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The Nursing Participation to Increasing Quality of Life of Patients with Diabetes Mellitus

Wpływ opieki pielęgniarskiej na zwiększenie jakości życia pacjentów chorych na cukrzycę

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A – research concept and design; **B** – collection and/or assembly of data; **C** – data analysis and interpretation; **D** – writing the article; **E** – critical revision of the article; **F** – final approval of article

Abstract

Objectives. In this paper we focus on assessing the quality of life and factors that the nurses of patients with diabetes mellitus influence.
Material and Methods. The research method we chose was a non-standardized questionnaire designed to measure the quality of life of patients with diabetes mellitus. Data from the questionnaires was processed by methods of descriptive statistics. We tried absolute (absolute frequency), percentage (relative abundance in percentage), average scale values and relative standard deviation of the scale values. In the questionnaire, with the exception of categorization surveys, a Likert scale was used, which expressed the degree of agreement of respondents with the questionnaire statements. The survey was conducted in clinics with diabetes patients and 93 respondents participated in the survey. The survey was to assess the level of selected aspects of quality of life of diabetic patients and assess the impact of the nursing care on quality of life.
Results and Conclusions. As a result of the survey, we found that diabetes affects almost every area of life with a diabetic patient. As the survey shows, respondents reported that health professionals should help patients learn about options for planning their care and how to set goals, they should have knowledge of the impact of diabetes care to the patient, and they should be trained to communicate with their patients. Nursing care has a positive impact on the quality of life of diabetic patients (**Piel. Zdr. Publ. 2014, 4, 1, 27–34**).

Key words: quality of life, the patient, diabetes mellitus, nursing.

Streszczenie

Cel pracy. Autorzy pracy skupili się na ocenie jakości życia pacjentów chorych na cukrzycę i czynników, na które mają wpływ pielęgniarki opiekujące się nimi.
Materiał i metody. Wybraną metodą badawczą był niestandardowy kwestionariusz przeznaczony do pomiaru jakości życia pacjentów chorych na cukrzycę. Dane z ankiet zostały opracowane z użyciem statystyki opisowej. Autorzy wykorzystali absolutną częstotliwość, odsetek (względem wartości procentowej), średnie wartości skali, średnie standardowe odchylenia wartości skali. W kwestionariuszu, z wyjątkiem ankiety dotyczącej kategoryzacji, użyto skali Likerta, która przedstawiała stopień zgody respondentów z oświadczeniami w kwestionariuszu. Badanie zostało przeprowadzone wśród pacjentów z klinik diabetologicznych, wzięło w nim udział 93 respondentów. Celem ankiety była ocena poziomu wybranych aspektów jakości życia pacjentów chorych na cukrzycę i ocena wpływu opieki pielęgniarskiej na jakość ich życia.
Wyniki i wnioski. Cukrzyca ma wpływ na niemal wszystkie dziedziny życia pacjentów chorych na cukrzycę. Respondenci stwierdzili, że pracownicy służby zdrowia powinni edukować pacjentów na temat planowania ich opieki zdrowotnej i wyznaczania swoich celów, powinni mieć także wiedzę na temat wpływu leczenia cukrzycy na pacjenta, powinni być przeszkoleni z zakresu komunikacji z pacjentami. Opieka pielęgniarska ma pozytywny wpływ na jakość życia pacjentów chorych na cukrzycę. (**Piel. Zdr. Publ. 2014, 4, 1, 27–34**).

Słowa kluczowe: jakość życia, pacjent, cukrzyca, pielęgniarstwo.

Introduction

Quality of life with diabetes is not fundamentally different from the quality of life of a healthy person, as long as he or she is given adequate nursing care, including education, the right treatment is deployed by a diabetologist in collaboration with experts from other fields, and the patient takes some responsibility for his or her condition.

The Main Part

Every disease, but especially chronic ones, significantly influences the quality of life of the patients affected. DM is an incurable disease that affects the way of life not only for the patient but also his or her relatives. The biological, psychological and social aspects of the course of the illness determine the method of treatment and nursing care. The lifelong nature of the treatment and prognosis uncertainty may also significantly affect the patient's life [1]. An important aspect is personal factors such as age, gender and personality traits that affect adaptation to the patient's changed conditions. Another important factor is the patient's social interaction with family members in particular, but also the broader social environment. Other important factors are the patient's mental condition and his or her fitness. What positively affects the quality of life is comprehensive education, focusing on the patient's personality and his or her social environment, treatment options and how to correct them, and the importance of self-monitoring. The patient must incorporate self-monitoring into his or her life by changing habits and behavior [1]. Plenty of adequate information and adequate incentives lead to an ill patient's active cooperation and compliance with a multidisciplinary team of professionals. Communication with members of the nursing team is important and beneficial to the patient. Finally, the quality of life of patients with DM also affects their financial situation, which is determined by the possibilities of the patient with respect to his or her current state [5]. The quality of life of the chronically ill is multifactorial and is conditional to long-term nursing care [1].

The Objective of the Survey

To assess the personal attitudes of patients with DM to his or her illness as aspects of quality of life. Based on the collected data, to assess the impact of nursing care for patients with diabetes on their quality of life.

The Exploratory Problem

How the provision of nursing care affects the quality of life of patients with diabetes mellitus?

Characteristics of the Review File

The sample group consisted of 93 respondents. Respondents were chosen deliberately. The questionnaire was given to patients with diabetes mellitus in the diabetes outpatient dispensary. The survey was conducted in December 2011 and January 2012 in VNsP Levoca, in the hospital in Spisska Nova Ves, and the hospital in Poprad, a. s. 93 respondents (100.00%) participated in the survey, of which 42 (45.16%) were males and 51 (54.84%) were women. 11 (11.83%) were from 18 to 35 years old, 18 (19.35%) from 36 to 50 years old, 31 (33.33%) from 51 to 65 years and 33 (35.48%) were 66 or older. Regarding education, 15 (16.13%) had only primary education, 20 (21.51%) had some secondary education, 35 (37.63%) had completed secondary education and 23 (24.73%) had higher education. Regarding the type of treatment of DM, 14 (15.05%) had a type of diet therapy, 18 (19.35%) had a type of treatment with oral hypoglycemic agents (OHAs), 24 (25.81%) had a type of insulin therapy, 19 (20.43%) had a type of incretins treatment and 18 (19.35%) had a combination therapy (Table 1).

Research Methods

The main method was a non-standardized questionnaire. Questionnaire items resulted from a review of the problem and research objectives. Data from the questionnaires was processed using

Table 1. Distribution of respondents by type of treatment of diabetes mellitus

Tabela 1. Rozkład badanych w zależności od rodzaju leczenia cukrzycy

	Antidiabetic diet	Oral antidiabetic	Insulin	Incretins	Combination therapy	Total
Number	14	18	24	19	18	93
%	15.05	19.35	25.81	20.43	19.35	100.00

methods of descriptive statistics. We tried absolute (absolute frequency), percentage (relative abundance in percentage), average scale values and relative standard deviation of the scale values. In the questionnaire, with the exception of categorization surveys, a Likert scale was used, which expresses the degree of agreement of respondents with the questionnaire statements.

Analysis of Results of the Survey

The evaluation of the mean scale values (2.5) and average relative scale values (36.80%) shows that most respondents to this question claimed not to accept it. The standard deviation of the data set examined is 1.37 (Table 2).

The evaluation of the mean scale values (3.7) and average relative scale values (68.00%) shows that a majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.31 (Table 3).

The evaluation of the mean scale values (3.5) and average relative scale values (62.90%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.32 (Table 4).

The evaluation of the mean scale values (3.8) and average relative scale values (70.40%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.41 (Table 5).

The evaluation of the mean scale values (3.5) and average relative scale values (62.40%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.32 (Table 6).

The evaluation of the mean scale values (4.3) and average relative scale values (82.30%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.07 (Table 7).

The evaluation of the mean scale values (4.1) and average relative scale values (76.60%) shows that the majority of respondents endorsed the

Table 2. The lack of need to maintain proper blood glucose levels

Tabela 2. Brak potrzeby utrzymania prawidłowego stężenia glukozy we krwi

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	12	11	15	26	29	93
%	12.90	11.83	16.13	27.96	31.18	100.00
Average scale values						2.5
Average relative scale values						36.8 %
Standard deviation						1.37

Table 3. Impact of disease on every area of life with the diabetic patient

Tabela 3. Wpływ choroby na życie pacjentów z cukrzycą

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	32	31	13	6	11	93
%	34.41	33.33	13.98	6.45	11.83	100.00
Average scale values						3.7
Average relative scale values						68.0 %
Standard deviation						1.31

Table 4. The patient making important decisions

Tabela 1. Ważne decyzje podejmowane przez chorego na cukrzycę

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	27	29	10	19	8	93
%	29.03	31.18	10.75	20.43	8.60	100.00
Average scale values						3.5
Average relative scale values						62.9 %
Standard deviation						1.32

Table 5. Maintaining normal blood glucose values

Tabela 5. Utrzymanie prawidłowego stężenia glikemii

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	42	24	7	8	12	93
%	45.16	25.81	7.53	8.60	12.90	100.00
Average scale values						3.8
Average relative scale values						70.4 %
Standard deviation						1.41

Table 6. Effect of knowledge of health professionals on diabetes care to the patient's life

Tabela 6. Wpływ wiedzy pracowników służby zdrowia na temat leczenia cukrzycy na życie pacjenta

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	31	15	23	17	7	93
%	33.33	16.13	24.73	18.28	7.53	100.00
Average scale values						3.5
Average relative scale values						62.4 %
Standard deviation						1.32

Table 7. Communication with patients

Tabela 7. Komunikacja z pacjentami

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	57	19	5	11	1	93
%	61.29	20.43	5.38	11.83	1.08	100.00
Average scale values						4.3
Average relative scale values						82.3 %
Standard deviation						1.07

Table 8. Help patients get information about how their care plans work

Tabela 8. Pomoc udzielana pacjentom w uzyskiwaniu informacji na temat planowania opieki zdrowotnej nad nimi

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	39	37	7	4	6	93
%	41.94	39.78	7.53	4.30	6.45	100.00
Average scale values						4.1
Average relative scale values						76.6 %
Standard deviation						1.12

Table 9. Healthcare professionals should counsel patients to learn to set goals

Tabela 9. Pomoc udzielana pacjentom przez służbę zdrowia w nauce wyznaczania swoich celów

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	34	28	9	12	10	93
%	36.56	30.11	9.68	12.90	1075	100.00
Average scale values						3.7
Average relative scale values						67.2 %
Standard deviation						1.36

Table 10. Patients should take responsibility for their own diabetes care

Tabela 10. Pacjenci powinni sami brać odpowiedzialność za leczenie cukrzycy

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	12	11	30	19	21	93
%	12.90	11.83	32.26	20.43	22.58	100.00
Average scale values						2.7
Average relative scale values						43.0 %
Standard deviation						1.29

Table 11. Support of family and friends

Tabela 11. Wsparcie rodziny i bliskich osób

	Strongly agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Number	31	21	12	17	12	93
%	33.33	22.58	12.90	18.28	12.90	100.00
Average scale values						3.5
Average relative scale values						61.3 %
Standard deviation						1.43

statement of the issue. The standard deviation of the data set examined is 1.12 (Table 8).

The evaluation of the mean scale values (3.7) and average relative scale values (67.20%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.36 (Table 9).

The evaluation of the mean scale values (2.7) and average relative scale values (43.00%) shows that most respondents to this question claimed not to accept it. The standard deviation of the data set examined is 1.29 (Table 10).

The evaluation of the mean scale values (3.5) and average relative scale values (61.30 %) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.43 (Table 11).

Discussion

Objective 1: Assess the personal attitudes of patients with DM to his or her illness as an aspect of quality of life.

The question "I believe it isn't very important to try to maintain good blood sugar control because diabetic complications occur regardless." was answered by 93 respondents (100.00%). Of those, 29 respondents (31.18%) completely disagreed with the statement that it makes little sense to try to maintain good control of blood sugar because diabetic complications occur regardless, 26 respondents (27.96%) disagreed with it, 15 respondents (16.13%) took a neutral position, 12 respondents (12.90%) completely agreed and 11 respondents (11.83%) agreed. The evaluation of the mean scale values (2.5) and average relative scale values (36.80%) shows that most respondents to this question claimed not to accept it. The standard deviation of the data set examined is 1.37 (Table 2).

The question "I believe that diabetes affects almost every area of life of the diabetic patient." was answered by 93 respondents (100.00%). Of those, 32 respondents (34.41%) completely agreed with the statement that diabetes affects almost every area of life, 31 respondents (33.33%) agreed with that statement, 13 respondents (13.98%) took a neutral position, 11 respondents (11.83%) absolutely disagreed and 6 respondents (6.45%) disagreed. The evaluation of the mean scale values (3.7) and average relative scale values (68.00%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.31 (Table 3).

Respondents opted for the assertion that DM changes the outlook of the patient on his or her life and essentially affects the quality of life. Patients assess the quality of life on the basis of the extent to which his or her previous life changed and constrained his or her health [1]. Dealing with your disease represents a challenge. Patients must adapt to the demands of the disease and do everything possible to maintain the best possible health. A necessary condition is the patient's willingness to adapt and live with their disease [4].

The question "I believe the diabetic should make important decisions concerning his or her daily care." was answered by 93 respondents (100.00%). Of those, 29 respondents (31.18%) agreed with the statement that a diabetic should make important decisions concerning his or her daily care, 27 respondents (29.03%) totally agreed with that statement, 19 respondents (20.43%) disagreed, 10 respondents (10.75%) took a neutral position, and 8 respondents (8.60%) absolutely agreed. The evaluation of the mean scale values (3.5) and average relative scale values (62.90%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.32 (Table 4).

The question "I believe maintaining normal glucose levels can help prevent complications of diabetes." was answered by 93 respondents (100.00%). Of those, 42 respondents (45.16%) completely agreed with the statement that maintaining normal blood glucose levels can help prevent the complications of the diabetes, 24 respondents (25.81%) agreed with that statement, 12 respondents (12.90%) completely disagreed, 8 respondents (8.60%) disagreed and 7 respondents (7.53%) took a neutral position. The evaluation of the mean scale values (3.8) and average relative scale values (70.40%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.41 (Table 5).

Objective 2: To assess the impact of nursing care for patients with diabetes on their quality of life.

The question "I believe that health workers should have knowledge of the impact of diabetes care to the patient's life." was answered by 93 respondents (100.00%). Of those, 31 respondents (33.33%) completely agreed with the statement that health professionals should have knowledge of the impact of diabetes care to the patient, 23 respondents (24.73%) took a neutral stance on that claim, 17 respondents (18.28%) disagreed, 15 respondents (16.13%) agreed and 7 respondents (7.53%) totally disagreed. The evaluation of the mean scale values (3.5) and average relative scale values (62.40%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.32 (Table 6).

The question "I believe that the health professionals who treat people with diabetes should be trained to communicate well with their patients." was answered by 93 respondents (100.00%). 57 respondents (61.29%) completely agreed with the statement that health care professionals who treat people with diabetes should be trained to communicate well with their patients, 19 respondents (20.43%) agreed with that statement, 11 respondents (11.83%) disagreed, 5 respondents (5.38%) took a neutral position and one respondent (1.08%) completely disagreed with the statement. The evaluation of the mean scale values (4.3) and average relative scale values (82.30%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.07. (Table 7) Pokorna (2006) states that communication is created as a relationship between entities that know about each other and share experiences and responses to a difficult situation. The level of communication and efficiency of the educational process is a close relationship [3].

The question "I believe that health professionals should help patients obtain information about how their care plans work." was answered by 93 respondents (100.00%). Of those, 39 respondents (41.94%) completely agreed with the statement that health professionals should help patients obtain information about how their care plans work, 37 respondents (39.78%) agreed with that statement, 7 respondents (5.53%) took a neutral position, 6 respondents (6.45%) absolutely disagreed and 4 respondents (4.30%) opposed the statement. The evaluation of the mean scale values (4.1) and average relative scale values (76.60%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.12 (Table 8).

Only a patient who is well educated may successfully struggle to cope with their disease. Nurses should communicate with each patient the individual account of their route of administration and information adapted to the actual condition of the patient. For effective communication, a nurse has to provide patient information important to him or her in a clear manner, while maintaining his or her dignity, giving him or her space and repeating questions and giving the opportunity to express their views [7].

The question "I believe that health workers should teach patients how to set goals, not just tell them what to do." was answered by 93 respondents (100.00%). Of the 34 respondents (36.56%) completely agreed with the statement that health workers should teach patients how to set goals, not just tell them what to do, 28 respondents (30.11%) agreed with that statement, 12 respondents (12.90%) disagreed, 10 respondents (10.75%) absolutely disagreed and 9 respondents (9.68%) to the claim took a neutral position. The evaluation of the mean scale values (3.7) and average relative scale values (67.20%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.36 (Table 9).

The question "I believe that people with diabetes should learn a lot about this disease so that

they can take responsibility for their own diabetes care." was answered by 93 respondents (100.00%). Of those, 30 respondents (32.26%) to the claim that people with diabetes should learn a lot about this disease so that they can take responsibility for their own diabetes care expressed a neutral attitude, 21 respondents (22.58%) completely disagreed with that statement, 19 respondents (20.43%) disagreed, 12 respondents (12.90%) completely agreed and 11 respondents (11.83%) agreed with the statement. The evaluation of the mean scale values (2.7) and average relative scale values (43.00%) shows that most respondents to this question claimed not to accept it. The standard deviation of the data set examined is 1.29. (Table 10) Effective education of a diabetic helps him or her take the right attitude towards it, i.e. that, although terminal, it is still a very countervailable disease.

Respondents did not consider themselves to be the most important person to care for themselves, as if afraid to take responsibility for themselves and for the development of their health. The ideal treatment is based on active cooperation of the patient. In keeping with curative measures, proper diet and a non-sedentary lifestyle, based largely on appropriate physical activity, can prevent worsening of the disease and complications [2].

The question "I believe that in this disease the support of family and friends is important." was answered by 93 respondents (100.00%). Of those, 31 respondents (33.33%) completely agreed with the statement that in this disease it is important to have the support of family and friends, 21 respondents (22.58%) agreed with that statement, 17 respondents (18.28%) disagreed, 12 respondents (12.90%) took a neutral position and 12 respondents (12.90%) absolutely disagreed with the statement. The evaluation of the mean scale values (3.5) and average relative scale values (61.30%) shows that the majority of respondents endorsed the statement of the issue. The standard deviation of the data set examined is 1.43 (Table 11). During the illness, the patient usually assesses the negative impact of the disease on the quality of life. The fact that the disease can have a positive impact on the quality of life is often underestimated. For example, the improvement of relations between loved ones, increased self-confidence and independence in learning self management of the disease or discovering new possibilities for personal growth [1].

The methodological basis for the quality of life in nursing is a holistic approach to the person, which is central to the needs and values of the patient. The framework of the conceptual model consists of six basic concepts – the severity of the disease, barriers to health-promoting behavior, resources, health promotion, disease acceptance, health-promoting behavior and quality of life. The main components of quality of life are comfort, satisfaction and health. The severity of the disease, behavioral barriers to promoting health, sources of social support and acceptance of the disease are fundamental determinants of behavior, which in turn affect the quality of life [1].

The Conclusion

Most DM patients perceive nursing care as a very important aspect of improving their quality of life. They expressed the need to obtain information about their disease from nurses and practical assistance in relation to the disease. Because, as reported by the patients, the disease affects all areas of their lives and affects their autonomy, it significantly affects the level of their quality of life. DM fundamentally changes the patient's perspective on life. Nursing care for patients with DM is provided in order to achieve a higher quality of life and the highest self-sufficiency in daily living and nursing activities in difficult life situations.

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