for study group only in the form of health education.

- Booklet included information about gestational diabetes, diet and exercises knowledge for pregnant diabetic women designed by researcher and distributed to the pregnant diabetic women.
- A post-test was done after the program implementation
- Follow up was done after three months of intervention (from 7th to 9th month of gestation) as woman who started study in 4th month of gestation the follow up was done in 7th month of gestation , woman who started study in 5th month of gestation the follow up was done in 8th month of gestation, woman who started study in 6th month of gestation the follow up was done in 9th month of gestation in antenatal clinics for all participants in the two groups (study group and control group).

C - Program description : Based on identified, educational needs of the pregnant diabetic woman , its mean, causes, clinical manifestation , complication , signs of hypoglycemia and hyperglycemia, number and regularity of meals, foods avoided, regularity and type of exercise performed, points to keep in mind before starting , recommended exercise during pregnancy, exercises to avoid during pregnancy, and benefits of exercise during pregnancy .

Implementation phase: Implementing of educational program and its content according to its objectives, this program was designed to pregnant diabetic women to study the effect of educational program on outcomes for pregnant diabetic women and infant. it was done through sessions, the health education sessions was given two days in a week / four weeks with a total of 4 sessions each session take 1 hour

Finally: the evaluating phase: In this phase estimating the effectiveness of health educational program on pregnant diabetic women was done. Health educational program outcomes were assessed through pre and posttest through comparing the change in knowledge and practice of pregnant diabetic women.

Ethical considerations: The study follows common ethical principles in clinical research. written consent obtained from women or guidance that are willing to participate in the study, after explaining the nature and purpose of the study.

Subjects' privacy considered during collection of data and confidentiality and anonymity was assured. All study subjects have the right to refuse to participate and or withdraw from the study without any rational. Before conducting this study, the research proposal was approved from ethical committee in Faculty of Nursing.

4- Statistical design: Data was categorized, coded and was entered using excellling while statistical analysis was done using statistical package for social sciences (SPSS) version 16. Data collected were analyzed and results were presented in tables and graphs using frequency distribution tables. The percentages were used in all tables. The statistical significance of observed differences was assessed using chi square

Results

Table 1: shows that there was no statistically significant difference in socio demographic characteristics regarding control and study women. Also reveals that **(44%&46%)** of studied women were in the age group 30-35 and **(42%&46%)** of them had moderate education, **(62%&64%)** of the studied sample was housewife and **(70%&60%)** of them were from urban area

Table 2 : reveals that there are no statistical significant difference between two groups pre educational program regarding to general knowledge about gestational diabetes mellitus ,a majority of women in two groups had poor level of knowledge about diabetes mellitus, **also** reveals that there are highly statistical significant difference between two groups post educational program, where **6%** of them know the meaning of gestational diabetes in control group compared with **96 %** in study group , also **8%** of them know causes of gestational diabetes in control group compared with **98%** in study group, almost of them don't know complication of gestational of diabetes for mother and fetus in control group compared with **90%** and **94 %** in study group, **4%** only of them know who avoid complication in control group compared with **96%** in study group, **8 %** of them know signs of hypoglycemia in control group compared with **100%** in study group. where **8 %**

know signs of hyperglycemia in control group compared with **100%** in study group post educational program.

Table 3: reveals that there are no statistical significant difference between two groups pre educational program regarding to nutritional needs, women in two groups had poor level of knowledge about diet and eating , almost of women in two groups had bad practice, (**80 & 80%**) don't follow diet plan, and (**50%&44%**) not avoided for fat and carbohydrates, **also** reveals that there are highly statistical significant difference between two groups post educational program. Where **20%** of them follow diet plan in control group compared with **96 %** in study group, also **28%** of them eat 4-6 meals in control group compared with **90 %** in study group and **26% &30%** of them avoided fat and carbohydrates in the food in control group compared with **90%&80%** in study group post educational program.

Table 4: reveals that there are no statistical significant difference between two groups pre educational program regarding to exercise needs , almost of women (**96%&92%**) in two groups had poor level in exercise knowledge and a majority of women not follow exercise practice (**96%**), **also** reveals that there are highly statistical significant difference between two groups post educational program, where **0%** of them done exercise always in control group compared with **96 %** in study group , also **96%** of them don't practice exercises in control group compared with **0%** in study group post educational program, **2%** of them make waking exercises in control group compared with **70 %** in study group post educational program and **2%** of them make leg exercises in control group compared with **30 %** in study group post educational program.

Figure 1: shows almost of women **96%** don't follow exercises during pregnancy in pretest compared with **0%** of them don't following exercises in post educational program according study group.

Figure 2: shows **26% &30%** of them avoided fat and carbohydrates in the food in pretest compared with **90%&80%** in post educational program according study group

Table (1): Distribution of the diabetic women in two groups according to their socio demographic characteristics

Variable	Control N= (50)		Study N= (50)		Chi square test	
	Pre		Pre			
Age	No.	%	No.	%	X ²	P value
• 20-25	18	36.0%	20	40.0%	0.657	0.720
• 25-30	10	20.0%	7	14.0%		
• 30-35	22	44.0%	23	46.0%		
Educational level						
• Illiteracy	7	14.0%	5	10.0%	0.520	0.914
• Read &write	8	16.0%	9	18.0%		
• secondary education	21	42.0%	23	46.0%		
• High education	14	28.0%	13	26.0%		
Occupation						
• Housewife	31	62.0%	32	64.0%	0.043	0.835
• Employment	19	38.0%	18	36.0%		
Residence						
• Rural	15	30.0%	20	40.0%	1.099	0.294
• Urban	35	70.0%	30	60.0%		

Table (2): Distribution of the diabetic women in two groups according to their knowledge about diabetes mellitus

Variable	Pre				Chi square test		Post				Chi square test	
	Control N= (50)		Study N= (50)		X ²	P value	Control N= (50)		Study N= (50)		X ²	P value
	N o.	%	N o.	%			N o.	%	N o.	%		
Meaning of gestational diabetes												
• Correct answer	2	4.0 %	3	6.0 %	0.253	0.881	3	6.0 %	48	96.0 %	82.160	<0.001
• In complete answer	10	20.0 %	9	18.0 %			9	18.0 %	2	4.0%		
• in correct answer	38	76.0 %	38	76.0 %			38	76.0 %	0	0.0%		
Causes of gestational diabetes												
• Correct answer	5	10.0 %	4	8.0 %	0.123	0.940	4	8.0 %	49	98.0 %	81.303	<0.001
• In complete answer	5	10.0 %	5	10.0 %			5	10.0 %	0	0.0%		
• in correct answer	40	80.0 %	41	82.0 %			41	82.0 %	1	2.0%		
Complications for mother												
• Correct answer	4	8.0 %	3	6.0 %	1.010	0.603	3	6.0 %	45	90.0 %	72.731	<0.001
• In complete answer	4	8.0 %	7	14.0 %			7	14.0 %	3	6.0%		
• in correct answer	42	84.0 %	40	80.0 %			40	80.0 %	2	4.0%		
Complications for infant												

• Correct answer	3	6.0 %	4	8.0 %	1.01 0	0.60 3	4	8.0 %	47	94.0 %	76.0 15	<0.0 01
• In complete answer	7	14.0 %	4	8.0 %			4	8.0 %	2	4.0%		
• in correct answer	40	80.0 %	42	84.0 %			42	84.0 %	1	2.0%		
How to avoid complications												
• Correct answer	4	8.0 %	2	4.0 %	0.74 6	0.68 8	2	4.0 %	48	96.0 %	84.8 62	<0.0 01
• In complete answer	7	14.0 %	8	16.0 %			8	16.0 %	1	2.0%		
• in correct answer	39	78.0 %	40	80.0 %			40	80.0 %	1	2.0%		
Signs of hypoglycemia												
• Correct answer	5	10.0 %	4	8.0 %	0.12 3	0.94 0	4	8.0 %	50	100.0 %	85.1 85	<0.0 01
• In complete answer	5	10.0 %	5	10.0 %			5	10.0 %	0	0.0%		
• in correct answer	40	80.0 %	41	82.0 %			41	82.0 %	0	0.0%		
Signs of hyperglycemia												
• Correct answer	5	10.0 %	4	8.0 %	0.12 3	0.94 0	4	8.0 %	50	100.0 %	85.1 85	<0.0 01
• In complete answer	5	10.0 %	5	10.0 %			5	10.0 %	0	0.0%		
• in correct answer	40	80.0 %	41	82.0 %			41	82.0 %	0	0.0%		

Table (3): Distribution of the diabetic women in two groups according to their diet, eating knowledge and practice

Variable	Pre				Chi square test		Post				Chi square test	
	Control N= (50)		Study N= (50)		X ²	P valu e	Control N= (50)		Study N= (50)		X ²	P value
	No.	%	No.	%			No.	%	No.	%		
Nutritional needs												
• Follow diet plan	10	20.0 %	10	20.0 %	0.000	1.000	10	20.0 %	48	96.0 %	59.278	<0.001
• Don't follow diet plan	40	80.0 %	40	80.0 %			40	80.0 %	2	4.0%		
Number of meals												
• 1-3	35	70.0 %	36	72.0 %	0.049	0.824	36	72.0 %	5	10.0 %	39.727	<0.001
• 4-6	15	30.0 %	14	28.0 %			14	28.0 %	45	90.0 %		
Food avoided												
• Fat	15	30.0 %	13	26.0 %	1.334	0.513	13	26.0 %	45	90.0 %	44.967	<0.001
• Carbohydrates	10	20.0 %	15	30.0 %			15	30.0 %	40	80.0 %		
• None	25	50.0 %	22	44.0 %			22	44.0 %	5	10.0 %		

Table (4): Distribution of the diabetic women in two groups according to their exercise's knowledge and practice

Variable	Pre				Chi square test		Post				Chi square test	
	Control N= (50)		Study N= (50)		X ²	P valu e	Control N= (50)		Study N= (50)		X ²	P value
	No .	%	No .	%			No .	%	No .	%		
Exercises knowledge												
• Correct answer	2	4.0%	4	8.0%	0.709	0.399	4	8.0%	48	96.0%	77.564	<0.001
• In correct answer	48	96.0%	46	92.0%			46	82.0%	2	4.0%		
Exercises practice												
• Always	0	0.0%	0	0.0%	0.000	1.000	0	0.0%	48	96.0%	97.333	<0.001
• Usually	0	0.0%	0	0.0%			0	0.0%	1	2.0%		
• Sometimes	2	4.0%	2	4.0%			2	4.0%	1	2.0%		
• None	48	96.0%	48	96.0%			48	96.0%	0	0.0%		
Duration												
• 5-10 minutes	1	2.0%	1	2.0%	0.049	0.824	1	2.0%	5	10.0%	39.727	<0.001
• 10-25 minutes	1	2.0%	1	2.0%			1	2.0%	45	90.0%		
Type of exercises												
• walking	2	4.0%	1	2.0%	1.333	0.248	1	2.0%	35	70.0%	10.361	<0.001
• Leg exercise	0	0.0%	1	2.0%			1	2.0%	15	30.0%		
Frequency per week												
• twice	2	4.0%	1	2.0%	0.709	0.399	1	2.0%	40	80.0%	11.412	<0.001

• above twice	0	0.0%	1	2.0%			1	2.0%	8	16.0%		
• None	48	96.0%	48	96.0%			48	96.0%	2	4.0%		

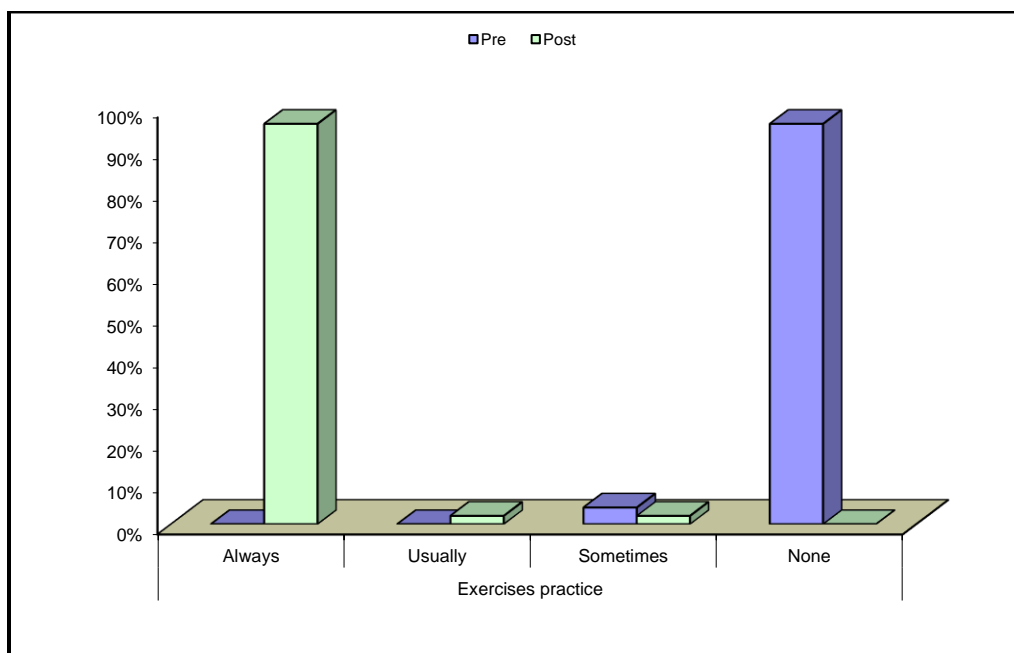


Fig 1 Comparison between pre and post in study group as regards their exercises practice

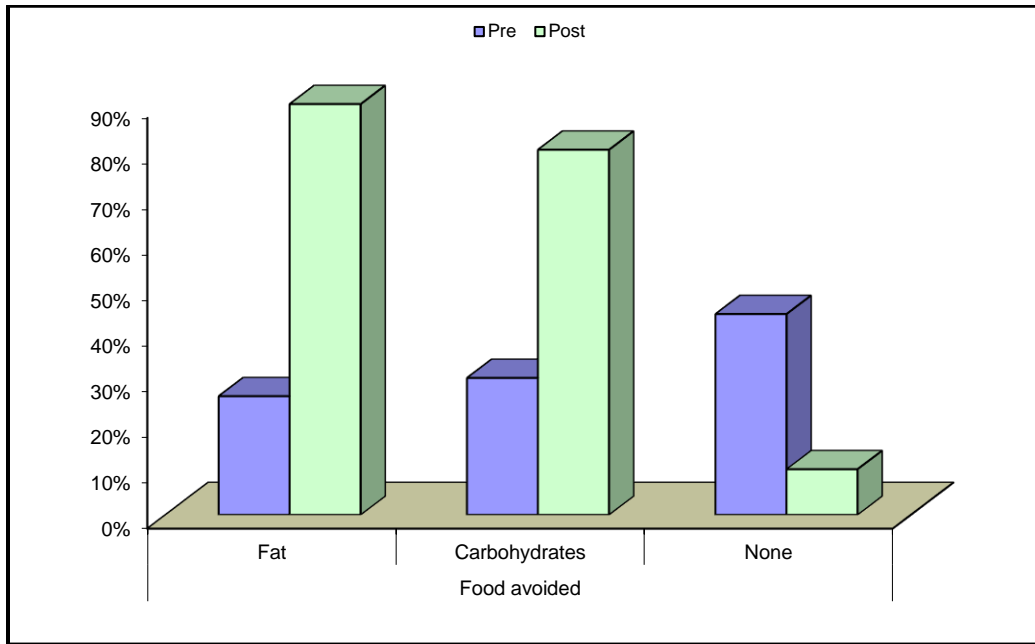


Fig 2 Comparison between pre and post in study group as regards their food avoided

Discussion

Regarding to the socio-demographic characteristics of gestational diabetic women, the result of this study revealed that more than two thirds of the studied women (**46%**) were in the age group 30-35 (**Table 1**) because this age is a reproductive age. This result means that the incidence of gestational diabetes was higher in middle age than in younger age and old age. This result agreement with **Reeta et al (2015)** study about the risks associated with obesity, gestational diabetes in the University of Eastern Finland, found that the age range for mothers with gestational diabetes was 30-35 this means that

the age play an important role in increasing the incidence of occurrence of gestational diabetes mellitus.

Also different with **Dehiya et al (2014)** other studies which carried out in Rohtak, Hyderabad, Jodhpur, found that high GDM prevalence among those ≥ 25 years of age.

In relation to education and occupation, a majority of the studied women in the current study were moderate educated (**46%**). The majority of them were housewives (**Table 1**). This result in agree with the result of **Surabhi et al (2015)**, who found increased prevalence of the disease among moderate educated and housewives (**64%**). Also agree with **Dave (2014)** study which found the prevalence of GDM positively associated with nonworking group.

Also different with **Rajput (2013)** study showed GDM prevalence significantly associated with higher education. Also different with **Eur (2015)** study carried out in Punjab showed positive association between GDM and illiteracy.

Concerning to general knowledge gestational diabetes the study finding illustrated that highly statistically significant difference between pre and post educational program in study group, pre educational program **6%** only had knowledge compared with **96%** post educational program knowledge improved , similar finding were reported in a study by **Smith et al. (2010)** who reported that finding suggests that the educational intervention given to women with gestational diabetes was beneficial in increasing the diabetes knowledge. The results show that the knowledge of the pregnant women with gestational diabetes in the intervention regarding the diet, treatment, problems and complications has

changed dramatically after the intervention of educational program from those pregnant women. Also, agreement with *Valintina & milen (2011)* study on Pilot project for education of gestational diabetes mellitus (GDM) Can it be beneficial at antenatal clinic, this study shows that the role of education program for improvement of gestational diabetes patient's outcomes significant.

In our study almost of women had bad practice, **80 %** don't follow diet plan pre educational program, and **50%** not avoided for fat and carbohydrates (**Table 2**). This result agrees with **Zhang et al (2015)**, this study showed the intake of high glycemic index nutrition is positively associated with risk of gestational diabetes.

Concerning to general women exercises the study finding that highly statistically significant difference between pre and post educational program , majority of women not follow exercise practice (**96%**) pre educational program versus **96%** of them following exercises post educational program similar finding were reported in a study by *Nuepert et al. (2010)* who reported that significant GDM women with higher self-efficacy were more likely engaged in physical activity.

Concerning to walking exercises the study finding that, **2%** only who following walking with regularity pre educational program (**table 3**) similar finding were reported in a study by (*Deirdre et al. 2012*) who reported that walking associated with a significantly lower risk of developing GDM.

Conclusion

This study results showed the incidence of gestational diabetes can be prevented through increased awareness and education of pregnant women about having

appropriate lifestyles during pregnancy and any intervention that would lead to improved lifestyle.

Recommendation

it is important to counsel diabetic women regarding the pregnancy should be planned in women with preexisting diabetes, a strict metabolic control with near or near-normal glucose levels, reached through lifestyle modifications, a healthy diet, and an exercise planning program to avoid short and long term complications for maternal and perinatal complications .

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الملخص العربي

تأثير التدخل التعليمي للمرأة الحامل المصابة بمرض السكري على وعيها بما يتعلق بالنظام الغذائي وممارسة الرياضة

المقدمة: التحكم في الوزن وممارسة التمارين الرياضيه بانتظام والالتزام بنمط الحياة الصحي له دور كبير في التقليل من مخاطر النتائج السلبية للأمهات الحوامل المصابات بالسكري وأطفالهن. مما يقلل من مخاطر الإصابة بالماكروزوما وعسر ولادة الكتف 5.9% والولادة القيصرية بنسبة 26.9%. وتسم الحمل أو ارتفاع ضغط الدم بنسبة 8.6% أكثر من السيدات الحوامل اللاتي يتلقين الرعاية الصحيه الاساسيه فقط

الهدف من الدراسة: تقييم تأثير التدخل التعليمي للنساء الحوامل المصابات بالسكري على وعيهم بشأن النظام الغذائي وممارسة الرياضة

منهج البحث: تم الاعتماد علي المنهج شبه التجريبي في اجراء هذه الدراسه.

مكان البحث:- قد تم اجراء هذه الدراسه في مستشفى جامعة قناة السويس في عيادات الحوامل بالمستشفى ومراكز رعاية الامومه والطفوله بمدينة الاسماعيليه وستتم المتابعة في قسم الولادة.

عينة البحث: اشتملت الدراسة 100 سيدة من السيدات الحوامل المريضات بالسكري ممن ينطبق عليهن معايير اختيار معينه قد تم ذكرها وتم تقسيمهم الي مجموعتين:-
المجموعه الاولى (التجريبيه) وتشمل 50 سيده. والمجموعه الاخرى (الضابطه) وتشمل 50 سيده

أدوات جمع البيانات:

الأداة الأولى - استمارة استبيان : البيانات الشخصية للمريض وبيانات الحمل وتاريخ مرض السكري

الأداة الثانية - استمارة تقييم اثناء الحمل

- البيانات الحاليه (قياس مستوي السكر بالدم- قياس كتلة الجسم - قياس مستوي ضغط الدم)
الأداة الثالثة استمارة متابعه تقييم معلومات المريضة عن النظام الغذائي والتمارين الرياضه للحوامل المصابات بالسكري (عدد الوجبات اللازمه في اليوم - الاطعمه التي يجب تناولها - الاطعمه التي يجب الابتعاد عنها - الرياضه التي يجب ممارستها - الرياضه التي يجب تجنبها.... الخ)

الاعتبارات الاخلاقيه :

- تم الحصول علي موافقه من لجنه اخلاقيات البحث العلمى في كليه التمريض قبل بدء الدراسه.
- تم توضيح هدف الدراسه بواسطه الباحث للمرضى الذين سيشملهم الدراسه .
- التزم الباحث بضمان خصوصيه وسريه بيانات المرضى .
- تم ابلاغ المرضى المشاركين في الدراسه بان لديهم الحق في الانسحاب من الدراسه في اي وقت .

النتائج:

- كانت الخصائص الديموجرافية والاجتماعية بين السيدات الحوامل المريضات بالسكري في المجموعتين متقاربه فيما يخص العمر والمستوي التعليمي والوظيفي .
- اوضحت النتائج ان معظم السيدات كان لديها ارتفاع في مستوي السكر بالدم واضطراب في الوزن وكتلة الجسم لدي المجموعتين قبل اعطاء المشورة .
- اوضحت النتائج ان هناك قصور في معلومات السيدات عن النظام الغذائي والتمارين الرياضيه للحوامل المصابات بالسكري قبل اعطاء المشورة لدي المجموعتين.
- اوضحت النتائج ان هناك تغيير بنسبه كبيره لدي معظم السيدات في المعلومات عن النظام الغذائي والتمارين الرياضيه للحوامل المصابات بالسكري بعدل اعطاء المشورة لدي المجموعتين.

الخلاصة: أظهرت نتائج هذه الدراسة أن معظم السيدات كان لديهم قدر غير كافي من المعلومات وبعض المفاهيم الغير صحيحه عن النظام الغذائي والتمارين الرياضيه للسيدات الحوامل المصابات بالسكري نمط حياة النساء المصابات بسكري الحمل كان مختلفًا عن نمط النساء الحوامل الأصحاء ، بحيث كان النمط الغذائي والنشاط البدني والرعاية الذاتية للسيدات الحوامل المصابات بالسكري اثناء الحمل أمر مهم جدا للحفاظ علي صحة الأم والجنين وتقليل نسبة المضاعفات الممكن حدوثها

التوصيات: افضت نتائج هذه الدراسة الي النتائج الاتيه يجب علي النساء الحوامل المصابات بالسكري التخطيط قبل الحمل وتنظيم الاسرة ، وعند حدوث الحمل يجب الالتزام بالنظام الغذائي المناسب واتباع التمارين الرياضيه بانتظام والتحكم الأيضي الصارم بمستويات الجلوكوز حتي تصبح قريبة أو شبه طبيعية