

Assessment of the Awareness of Eye Complications Among Diabetic Patients Attending the Outpatient Clinics in Jeddah Eye Hospital in Jeddah City, Kingdom of Saudi Arabia, 2015

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Introduction

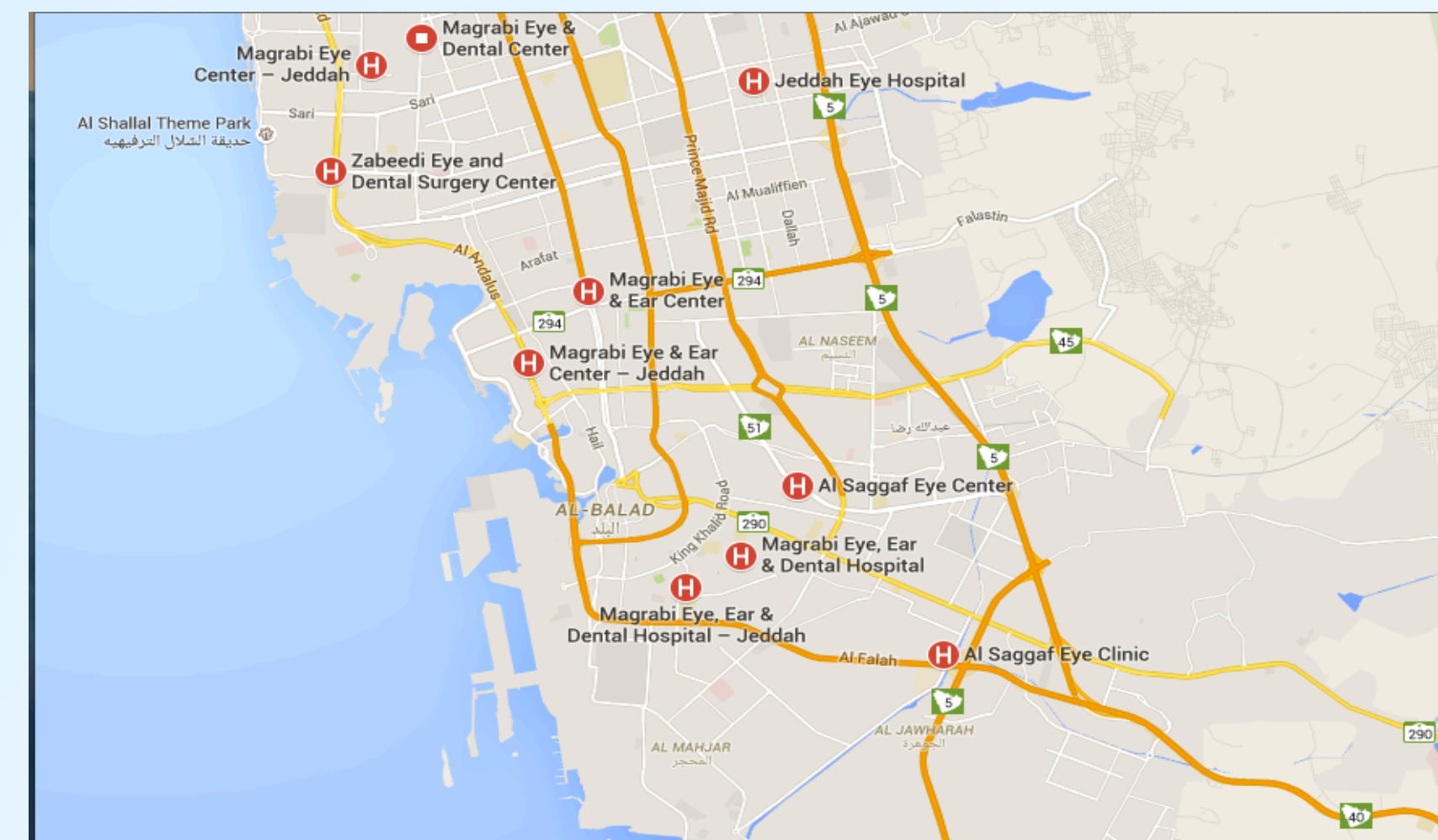
- Diabetes mellitus is on increase worldwide; 439 million adults affected by 2030
- Saudi Arabia is in top ten countries with highest prevalence of diabetes in the world
- In 2013, estimated prevalence in Saudi Arabia was 23.9%
- 14% of diabetics over 40 will develop diabetic retinopathy (DR) after 5 years
- Screening for DR through retinal examination is valid technique for detecting eye complications early
- 33% and 36% prevalence of DR in Saudi Arabia across different regions

Objectives

- Assess awareness of diabetes complications, especially DR, among diabetic patients who visit the outpatient clinics in Jeddah Eye Hospital
- Assess role of socio-demographic characteristics, medical risk factors, and screening-related factors

Methods

- Conducted in Jeddah Eye Hospital, the only governmental and specialized hospital for eye problems in city
- Interview conducted using a 26 item closed-ended questionnaire
- 380 participants selected from diabetic patients visiting outpatient department at Jeddah Eye Hospital from June 1 to July 30, 2015
- Assessed demographic data, diabetes clinical status data, and awareness of diabetes complications, eye screening and eye care-seeking behavior



Jeddah Eye Hospital and other main private eye centers and hospitals in Jeddah city

Results

- Participants aged 11 – 84 years old; average age 58.3 years (STD 10.9).
- 91.8% had visited doctor, nurse, or other healthcare professional for diabetes in last 12 months
- 66.9% had been told by doctor they had DR

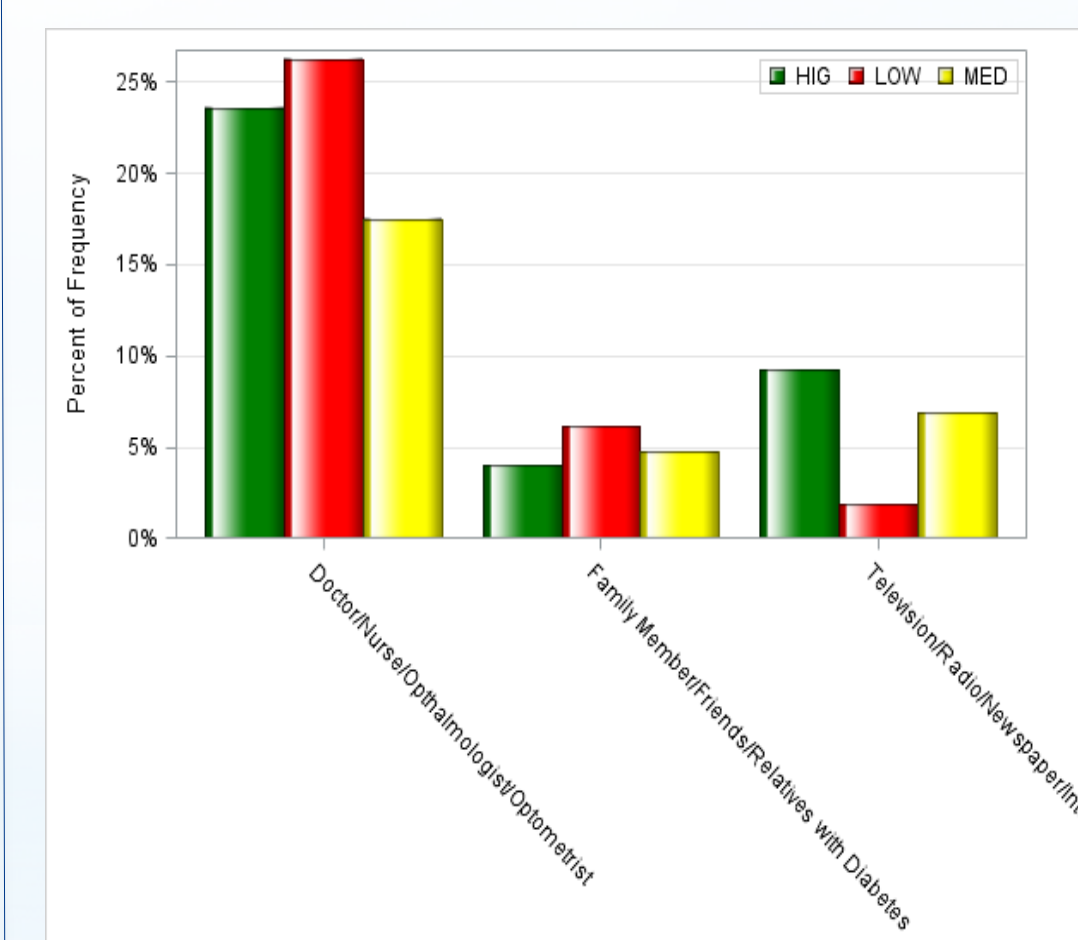
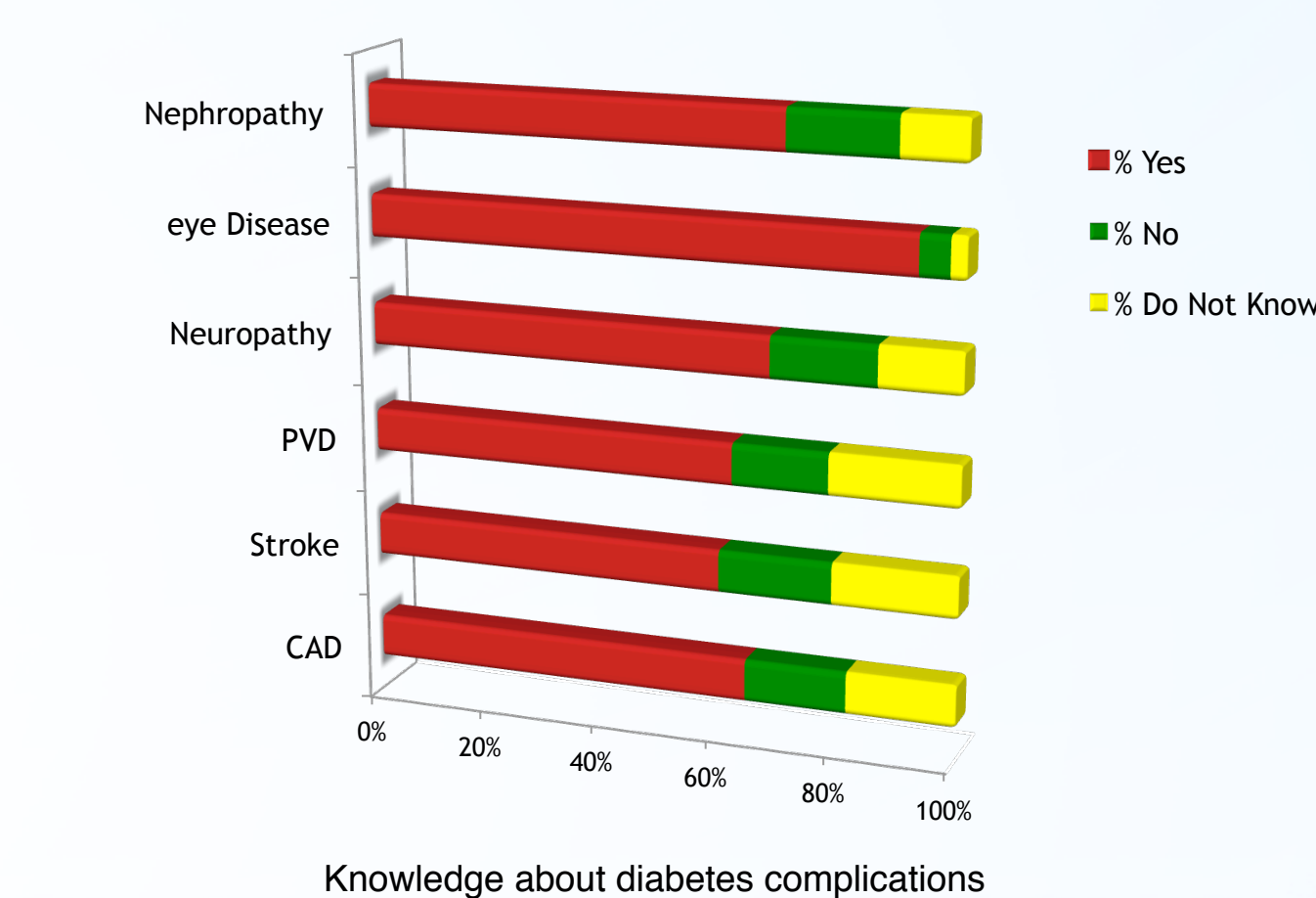
Table 1. Demographic characteristics of the 380 study participants (N,%)

<i>Age (y)</i>	
0-45	31 (8.2%)
45-55	86 (22.6%)
55-65	154 (40.5%)
65 and above	109 (28.7%)
<i>Sex</i>	
Male	181 (47.6%)
Female	199 (52.4%)
<i>Nationality</i>	
Saudi	332 (87.4)
Non Saudi	48 (12.6)
<i>Residency</i>	
Inside Jeddah	291 (76.6%)
Outside Jeddah	89 (23.4)
<i>PHCC</i>	
Follow up	255 (67.1%)
Not follow up	125 (32.9%)
<i>Educational level</i>	
Illiterate	168 (44.2%)
Primary school	70 (18.4%)
Preparatory school	146 (12.1%)
Secondary school	49 (12.9%)
University and higher degree	47 (12.4%)



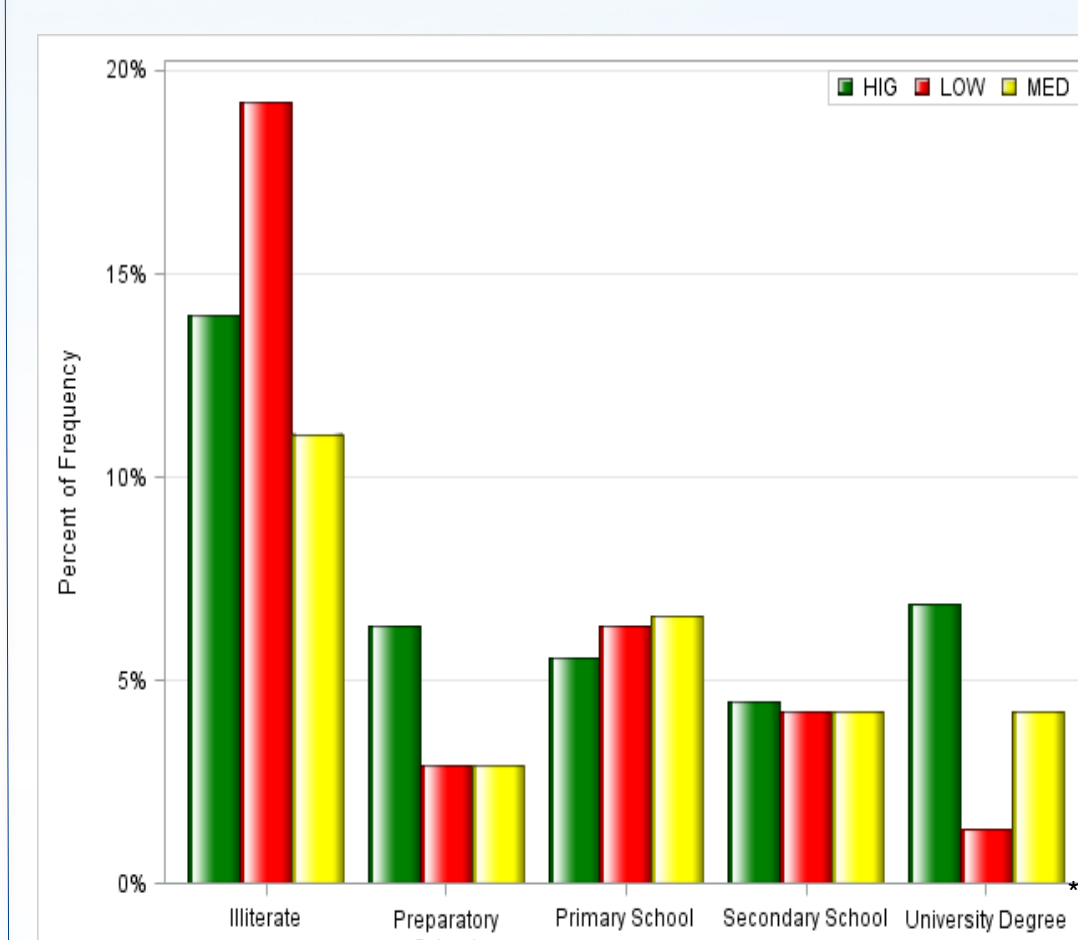
Table 2. Association between different clinical variables and gender (N,%)

	Female	Male	Total
<i>Diabetes Type</i>			
Type 1	15 (8.3%)	8 (4.0%)	23 (6.1%)
Type 2	159 (87.8%)	182 (91.5%)	341 (89.7%)
Unknown	7 (3.9%)	9 (4.5%)	16 (4.2%)
<i>Use of insulin</i>			
Yes	79 (43.9%)	79 (40.1%)	158 (41.9%)
No	101 (56.1%)	118 (59.9%)	219 (58.1%)
<i>Seen by doctor past 12 months</i>			
Yes	168 (92.8%)	181 (91.0%)	349 (91.8%)
No	13 (7.2%)	18 (9.0%)	31 (8.2%)
<i>Follow up recommendation*</i>			
<4 visits in the last 12 months	76 (43.7%)	62 (31.8%)	138 (37.4%)
≥4 visits in the last 12 months	98 (56.3%)	133 (68.2%)	231 (62.6%)
<i>Glucose check up frequencies</i>			
Never	31 (17.3%)	26 (13.1%)	57 (15.1%)
<4 times a day	46 (25.7%)	78 (39.2%)	124 (32.8%)
>4 times a day	6 (3.4%)	2 (1.0%)	8 (2.1%)
<4 times a month	31 (17.3%)	34 (17.1%)	65 (17.2%)
>4 times a month	61 (34.1%)	58 (29.1%)	119 (31.5%)
Rarely	4 (2.2%)	1 (0.5%)	5 (1.3%)
<i>Eye screening referral</i>			
Yes	121 (33.2%)	134 (67.3%)	255 (67.1%)
No	60 (66.8%)	65 (32.7%)	125 (32.9%)
<i>Time between diagnosis and eye screening</i>			
Between 0-10 years	79 (44.6%)	73 (37.6%)	152 (41.0%)
Between 10-20 years	51 (28.8%)	72 (37.1%)	123 (33.1%)
>20 years	47 (26.6%)	49 (25.3%)	96 (25.9%)
<i>Wear eyeglasses or contact lenses</i>			
Yes	109 (60.2%)	129 (65.5%)	238 (62.9%)
No	72 (39.8%)	68 (34.5%)	140 (37.1%)
<i>Last eye examination</i>			
Never	14 (7.8%)	15 (7.5%)	29 (7.6%)
Don't know/Not sure	8 (4.4%)	4 (2.0%)	12 (3.2%)
Within past year	142 (78.9%)	169 (85.0%)	311 (82.2%)
>One year	16 (8.9%)	11 (5.5%)	27 (7.1%)
<i>Retinopathy</i>			
Yes	119 (66.1%)	134 (67.7%)	253 (66.9%)
No	55 (30.6%)	56 (28.3%)	111 (29.4%)
Don't know/Not sure	6 (3.3%)	8 (4.0%)	14 (3.7%)
<i>HbA1c</i>			
>6.5%	52 (96.3%)	76 (96.2%)	128 (96.2%)
≤6.5%	2 (3.7%)	3 (3.8%)	5 (3.8%)



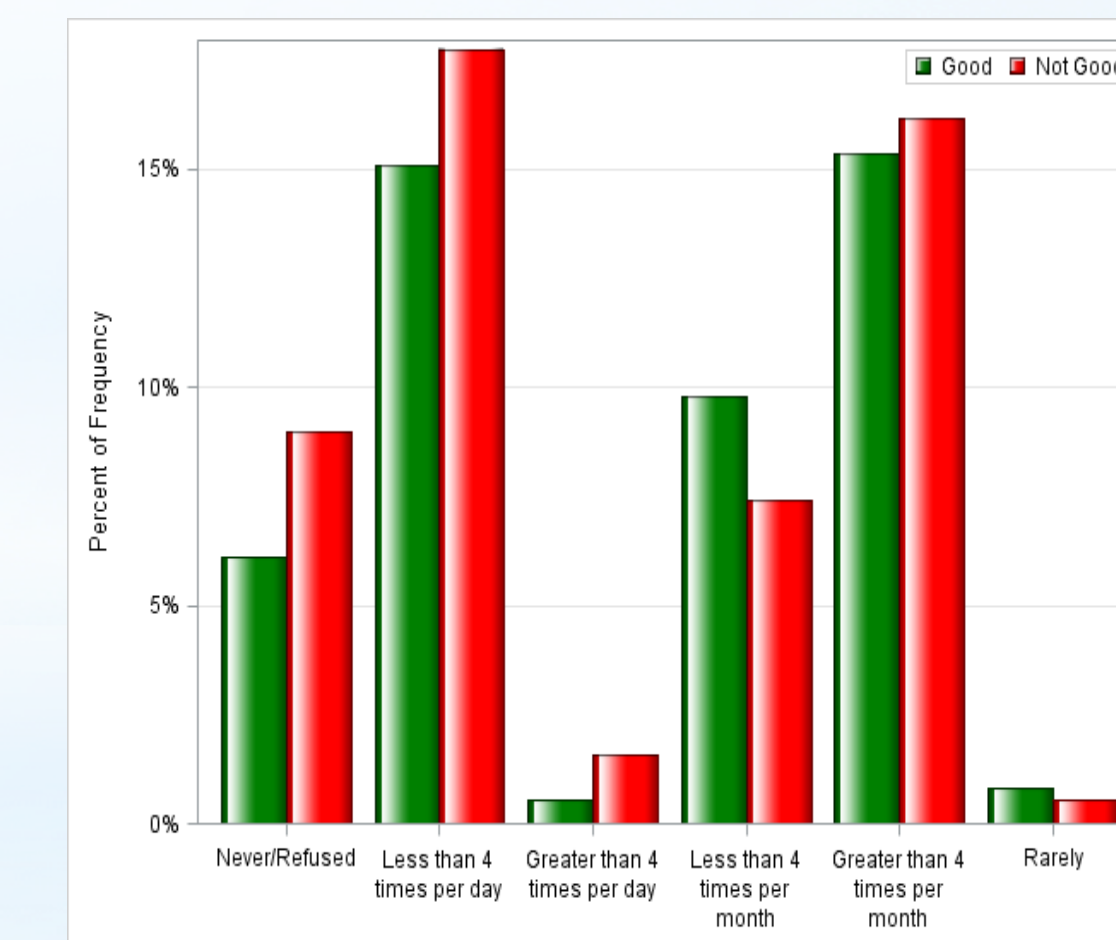
*P-value<0.005

Level of awareness by source of knowledge

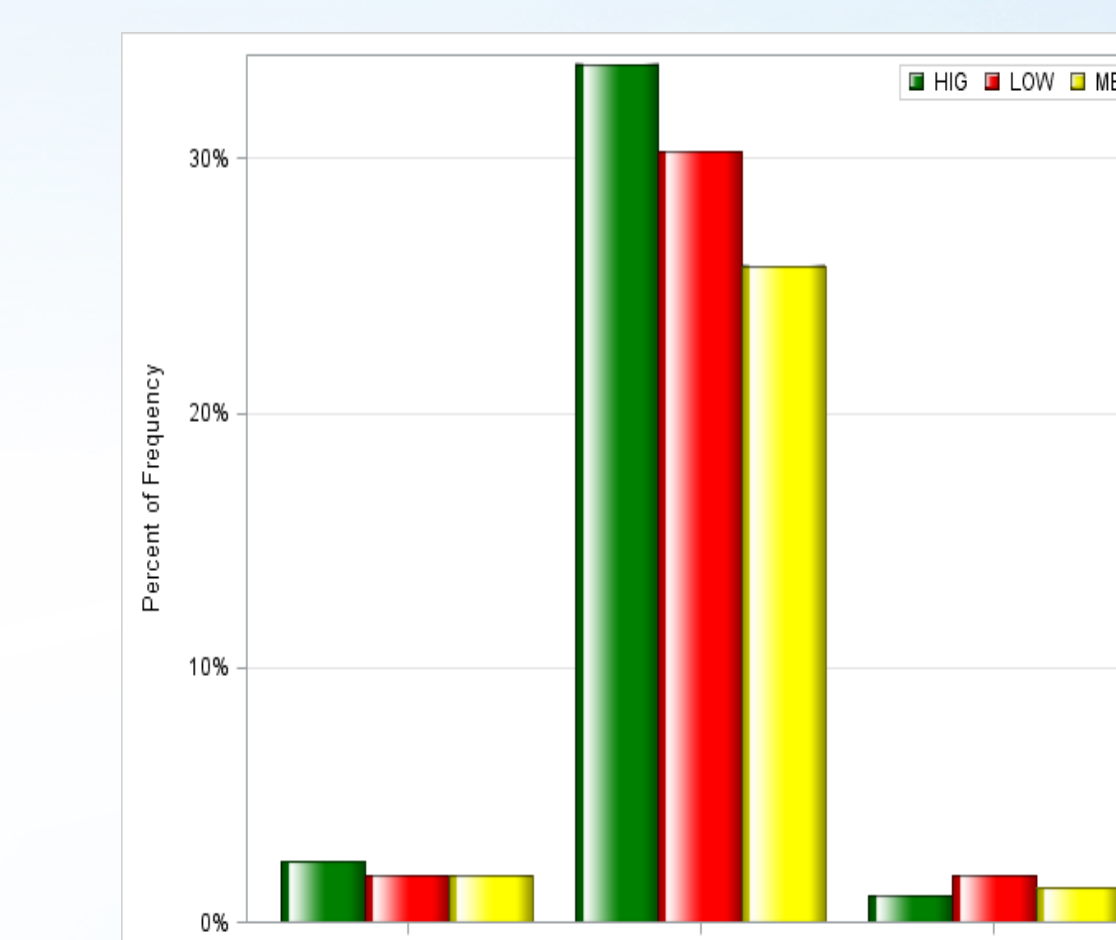


*P-value<0.005

Level of awareness by educational level



Blood glucose test frequencies classified by patients' impression of whether or not their diabetes is under good control or not



Level of awareness by type of diabetes

Discussion

- High percentage of patients not receiving eye check ups at optimal frequency for preventing complications or within recommended timeframe
- For majority, lack of knowledge of diabetic eye complications was main barrier preventing them from getting eye screenings earlier

Recommendations

- More effort needed to promote appropriate eye care seeking behavior to prevent further increases in diabetic eye complications
- Mass media has proven to be effective tool for providing health information; delivering fixed and simple health messages could be an effective method in raising awareness

Acknowledgments

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