



Enhancement of knowledge of diabetic foot care among diabetic adults

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Abstract:

Diabetic foot is one of the most common, but unfortunately less talked about complication among Diabetic adults in our scenario. The present study was undertaken to enhance the knowledge of diabetic adults regarding foot care. Fifty subjects were enrolled in the study and their knowledge level was assessed at the baseline. The structured teaching programme was developed and administered. After seven days, post test was conducted which revealed significant gain in the knowledge score. Hence, it is recommended that such cost effective interventions should be held frequently in chronic care self-management.

Key words: Adults; Diabetes; Diabetic Foot; Knowledge; teaching programme

Introduction

The usual complications of diabetes mellitus are retinopathy, peripheral neuropathy, peripheral vascular disease, renal impairment and failure, cardiovascular disease, neuropathies. The highest rates of neuropathy is seen among people who have had diabetes for at least 25 years [1]. The feet are a major focus in diabetes and at the same time most frequently remained neglected. Neglect of the feet in diabetes is a leading cause of amputation [2]. The mortality rate in patients with diabetic foot ulceration is also high and is approximately twice that of

patients without ulceration. Worldwide, the prevalence of foot ulceration among patients with diabetes mellitus ranges from 1.3% to 4.8% in the community, to as high as 12% in hospital [3].

Multidisciplinary management programs that focus on prevention, education, regular foot examinations, aggressive intervention and optimal use of therapeutic footwear have demonstrated significant reductions in the incidence of lower-extremity amputations [4]. If the diabetic patients have knowledge about the preventive behaviours

regarding diabetic foot ulcer, they can apply them in their daily living. The complications may decrease and their quality of life may increase and thus, reducing healthcare costs for this chronic disease.

The management of diabetic foot among diabetics is poor due to lack of knowledge. The present study aimed to enhance the knowledge of diabetic patients in the community regarding foot care.

We conducted a pre-experimental study to find out the effect of a Structured Teaching Programme (STP) on foot care. The present study was conducted at 1-7 blocks of Kittae, the practice area of SGRDIMSR, i.e. Urban Health Centre (UHC), Amritsar. Baseline survey was conducted to estimate the number of individuals who were diagnosed with diabetes mellitus type II. Survey reveals that 96 adults were suffering with diabetes mellitus type II. The sample for present study included 50 conveniently selected adults who were diagnosed with diabetes mellitus type II and were residing in 1-7 blocks of Kittae, Amritsar.

Diabetic foot care knowledge questionnaire with 25 items relating to knowledge regarding general aspects such as introduction, causes, signs and symptoms, diagnostic measures, Risk factors for development of foot ulcer, hygiene and skin care among diabetic clients was prepared, further validated by subject experts and reliability of the tool (0.88) was also established. Structured teaching programme preparation involved developing a lesson plan, which was organized as introduction of diabetes mellitus, incidence and prevalence of diabetes, pathway and causes of diabetic foot, warning signs of foot problems, test for feet at home, prevention of diabetic foot ulcers, treatment of diabetic foot.

Written consent was obtained from each subject after giving assurance of confidentiality. Pre-test was conducted and then structured teaching programme was administered to diabetic clients. Post test was conducted on 7th day after administration of STP. The data obtained was analyzed by SPSS 16.0 version in terms of the objectives of the study using descriptive and inferential statistics.

Regarding age, 40% of diabetic clients were in age group 61-70 years followed by 28% in 51-60 years of age group and 18% were \leq 50 years of age whereas only 14% were above 70 years with mean \pm SD was 60.92 ± 9.26 and range 41-81 years. Majority (60%) of diabetic clients were females and rest were males. As per education, 34% of the diabetic clients studied up to middle level, 18% of the diabetic

client's had completed secondary education, 14% were graduate/postgraduate and 10% were found illiterate. More than half (64%) of the diabetic clients were housewife/unemployed, 22% of them were employed, while 14% were retired.

Table 1: Pre-test & Post –test knowledge level among diabetic clients (N=50)

Knowledge level / Score	Pre-test f (%)	Post-test f (%)
Excellent (>22)	-	02(04.0)
Good (18 - 22)	04(08.0)	23(46.0)
Average (15 -17)	12(24.0)	11(22.0)
Below average (<15)	34(68.0)	14(28.0)
Range of Score	08-19	10-23

Table 1 reveals that in pre-test 68% of the diabetic clients had below average level knowledge score followed by 24% had average level knowledge score. The range of knowledge score in pre test was 8 to 19. In post test, 46% diabetic clients had good knowledge level while 4% were in excellent level with range 10-23.

Table 2: Statistical significance of pre-test & post-test knowledge scores among diabetic adults (N=50)

	Mean	SD	t-test	p-value	df
Pre-Test	12.70	3.06	15.63	0.00	49
Post-Test	16.92	3.47			

Table 2 reveals that mean knowledge score in the pre-test was 12.70, which increased to 16.92 in the post-test, which was also found to be statistically significant.

The present study depicts that 68% of diabetics were below average in pre-test. The findings are consistent with the findings Vishwanathan V, Shobhana R, Snehathatha C, Seena R, Ramachandran A (1999) [5]. The results show that the score on awareness of general foot care knowledge and foot complications were poor. Similarly another study by Badruddin N, Basit A, Hydrie ML.I, Hakeem R (2000) [6], reported 54% diabetic patients had poor knowledge about diabetes.

A study in 2011 by Desalu OO, Salawu FK, Jimoh AK, Olokoba AB explored that majority (78.4%) of the diabetic patients had poor knowledge of foot care [7].

Present study shows that mean of pre-test score was 12.70 and post test was 16.92. This indicates that structured teaching programmes was effective in increasing the knowledge score of diabetic clients. The results are consistent with study conducted by Vatankhah N, Khamseh ME, Noudeh YJ, Aghili R, Baradaran H R, Haeri N S (2009) [8]. The findings of the study show that a simple face-to-face education is an effective and applied method to improve the knowledge about foot care. Similar study by Valk GD, Kriegsman DM, Assendelft WJ (2005) presented that the participant's foot care knowledge significantly improved with education in two trials [9]. The present study demonstrates the effectiveness of structured teaching programme in improving the knowledge regarding foot care among diabetic adults. Hence, it is recommended that such teaching interventions should be regularly planned and implemented for diabetics in enhancing their self-care abilities, so that they also become active partners in managing their disease condition.

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