Knowledge, Attitude and Practices of Type 2 Diabetic patients attending a tertiary care hospital in Karachi

Kanza Baig (1)
Tafazzul Hyder Zaidi (2)
Kiran Mehtab (3)
Marium Farid (1)
Shajeeya Khaliq (1)
Wajiha Mukhtar (1)
Shiza Tariq (1)
Fozia Zaidi (4)

(1) Undergraduate Medical Student, Sindh Medical College, Jinnah Sindh Medical University, Karachi.
(2) Associate Professor, Community Medicine Department, Sindh Medical College, Jinnah Sindh Medical University, Karachi
(3) Professor and Head Of Department, Department of Community Medicine, Liaquat College of Medicine & Dentistry, Karachi.
(4) Nursing Instructor, School Of Nursing, Layyah.

Corresponding author:
Dr Syed Tafazzul Hyder Zaidi, MBBS, MSPH
Associate Professor, Community Medicine Department,
Sindh Medical College, Jinnah Sindh Medical University,
Karachi
Cell No: 00 92 300 923 26 95
Email: drtaf2002@yahoo.com

Abstract

Introduction: Type 2 Diabetes Mellitus (DM) has become a global epidemic with patients suffering significant disabilities and potential premature death. Due to a lack of education regarding diabetes, most patients suffer from diabetic complications. This study was conducted to determine the knowledge, attitudes and practices among patients with type 2 diabetes. Methods: A cross-sectional study was conducted using a non-probability sampling technique to select the diabetic patients. A total of 244 diabetic patients coming to the medical OPD at Jinnah Post Graduate Medical Center, were interviewed. The data was collected via interviews using a structured questionnaire. The data was collected using Non Probability Purposive Sampling technique and analyzed using Statistical Package SPSS software version 20.0. The patients' knowledge about the disease, their attitudes and practices were the main outcome measures. A chi square test was run at 95 % confidence interval (CI).

Methodology: A Cross sectional study was conducted at the Medicine OPD and Ward of Jinnah Post Graduate Center, Karachi from April 2019 and August 2019. The sample size was calculated to be 220. The sample was selected using non probability purposive sampling technique. A structured questionnaire with close ended questions was our data collection tool. It was translated into simple Urdu and divided into 4 sections pertaining to: demographic details, knowledge about DM 2, attitude and practices adopted for DM 2. It was handed out to our data collectors who, after obtaining verbal consent, conducted personal interviews amongst patients coming to Medicine OPD and Ward of JPMC, diagnosed with DM type 2. Patients not diagnosed with DM type 2 or those unwilling to participate were excluded.

Data collected was analyzed using the SPSS software version 20.0 and a chi square test performed. Frequencies and percentages were taken out. The statistical analysis was conducted with a 95% confidence interval and a p-value of <0.05 as threshold of statistical significance. All ethical considerations

were observed while seeking legal permission of concerned authorities to assess data. Any research misconduct was avoided and rights and well-being of research participants were protected.

Results: A total of 220 individuals participated in this study with ages ranging from 10 years to 78 years with the highest number of individuals, 9.5% (n=21) in the 50 year old age group. Of the diabetic patients 55.9% (n=123) of them were female and 44.1% (n=97) were males. Among the patients 85.5% (n=188) were married, 4.5% (n=10) were unmarried and 10% (n=22) were widowed. Regarding their level of education, 22.3% (n=49) were not formally educated, 15.9% (n=35) were primary educated, 20.5% (n=45) were secondary educated and 41.4% (n=91) were graduates. Most of the females who were 34.7% (n=75) were house wives while males represented all professions including government jobs 4.7% (n=10), Engineers 4.1% (n=9), drivers 2.3% (n=5) and labourers 4.1% (n=9). Regarding the monthly income of the participants about 34.5% (n=76) earned from Rs 1000/- to Rs 29,999/- per month, 22.7% (n=50) earned from Rs 30,000/- to Rs 99,999/- per month and 6.8% (n=15) earned up to or more than Rs 3,00,000/-. Regarding their time since onset of diabetes, 11.4% (n=25) had it for less than one year. About 30.5% (n=67) had it for the last 1-5 years, 23.6% (n=52) had it from 6-10 years, 15.5% (n=33) had it for the last 11-15 years and   19.5% (n=43) had it for more than 15 years. When asked about any prior knowledge about diabetes, 60.9% (n=134) knew somewhat about diabetes and 39.1% (n=86) had no prior knowledge. Regarding the source of their knowledge, the majority who were 46.8% (n=103) had learnt from family and friends and 28.6% (n=63) had learnt about it from health care providers and only 4.1% (n=9) had learnt about it through the media. Of the patients, 77.3% (n=170) of them had the belief that diabetes was a genetic disease and 22.7% (n=50) did not believe it to be a genetic disease. 28.2% (n=62) of the diabetic patients correctly identified the symptoms of their disease such as increased thirst, appetite and urination. 92.3% (n=203) of diabetic patients declared their disease as a dangerous one while 56.4% (n=124) believed it is a preventable illness; 23.2% (n=51) did not think of it as preventable and 20.5% (n=45) were not sure of terming diabetes as preventable. Responding to the question whether blood sugar levels rise in diabetes, 82.7% (n=182) knew about it and 17.3% (n=38) did not know about it. Almost 66.4% (n=146) patients knew how to measure sugar levels with a glucometer and 33.6% (n=74) did not know how to use a glucometer. 15.5% (n=34) patients daily checked their sugar levels, 57.7% (n=127) checked irregularly and 12.3% (n=27) did not check at all. Almost 50.5% (n=111) had their blood pressure checked a few days before, 26.4% (n=58) had it checked a few weeks ago, 15.5% (n=34) had it checked a few months ago and 7.7% (n=17) had it checked one year ago. Regarding the type of treatment, 17.3 (n=38) patients were on oral hypoglycemic agents and insulin, 63.2% (n=139) were on oral hypoglycemic, 10.5% (n=23) were on insulin only, 5.9% (n=13) were on dietary control and 3.2% (n=7) did not take any treatment. 67.3% (n=148) monitored diet regularly and 76.4% (n=168) did not ever miss taking their medicines. 18.2% (n=4 used to miss taking regular medication and 5.5% (n=12) were not sure about their regularity. 65.5% (n=144) termed insulin as the last level of treatment therapy for diabetes and 71.4% (n=157) knew that exercise can help prevent occurrence of diabetes complications. When the patients were asked whether insulin was an addiction, 34.5% (n=76) said yes, 49.1% (n= 108) said no and 16.4% (n=36) said may be.

Conclusion: The majority had good overall knowledge and attitude towards their disease. Despite that, self-care practices were mediocre. We still have miles to go in ensuring that every patient, regardless of their education, not only fully comprehends but also implements their self-care practices rigorously via educational and awareness programs.

Key words: Type 2 Diabetes Mellitus (DM), Patients, Attitude, Self Care

Introduction

Diabetes Mellitus has become a major health concern that has been particularly growing in developing countries (1). According to NDSP 2016–2017, the prevalence of Diabetes mellitus is 26.3%. Hence, Pakistan has around 27.4 million people >20 years of age suffering with diabetes (2).
It is widely acknowledged that poor control of Diabetes leads to remarkably elevated risks for heart disease, stroke, blindness, kidney failure, leg amputation and premature death [3-4]. These potential complications may largely be avoided in future by proper management of Diabetes [5]. This may be achieved by optimal glycemic control which aims to delay both micro vascular and macro vascular complications[6]. This involves lifestyle modification that includes routine exercise, healthy diet, weight loss, and drug therapy. Therefore, adequate health education is a cornerstone of diabetes management. Patients who are well aware and knowledgeable regarding diabetes and its adverse complications seek proper treatment and care, and are proactive regarding their health [7]. Therefore such individuals, who are diligent with their diabetes self-care, achieve better and long-lasting diabetic control [8, 9].

Furthermore, incorrect attitude and beliefs regarding Diabetes, hinders proper guidance about the disease. For future effective education programs to be better planned, we need to explore patients' awareness about diabetes,

misconceptions about the disease itself and its treatment especially diet and insulin (10). In view of the projected rise in the incidence of type 2 Diabetes and the resultant morbidity and mortality in a country like Pakistan, there has been a dearth of KAP studies in Pakistan in recent years. As of now, Pakistan currently lacks large scale structured educational and awareness programs regarding diabetes and its complications. This study aims to ascertain current knowledge, mindset and self-care practices prevalent amongst people suffering from Type 2 DM.

The information gained could subsequently be helpful to design and initiate comprehensive programs for control of diabetes and help prevent its sufferers from developing debilitating complications and achieve better health control.

Methodology

A Cross sectional study was conducted at the Medicine OPD and Ward of Jinnah Post Graduate Center, Karachi from April 2019 and August 2019. The sample size was calculated to be 220. The sample was selected using non probability purposive sampling technique. A structured questionnaire with close ended questions was our data collection tool. It was translated into simple Urdu and divided into 4 sections pertaining to: demographic details, knowledge about DM 2, attitude and practices adopted for DM 2. It was handed out to our data collectors who, after obtaining verbal consent, conducted personal interviews amongst patients coming to Medicine OPD and Ward of JPMC, diagnosed with DM type 2. Patients not diagnosed with DM type 2 or those unwilling to participate were excluded.

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Results

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Figure 1: Depicting level of education of diabetic patients showing 22.3% (n=49) were not formally educated, 15.9% (n=35) were primary educated, 20.5% (n=45) were secondary educated and 41.4% (n=91) were graduates
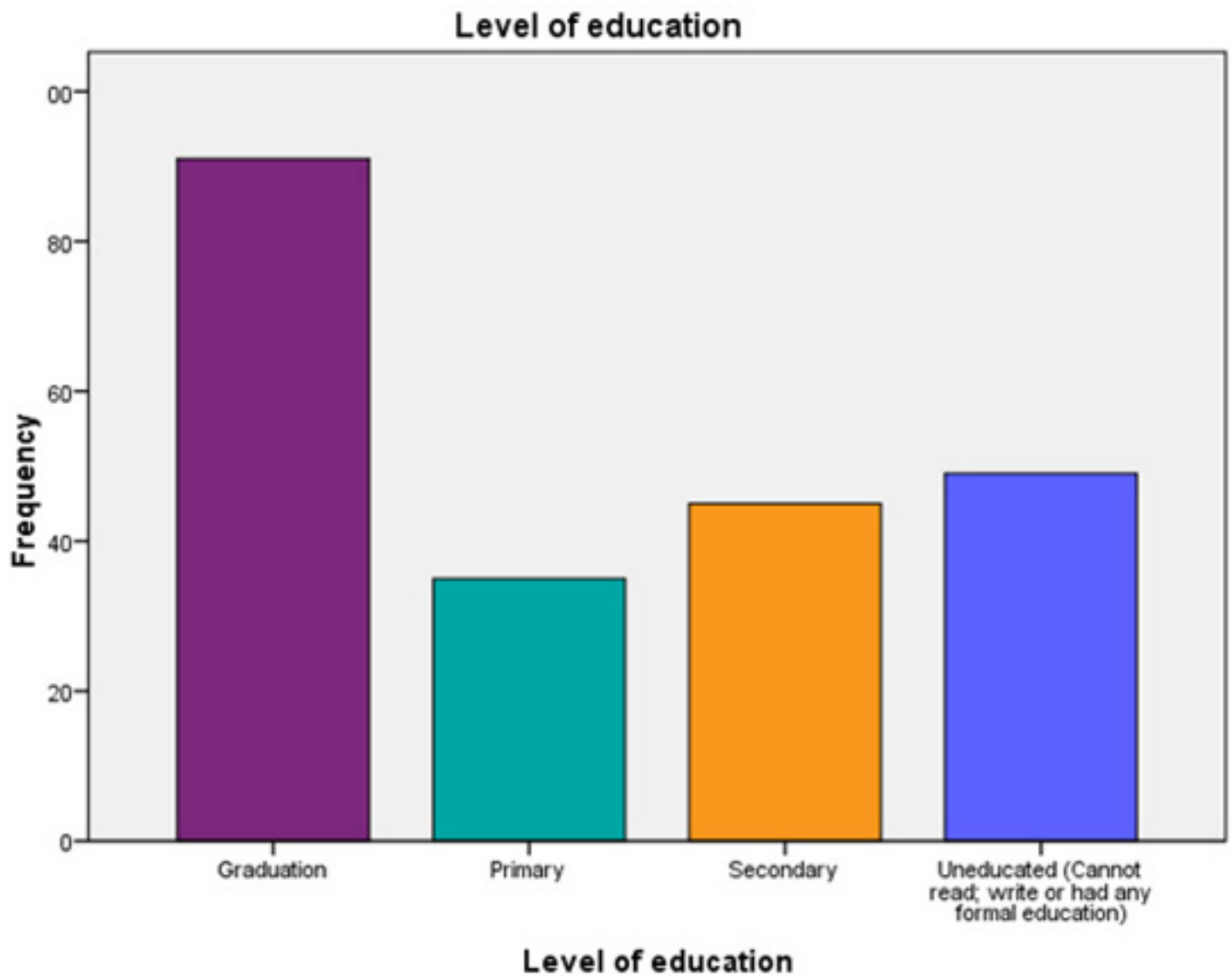
Figure 2: Percentage of participants who follow regular self-practice routines. The figure shows that 67.3% (n=148)   of the patients monitored diet regularly , 15.5% (n=3) patients daily checked their sugar levels and 76.4% (n=168) did not ever miss taking their medicines.
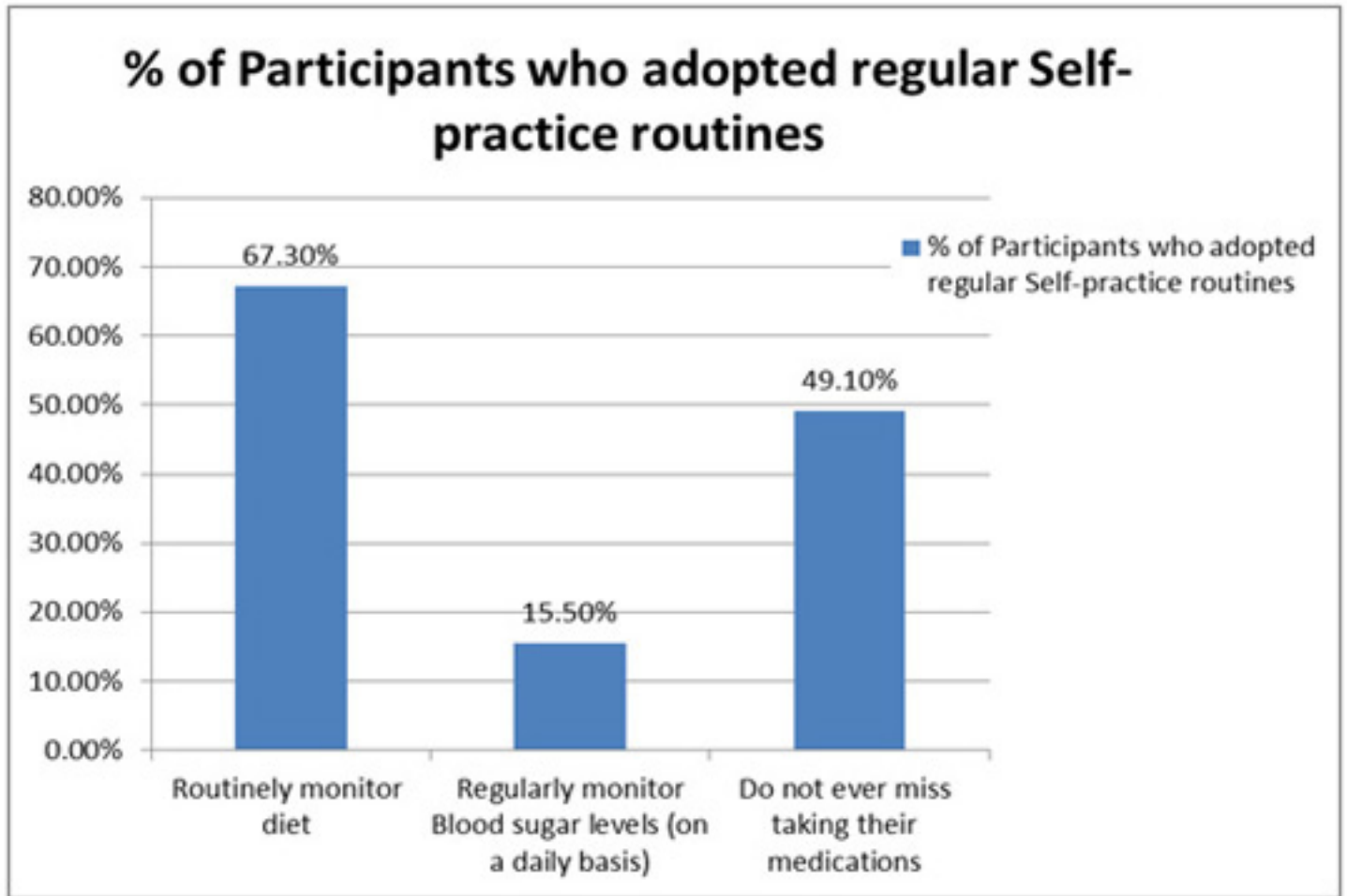
Figure 3 showing the patients' type of treatment; 17.3 (n=38) were on oral hypoglycemic and insulin, 63.2% (n=139) were on Oral hypoglycemic, 10.5% (n=23) were on insulin only, 5.9% (n=13) were on dietary control and 3.2% (n=7) did not take any treatment.
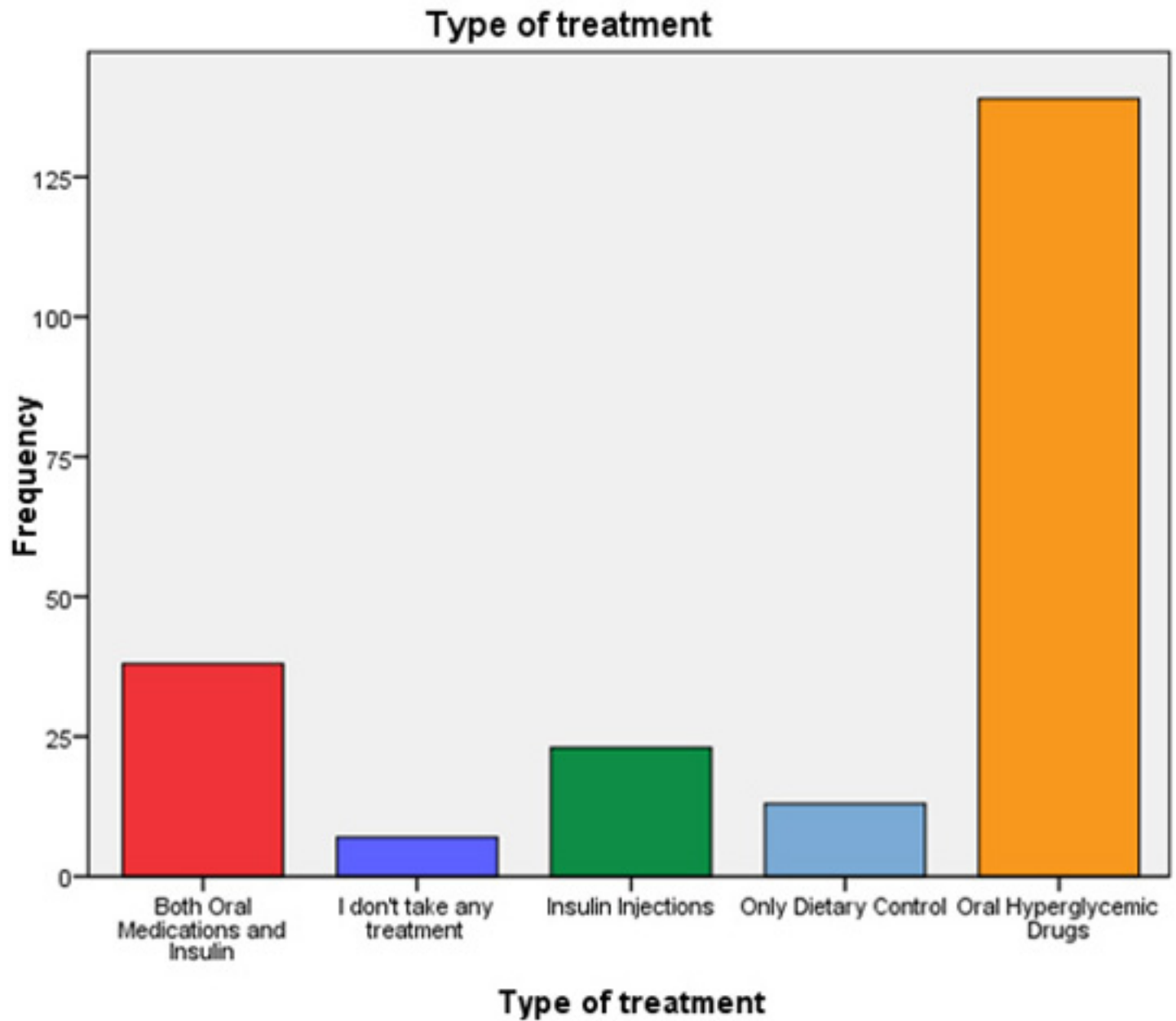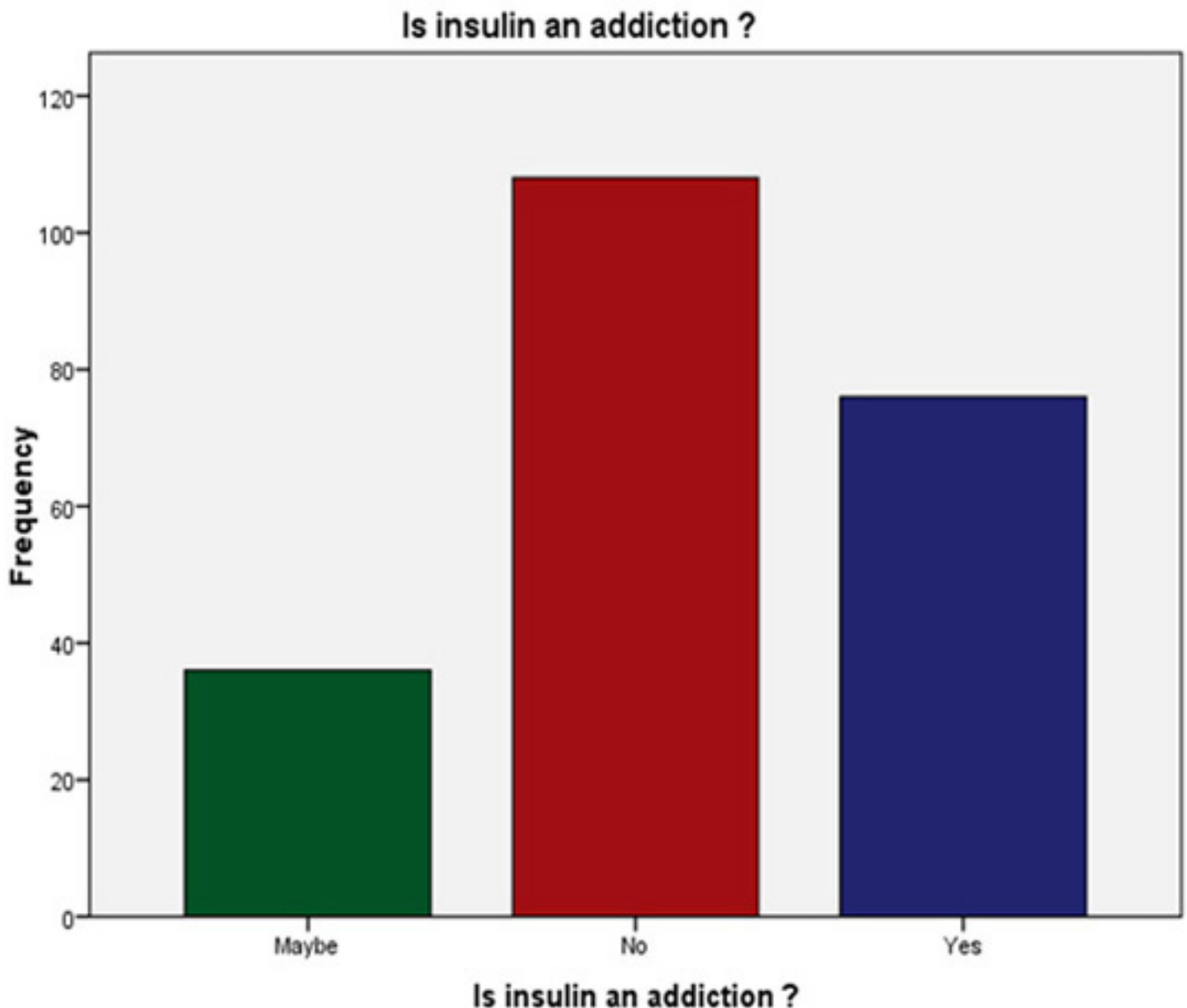

Type of treatment

Figure 4 showing that when patients were asked whether insulin was an addiction, 34.5% (n=76) said yes, 49.1% (n= 108) said no and 16.4% (n=36) said may be.

Discussion

This cross sectional study was conducted primarily in Jinnah Postgraduate Medical Center, with 220 type 2 diabetics participating in the study. According to this study when asked about any prior knowledge about diabetes, 60.9% knew somewhat about diabetes and 39.1% had no prior knowledge. A majority of our population had good knowledge regarding the disease; they knew what diabetes was, knew about the symptoms, and the complications. This is a significant improvement to one our parent researchers did in Islamabad in 2010 where half of their participants didn't even know what diabetes was (11). In this study regarding diabetic patients' level of education, 22.3% were not formally educated, 15.9% were primary educated, 20.5% were secondary educated and 41.4% were graduate An obvious parallel that we noticed was that the education level had a major role to

play in the knowledge regarding the disease with most people with higher education being well informed. Also the use of a glucometer to monitor the disease was also tied to the education level. These findings were also confirmed by a study conducted in Uganda in 2010 (12). It was a little disheartening how a less number of respondents got their information from medical professionals, indicating the need to further bridge this gap as in this study it was found that regarding the source of their knowledge, the majority, which was 46.8%, had learnt from family and friends and 28.6% had learnt about it from health care providers and only 4.1% had learnt about it through the media.

This study showed that the attitude towards the disease was good as well, with the majority of the participants knowing this to be a dangerous condition that required changed diet and regular exercise and constant monitoring. This was confirmed by another study conducted in China (13).

In addition to having a sound knowledge of diabetes, self-management of diabetes is also vital for patients. Previous researchers have assessed the attitudes and self –care practices of each patient in order to maintain their disease condition (14,15).

In this study, the majority of individuals were found to exercise adequate control over their diet, and adopt healthier food alternatives. This could be a potent indicator of the growing mindset rampant in the general populace, of relying on healthier diets to keep Type 2 Diabetes at bay. However, a worrisome statistic has come to surface with regards to checking routine Blood sugar levels. Only 15.5% of individuals regularly monitored their blood sugar levels, as is consistent with the findings of a previous research paper (16) where 14.5% reported checking of their S=sugar levels once disease showed worsening symptoms and 12.3% did not monitor at all. 57.7% participants did monitor their sugar levels, although irregularly (on a weekly/ monthly basis). Despite a moderate decline in the number of individuals who do not monitor, it is a concerning issue nonetheless that even those who did monitor sugar levels, did so infrequently and this imparts little or no health benefit in the long run. This was also confirmed by a study conducted in Indonesia in 2018 (17). In this study 67.3% monitored diet regularly and 76.4% did not ever miss taking their medicines whereas 18.2% used to miss taking regular medication and 5.5% were not sure about their regularity. With regard to medication compliance, a satisfactory number of individuals never missed a dose of their medications indicating the individuals' earnest belief in drug therapy and their proactive, disciplined attitude towards their health. A few, who did miss their doses, did so infrequently, and this partial compliance might be corrected by health professionals who can counsel and place emphasis on strict adherence to medication. Furthermore, our data showed a majority of individuals who had received general formal education seemed to know how to operate a glucometer while a large set of those with no education, did not know. These findings were also similar to a study conducted in Iran (18). This might imply a greater sense of awareness regarding self-management practices amongst the educated class and their increased capability in handling technological gadgets to monitor diabetes better. Those not educated, are at a disadvantage and perhaps may benefit from educational programs and practical demonstrations by health care professionals.

Conclusion

The majority of our respondents had a good overall knowledge and attitude towards their disease while self-care practices were moderate. Despite an obvious increase in awareness and know how about the disease in recent times, we still have miles to go in ensuring that every patient regardless of their education, not only fully comprehends but also implements their self-care practices rigorously. It seems that it is imperative that patients of lower socioeconomic status and education are not restricted by their circumstances, with the principal of

equity rather than equality being used to ensure better results. Educational and awareness campaigns run on different social media platforms, TV and print media may help generate greater know how about Type 2 Diabetes in people of all different backgrounds. This will encourage them to have regular follow ups, get checked for various complications, and to live a lifestyle that allows their body to be the best it can be.

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