CHRONIC COMPLICATIONS OF DIABETES AND QUALITY OF LIFE

Vilma Kolarić[1,2], Vesna Svirčević[3,4], Rea Bijuk[3,4] and Vesna Zupančič[1,5]

[1]University of Novo mesto Faculty of Health Sciences
[2]Vuk Vrhovac University Clinic, Merkur Clinical Hospital
[3]Department of Neurosurgery, UHC Sestre milosrdnice
[4]University of Applied Health Sciences Zagreb
[5]Ministry of Health of the Republic of Slovenia

SUMMARY – The course of diabetes is marked by the development of chronic complications that, in addition to affecting health, also affect the quality of life of patients. The purpose of this study was to compare the quality of life of patients with type 2 diabetes based on their chronic complications. The study, which was conducted from March 2019 until March 2020, included 382 diabetic patients, specific data from medical records, and the application of the World Health Organization Quality of Life-Brief questionnaire. There were more men than women included in the study, with the majority of respondents belonging to the age group of 61 to 70 years. In the quality-of-life assessment, the mean value of physical functioning was 57.14 (42.86-71.43), psychological functioning was 66.67 (54.17-79.17), social functioning 66.67 (50.00-75.00), and environmental functioning was 68.75 (50.00-75.00). The domains of social functioning were lowest in patients with diabetic retinopathy and neuropathy, while the physical functioning domains were rated lowest in patients with diabetic nephropathy, diabetic foot ulcer, and multiple chronic complications. All domains were rated lowest by patients with multiple complications and highest by those without any complications. In conclusion, differences in the assessment of quality of life of diabetic patients depend on the type of chronic complication.

Keywords: *quality of life; type 2 diabetes; retinopathy; neuropathy; nephropathy;, diabetic foot ulcer*

Introduction

Quality of life (QOL) plays an important role in patient experience of a disease and affects the way patients address the problems and additional demands imposed by it. The notion of QOL and life satisfaction is used to describe deeper feelings and long-term assessments of the QOL[1]. The International Diabetes Federation (IDF) reported that there were 451 million adults with diabetes worldwide, with a projected increase to 693 million by 2045 if effective preventative measures are not adopted[2]. According to data from the National Register of Persons with Diabetes, 310,212 persons with diabetes were registered in 2020. It is estimated that 40% of people with diabetes are not aware of their diagnosis and that the total number of patients is approximately 500,000, 90% of which are patients

with type 2 diabetes (T2DM)[3]. Chronic complications are present in 56% of patients with T2DM[4]. There are significant correlations with age, duration of T2DM, and body mass index[5]. Recent studies have shown that complications of T2DM, such as myocardial infarction, neuropathy, retinopathy, and hospitalization for unstable angina pectoris, significantly reduce the QOL of patients with T2DM[5]. In measuring the QOL of diabetic patients, more and more emphasis is placed on health outcomes and diabetes management, such as self-care and adherence to medication[6]. In a study conducted by Malomo et al., patients with T2DM rated their QOL as moderate, believing that diabetes educators and other health professionals need to step up their efforts in educating them on disease management and complication prevention in order to maintain and improve their QOL[7]. There is insufficient research on the QOL of people with diabetes in Croatia. The QOL of patients with diabetes is reduced, especially in the case of the development of chronic complications. In the majority of patients, life expectancy is over 10 years shorter[8]. Chronic complications of diabetes have a strong impact on the QOL of people with diabetes in Croatia. Except on health, QOL often depends on many other factors[8-10].

Methods

This study used the World Health Organization QOL-Brief (WHOQOL-BREF) questionnaire[11]. WHOQOL-BREF is a self-administered questionnaire that consists of 26 items about an individual's assessments of their health and well-being over the past two weeks. Questions are graded on a 1-5 Likert scale, with 1 representing "disagree" or "not at all" and 5 representing "totally agree" or "very." Using a formula, all scores are then transformed to a 0-100 scale. The questionnaire was translated and validated in Croatian[12]. Permission to use the WHOQOL-BREF questionnaire was obtained from the author, who validated the questionnaire in Croatian. We extracted the following data from medical records: regulation of diabetes according to the latest glycated hemoglobin (HbA1c), medications used by the patient for the treatment of diabetes, and patient comorbidities that could affect the assessment of their QOL. The QOL of diabetic patients was assessed through the domains of physical, psychological, social, and environmental functioning.

Statistical methods

Numerical variables were tested for distribution normality using the Shapiro-Wilk test and are presented as mean values and interquartile ranges. The Kruskal-Wallis test was used to test the differences between groups of numerical variables. The Chi-square and, if appropriate, Fisher's exact test were used to compare the nominal categorical variables. The SPSS ver.23 package was used for data processing.

The results

The study involved 382 participants with T2DM. Diabetic retinopathy was present in 120 (31.4%) subjects, diabetic neuropathy in 166 (43.5%), and diabetic nephropathy in 113 (29.6%), while 113 (29.6%) subjects had diabetic foot ulcers. The characteristics of T2DM individuals depending on the presence of chronic complications are shown in Table 1.

Examining the absence of chronic complications or the presence of retinopathy, neuropathy, nephropathy, diabetic foot ulcer, or multiple chronic complications, a statistically significant difference was found in the sex of subjects (χ^2 = 29.897, df = 5, p <0.001). The analysis of the frequency of subjects over 60 compared with younger subjects found a statistically significant difference (χ^2 = 17.9, df = 5, p = 0.003), and the proportion of elderly patients was expectedly higher in groups of subjects with complications. The differences between groups defined by the duration of the disease were statistically significant, and the patient group without complications mostly consisted of subjects younger than 60 (χ^2 = 34.3, df = 10, p <0.001). There was no statistically significant difference in the occurrence of the first complication among groups according to disease duration (χ^2 = 15.6, df = 12, p = 0.209), while the frequency of hospitalizations (no hospitalizations versus up to 2 hospitalizations versus 3 or more hospitalizations) differed statistically significantly (χ^2 = 44.4, df = 8, p <0.001). The frequency of hospitalizations was more common in patients with diabetic foot ulcers as well as those with multiple complications. Out of 382 subjects, in 34 (8.9%) subjects the first chronic complication occurred less than a year after the initial diagnosis of diabetes, in 82 (21.5%) after between 1 and 5 years, in 68 (17.8%) between 6 and 10 years, in 62 (16.2%) between 11 to 15 years, and in 59 (15.4%) after 16 or more years. Regarding hospitalization due

Table 1. Characteristics of patients with T2DM depending on the presence of chronic complications (%)

		Complications					
		Retinopathy	Neuropathy	Nephropathy	Diabetic foot ulcer	No complications	Multiple complications
Sex	M	52.5%	46.7%	76.3%	84.6%	46.8%	69.5%
	F	47.5%	53.3%	23.7%	15.4%	53.2%	30.5%
Age (years)	≤ 40	0.0%	0.0%	0.0%	0.0%	2.6%	0.8%
	41-50	7.5%	5.0%	5.3%	10.3%	19.5%	7.8%
	51-60	17.5%	21.7%	21.1%	15.4%	27.3%	17.2%
	61-70	55.0%	50.0%	42.1%	46.2%	27.3%	46.9%
	≥ 71	20.0%	23.3%	31.6%	28.2%	23.4%	27.3%
Education	Finished or unfinished primary school	12.5%	16.7%	18.4%	15.4%	9.1%	14.8%
	Secondary school	60.0%	65.0%	52.6%	64.1%	62.3%	54.7%
	Bachelor's degree	10.0%	13.3%	10.5%	12.8%	11.7%	16.4%
	Faculty	15.0%	5.0%	18.4%	7.7%	16.9%	13.3%
	PhD	2.5%	0.0%	0.0%	0.0%	0.0%	.8%
Years with DM	≤ 10	20.0%	23.3%	31.6%	20.5%	44.2%	18.0%
	11-20	45.0%	45.0%	39.5%	46.2%	36.4%	31.3%
	21-30	25.0%	23.3%	15.8%	23.1%	11.7%	31.3%
	31-40	7.5%	3.3%	0.0%	5.1%	5.2%	14.1%
	≥ 40	2.5%	5.0%	13.2%	5.1%	1.3%	4.7%
Time from DM diagnosis until first complication (years)	< 1	17.5%	10.0%	7.9%	25.6%		5.5%
	1-5	32.5%	30.0%	28.9%	20.5%		25.0%
	6-10	12.5%	25.0%	15.8%	23.1%		24.2%
	11-15	15.0%	16.7%	15.8%	20.5%		23.4%
	≥ 16	20.0%	13.3%	31.6%	10.3%		20.3%
Number of hospital admissions	0	65.0%	48.3%	55.3%	23.1%	87.0%	25.8%
	≤ 2	20.0%	31.7%	28.9%	28.2%	10.4%	23.4%
	3-4	10.0%	1.7%	10.5%	35.9%	0.0%	22.7%
	5-6	2.5%	6.7%	5.3%	2.6%	0.0%	10.9%
	≥ 7	2.5%	11.7%	0.0%	10.3%	1.3%	17.2%

to chronic complications, 34 (8.9%) subjects were never hospitalized, 82 (21.5%) were hospitalized up to 2 times, 68 (17.8%) 3 to 4 times, 62 (16.2%) 5 to 6 times, and 59 (15.4%) more than 7 times. The mean HbA1c value was 7.0%, with an interquartile range of 6.5% to 7.9%, while the mean values (25-75%), depending on the absence of chronic complications or the presence of retinopathy, neuropathy, nephropathy, diabetic foot ulcer, or multiple complications, ranged as follows: 7,0 (6.4-8.1), 7.6 (6.7-8.9), 6.7 (6.2-7.1), 7.4 (6.6-8.4), 6.8 (6.3-7.4), and 7.1 (6.5-8.1), respectively. A statistically significant difference in HbA1c values was found among the groups of patients defined by the presence of different complica-

tions (Kruskal-Wallis test, p <0.001). The distribution of HbA1c values depending on the presence of each complication and the differences between the groups are shown in Fig. 1.

lis test, p = 0.001) between groups of patients with different chronic complications. All QOL domains were rated worst in patients with multiple complications and best in those without complications. Moreover,
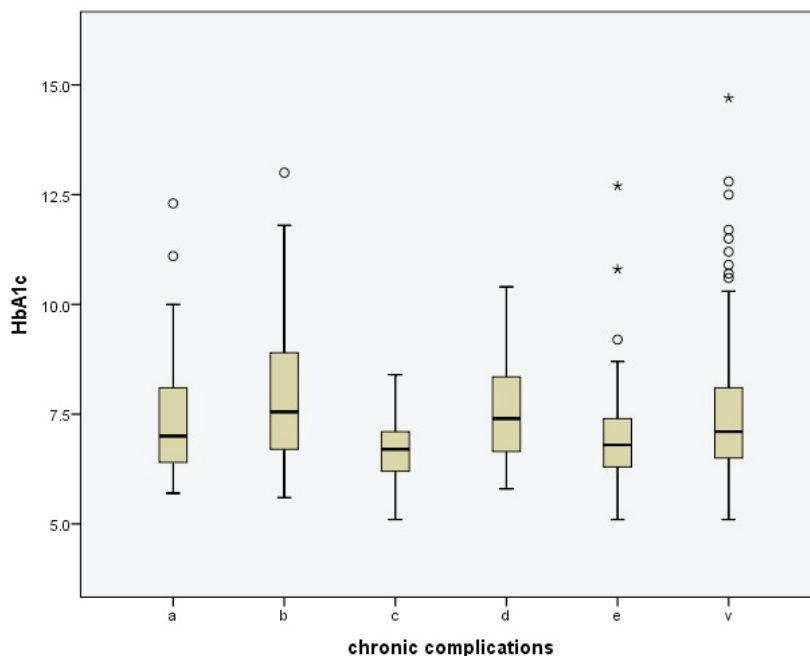

Fig. 1. Distribution of HbA1c values and differences between groups defined by the presence of complications

a = diabetic retinopathy; b = diabetic neuropathy; c = diabetic nephropathy; d = diabetic foot ulcer; e = no chronic complications; v = multiple complications

The mean value of physical functioning was 57.14, with an interquartile range of 42.86-71.43, the mean value for psychological functioning was 66.67 with an interquartile range of 54.17-79.17, the mean value for social functioning was 66.67 with an interquartile range of 50.00-75.00, and the mean value for environmental functioning was 68.75 with an interquartile range of 50.00-75.00. The QOL of patients with diabetes depending on the absence of chronic complications or the presence of retinopathy, neuropathy, nephropathy, diabetic foot ulcer, or multiple chronic complications is shown in Table 2.

There was a statistically significant difference in the values for physical functioning (Kruskal-Wallis test, p <0.001), psychological functioning (Kruskal-Wallis test, p <0.001), social functioning (Kruskal-Wallis test, p <0.001), and environmental domains (Kruskal-Wallis test, p <0.001), social functioning (Kruskal-Wallis test, p <0.001), and environmental domains (Kruskal-Wallis test, p <0.001).

psychological functioning was rated best in patients with diabetic retinopathy, neuropathy, diabetic foot ulcers as well as those without complications. In diabetic retinopathy, social functioning had the lowest score, while the environmental domain had the best score. Social functioning was also rated worst in diabetic neuropathy, while psychological functioning was rated the highest. Physical functioning was rated lowest in patients with diabetic nephropathy, while the environmental domain was rated significantly higher. Patients with diabetic foot ulcers rated the physical domain the lowest and the psychological domain of QOL the highest. Study participants without chronic complications gave the lowest grades to physical functioning, while they rated social and environmental functioning domains equally well. Patients with multiple chronic complications rated physical functioning the lowest and environmental functioning the highest.

Table 2. Quality of life of patients with diabetes depending on the absence or presence of certain chronic complications

	Physical functioning		Psychological functioning		Social functioning		Environmental functioning	
	Mean value	Interquartile range	Mean value	Interquartile range	Mean value	Interquartile range	Mean value	Interquartile range
Diabetic retinopathy	64.29	53.57-83.92	70.83	56.25-79.16	62.50	50-83.33	73.44	57.81-84.37
Diabetic neuropathy	60.71	44.64-78.57	70.83	58.33-79.16	58.33	50-75	68.75	53.12-81.25
Diabetic nephropathy	60.71	46.42-75	66.67	62.5-79.16	66.67	50-75	71.88	56.25-78.12
Diabetic foot ulcer	60.71	46.42-71.42	70.83	62.5-79.16	66.67	58.33-83.33	68.75	59.37-84.37
No chronic complications	67.86	57.14-78.57	70.83	62.5-83.33	75.00	66.66-83.33	75.00	65.62-84.37
Multiple complications	46.43	35.71-60.71	62.50	50-72.91	58.33	41.66-66.66	65.63	53.12-75

Discussion

The majority of participants (61%) in our study were men, and a significant number of respondents were older than 61 years. The proportion of men was higher in the younger age groups, while the older age groups consisted mostly of women. Thirty percent of respondents were diagnosed with the first complication of diabetes within 5 years of being diagnosed with T2DM. Interestingly, in similar studies, the average duration of diabetes before the onset of the first chronic complication was 6-8 years[13,14], and up to 50% of patients had signs of micro- or macrovascular complications at the time of diagnosis[15]. The results of this study showed no discrepancies. Our results are comparable with previous studies conducted in the Republic of Croatia, which showed that in the total population of patients with T2DM, whose average duration of disease was 7 years, 56% had at least one chronic complication[16]. Only 10% of the patients who completed the questionnaires were never admitted to a hospital due to chronic complications. A possible explanation for frequent hospitalizations is that the Vuk Vrhovac University Clinic is the reference centre for diabetes in the Republic of Croatia, where the most severe cases are hospitalized for complications, particularly those with diabetic foot ulcers. A significant gender difference was found in our study, with a male predominance in occurrence rates of nephropathy, diabetic foot ulcers, and multiple chronic complications compared with other groups, in which the both sexes were equally represented. A correlation has been demonstrated between male sex and both nephropathy and its progression[17] as well as the risk of foot amputation[18]. Diabetic foot ulcers are the most common cause of foot amputation in patients with diabetes[19], a trend reinforced by our findings. The proportion of older subjects was expectedly higher in the groups of subjects with complications. Similar to our findings, other studies showed that the prevalence of T2DM, as well as the frequency of complications, increases with age[20,21] and duration of the disease. The regulation of T2DM (indicated by the HbA1c of 7.0%) was successful in comparison with data from the National Register of Persons with Diabetes from 2019, in which, according to glycated hemoglobin levels, only somewhat more than 1/3 of diabetic patients were well-regulated, while the regulation of the disease was borderline satisfactorily in 1/3[22]. The findings of our study are in line with similar studies performed on the Croatian population. In our study, the regulation of diabetes was different depending on individual complications. For instance, diabetes was borderline well-regulated in the diabetic retinopathy group. HbA1c is considered the most relevant risk factor for the progression of diabetes[23]. Patients with diabetic neuropathy were on average more poorly regulated, often suffering from pain that

is difficult to tolerate for elderly patients[24]. In diabetic nephropathy, patients were borderline well-regulated, which can be explained by the strong motivation of the subjects. These patients had already been treated with chronic renal replacement therapy or were undergoing procedures required to start the chronic renal replacement. Patients with diabetic foot ulcers are moderately poorly regulated according to HbA1c. To prevent the development of diabetic foot ulcers, comprehensive and timely care, such as foot exams, education, early diagnosis, and analysis of other factors associated with the development of foot ulcers, is needed for patients in this risk group[25,26]. The best regulation of diabetes, based on HbA1c, was among subjects without chronic complications[22]. Based on average HbA1c, patients with multiple chronic complications were classified as borderline well-regulated, which can be attributed to adherence to all the advice received due to the desire to improve their health. Patients with diabetic foot ulcers and multiple complications were more often hospitalized due to the need for specific treatment.

Our respondents rated the domain of physical functioning the lowest, as people with chronic complications often have problems with daily activities, demanding therapeutic regimens, need for medical aids, reduced energy for daily activities, frequent fatigue, poor mobility, sleeping problems, and thus work performance suffers and, in certain complications such as diabetic neuropathy, there is daily presence of pain. Psychological and social functioning was rated with an average grade, while environmental functioning was rated with the highest grade, which can be explained by patients having sufficient financial resources for their needs. Overall, the QOL was rated the worst in patients who had multiple chronic complications, while those without any complications graded their QOL the highest. The number of patients with T2DM increases significantly after the age of 65[27]. It is important to note that the overall conclusion from all the abovementioned studies was that both types of diabetes negatively affect QOL. Moreover, it was found that educational and physical activity programs lead to an improvement in QOL. Some studies have noted the effect of socioeconomic status of diabetic patients on QOL, and that diabetic male patients have a better QOL. Poorly regulated diabetes, in turn, negatively affects QOL[28]. Our findings should be interpreted in light of several limitations. The study included exclusively patient withs T2DM who are followed up at the Vuk Vrhovac University Clinic, the reference center for diabetes of the Republic of Croatia. Additionally, we used different instruments for measuring the QOL when compared with similar studies.

Conclusion

Our results confirmed that QOL in patients with T2DM and chronic complications is reduced. Due to those findings, diabetic patients must undergo frequent control by diabetologists and educating nurses. By employing regular follow-ups and continuous monitoring of their condition, resulting in potential changes in their therapeutic regimen and reeducation on a healthy lifestyle, it is possible for patients to achieve target glycemic values and thus desired treatment outcomes, all of which positively influences their QOL.

Abbreviations

IDF: International Diabetes Federation
T2DM: Type 2 diabetes mellitus
WHOQOL-BREF: World Health Organization Quality of Life-Brief Version
HbA1c: glycated hemoglobin
QOL: quality of life

References

1. Eger RJ, Maridal JH. A statistical meta-analysis of the wellbeing literature. Intnl J Wellbeing. 2015 Jun 21;5(2).

2. Cho NH, Shaw JE, Karuranga S, Huang Y, da Rocha Fernandes JD, Ohlrogge AW, et al. IDF Diabetes Atlas: Global estimates of diabetes prevalence for 2017 and projections for 2045. Diabetes Res Clin Pract. 2018 Apr;138:271-81.

3. Stevanović R, Capak K, Benjak T. CROATIAN HEALTH STATISTICS YEARBOOK 2019 . Croatian Institute of Public Health; 2020 Sep. Cited 2021 Jun 25. Available from: https://www.hzjz.hr/wp-content/uploads/2021/02/Ljetopis_Yerabook_2019.pdf

4. Poljičanin T. Uloga praćenja dijabetičkih bolesnika pomoću registra CroDiab u prevenciji komplikacija. 2010.

5. Mehović S, Janković S, Tafi Z. Quality of Life Assessment in Type 2 Diabetes Patients With Cardiovascular and/or Diabetic Complications. Southeastern European Medical Journal: SEEMEDJ. 2021;5(1):75-88.

6. Jannoo Z, Wah YB, Lazim AM, Hassali MA. Examining diabetes distress, medication adherence, diabetes self-care activities, diabetes-specific quality of life and health-related quality of life among type 2 diabetes mellitus patients. Journal of Clinical & Translational Endocrinology. 2017 Sep 1;9:48-54.

7. Malomo OO, Nwozichi C. Clinical Predictors of Health-Related Quality of Life Among Patients with Type-2 Diabetes Mellitus at Federal Medical Centre Abeokuta. 2021; Available from: https://www.cjar.eu/wp-content/uploads/2021/05/2.5-

2021-5-Clinical-Predictors-of-Health-Related-Quality-of-Life-Among-Patients-with-Type-2-Diabetes-Mellitus-at-Federal-Medical-Centre-Abeokuta.pdf

8. Poljicanin T, Ajduković D, Sekerija M, Pibernik-Okanović M, Metelko Z, Vuletić Mavrinac G. Diabetes mellitus and hypertension have comparable adverse effects on health-related quality of life. BMC Public Health. 2010 Jan 13;10:12.

9. Dermanovic Dobrota V, Hrabac P, Skegro D, Smiljanic R, Dobrota S, Prkacin I, et al. The impact of neuropathic pain and other comorbidities on the quality of life in patients with diabetes. Health Qual Life Outcomes. 2014 Dec 3;12(1):171.

10. Pibernik-Okanović M, Szabo S, Metelko Ž. Quality of life in diabetic, otherwise ill and healthy persons. Abstracts. in: Diabetes research and clinical practice 50 (2000)(S1). 2000;S235.

11. Skevington SM, Lotfy M, O'Connell KA. The World Health Organization's WHOQOL-BREF quality of life assessment: psychometric properties and results of the international field trial. A report from the WHOQOL group. Quality of life Research. 2004 Mar;13(2):299-310.

12. Pibernik-Okanović M. Psychometric properties of the World Health Organisation quality of life questionnaire (WHOQOL-100) in diabetic patients in Croatia. Diabetes research and clinical practice. 2001 Feb 1;51(2):133-43.

13. Zoungas S, Woodward M, Li Q, Cooper ME, Hamet P, Harrap S, et al. Impact of age, age at diagnosis and duration of diabetes on the risk of macrovascular and microvascular complications and death in type 2 diabetes. Diabetologia. 2014 Dec;57(12):2465-74.

14. Porta M, Curletto G, Cipullo D, Rigault de la Longrais R, Trento M, Passera P, et al. Estimating the delay between onset and diagnosis of type 2 diabetes from the time course of retinopathy prevalence. Diabetes Care. 2014 Jun;37(6):1668-74.

15. Bonora E, Trombetta M, Dauriz M, Travia D, Cacciatori V, Brangani C, et al. Chronic complications in patients with newly diagnosed type 2 diabetes: prevalence and related metabolic and clinical features: the Verona Newly Diagnosed Type 2 Diabetes Study (VNDS) 9. BMJ Open Diabetes Research and Care. 2020;8(1):e001549.

16. Poljičanin T, Šekerija M, Metelko Ž. Šećerna bolest – epidemiološko stanje i javnozdravstvene aktivnosti u Hrvatskoj. Hrvatski časopis za javno zdravstvo. 2011;;7(28). Available from: https://www.bib.irb.hr/529581?rad=529581

17. Clotet S, Riera M, Pascual J, Soler MJ. RAS and sex differences in diabetic nephropathy. Am J Physiol Renal Physiol. 2016 May;310(10): F945-57.

18. Fan L, Wu X-J. Sex difference for the risk of amputation in diabetic patients: A systematic review and meta-analysis. PLoS One. 2021 Mar 11;16(3):e0243797.

19. Poljičanin T, Pavlić-Renar I, Metelko Ž, Coce F. Draft program of prevention of diabetic foot development and lower extremity amputation in persons with diabetes mellitus. Diabetol Croat. 2005;34(2):43-9.

20. Metelko Z, Pavlić-Renar I, Poljicanin T, Szirovitza L, Turek S. Prevalence of diabetes mellitus in Croatia. Diabetes Res Clin Pract. 2008 Aug;81(2):263-7.

21. Deshpande AD, Harris-Hayes M, Schootman M. Epidemiology of diabetes and diabetes-related complications. Phys Ther. 2008 Nov;88(11):1254-64.

22. Poljičanin T, Švajda M. National Diabetes Registry CroDiab: Report for 2019. Croatian Institute of Public Health; 2020. Available from: https://www.hzjz.hr/wp-content/uploads/2020/03/Izvje%C5%A1%C4%87e-za-2019.-godinu.pdf

23. Kawasaki R, Tanaka S, Tanaka S, Yamamoto T, Sone H, Ohashi Y, et al. Incidence and progression of diabetic retinopathy in Japanese adults with type 2 diabetes: 8 year follow-up study of the Japan Diabetes Complications Study (JDCS). Diabetologia. 2011 Sep;54(9):2288-94.

24. Popescu S, Timar B, Baderca F, Simu M, Diaconu L, Velea I, et al. Age as an independent factor for the development of neuropathy in diabetic patients. Clin Interv Aging. 2016 Mar 15;11:313-8.

25. Rossaneis MA, Haddad M do CFL, Mantovani M de F, Marcon SS, Pissinati P de SC. Foot ulceration in patients with diabetes: a risk analysis. Br J Nurs. 2017 Mar 23;26(6):S6-14.

26. Lane KL, Abusamaan MS, Voss BF, Thurber EG, Al-Hajri N, Gopakumar S, et al. Glycemic control and diabetic foot ulcer outcomes: A systematic review and meta-analysis of observational studies. J Diabetes Complications. 2020 Oct 1;34(10):107638.

27. Centers for Disease Control and Prevention. National diabetes statistics report, 2020. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services. 2020;12-5.

28. de la Cruz JPS, Morales DLG, González-Castro TB, Tovilla-Zárate CA, Juárez-Rojop IE, López-Narváez L, et al. Quality of life of Latin-American individuals with type 2 diabetes mellitus: A systematic review. Prim Care Diabetes. 2020 Aug;14(4):317-34.

Sažetak

KRONIČNE KOMPLIKACIJE ŠEĆERNE BOLESTI I KVALITETA ŽIVOTA

V. Kolarić, V. Svirčević, R. Bijuk i *V. Zupančič*

Tijek šećerne bolesti obilježen je razvojem kroničnih komplikacija bolesti koje, osim utjecaja na zdravlje, utječu i na kvalitetu života oboljelih. Cilj nam je bio istražiti kvalitetu života osoba sa šećernom bolešću tipa 2 s kroničnim komplikacijama te je usporediti ovisno o tipu komplikacija. U istraživanje, koje je trajalo od ožujka 2019. do ožujka 2020. godine, bile su uključene 382 osobe sa šećernom bolešću, a korišteni su podaci iz medicinske dokumentacije te standardizirani upitnik Svjetske zdravstvene organizacije o kvaliteti života (WHOQOL-BREF upitnik). Udio muškaraca u istraživanju bio je veći od udjela žena, a najviše ispitanika je pripadalo dobnoj skupini od 61 do 70 godina. Kod ocjenjivanja kvalitete života, srednja vrijednost fizičkog funkcioniranja bila je 57,14 (42,86 -71,43), psihološkog funkcioniranja 66,67 (54,17–79,17), socijalnog funkcioniranja 66,67 (50,00–75,00), a funkcioniranja u okolini 68,75 (50,00 - 75,00). Kod bolesnika s dijabetičkom retinopatijom i neuropatijom, najniže ocjene imale su komponente socijalnog funkcioniranja, dok su kod onih s dijabetičkom nefropatijom, dijabetičkim stopalom i višestrukim kroničnim komplikacijama najlošije ocijenjene bile komponente fizičkog funkcioniranja. Sve komponente kvalitete života najlošije su ocijenjene kod bolesnika s višestrukim komplikacijama, a najbolje kod onih bez komplikacija. Zaključno, postoje razlike u ocjeni kvalitete života ovisno o vrsti kronične komplikacije šećerne bolesti.

Ključne riječi: *kvaliteta života, šećerna bolest tip 2, retinopatija, neuropatija, nefropatija, dijabetičko stopalo*