MOSUL JOURNAL OF NURSING
Online ISSN: 2663-0311 - Print ISSN: 2311-8784
Website: https://mjn.mosuljournals.com

RESEARCH ARTICLE

Evaluation of Glucose Level- controlling Behaviour for Clients with Diabetes Mellitus

Ali M. Abbood [1], Arkan B. Naji [2]

1. *Department of communit health nursing, College of Nursing, University of Baghdad.*
2. *Department of community health nursing, College of Nursing, University of Baghdad.*

Corresponding author: Ali M. Abbood

Email: ali_iq1983@yahoo.com

ORCID 0000-0002-7050-8243

ABSTRACT

Background: The global prevalence of diabetes mellitus is rapidly increasing and poses a worrying sign and threat to global health unless interventions are created through community awareness and knowledge of different aspects of diabetes mellitus. (Rania Ayad Abdul Karim and Huda Adnan Habib, 2022).

Objective: this study aims to evaluate glucose level controlling behaviors for clients with diabetes.

Methods : The current investigation is conducted utilizing an experimental design with a control group method from November 25, 2021, to November 20, 2023. Statistical sample of (60) diabetic clients who are present, chosen at random. The sample is chosen at random, with 30 clients in each of the experimental and control groups being evenly dispersed..

Results: 50.0% (30) of the sample at age (36-45) years, according to the research 49 out of the sample's 81.7% of men were male. 40 out of the sample, or 66.7%, were married. 16.2% (26.7%) of the sample had at least a bachelor's degree. 30 out of the sample's 50.0% were employed. 58.3% (35) of the sample are rural residents, making up 71.7% (43) of the sample's socioeconomic status. All questions were significant at the p-value of 0.000, with the exception of the ones asking whether or not you assess your blood sugar levels after receiving a diagnosis. These questions were both non-significant at the p-value of 0.250 and 0.094, respectively.

Conclusions: The study concluded that the respondents answers were good since the answers were significant

Received: 27 September 2022, Accepted: 24 November 2022, Available online: 28 January 2023

INTRODUCTION

A chronic, progressive metabolic illness known as diabetes mellitus (DM) causes hyperglycemia primarily as a result of an absolute (Type 1 DM) or relative (Type 2 DM) insulin hormone shortage. Diabetes Mellitus is a complex chronic disease requiring ongoing medical care with multifactorial risk reduction strategies in addition to glycemic control (Ashraf Al Maliki and Faris Lami,2014).

The research instrument consisted of two mainparts: Sociodemographic characteristics and foot self-efficacy in diabetic clients (Amer M. Gabish and Widad Kamil Mohammed, 2018).

until recently, it was thought to be a condition that only affected industrialized nations, but current research shows that type 2 diabetes mellitus (DM) occurrences are increasing, with an earlier start and accompanying problems, in emerging nations. (WHO, 2012).

METHOD

Experimental design, using experimental-control groups approach, is carried throughout the present study to for the period of November 25th 2021 to November 20th 2023. Probability, simple random, sample of (60) diabetic client who are attending. The sample is selected randomly and assigned to the experimental and control groups of (30) client each who are equally distributed with respect to their age and gender. Such selection is employed of pool of subjects (11-22).

RESULTS

The study revealed that 50.0% (30) of the sample at age (36-45) years 81.7% (49) of the sample was male gender 66.7% (40) of the sample was married at marital status 26.7% (16) of the sample was bachelor's degree at educational level 50.0% (30) of the sample was worker at employments. 71.7% (43) of the sample at medium level of socioeconomic status 58.3% (35) of the sample Residency at rural area. all questions were significant at p. value (0.000), except the question of I measure my blood sugar level after my diagnosis was non-significant at p. value (0.250), also the question I measure the glucose level after changing the treatment was also non-significant at p.value (0.094) only.

Table 1. Demographic characteristics related to participants.

Demographic	Estimate	Freq.	%	X2	Sig
Age	(26-35)	18	30.0	26.933[a]	**0.000**
	(36-45)	**30**	**50.0**		
	(46-55)	8	13.3		
	(56-65)	4	6.7		
Gender	**Male**	**49**	**81.7**	24.067[b]	**0.000**
	Female	11	18.3		
Marital Status	**Married**	**40**	**66.7**	86.833[c]	**0.000**
	Single	11	18.3		
	Divorced	6	10.0		
	Widower	3	5.0		
Educational Level	Elementary school	9	15.0	2.667[c]	0.615
	Middle school	10	16.7		
	High school	11	18.3		
	Diploma degree	14	23.3		
	Bachelor's degree	**16**	**26.7**		
Employment	House wife	10	16.7	21.200[a]	**0.000**
	Worker	**30**	**50.0**		
	Employee	13	21.7		
	Retired	7	11.7		
Socioeconomic Status	Poor	7	11.7	39.900[d]	**0.000**
	Medium	**43**	**71.7**		
	Good	10	16.7		
Residency	Urban	3	5.0	25.900[d]	**0.000**
	Suburban	22	36.7		
	Rural	**35**	**58.3**		
Total		**60**	**100.0**		

The study revealed that 50.0% (30) of the sample at age (36-45) years 81.7% (49) of the sample was male gender 66.7% (40) of the sample was married at marital status 26.7% (16) of the sample was bachelor's degree at educational level 50.0% (30) of the sample was worker at employments. 71.7% (43) of the sample at medium level of socioeconomic status 58.3% (35) of the sample Residency at rural area.

Table (1) Statistical Consequences ANOVA for Sample Knowledge regarding Glucose Level Controlling Behavioral

Controlling Behavioral Items		Sum of Squares	df	Mean Square	F	Sig.
I change the treatment	Between Groups	46.233	2	23.117	97.498	**0.000**
	Within Groups	41.967	177	0.237		
	Total	88.200	179			
I measure my weight regularly	Between Groups	29.478	2	14.739	34.065	**0.000**
	Within Groups	76.583	177	0.433		
	Total	106.061	179			
I change my lifestyle	Between Groups	4.011	2	2.006	3.874	**0.023**
	Within Groups	91.633	177	0.518		
	Total	95.644	179			
I contacting the specialist doctor to take care of me or to give me advice	Between Groups	6.678	2	3.339	7.690	**0.001**
	Within Groups	76.850	177	0.434		
	Total	83.528	179			
I measure my blood sugar level after my diagnosis	Between Groups	1.285	2	0.642	1.399	0.250
	Within Groups	80.816	176	0.459		
	Total	82.101	178			
I measure the glucose level after changing the treatment	Between Groups	2.033	2	1.017	2.394	0.094
	Within Groups	75.167	177	0.425		
	Total	77.200	179			
I measure my glucose level after using steroids	Between Groups	52.484	2	26.242	70.174	**0.000**
	Within Groups	65.817	176	0.374		
	Total	118.302	178			
I measure the glucose	Between	25.600	2	12.800	35.99	**0.00**

level after using insulin	Groups				0	**0**
	Within Groups	62.950	177	0.356		
	Total	88.550	179			
I check the sugar when it is outside the normal level	Between Groups	5.411	2	2.706	6.830	**0.001**
	Within Groups	70.117	177	0.396		
	Total	75.528	179			
I measure the sugar level before and after exercise	Between Groups	46.689	2	23.345	56.681	**0.000**
	Within Groups	72.075	175	0.412		
	Total	118.764	177			
I do heart checks	Between Groups	51.378	2	25.689	73.794	**0.000**
	Within Groups	61.617	177	0.348		
	Total	112.994	179			
I use an insulin mixture	Between Groups	64.645	2	32.323	101.59	**0.000**
	Within Groups	55.675	175	0.318		
	Total	120.320	177			

The table shoes that all questions were significant at p. value (0.000), except the question of I measure my blood sugar level after my diagnosis was not-significant at p. value (0.250), also the question I measure the glucose level after changing the treatment was also not-significant at p.value (0.094) only.

DISCUSSION

This study is similar with (Kissal & Kartal,2019), who found the average age of students was (21.21 ± 2.90). About 97.9% were single, 72.9% of them had low family income, and 81.3% lived in a house owner. This study agrees with (Oveisi et.al.,2019) who found the mean age of the studied population was (23.48±2.51). 56.6% of fathers and mothers had low level education.

The results of the study confirmed that the mean of age is (55.7) year, and the majority of the sample aremale, first degree relativeswith diabetes mellitus type-II arewithin positive bio-social aspect and laboratory screening had an effect on the incidence of diabetes mellitus type-II for first degree relatives to type-II diabetes mellitus (Abdul-Kareem H.Shanon and Batool A. Jaddou, 2011)

This finding is supported by (Seyed et al., 2017) who found after the intervention, mean

score of perceived susceptibility increased 24% in the intervention group. These findings also consistent with (Mohammadi and Tavafian., 2020), who stated the repeated measures ANOVA showed significant differences in the study group in Health Belief Model constructs and also perceived susceptibility toward substance abuse ($P < 0.001$).

CONCLUSIONS

The study concluded that the respondents answers were good since the answers were significant.

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

All clients, who have participated in the study, have signed consent form for their agreements for the participation in the study. All participants are introduced with the study objectives and they are presented with the opportunity of being aware of the study affairs.

FUNDING

This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors. There are various studies conducted in various parts of the world show that there is a lack of public awareness and knowledge about various aspects related to diabetes (Maral.F.Thabit, 2013).

AUTHOR'S CONTRIBUTIONS

Study concept, Writing, Reviewing the final edition by all authors..

DISCLOSURE STATEMENT:

The authors report no conflict of interest

ACKNOWLEDGEMENTS

The researcher acknowledge the dean of nursing college and the editer of the journl and all the clients who participated in the study.

REFERENCES

1. Rania Ayad Abdul Karim and Huda Adnan Habib (2022), Awareness Regarding Diabetes Risk Factors, Prevention and Management among Community Members in Diyala/Baqubah, Al-Kindy College Medical Journal Vol. 18 No. 1.
2. Ashraf Al Maliki and Faris Lami(2014), Prevalence and Determinants of Depression among Diabetic Patients,Babel Province, Iraq, Journal of the Faculty of Medicine Baghdad, Vol. 56 No. 4 .
3. Amer M. Gabish and Widad Kamil Mohammed(2018), Effectiveness of Health Education Program for Type 2 Diabetes Mellitus Patient's Self-efficacy toward Managing Feet at Endocrinology and Diabetes Center in Al-Rusafa Sector, Iraqi National Journal of Nursing Specialties Vol. 1 No. 31.
4. World Health Organization (WHO). (2012). **Diabetes – Factsheet**
5. Kıssal, A., & Kartal, B. (2019). Effects of health belief model-based education on health beliefs and breast self-examination in nursing students. Asia-Pacific Journal

of Oncology Nursing, 6(4), 403. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6696807/.

6. Oveisi, S., Zahedifar, F., Atashgar, E., Yadegary, Z., Amole, N., & Taherkhanee, S. (2019). Prediction of Dental Caries Preventive Behaviors using Health Belief Model (HBM). Health Education and Health Promotion, 7(3), 105–109. Available at: https://mme.modares.ac.ir/article-5-24988-en.html.
7. Seyed, S., Salmani, M., Motahari Nezhad, F., & Noruzi, R. (2017). Selfefficacy, achievement motivation, and academic progress of students with learning disabilities: A comparison with typical students. Middle East Journal of Rehabilitation and Health, 4(2), e44558. Available at: http://eprints.semums.ac.ir/1092/1/mejrh-04-02-44558.pdf.
8. Abdul-Kareem H.Shanon and Batool A. Jaddou(2011): Early detection of first degree relatives to type-II diabetes mellitus, Iraqi National Journal of Nursing Specialties Vol. 2 No. 24.
9. Mohammadi, K., & Tavafian, S. S. (2020). Effect of Educational Intervention Based on Health Belief Model on Prevention of Substance Abuse Among the Students of Khatam Al-Nabieen University in Afghanistan. Iranian Red Crescent Medical Journal, 22(5). Available at: https://ircmj.org/index.php/IRCMJ/article/view/596.
10. Maral.F.Thabit (2013), awareness regarding diabetes mellitus and its complications in type2 diabetic patients, AL-Kindy College Medical Journal Vol. 9 No.2.
11. Baktash, M. Q., & Naji, A. B. (2019). Efficacy of the Health Belief Model in Enhancing Weight Loss Behaviors to Prevent Stroke among Overweight and Obese Geriatrics Homes Residents in Baghdad City, *Kufa Journal for Nursing Sciences*, *9*(2). 1-8.
12. .Baktash, M. Q., & Naji, A. B. (2019). Efficacy of Health Belief Model in Enhancing Exercise Behavior to Preventing Stroke among Geriatrics Homes Residents in Baghdad City, *Indian Journal of Public Health Research & Development*, *10*(02), 928-933.
13. Ahmed, F.T., & Naji, A. B. (2021). Assessment of Health Beliefs about Cardiovascular Disease and its relation to Some Social Variables among Elementary School Teachers in Baghdad City. *Annals of the Romanian Society for Cell Biology*, *25*(6), 7963-7969.
14. Younis, N. M., & Naji, A. B. (2021). Evaluation of Preventive Behaviors of Addiction among Students: Application of Health Belief Model. *Indian Journal of Forensic Medicine & Toxicology*, *15*(3), 1273-1278.
15. Younis, N. M., & Naji, A. B. (2021). The Effect of Health Education based on the Health Belief Model about Changing the Belief Related to Substance use among University Students in Mosul City-Iraq. *Annals of the Romanian Society for Cell Biology*, 25(4), 14687-14698.

Elderly Quality of Life at Al-Amara city/Iraq, Medico-legal Update, *20*(3),1223-1228.

16. Younis, N. M., & Naji, A. B. (2021). Assessing the Effect of an Educational Intervention based on Health Belief Model on Preventive Behaviors of Addiction. *Pakistan Journal of Medical and Health Sciences*, *15*(3), 813-817.
17. Ali Basha, A. A., & Naji, A. B. (2019). Processes of Change for Weight Control Behavior among Collegians. *Indian Journal of Public Health Research & Development*, *10*(9),1369-1374.
18. Resham, A. K., & Naji, A. B. (2016). Effectiveness of Health Education Program about Health Beliefs Related to Cardiovascular Disease on Readiness of Engagement in Healthy Behaviors of Older Adults at Geriatric Home in Baghdad City. *International Journal of Scientific and Research Publications, 6 (11)*, 466-479.
19. Jasim, A. R., Naji, A. B., & Ali, R. M (2015). Assessment of abusive behaviors among females at secondary schools in Baghdad City: Retrospective study. *IOSR Journal of Nursing and Health Science, 4*(4), 40-47.
20. Jasim, N. A., & Naji, A. B. (2018). Using the Constructs of the Health Belief Model in Changing the Health Beliefs of Male Nurses about Testicular Self-Examinations. Indian Journal of Public Health Research and Development, *9*(12), 1252-1257.
21. Saeed, B. L., & Naji, A. B. (2022). Weight Trend among Middle School Student: The Mediating Role of Food Addiction and Commitment to Physical Activity. *Pakistan Journal of Medical & Health Sciences*, *16*(06), 447-449.
22. AlAbedi, G. A. H., & Naji, A. B. (2020). Impact of Physical Activity Program upon