

**Research Article****Evaluation of the awareness regarding Type 2 Diabetes, its management and adverse effects of the treatment among the patients with Type 2 Diabetes**

Tip 2 Diyabet hastalarının hastalıkları, tedavisi ve tedavi yan etkileri hususundaki farkındalıklarının değerlendirilmesi

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ABSTRACT

Introduction: Diabetes Mellitus (DM) management requires not only continuous medical care but also risk reduction strategies to prevent complications. Improving patients' knowledge and awareness about DM and diabetes-related complications (DRC) is crucial for the management of DM. Increased awareness about DM and DRC, which leads to an eagerness to follow-up diet plans, and lifestyle modifications would help us to establish patient-specific goals. In this study, we would like to determine the awareness levels of diabetic patients about DM, DM management and DRC.

Methods: Total of 300 adult patients (179 female, 121 male) with type 2 Diabetes Mellitus (T2DM) were included in this study. The data was collected through a survey based on face-to-face interviews. Total Survey score (TSP) for each participant was calculated by taking 1 point for each correct answer and TSP interval was evaluated between 0-24 points..

Results: The score of women was higher than that of men (14.72±3.14 vs. 13.07±3.30, p <0.001). Patients who did not work were more aware (14.53±3.22 vs. 13.64±3.31, p = 0.019). No significant difference in terms of awareness was observed between low educated and high-educated participants. Patients who had insulin in their treatment combination, anti-hypertensive, and lipid-lowering drug user had significantly higher TSP scores. A significant correlation was observed in BMI, HC, DBP, and age of Diabetes with awareness.

Conclusions: The mean awareness score of the patients who participated in our study was 14 points. Since the maximum score that can be obtained at the highest awareness level is 24, the awareness level of our patients can be evaluated as 58%. Considering the morbidity, mortality and economic costs associated with diabetes, it can be said that more attention should be paid to patient education in order to achieve higher treatment success.

Keywords: Awareness, Diabetes Mellitus, education, knowledge

ÖZ

Giriş: Diyabetes Mellitus (DM) tedavisi sadece sürekli tıbbi bakımı değil aynı zamanda komplikasyonlardan korunmak için risk azaltma stratejilerini de içerir. Hastaların DM ve diyabetle ilgili komplikasyonlar (DIK) hakkındaki bilgi ve farkındalıklarını artırmak, DM yönetimi için çok önemlidir. DM ve DIK ile ilgili farkındalık, hastaların diyet planlarına ve yaşam tarzı değişikliklerine uyumda daha istekli davranmalarını sağlayarak bizlerin hastaya özel hedefler belirlememize yardımcı olacaktır. Bu çalışmada diyabet hastalarının DM, DM yönetimi ve DIK hakkındaki farkındalık seviyelerini belirlemek istiyoruz.

Yöntem: Çalışmaya tip 2 Diyabetes Mellituslu (T2DM) toplam 300 yetişkin hasta (179 kadın, 121 erkek) dahil edildi. Veriler yüz yüze görüşmelere dayanan bir anket aracılığıyla toplanmıştır. Her bir katılımcı için toplam anket puanı (TAP), her bir doğru cevap 1 puan alınarak hesaplandı ve TAP aralığı 0-24 arasında değerlendirildi

Bulgular: Kadınların puanı erkeklerin puanından yüksekti (14.72±3.14 vs. 13.07±3.30, p <0,001). Çalışmayan hastaların farkındalıkları daha yüksekti (14.53±3.22 vs. 13.64±3.31, p = 0,019). Düşük eğitilmiş ve yüksek eğitilmiş katılımcılar arasında farkındalık açısından anlamlı bir fark gözlenmedi. Tedavi kombinasyonlarında insülin, anti-hipertansif ve lipid düşürücü ilaç kullanan hastalarda TAP skorları anlamlı derecede yüksek bulundu. Vücut kitle indeksi, kalça çevresi, diyastolik kan basıncı ve diyabet yaşı ile farkındalık arasında anlamlı bir korelasyon olduğu gözlemlendi.

Sonuç: Çalışmamıza katılan hastaların ortalama farkındalık puanı 14 puan olarak gözlemlendi. En yüksek farkındalık düzeyinde alınabilecek maksimum puan 24 olduğundan hastalarımızın farkındalık düzeyi %58 olarak değerlendirilebilir. Diyabete bağlı morbidite, mortalite ve ekonomik maliyetleri göz önüne alarak, daha yüksek tedavi başarısını elde etmek için hasta eğitimine daha fazla önem verilmesi gerektiği söylenebilir.

Anahtar kelimeler: Farkındalık, Diyabetes Mellitus, eğitim, bilgi

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Introduction

Diabetes mellitus (DM) is a chronic condition that causes disabling complications if left untreated. Management requires not only continuous medical care but also create risk reduction strategies to prevent complication development. Diabetes is one of the most prevailing disorders worldwide, the prevalence for which was estimated (globally), in 2017, 425 million people live with diabetes and this is expected to rise to 629 million by 2045. According to International Diabetes Federation, currently 6.7 million people live with diabetes in Turkey, and in 2045 the total number of people with diabetes is estimated to be 11.2 million; Turkey has the 13rd largest population of diabetes [1].

DM related vascular complications (macro and micro) results significant rates of morbidity and mortality [2]. Each complication requires further managements, which results economic burdens for both health departments and patients itself. Improving patients' knowledge and awareness of diabetes and diabetes related complications is crucial for management of diabetes. Individuals self-care practices are directly related with their knowledge; the more they know, the more they care themselves [3]. In diabetic population, increased awareness about DM and diabetes complications, which leads to eagerness to follow-up diet plans and lifestyle modifications, would help us to establish patient specific goals [4]. Education has key importance in self-management and support that is critical for preventing acute complications and reducing the long-term complications risk. In this study, we would like to determine the awareness levels of diabetic patients about their illness, diabetes complications and diabetes management.

Methods

After local ethical committee (Uludağ University ethical committee) approval (2008-21/20) a total of 300 adult patients (179 female, 121 male) with type 2 diabetes mellitus (T2DM) who admitted Internal medicine or Endocrinology & Metabolism outpatient clinic between January 2009 and May 2009 were included in this study. The data was collected after written consent was taken from each participant through a survey based on face-to-face interviews.

In addition to survey we also collect participants' demographic characteristics [Age, sex, weight, height, waist circumference (WC), Hip circumference (HC), systolic and diastolic blood pressures (SBP and DBP)], age of diabetes, treatment type, and the levels of most recently measured level of fasting plasma glucose (FPG), post-prandial plasma glucose (PPPG), hemoglobin A1c levels (HbA1c), cholesterol-lipid values. Patient's education level was evaluated into two groups. While, participants with education status higher than high school considered as group 2 and the others considered as group 1.

Scoring

Total survey point (TSP) was calculated for each participant by multiplying each correct answer as 1 point with exclusion of 6th and 7th questions that are not measuring knowledge. Since, question 25 had 2 items it was considered as two questions. By this calculation, the highest score would be 24 and lowest score would be zero.

Statistical Analysis

The test was found as reliable and repeatable with the test-retest method that applied first 20 patients (Pearson correlation coefficient 0.96, $p < 0.001$). McNemar test was applied to each question to show compliance between the questions and compliance was observed for all questions ($p > 0.05$). Pearson's chi-square test and fisher's exact chi-square test was used for categorical variables. In comparison of two groups, independent sample t-test or Mann - Whitney U test was used. ANOVA or Kruskal Wallis test was used for comparison of more than two groups. Pearson correlation analysis was performed to see the relationship between continuous variables. Averages were given with standard deviation. $p < 0.05$ was considered significant. SPSS (SPSS Inc., Chicago, IL, USA) V20.0 package program was used for statistical analysis..

Results

Totally 300 patients who accepted to answer face-to-face survey was recruited to this study. Demographics of the participants were evaluated. A hundred-seventy-nine of them (59.66 %) were female. Mean age was 57.63 ± 9.76 and diabetes duration was 9.62 ± 7.80 years. Ninety-two percent of the volunteers were married. Participants weight, height, waist and hip circumferences and blood pressures were measured (Table-1).

Table 1. Demographics and measurements

	Female (n:179)	Male (n:121)	Total (n:300)
Married/single	157/22	119/2	276/24
Working/not-working	6/173	25/96	31/269
Age (mean \pm SD)	56.85 ± 9.48	58.79 ± 10.09	57.63 ± 9.76
Age of Diabetes (mean \pm SD)	9.24 ± 7.50	10.19 ± 8.23	9.62 ± 7.80
Weight (kg)	82.48 ± 14.98	83.22 ± 12.81	82.78 ± 14.13
Height (cm)	155.80 ± 8.31	169.21 ± 6.44	161.21 ± 10.06
BMI (kg/m ²)	33.41 ± 5.66	28.91 ± 4.09	31.59 ± 5.54
Waist Circumference (cm)	107.64 ± 13.35	104.82 ± 10.77	106.50 ± 12.44
Hip Circumference (cm)	119.65 ± 11.88	109.47 ± 9.13	115.55 ± 11.94
SBP (mmHg)	129.39 ± 16.42	129.61 ± 15.22	129.48 ± 15.92
DBP (mmHg)	76.79 ± 9.92	78.98 ± 9.70	77.67 ± 9.88

SD: standard deviation, BMI: body mass index, SBP: systolic blood pressure, DBP: diastolic blood pressure

Participants mean FPG, PPPG and HbA1c levels were 161.66 ± 62.26 mg/dL, 224.29 ± 84.95 mg/dL and 8.35 ± 2.16 %, respectively. Comparison of lipid profile between male and female participants reveals that female participants had significantly higher HDL (45.93 ± 10.98 mg/dL vs. 41.62 ± 13.02 , $p < 0.001$) and LDL (124.11 ± 33.63 mg/dL vs. 112.08 ± 32.14 , $p = 0.002$) levels (Table 2).

Table 2. Laboratory results

	Female (n:179)	Male (n:121)	Total (n:300)
FPG (mg/dl)	159.70 ± 63.50	164.54 ± 60.53	161.66 ± 62.26
PPPG (mg/dl)	215.90 ± 86.29	237.00 ± 81.62	224.29 ± 84.95
HbA1c (%)	8.27 ± 2.31	8.47 ± 1.91	8.35 ± 2.16
T-chol (mg/dl)	220.78 ± 198.63	191.55 ± 50.13	208.99 ± 157.17
HDL (mg/dl)	45.93 ± 10.98	41.62 ± 13.02	44.19 ± 12.01
LDL (mg/dl)	124.11 ± 33.63	112.08 ± 32.14	119.31 ± 33.51
TG (mg/dl)	189.16 ± 105.44	184.90 ± 172.31	187.45 ± 136.02

FPG: fasting plasma glucose, PPPG: post-prandial plasma glucose, HbA1c: hemoglobin A1c, T-chol: total cholesterol, HDL: high-density lipoprotein, LDL: low-density lipoprotein, TG: triglyceride

While, seven participants took no medication for diabetes management majority of them were under oral anti-diabetics (OAD) 139 (46.3%) or insulin treatment 82 (27.3%). Seventy-two (24%) participants were followed-up with both OAD and insulin treatment. Half of the total participants 150 (50%) were receiving lipid lowering medications and 210 (70%) were under anti-hypertensive treatment (Table 3).

Table 3. Medication history

	Female (n=179)	Male (n=121)	Total (n=300)
No meds	4 (2.2%)	3 (2.5%)	7 (2.3%)
OAD	86 (48%)	53 (43.8%)	139 (46.3%)
insulin	41 (22.9%)	41 (33.9%)	82 (27.3%)
insulin + OAD	48 (26.8%)	24 (19.8%)	72 (24%)
Lipid lowering meds	93 (52%)	57 (47.1%)	150 (50%)
Antihypertensive	135 (75.4%)	75 (62.0%)	210 (70%)

No meds: No medication, OAD: oral anti-diabetics

TSP, which indicates the level of patients' knowledge was evaluated. Women's score was higher than men's score ($p < 0.001$) and patients who are not working had better TSP scores ($p = 0.019$). TSP score was higher in single participants and participants with higher income, but the difference for both groups was not significant. No significant difference in terms of TSP was observed between low educated and high educated participants (14.04 ± 3.42 vs 14.07 ± 3.11 , $p > 0.05$). Patients who had insulin in their treatment combination, anti-hypertensive and lipid-lowering drug user had significantly higher TSP scores (Table 4).

Table 4. Total survey score evaluation

		Total Survey Point	p
Sex	Female	14.72 ± 3.14	<0.001
	Male	13.07 ± 3.30	
Marital status	Married	13.99 ± 3.32	NS
	Single	14.68 ± 3.03	
Working status	Working	13.64 ± 3.31	0.019
	Not working	14.53 ± 3.22	
Education level	Group 1	14.04 ± 3.42	NS
	Group 2	14.07 ± 3.11	
Income	Less than minimum wage	13.88 ± 3.37	NS
	More than Minimum wage	14.24 ± 3.23	
	No meds	13.14 ± 3.13	
Anti-hyperglycemic drugs	OAD	13.24 ± 3.30	0.001
	insulin	14.82 ± 3.19	
	insulin + OAD	14.80 ± 3.11	
Anti-hypertensives	User	14.35 ± 3.22	0.008
	Non-user	13.34 ± 3.41	
Lipid lowering drugs	user	14.43 ± 3.12	0.032
	Non-user	13.67 ± 3.43	

OAD: oral anti-diabetics, NS: non-significance, in comparison of two groups, independent sample t-test or Mann-Whitney U test was used. ANOVA or Kruskal Wallis test was used for comparison of more than two groups. Significant correlation was observed in BMI, HC, DBP and age of diabetes with total survey points (Table 5).

Table 5. Correlation of total survey points

	Age	BMI	WC	HC	SBP	DBP	DD
r:	-0.097	0.171	0.024	0.127	-0.033	-0.125	0.278
p:	NS	0.003*	NS	0.028*	NS	0.030*	<0.001*
	FBG	PPG	HbA1c	T-Chol	HDL	LDL	TG
r:	-0.035	-0.089	-0.037	0.057	0.041	0.046	0.079
p:	NS	NS	NS	NS	NS	NS	NS

*: significant difference, NS: non-significance, BMI: body mass index, WC: waist circumference, HC: hip circumference, SBP: systolic blood pressure, DBP: diastolic blood pressure, DD: diabetes duration, FPG: fasting plasma glucose, PPG: post-prandial plasma glucose, HbA1c: hemoglobin A1c, T-chol: total cholesterol, HDL: high-density lipoprotein, LDL: low-density lipoprotein, TG: triglyceride

Discussion

There are increased number of epidemiological studies about diabetes, but less of them covers the awareness about the disease, treatment, side effects and complications in Turkey. Documenting the factors associated with awareness will guide for reducing the prevalence of diabetes and planning the accurate treatment and disease control strategies.

In the literature, different results were obtained in studies comparing age and diabetes knowledge. While, no significant difference was reported between age and diabetes knowledge in a study from Turkey [5], a study conducted with Type 2 diabetic in Chinese population have been reported the elder patients have less knowledge about diabetes [6]. In another study conducted in Kuwait, it was demonstrated that old age affects the knowledge of diabetes negatively and older age has been shown as an obstacle for diabetes education [7]. In our study, when we compared the scores with age, although there was a negative correlation, no statistical significance was found. The reason why such a relationship was not found may be that the majority of our study group was under 65 years old. Negative correlation may still support the decrease in the level of disease information with the increase in age.

Gender distribution of the participants reveals female predominance (59.66 %, 6th decade) which is consistent with Arslantas [8] and Liu [9] et al.'s studies (77.2%, 7th decade and 64.9%, 6th and 7th decade). These results may indicate the incidence of T2DM is higher than men around 6th decade which would be related with post-menopausal changes.

In France, a survey was conducted to measure the level of knowledge about diabetes in patients with type 2 diabetes and to the normal population. In this study, the level of knowledge about the disease was found to be higher in the diabetic population and in the high social category women over the age of 65 years [10]. In another study, general diabetes information, insulin-related knowledge level and total knowledge level of adults living in Kuwait with Type 2 diabetes were examined, and no differences in terms of gender were observed in the comparison of these three scores [7]. In our study, women gave more accurate answers to survey questions than men in contrast to Rahman et al. [11] and Caliskan et al. [12] studies. The higher level of knowledge of women about diabetes, its treatment and side effects can be attributed to the fact that women are more interested in health, to devote more time to this issue, and to follow the publications to inform the community in television and newspapers in Turkey.

In China, in a questionnaire study conducted to evaluate disease-related information and glycemic control in type 2 diabetics, the highest awareness was observed in civil servants, the lowest awareness was observed in housewives, and the authors emphasized the need to pay attention to sociodemographic characteristics when preparing the training program [6]. In a study conducted in India, diabetes and education and working status were compared and no relation was found with knowledge about the disease in any occupational group (even in the doctor) [13]. In our study, the scores of the non-working group (housewives and one unemployed person) were significantly higher compared to the workers. This can be attributed to the fact that housewives spend more time on themselves and their health than the workers. Considering that the majority of the non-working group is housewives and women's scores are higher, it can be thought that the workers may find it difficult to find time to watch, listen to or read the health programs in the media, and may not be able to get permission from workplaces to be informed by health care providers. Caliskan et al [12] reported education level as an important predictor of awareness and they found that high-educated individuals were more informed and aware of their condition. In a study conducted in the USA, although there was a positive relationship between the level of education and diabetes awareness, no statistical significance was found [14]. Our study reveals no significant difference between low and high-educated participants. This may be the fact that the patients with low level of education raised themselves because of their interest in diabetes may have eliminated the difference between the groups.

The level of knowledge about the disease was found to be low in families with low income in a study from Kuwait [7]. In our study, there was no significant difference when compared with those with income above and below the minimum wage. Social security in our country covers all the people and therefore there is no difference between the income groups in accessing to health care. For this reason, the patient in each income group can apply to the health institutions at the same standards and get information.

In France, a study in type 2 diabetics has shown that the level of knowledge increase with antihyperglycemic therapy intensification. While, OAD users have been shown to have a better knowledge of diabetes than those in the diet and lifestyle changes group, insulin users have better knowledge than those who use OAD [10]. In a study conducted in Austria, it was shown that although, patients using insulin participated more education programs and had better knowledge, their glycemic controls were not good and had high HbA1c levels. It has been emphasized that disease-specific education is not sufficient for glycemic and metabolic control alone [15]. In contrast to these studies, in a study conducted in China, the highest score about the level of knowledge about diabetes was obtained in patients those who are only under the diet-therapy and the lowest score was observed in patients those who use insulin treatment [6]. When the patients were examined in terms of the antihyperglycemic agents, the

scores of patients using insulin or insulin + OAD were found to be higher in our study. This may be related with insulin required patient's higher diabetes duration and more training they have received during the course of treatment.

In recent years, with the help of social media, patients have a lot of useful information including the increase of the risk of cardiovascular disease in the combination of diabetes, dyslipidemia and hypertension. In addition, patients' perception about their diagnosis is also increasing. In a study, it was stated that the level of knowledge about the disease increases with the number of visits [14]. In our study, the scores of lipid-lowering and anti-hypertensive drug users were significantly higher than those who did not. It may be possible to link the high level of knowledge in patients who use lipid-lowering drugs and antihypertensives with their more frequent doctor visits requirements that they are informed at each visit.

It was shown that the duration of prolonged disease increased the knowledge about the disease, and this was interpreted as a result of patients getting more education about diabetes [10]. In another study, which showed a very high level of diabetes knowledge compared to other studies, no significant difference was found between diabetes duration and general diabetes knowledge [6]. In our study, when we compare the age of diabetes and the questionnaire scores, it was found that as the age of diabetes increased, the level of knowledge about the disease, treatment and treatment side effects of the patients increased. With the increase in the duration of the disease, patients experience, and knowledge increases about the disease and the transformation of repetitive trainings into permanent knowledge, as the patients go to more doctor visit.

In a study conducted with type 2 diabetics, low diastolic blood pressure and high HDL-K were reported in women and all other cardiovascular risk factors were similar for both sexes [15]. As the knowledge of the diabetic person increases, the likelihood of being aware of the complications increases. In our study, no statistically significant difference was found between the systolic blood pressure and the questionnaire score, whereas there was a negative correlation between diastolic blood pressure and the questionnaire score. The increased rate of accurate knowledge while diastolic blood pressure decrease, may lead us to conclude that, even though indirectly, blood pressure control improves with increased knowledge. The relationship between diabetes knowledge level and glycemic control was evaluated in type 2 diabetics, and no difference between the HbA1c level and the knowledge levels of the patients was observed. It was concluded that the information obtained by the patients might be due to the complications their experience during the longer time they spend as a diabetic rather than diabetes education [7]. In our study, similar to the findings in the literature, we did not find any significant difference between the glycemic parameters (FPG, PPPG and HbA1c) and questionnaire scores. The underlying reason for this may be the fact that the current conditions of the people in our country are not suitable for implementing the diabetic lifestyle (increasing exercise, ensuring a healthy diet).

Kacerovsky et. al reported that, although cardiovascular risk factors were similar for both genders, HDL-K was found to be higher in women with type 2 diabetes [15]. In our study, no significant difference was found between lipid parameters and knowledge about diabetes, its treatment and side effects. This may be because 50% of our patients are receiving lipid-lowering treatment.

Limitations

This study was designed in a single center with tertiary hospital outpatient clinic patients. Participants' awareness level were evaluated with total survey point. These may be considered as a limitation.

Conclusion

The mean score of the patients who participated in our study was 14 points on a total of 24 points (58%). Considering the morbidity, mortality and economic costs associated with diabetes, we can see how much we need patient education about diabetes, its treatment and treatment side effects in order to achieve success in treatment.

As a result; In the light of this information, patients are required to participate in the treatment in order to control type 2 diabetes and to prevent complications. This can only be achieved by informing the patients about the disease, treatment and especially the side effects of treatment. In order for patient information to be complete, health care personnel should update their knowledge about the drugs used in treatment, the time and side effects of taking the medication and re-explain them to the patients repeatedly. It should be kept in mind that accurate information on diabetes, its treatment, treatment side effects and complications will reduce short and long-term complications and increase quality of life and life expectancy.

Further multicenter studies with greater participant number and surveys that include the source of information would reflect the greater population and help to produce appropriate educational programs for patients own cultural level. New surveys that produced for each subgroup of diabetes awareness such as medications, acute and chronic complications would allow us to see our shortcomings better in terms of education.

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Supplements

The questionnaire to measure diabetic patients' knowledge about diabetes itself, treatment and side effects

Question 1:	Do you think diabetes is an important disease?	"Yes or No"
Question 2:	Is diabetes a familial disease?	"Yes or No"
Question 3:	Can high levels of blood sugar give you damage?	"Yes or No"
Question 4:	Does weight control help to control the blood sugar levels?	"Yes or No"
Question 5:	Does exercising have any benefits on control of your blood sugar levels?	"Yes or No"
Question 6:	Do you feel uncomfortable when you are taking your pills for diabetes while you are with other people?	"Yes or No"
Question 7:	Does it make you unhappy to use Insulin? / Would it?	"Yes or No"
Question 8:	Can only the diet and exercise be enough to control the blood sugar levels?	"Yes or No"
Question 9:	If the blood sugar level is high despite the diet and exercise, should the additional medication given by the doctor be taken?	"Yes or No"
Question 10:	Do more drugs use control blood sugar better?	"Yes or No"
Question 11:	If the blood pressure is within the normal range, should the hypertension medication regularly be taken administered by the doctor for to protect kidney functions?	"Yes or No"
Question 12:	Should cholesterol lowering drugs given by the doctor besides diabetes medicines be used regularly?	"Yes or No"
Question 13:	If blood glucose control is insufficient, should insulin be used when it is said necessary to use by the doctor?	"Yes or No"
Question 14:	Is it easier to use insulin instead of using multiple sugar pills?	"Yes or No"
Question 15:	Do you think the diabetes drugs you use have any side effects?	"Yes or No"
Question 16:	Do you think the sugar pills you use can cause unwanted falls in your blood sugar?	"Yes or No"
Question 17:	Can insulin use cause unwanted falls in your blood sugar level?	"Yes or No"
Question 18:	Do you know if diabetes drugs can cause liver failure?	"Yes or No"
Question 19:	Do you know if diabetes pills can cause kidney failure?	"Yes or No"
Question 20:	Do you know if the pills you use for your diabetes can cause nausea, vomiting, metallic taste in the mouth, indigestion or diarrhea?	"Yes or No"
Question 21:	Do you know if diabetes drugs you use can make changes in your blood count?	"Yes or No"
Question 22:	Do you think that sugar pills and insulin are addictive?	"Yes or No"
Question 23:	Do you think that diabetes pills and insulin can cause unwanted weight gain?	"Yes or No"
Question 24:	Do you think that diabetes pills and insulin cause edema in your body?	"Yes or No"
Question 25a:	Do you think the diabetes pills you use can be used during pregnancy?	"Yes or No"
Question 25b:	Is insulin available during pregnancy?	"Yes or No"