Factors Related to Foot Care Behaviors Among Patients With Type 2 Diabetes Mellitus in Da Nang, Vietnam

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Background: Foot ulceration and amputation have alarmingly increased among patients with type 2 diabetes mellitus in Vietnam. Poor foot care behavior is one of the crucial reasons which leads to diabetes related foot problems. Exploration factors related to foot care behaviors among people with diabetes becomes a necessary issue to limit this complication.

Objective: To determine factors related to foot care behaviors among patients with type 2 diabetes mellitus.

Methods: The descriptive correlation study was conducted in 140 participants by purposive sampling technique in the outpatient room of Da Nang Hospital, Da Nang, Vietnam from December 2017 to January 2018. Instrument used in the study included of the six cognitive impairment test, demographic form, the Nottingham assessment of functional foot care, foot care knowledge, foot care confidence scale, and foot care subscale in the social support scale for self-care in middle-aged patients with type 2 diabetes mellitus. Data were analyzed by chi-square test, Pearson product moment correlation coefficient, and Spearman rank correlation coefficient.

Results: Of 140 participants, 58.6% had poor foot care behaviors. Education level, foot care knowledge, foot care self-efficacy, and social support showed a statistically significant positive correlation with foot care behaviors. There was no significant correlation between age, gender, and foot care behaviors.

Conclusions: The study suggested that improving foot care knowledge, foot care behaviors and enhancing the role of nurses must be implemented for the improvement of foot care behaviors among patients with type 2 diabetes mellitus.

Keywords: Foot care behaviors, Foot care knowledge, Foot care self-efficacy, Social support

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Introduction

Diabetes, a kind of the prevalent metabolic disease, has been rising dramatically over the world nowadays.[1] There were 425 million people with diabetes mellitus in 2017,[1] and this number will rapidly increase nearly 50% in 2045.[1] This was accompanied by the development of death and disability from diabetes complications.[1] Actually, every 6 seconds, there was one person died from diabetes, and 5 million deaths caused by diabetes and its complications were reported.[1] Type 2 diabetes mellitus was counted up to 90% in cases of diabetes.[1] In developing countries, approximately 80% of population globally suffered from type 2 diabetes mellitus.[1] Within the past 10 years, Vietnam has been facing the alarmingly increasing rate of diabetes.[2] In fact, one in every 20 adults had diabetes.[2] According to the national survey conducted in Vietnam, 5.4% people in urban area aged 30 - 69 years had diabetes.[3]

Remarkably, about 40% Vietnamese patients with type 2 diabetes mellitus had severe complications that were firmly obstacles in caring and doing interventions to prevent these complications.[4] One of severe diabetes complications what was common cause leading to mortality and morbidity among Vietnamese patients with type 2 diabetes mellitus was feet ulcer.[2] Evidently, the percentage of amputation legs in diabetes patients in Vietnam was higher than 40%.[5] More than 90% considerable characteristics of diabetic foot problems among Vietnamese patients was the infection.[5] Although the rate of foot complications was high, few of patients with type 2 diabetes mellitus adhered to foot care behaviors that were the best way to prevent foot ulcer.[6]

Da Nang, a coastal city in the central of Vietnam, has over 1 million of population.[7] The incidence of patients with type 2 diabetes mellitus in Da Nang was estimated to rise up to 6.0% in 2026.[8] With the rapid increase of diabetic incidence, the programs provided knowledge of foot care for diabetic patients were necessary. In addition, the research done due to theory-based framework of related factors has not widely applied in the previous nursing studies in Da Nang. Therefore, the study was essential to conduct and being one of a few studies beginning to explore factors related to foot care behaviors among patients with type 2 diabetes mellitus and developed on the theory in Da Nang.

The conceptual framework of the present study was based on the social cognitive theory of Bandura.[9] Social cognitive theory illustrated human behavior with the triadic dynamic interaction of behavior, personal factors, and environmental factors.[10] Social cognitive theory was applied to successfully explain factors related to foot care behaviors. If the patients had appropriate knowledge, enough self-efficacy, and receive adequate social support, they would get better foot care behaviors. Therefore, social cognitive theory was used to explore the relationships with foot care behaviors among patients with type 2 diabetes mellitus.

The present study aimed at exploring correlation between personal factors (age, gender, education level, foot care knowledge, foot care self-efficacy) and environmental factor (social support) with foot care behaviors among patients with type 2 diabetes mellitus. The results from this study might provide comprehensive information of level of foot care behaviors and related factors. Additionally, the using theory in this study might be beneficial to Vietnamese health care providers for altering the quality of care of these patients better. The findings might boost patients with type 2 diabetes mellitus to achieve better foot care behaviors.

Methods

Participants

The descriptive correlational design was used in this study. Participants who had type 2 diabetes mellitus were outpatients examined at Da Nang Hospital. They were selected by purposive sampling technique.

The eligibility criteria of participants were as follows: aged of 18 years and over; had diagnosed with type 2 diabetes mellitus for more than 6 months; understood Vietnamese language; agreed to join this study. The sample size was estimated by the G*Power program to identify the minimum number of participants. The sample size was calculated from correlation (bivariate normal model) due to agreement of the power analysis equaled 0.8 that was acceptable for this study.[11] Level of significance was .05. The effect size was 0.27 that was chosen from the correlation coefficient between foot care knowledge and foot care behavior ($r = 0.27$, $P \le .001$) in the recent cross-sectional study of 5961 patients with type 2 diabetes mellitus in China.[12] The 144 participants were required as a minimal adequate sample size. However, in the process of statistical analysis, 4 outliers were found and deleted. Therefore, 140 participants were analyzed.

Ethical Considerations

Ethical approval (MURA2017/721) was agreed by the Institution Review Board, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Da Nang University of Medical Technology and Pharmacy, and Da Nang Hospital. Before giving the informed consent, the researcher explicitly explained the objectives, research procedures, advantages and risks of the study to participants. The participants were confirmed that they were able to refuse or withdraw from the study if they got any difficulties.

Instruments

The instruments included 6 parts. Part 1, the six items cognitive impairment test (6CIT) was used to screen dementia when collecting inclusive data.[13]

Part 2, the demographic form consisted of personal characteristics and patients' health status.

Part 3, the Nottingham assessment of functional foot care (NAFF) originally developed by Lincoln et al[14] was used to measure foot care behaviors. NAFF consisted of 26 multiple-choice questions of 3 sections of footwear,

foot care, and foot safety and prevention. Each question had 4 choices with the mark from 0 to 3, and participants chose the best answer. The cutoff score of 50 indicated the necessity of further assessment of foot care behaviors. The Cronbach's alpha of NAFF tool was 0.84.

Part 4, the foot care knowledge consisted of 10 items was developed by researcher based on the literature reviews and adjusted to the local sociocultural context. The questionnaire consisted of 10 questions of Yes/No type. A correct answer got 1 mark, and the wrong answer got 0 mark. The respondents had good foot care knowledge when they got the score of 7 - 10 (> 70%), satisfied knowledge with the score of 5 - 7 (50% - 70%), and poor knowledge with the score of less than 5 (< 50%). The Kuder-Richardson reliability score of this tool was 0.72.

Part 5, the foot care confidence scale (FCCS) questionnaire originally established by Sloan[15] was used to measure foot care self-efficacy. This questionnaire contained of 12 items about confidence level of patients using Likert scale response with 5 points. The score marked from 1 to 5 following from "strongly not confident" to "strongly confident". That meant there was a total score of 60. However an approximate absolute score would be 40 showing a high level of self-efficacy. The Cronbach's alpha coefficient of FCCS tool was 0.90.

Part 6, the foot care subscale in the social support scale for self-care in middle-aged patients with type 2 diabetes mellitus (S4-MAD) originally developed by Naderimagham et al[16] was used to measure social support. The subscale including 6 questions explored the perception that the patients receive social support from their families, friends, and significant others such as health care providers, peers for foot care. Each question had 5 answers from "no support at all" to "always strongest level of support". The Cronbach's alpha coefficient was 0.93

Data Collection

Type 2 diabetes mellitus participants were potentially eligible for the study and there were provided study

information and informed consent. After that, the researcher gave the participants criteria, took the sample for the study, and read following the questionnaires participants one by one. The procedure often took about 30 minutes for each patient. Data collection spent 2 months from December 2017 to January 2018.

Statistical Analysis

Data were analyzed with SPSS version 21.0 (IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp; 2012). Data were cleaned before doing further analysis. Descriptive statistics was used to describe the variables. The correlations between age, gender, education level, and foot care behaviors was explored by chi-square test. The correlations between foot care self-efficacy, social support, and foot care behaviors were examined with Pearson product moment correlation coefficient (r) when all variables got normality of assumption. If not, the researcher used Spearman rank correlation coefficient (r_s) to explore the correlation between foot care knowledge and foot care behaviors.

Results

Demographic and Health Characteristics

One hundred forty patients (mean age, 63.11; standard deviation [SD], 7.77; range, 45 - 89 years) who had type 2 diabetes mellitus were included. Of those, over a half was more than 60 years (52.9%) and female (54.3%). The most common education level of participants was high school and over (60.7%). Participants who did not working accounted for 58.6%. A very large number of participants were married (81.4%) and lived with family (82.1%). Most of participants were nonsmoking (85%). The duration of type 2 diabetes mellitus was under 5 years (35%). Majority of participants had body mass index (BMI) in healthy range from 18.5 - 22.9 kg/m^2 (81.9%) (Table 1).

Table 1. Demographic and Health Characteristics of Vietnamese Patients With Type 2 Diabetes Mellitus (N= 140)

Characteristic	No. (%)
Age, y	
≤ 60	66 (47.1)
> 60	74 (52.9)
Gender	
Male	64 (45.7)
Female	76 (54.3)
Education level	
Under high school	55 (39.3)
High school and over	85 (60.7)
Employment	
Not working	82 (58.6)
Full-time jobs	39 (27.9)
Part-time or seasonal jobs	19 (13.5)
Marital status	
Single	5 (3.6)
Married	114 (81.4)
Divorced/widowed	21 (15.0)
Living condition	
Alone	10 (7.1)
With family	115 (82.1)
Couple only	15 (10.8)
Smoking	
No	119 (85.0)
Yes	21 (15.0)
Duration of diabetes, y	
< 5	49 (35.0)
5 - 9	46 (32.9)
10 - 15	29 (20.7)
> 15	16 (11.4)

Table 1. Demographic and Health Characteristics of Vietnamese Patients With Type 2 Diabetes Mellitus (N= 140) (Continued)

Characteristic	No. (%)
BMI, kg/m^2	
< 18.5	1 (0.7)
18.5 - 22.9	114 (81.4)
23 - 24.9	18 (12.9)
≥ 25	7 (5.0)
Fasting blood glucose, mmol/L	
< 7.0	70 (50.0)
≥ 7.0	70 (50.0)
HbA$_{1c}$, %	
≤ 6.9	63 (45.0)
7.0 - 7.9	38 (27.1)
≥ 8.0	39 (27.9)
Medication	
Oral hypoglycemic	69 (49.3)
Insulin and oral hypoglycemic	71 (50.7)

Abbreviations: BMI, body mass index; HbA$_{1c}$, glycated hemoglobin.

Foot Care Behaviors

Most of participants (58.6%) had poor foot care behaviors (mean ± SD, 47.4 ± 9.2). More than a half of participants (53.6%) often wore artificial fiber (eg, nylon) socks, 64.3% used slippers often with no fastening, and 62.9% used pointed-toed shoes and flip-flops or mules. Almost patients (94.3%) washed their feet more than once a day, while there was only 15.7% people often checking feet dry after washing and 26.4% of participants dried between toes often. There was about one fifth participants (21.4%) using moisturizing cream on feet daily. There were 2.9% of participants examined either their feet or changing socks/stocking/tights more than once a day. The high percentage of participants performed good behaviors including never using a hot water bottle in bed, never putting feet near fire, never putting feet on a radiator, and never using corn remedies/corn plasters/paints when getting a corn (95%, 99.3%, 97.9%, and 65%, respectively) (Table 2).

Foot Care Knowledge, Foot Care Self-efficacy, and Social Support

More than a half (57.1%) got good foot care knowledge with the score ranged from 7 to 10 out of the maximum score of 10 (mean ± SD, 8.5 ± 1.0), 24.3% participants showed satisfied foot care knowledge that scores were in from 5 to 6 (mean ± SD, 5.5 ± 0.5), and 18.6% presented poor foot care knowledge that the range of scores from 1 to 4 out of the highest score of this level of 5 (mean ± SD, 3.0 ± 0.9). The mean score of foot care self-efficacy was 50.1 (SD, 6.9). There was 86.8% participants having good foot care self-efficacy (mean ± SD, 51.6 ± 5.3), whereas only 9.3% people got under the cutoff score (mean ± SD, 35.6 ± 3.6). Additionally, the total score of social support ranged from 8 to 30 out of a possible score from 6 to 30 (mean ± SD, 18.4 ± 5.3). More than a half of participants (51.4%) had poor social support (mean ± SD, 14.1 ± 2.8), while 48.6% patients with type 2 diabetes mellitus got good social support (mean ± SD, 22.9 ± 3.1).

Correlations Between Age, Gender, Education Level, Foot Care Knowledge, Foot Care Self-Efficacy, Social Support, and Foot Care Behaviors

While there was no correlation among age, gender, and foot care behaviors ($P > .05$), education level related to foot care behaviors ($P < .01$) (Table 3). There was statistically significant positive correlation between foot care knowledge and foot care behaviors ($r_s = 0.647$, $P < .01$), foot care self-efficacy and foot care behaviors ($r = 0.582$, $P < .01$), and social support and foot care behaviors ($r = 0.522$, $P < .01$) (Table 4)

Table 2. **Foot Care Behaviors of Vietnamese Patients With Type 2 Diabetes Mellitus (N = 140)**

Foot Care Behavior	Possible Range	Actual Range	No. (%)
Overall foot care behaviors	0 - 78	16 - 55	
Good foot care behaviors (≥ 50)			58 (41.4)
Poor foot care behaviors (< 50)			82 (58.6)
Footwear	0 - 21	2 - 20	
Wear trainers			59 (42.1)
Wear shoes with lace-up, velcro, trap fastening			28 (20.0)
Break in new shoes gradually			13 (9.3)
Wear artificial fiber (eg. nylon) socks			75 (53.6)
Wear slippers with no fastening			90 (64.3)
Wear pointed-toed shoes			41 (29.3)
Wear flip-flops or mules			47 (33.6)
Foot care	0 - 24	4 - 20	
Examine your feet			4 (2.9)
Wash your feet			132 (94.3)
Check your feet are dry after washing			23 (15.7)
Dry between your toes			37 (26.4)
Change your socks/stocking/tights			4 (2.9)
Use moisturizing cream on your feet			30 (21.4)
Put moisturizing cream between your toes			2 (1.4)
Cut your toenails			24 (17.1)
Foot safety and prevention	0 - 33	15 - 33	
Check shoes before you put them on			89 (63.6)
Check shoes when you take them off			10 (7.1)
Put a dry dressing on a blister when you get one			50 (35.7)
Put a dry dressing on a graze, cut or burn when get one			52 (37.1)
Wear shoes without socks/stocking/tights			71 (50.7)
Walk around the house in bare feet			80 (57.1)
Walk outside in bare feet			121 (86.4)
Use a hot water bottle in bed			133 (95.0)
Put your feet near the fire			139 (99.3)
Put your feet on a radiator			137 (97.9)
Use corn remedies/corn plasters/paints when you get a corn			91 (65.0)

Table 3. Correlations Between Age, Gender, Education Level, and Foot Care Behaviors of Vietnamese Patients With Type 2 Diabetes Mellitus (N = 140)

Variable	No. (%)		P Value[*]
	Foot Care Behaviors (Score)		
	Poor (28 - 49)	Good (50 - 67)	
Age, y			
≤ 60	40 (60.6)	26 (39.4)	NS
> 60	42 (56.8)	32 (43.2)	
Gender			
Male	36 (56.2)	28 (43.8)	NS
Female	46 (60.5)	30 (39.5)	
Education level			
Under high school	33 (60)	22 (40)	.007
High school and over	49 (57.6)	36 (42.4)	

NS, not significant.

[*] Significance for the test was determined at $P < .01$.

Table 4. Correlations Between Foot Care Knowledge, Foot Care Self-Efficacy, Social Support and Foot Care Behaviors of Vietnamese Patients With Type 2 Diabetes Mellitus (N = 140)

Variable	Foot Care Behaviors	
	Correlation Coefficient	P Value[*]
Foot care knowledge	0.647[a]	< .01
Foot care self-efficacy	0.582[b]	< .01
Social support	0.522[b]	< .01

[a] The test was Spearman rank correlation coefficient.

[b] The test was Pearson product moment correlation coefficient.

[*] Significance for the test was determined at $P < .01$.

Discussion

Foot Care Behaviors

Using moisturizing cream was one of effective treatment to prevent diabetic foot problems caused by peripheral neuropathy because the cream was able to restore the cutaneous barrier, protect from water loss, and keep adequate hydration in order to prevent xerosis.[17] The reason explained to few samples on this study used moisturizing cream was patients had lack of motivation to change their habits and lifestyles.[18] As well as, economic condition also was a barrier of no using lotion in diabetic patients.[18]

This reason has still explained to wear shoes with lace-up and fastening infrequently. According to observation and investigation process of the researcher, most patients used trainers when doing exercise only. In addition, the weather in Vietnam is typically tropical climate with hot and humid characteristics, so flip-flop and pointed-toed shoes became convenient choices for

many Vietnamese people, even though these wearing enhanced the risk of diabetic foot ulcers and other foot complications.[18] Moreover, walking barefoot indoor was a habitually cultural practice in many Vietnamese households, especially in rural area.

Correlations Among Variables

The correlations between factors and behaviors were consistent with others studies and social cognitive theory especially. However, age and gender were unrelated to foot care behaviors, whereas education level, foot care knowledge, foot care self-efficacy, social support were positively correlated to foot care behaviors.

Age and gender did not significantly correlated to foot care behaviors among patients with type 2 diabetes mellitus in this study. Therefore, the hypothesis was not warranted. The reason was younger diabetic people were busy with developmental mission such as childcare, parenting, and career, so they had to spent much time for working task. As a consequence, they ignored detailed self-management behaviors for diabetes.[19] Furthermore, young people had tendency of neglect of healthy behaviors, not keen on keeping fit, and were subjective their health so that not paid attention the currently symptoms.[20] Whereas, the older people with diabetes concerned their disease much because they had the high preventive behaviors and they were afraid their weakness.[21] In other words, the older people with type 2 diabetes mellitus got foot problems easier than the younger because of the neuropathy complications.[22] This was the reason why there was no difference of foot care behaviors among groups of age in this study.

The practice of foot care behaviors was not statistically different between 2 genders because the approximately equal ratio of males and females in the study. The finding was confirmed to the study of Solan et al.[23] They explained there were no significant differences between males and females concerning foot inspection, nail care, and shoe check.[23] Men totally were less likely

to take rests or lazier to find out medical service when they had illness and less keened on health promoting practices, however, gender had no significant correlation to foot care behaviors.[24]

The finding showed the correlation between education level and foot care behaviors. That meant people with higher education level practiced better foot care performances. Obviously, people who had higher education level, they had a better understanding of the repercussion of the unsuccessfulness to implement health behaviors. Diabetic patients who educated properly could improve preventive foot care behaviors in order to decline amputations and low incident of diabetic foot ulcer.[25] To be evidenced, comprehensive level of education was correlated with sustainable development of the rate of patients inspecting their feet every day, carrying out other self-care behaviors, and performing professional assessments of their feet.[25] Moreover, low education level led to less access to health care, so participants missed opportunities to get information and services to take care of their feet.

This study presented the significant positive correlation between foot care knowledge and foot care behaviors. This meant it was difficult for patients with type 2 diabetes mellitus to perform effective foot care behaviors if they lacked of foot care knowledge. The finding was consistent to the study of D'Souza et al.[26] Lack of knowledge about the risk of foot care enhanced foot complications such as inappropriate foot wear lead to pressure on plantar and injuries in foot.[26] Therefore, D'Souza et al[26] recommended diabetic patients had to modify foot care behaviors daily which relied on their education, foot care knowledge and attitude toward practicing. Nevertheless, a study in developed country as USA reported poor foot care knowledge was correlated with poor foot care behaviors.[27]

The result of the study displayed the significant positive correlation between foot care self-efficacy and foot care behaviors. Individuals with higher self-efficacy and health literacy had stronger motivation to perform

incorporated self-care behaviors and tackle any tasks.[10] Therefore, it was seemed as one of the crucial and powerful preconditions for successful cooperation of self-care behaviors. No exceptions, as a result, self-efficacy was a factor related statistically significant to foot care practice in this study.

The positive correlation between social support and foot care behavior was displayed in the study. People who had higher social support implemented better diabetes self-care including behaviors to avoid foot ulcer Furthermore, social support was a significant figure for patients with diabetes improving their disease management. As a result, patients could achieve the goals and facilitate adjustment to disease. Social support could also advance adherence to suggested health performances for people with type 2 diabetes mellitus.[28]

The study reported the results confirmed to the social cognitive theory of Bandura.[9] Education level, foot care knowledge, foot care self-efficacy, and social support had correlation with foot care behaviors. However, some variables including age and gender were not correlated to foot care behaviors. Therefore, focusing on improvement of foot care knowledge, foot care self-efficacy and social support was important to enhance foot care behaviors for patients with type 2 diabetes mellitus in Da Nang, Vietnam.

Conclusions

This study provided overall version of the fact of foot care behaviors among patients with type 2 diabetes mellitus in Da Nang, Vietnam as well as advantage factors impacting on implementation these performances. Based on the results of the study, enhancing perception for patients with type 2 diabetes mellitus about providing knowledge and practice has been a crucial problem in Da Nang, Vietnam. Therefore, from the finding of the study, the healthcare providers could know what the behaviors that patients performed lessened, what should be improved more, how to perform foot care behaviors properly as well as which factors were the motivation for patients to do these behaviors.

Acknowledgements

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ปัจจัยที่สัมพันธ์กับพฤติกรรมการดูแลเท้าในผู้ป่วยเบาหวานชนิดที่ 2 เมืองดานัง ประเทศเวียดนาม

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บทนำ: ในประเทศเวียดนาม ผู้ป่วยเบาหวานชนิดที่ 2 มีปัญหาเกิดแผลที่เท้าและการถูกตัดเท้าหรือขาเพิ่มสูงขึ้น ซึ่งหนึ่งในสาเหตุสำคัญของปัญหาเท้าเบาหวาน คือ การมีพฤติกรรมการดูแลเท้าที่ไม่ถูกต้อง ดังนั้น เพื่อลดการเกิดภาวะแทรกซ้อนปัญหาเท้าเบาหวานจึงควรมีการศึกษาปัจจัยที่เกี่ยวข้องกับพฤติกรรมการการดูแลเท้า

วัตถุประสงค์: เพื่อศึกษาปัจจัยที่สัมพันธ์กับพฤติกรรมการดูแลเท้าของผู้ป่วยเบาหวานชนิดที่ 2

วิธีการศึกษา: การวิจัยเชิงพรรณนา กลุ่มตัวอย่างเลือกแบบเฉพาะเจาะจง จำนวน 140 คน ณ แผนกผู้ป่วยนอก โรงพยาบาลดานัง เมืองดานัง ประเทศเวียดนาม เก็บข้อมูลด้วยแบบสอบระหว่างเดือนธันวาคม พ.ศ. 2560 ถึงเดือนมกราคม พ.ศ. 2561 เครื่องมือที่ใช้ในการวิจัยประกอบด้วย แบบวัดการรู้คิดบกพร่อง ข้อมูลส่วนบุคคล แบบวัดความสามารถในการประเมินการดูแลเท้าของน็อตติงแฮม แบบวัดความมั่นใจในการดูแลเท้า การรับรู้สมรรถนะแห่งตนในการดูแลเท้า ความรู้ในการดูแลเท้า และแบบวัดการสนับสนุนทางสังคมของผู้ป่วยเบาหวานชนิดที่ 2 วัยกลางคน การวิเคราะห์ข้อมูลใช้สถิติ Chi-square test, Pearson product moment correlation coefficient และ Spearman rank correlation coefficient

ผลการศึกษา: จากกลุ่มตัวอย่าง 140 คน พบว่า ร้อยละ 58.6 มีพฤติกรรมการดูแลเท้าไม่ดี และระดับการศึกษา ความรู้เกี่ยวกับการดูแลเท้า การรับรู้สมรรถนะแห่งตนในการดูแลเท้า แรงสนับสนุนในการดูแลเท้า มีความสัมพันธ์ทางบวกกับพฤติกรรมการดูแลเท้าอย่างมีนัยสำคัญทางสถิติ และไม่พบความสัมพันธ์ระหว่างอายุ เพศ กับพฤติกรรมการดูแลเท้า

สรุป: การศึกษานี้แสดงให้เห็นว่า ผู้ป่วยเบาหวานชนิดที่ 2 ต้องได้รับความรู้ในการดูแลเท้าและพฤติกรรมการดูแลเท้า และพยาบาลมีหน้าที่ช่วยเหลือผู้ป่วยเบาหวานชนิดที่ 2 ให้สามารถปฏิบัติพฤติกรรมการดูแลเท้าที่เหมาะสม

คำสำคัญ: พฤติกรรมการดูแลเท้า ความรู้ในการดูแลเท้า การรับรู้สมรรถนะแห่งตนในการดูแลเท้า แรงสนับสนุนในการดูแลเท้า

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