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Effect of Diabetes Foot Care Education on Self –Efficacy Among Diabetes Mellitus Patients Attending Embu and Kerugoya Level Five Hospitals, Kenya

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ABSTRACT

Diabetic foot (DF) remains a leading cause of disability, amputations, and premature mortality among individuals with diabetes, yet much of its burden is preventable through education and effective self-care practices. Beyond knowledge, prevention requires strengthening self-efficacy—the confidence to adopt and maintain protective foot care behaviors. This study evaluated the impact of structured diabetes foot care (DFC) education, guided by Bandura's self-efficacy theory, on foot care self-efficacy among patients with diabetes in Kenya. A quasi-experimental design was employed at Embu and Kerugoya Level Five Hospitals, enrolling 230 participants randomly assigned to intervention (n=115) and control (n=115) groups. The intervention group received monthly interactive DFC sessions for three months, reinforced by follow-up phone calls, while the control group continued with routine care. Self-efficacy was assessed at baseline and post-intervention using the Diabetes Foot Care Self-Efficacy Scale, which measures magnitude, strength, and generality. At baseline, both groups exhibited low to moderate self-efficacy levels. However, after the intervention, significant improvements were observed in the intervention group across all domains: magnitude (2.85→4.23, $p<0.001$), strength (2.54→4.33, $p<0.001$), and generality (2.05→4.27, $p<0.001$), while the control group demonstrated only modest changes. These findings highlight that structured foot care education, reinforced through follow-up support, substantially improves patients' confidence and ability to sustain preventive foot care behaviors. Integrating such approaches into routine diabetes care, complemented by community and digital follow-up strategies, offers a feasible pathway to reducing diabetic foot complications in resource-limited settings.

Keywords: diabetes mellitus, diabetic foot, self-efficacy, foot care education, Structured education.

INTRODUCTION

Diabetes mellitus is a chronic metabolic disorder characterized by persistent hyperglycemia, which over time leads to serious complications affecting multiple organ systems [1]. One of the most debilitating and costly complications is the diabetic foot (DF)—a clinical condition arising from a combination of peripheral neuropathy, peripheral arterial disease (PAD), and impaired wound healing [2]. These pathophysiological changes compromise the integrity of the lower limbs, often resulting in foot ulcerations, infections, and, if not managed promptly, lower extremity amputations [3]. DF is associated with a significantly reduced quality of life, increased healthcare utilization, and a heightened risk of premature mortality [4].

Globally, the burden of diabetic foot complications continues to rise. It is estimated that 19% to 34% of individuals with diabetes will develop a foot ulcer in their lifetime, with approximately 20% of these cases progressing to lower limb amputation [5]. Despite this high prevalence, most amputations are preventable through early identification of at-risk feet, appropriate foot care practices, and effective patient education [3]. However, disparities in access to care and education persist, particularly in low- and middle-income countries (LMICs) where healthcare systems are often overstretched [6]. In sub-Saharan Africa, diabetic foot ulcer prevalence ranges from 4% to 19%, with many patients presenting late due to lack of awareness, poor glycemic control, and limited access to specialized care [7].

Education is widely recognized as a cornerstone of diabetic foot care prevention. Evidence shows that targeted patient education can significantly improve foot care behaviors, reduce ulcer recurrence, and lower amputation rates [8]. However, education must go beyond information delivery—it must empower patients to take ownership of their care. This highlights the critical role of self-efficacy, a psychological construct defined by Bandura, [9] as an individual's belief in their capacity to execute behaviors necessary to produce specific outcomes. In the context of chronic disease management, including diabetes, self-efficacy has been shown to influence adherence to treatment, self-monitoring behaviors, and coping with illness [10]. Effective management of diabetic foot risk depends not only on knowledge but also on the confidence to perform daily foot care tasks, including inspection, hygiene, footwear selection, and early help-seeking when foot problems arise [11].

Bandura (9) describes three domains of self-efficacy that are particularly relevant in foot care education: magnitude (the level of challenge an individual believes they can successfully overcome), strength (the conviction with which beliefs are held), and generality (the extent to which efficacy beliefs transfer across tasks or settings). Research consistently shows that self-efficacy is a key determinant of diabetes self-care behaviors, including foot care practices. Patients with higher levels of self-efficacy are more likely to engage in regular foot inspection, seek early treatment, and avoid risk behaviors such as walking barefoot or wearing inappropriate footwear [10, 12]. Moreover, foot care education that incorporates self-efficacy-enhancing strategies—such as skills training, modeling, verbal persuasion, and mastery experiences—has been shown to significantly reduce the incidence of foot ulcers and improve long-term foot health outcomes [13, 2].

A recent randomized controlled trial in Saudi Arabia by Hijazi et al. [13] showed that over the course of eight weeks, participants who received self-efficacy-based education had higher levels of self-efficacy and confidence in carrying out foot care activities like self-examinations,

seeking medical attention, and finishing necessary tasks like daily foot inspections, applying lotion, and choosing appropriate footwear than those who received routine care. Similarly, Sezgunsay et al. [10] found that a structured intervention targeting self-efficacy significantly improved foot care behaviors among Turkish patients with type 2 diabetes, with a measurable increase in daily foot inspections and appropriate footwear use. These findings align with earlier evidence from international guidelines which emphasize self-management confidence as critical to ulcer prevention [2]. Another longitudinal study demonstrated that enhancing self-efficacy through structured education programs directly influenced improvements in self-care behaviors at 3, 6, and 12 months. While increased diabetes knowledge initially contributed to improved behavior at 3 months, its direct impact diminished over time, and the indirect effect—mediated through self-efficacy—was sustained only up to 6 months [14]. This underscores the need for diabetic foot care education programs to go beyond knowledge delivery and intentionally target self-efficacy domains to promote sustainable behavioral outcomes.

Despite growing recognition of the importance of self-efficacy in diabetes self-care, few interventions systematically evaluate the unique roles of Bandura's three domains of self-efficacy—magnitude, strength, and generality—in relation to diabetic foot care behaviors. Most studies treat self-efficacy as a unified construct, focusing on overall confidence scores rather than dissecting how specific domains influence different components of preventive foot behavior [10, 15]. Integrating strategies that improve patients' self-belief across varying levels of difficulty, persistence, and contexts is vital in reducing the burden of diabetic foot complications. Therefore, there is a critical need to assess whether structured diabetic foot care education can effectively enhance self-efficacy and, in turn, improve preventive foot care behaviors among Kenyan patients with diabetes. This study seeks to address this gap within the context of Embu and Kerugoya Level Five Hospitals.

MATERIALS AND METHODS

Methodology

This study employed a quasi-experimental design to evaluate the effect of a structured diabetes foot care (DFC) education program on self-efficacy among patients with diabetes mellitus. The design was guided by Bandura's Social Cognitive Theory (SCT) to assess whether the intervention could produce measurable improvements in foot care self-efficacy. The study was conducted at Embu and Kerugoya Level Five Hospitals in Kenya, both offering specialized diabetes care and serving as referral centers for surrounding regions.

The target population included adult patients diagnosed with type 1 or type 2 diabetes mellitus, attending routine diabetes clinics at the two hospitals. Participants were eligible if they provided informed consent and had no active foot ulcers at the time of recruitment. Exclusion criteria included individuals not registered in the diabetes clinics, those unable to provide consent, and those presenting with active foot ulcers. Sample size was determined using Chan's formula [16] yielding 200 participants, which was increased to 230 to allow for a 15% attrition rate. Stratified random sampling ensured equal representation from both hospitals, and participants were allocated into an intervention group (n = 115) and a control group (n = 115)."

Intervention and Follow-Up

The intervention group participated in a structured diabetes foot care education program based on Bandura's self-efficacy theory. The content focused on glycemic control, regular foot

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inspection and examination, appropriate footwear, and treatment of foot complications. The program was delivered through monthly interactive sessions over three months, incorporating lectures, group discussions, practical demonstrations, and printed educational materials. Sessions were facilitated by trained research assistants under the supervision of the principal investigator.

The control group continued to receive standard routine care, which included general diabetes foot management without structured foot care education. Following the intervention, participants in both groups entered a three-month follow-up phase. During this period, the intervention group received monthly reinforcement messages via phone calls to support continued practice of foot care behaviors. The control group received no additional input during the follow-up.

Blinding

Due to the nature of the educational intervention, double blinding was not feasible. However, single blinding was maintained by ensuring that outcome assessors remained unaware of group allocations during both data collection and analysis to minimize bias.

Data Collection

Data were collected at baseline and post-intervention using a structured questionnaire. The tool gathered sociodemographic and clinical data, and assessed self-efficacy using a validated Diabetes Foot Care Self-Efficacy Scale (DFCSES**)**. The scale measured three core domains of self-efficacy: magnitude (perceived task difficulty), strength (confidence in performing tasks), and generality (confidence across various contexts). The same tool was used at both time points to ensure consistency and comparability. Trained research assistants conducted the data collection under close supervision to ensure data accuracy and integrity.

Data Analysis

Data were analyzed using SPSS version 29. Descriptive statistics summarized participant characteristics. Owing to an 11% attrition rate at end line, only independent t-tests were performed to evaluate differences between the intervention and control groups. A significance level of $p < 0.05$ was applied for all statistical tests

Ethical Considerations

Ethical approval was obtained from the Chuka University Research Committee, and a research permit was granted by National Commission for Science, Technology and Innovation (NACOSTI). All participants gave written informed consent prior to enrollment. Confidentiality and voluntary participation were strictly maintained throughout the study period.

RESULTS

Socio-demographic and Clinical Characteristics of the Participants

Participants in the intervention group (Embu Level 5 Hospital) had ages ranging from 8 to 85 years, with a mean age of 54 years, while those in the control group (Kerugoya Level 5 Hospital) ranged from 7 to 85 years, with a mean age of 55 years. Across both groups, the majority of participants were female, each accounting for 67% (77 participants). Most respondents were married—56% (65) in Embu and 66% (76) in Kerugoya. In terms of education, the highest proportion had attained secondary school level, reported by 43% (50)

of the intervention group and 50% (58) of the control group. A majority of the participants derived their livelihood from informal sources of income—57% (66) in Embu and 65% (75) in Kerugoya. Protestantism was the predominant religion in both groups, with 62% (71) of participants identifying as Protestant. Furthermore, most participants resided in rural areas, comprising 75% (86) in Embu and 71% (82) in Kerugoya. Clinical characteristics, the majority of participants in both groups had been diagnosed with type 2 diabetes mellitus—85% (98) in Embu and 79% (91) in Kerugoya. Most had lived with the condition for 0 to 10 years, accounting for 65% (75) of participants in the intervention group and 60% (69) in the control group. Oral antidiabetic medication was the most common form of treatment, used by 56% (64) of Embu participants and 50% (57) of those in Kerugoya. In terms of body mass index (BMI), the most frequently observed category in Embu was normal weight (33%, 38 participants), whereas in Kerugoya, overweight individuals comprised the largest group (49%, 56 participants). The majority of respondents had never smoked—75% (86) in Embu and 88% (101) in Kerugoya. Similarly, most participants reported never consuming alcohol, with 68% (78) in the intervention group and 75% (87) in the control group.

Baseline Level of DFC Self-efficacy Among Respondents in Embu and Kerugoya Level 5 Hospital

The participants were assessed based on Bandura's three core domains of self-efficacy: magnitude, strength, and generality. The focus was on key preventive foot care practices, including glycemic control, regular foot inspection and examination, use of appropriate footwear, and management of risk factors associated with foot ulcers.

Table 1: Magnitude Domain – Perceived Task Difficulty

Variable	Embu (n/%)	Kerugoya (n/%)
Magnitude (Measures participants' perceived ability to perform foot care tasks of varying complexity)		
Capability of achieving glycemic control	High: 23 Moderate: 51 Low: 41	High: 47 Moderate: 35 Low: 33
Capability of doing regular foot inspection	High: 20 Moderate: 56 Low: 39	High: 6 Moderate: 54 Low: 55
Capability of achieving appropriate foot wear	High: 18 Moderate: 52 Low: 45	High: 2 Moderate: 42 Low: 71
Capability of managing foot ulcer risk factors	High: 18 Moderate: 45 Low: 52	High: 5 Moderate: 26 Low: 84
Average	High: 20 (18%) Moderate: 51 (44%) Low: 44 (38%)	High: 15 (13%) Moderate: 39 (34%) Low: 61 (53%)

Table 1 shows that the magnitude domain reflected differences in participants' perceived ability to perform foot care tasks of varying complexity. In Embu, most participants reported moderate capability (44%), while 38% rated themselves low and 18% high. In contrast, more than half of Kerugoya participants (53%) reported low capability, with only 13% indicating high ability. Task-specific analysis revealed that Kerugoya participants expressed greater confidence in achieving glycemic control but had markedly lower perceived ability in regular foot inspection, appropriate footwear use, and managing foot ulcer risk factors, where low ratings predominated. Embu participants demonstrated relatively stronger perceptions of capability across tasks, though moderate scores were most common. Overall, these findings

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indicate that while both groups had limitations in perceived ability, Embu participants reported higher self-efficacy than those in Kerugoya, highlighting important gaps in preventive foot care practices, particularly in footwear use and risk factor management.

Table 2: Strength Domain – Confidence in Ability

Variable	Embu (n/%)	Kerugoya (n/%)
Strength: (Reflects how confident participants are in their ability to consistently perform foot care behaviors)		
Confidence in achieving glycemic control	High: 17 Moderate: 64 Low: 34	High: 12 Moderate: 48 Low: 55
Confidence in doing regular foot inspection	High: 10 Moderate: 51 Low: 54	High: 5 Moderate: 31 Low: 79
Confidence in achieving appropriate foot wear	High: 12 Moderate: 39 Low: 64	High: 4 Moderate: 25 Low: 86
Confidence in managing foot ulcer risk factors	High: 6 Moderate: 38 Low: 71	High: 2 Moderate: 23 Low: 90
Average	High: 11 (9%) Moderate: 48 (42%) Low: 56 (49%)	High: 6 (5%) Moderate: 32 (28%) Low: 77 (67%)

Table 2 shows that the strength domain reflected generally low confidence in sustaining foot care behaviors across both sites, with notable differences between them. In Embu, 49% of participants reported low confidence compared to 67% in Kerugoya, where only 5% expressed high confidence. Task-specific analysis showed that confidence was highest for glycemic control but markedly lower for regular foot inspection, appropriate footwear use, and foot ulcer risk management. In Kerugoya, confidence was particularly poor, with most participants rating themselves low in footwear use (86) and risk factor management (90). Although Embu participants demonstrated relatively stronger confidence, low ratings still predominated, especially in risk factor management (71). Overall, these findings indicate that self-efficacy for preventive foot care is suboptimal in both settings but significantly weaker in Kerugoya, underscoring the need for targeted education and behavioral support to strengthen confidence in consistent foot care practices.

Table 3: Generality Domain – Ability to Cope Across Situations

Variable	Embu (n/%)	Kerugoya (n/%)
Generality:(Assesses the belief in ability to perform well across various challenges or pressures)		
Achieving glycemic control under pressure	High: 9 Moderate: 28 Low: 78	High: 4 Moderate: 19 Low: 92
Regular foot inspection under pressure	High: 33 Moderate: 54 Low: 28	High: 3 Moderate: 17 Low: 95
Appropriate foot wear under pressure	High: 25 Moderate: 56 Low: 34	High: 0 Moderate: 9 Low: 106
Foot ulcer risk management under pressure	High: 4 Moderate: 18 Low: 93	High: 1 Moderate: 7 Low: 107
Average	High: 18 (16%) Moderate: 39 (34%) Low: 58 (50%)	High: 2 (2%) Moderate: 13 (11%) Low: 100 (87%)

Table 3 shows the generality domain results, assessing participants' ability to sustain foot care behaviors under challenging conditions, and reveals marked differences between the two

sites. In Embu, half of the participants (50%) reported low capability, while 34% indicated moderate and 16% high capability. By contrast, in Kerugoya, the majority (87%) rated themselves low, with only 2% expressing high self-efficacy. Task-specific analysis showed that Embu participants were relatively more confident in maintaining regular foot inspection (33 high, 54 moderate) and appropriate footwear use (25 high, 56 moderate), whereas Kerugoya participants overwhelmingly reported low ability across these behaviors, including 95 for inspection and 106 for footwear. For foot ulcer risk management, low capability predominated in both settings, but was especially pronounced in Kerugoya (107 low). These findings suggest that while Embu participants demonstrated some resilience in sustaining foot care across situations, Kerugoya participants had very limited generality, highlighting the need for interventions that enhance adaptability and coping strategies.

Post-Intervention Assessment of the of DFC Self-Efficacy Among Respondents in Embu and Kerugoya Level 5 Hospital

Table 4: Magnitude dimension of self-efficacy

Group	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	t-value	df	p-value (2-tailed)	95% CI of the Difference
Intervention (Embu)									
Pre-Intervention	115	2.8500	0.74545	0.06951					
Post-Intervention	102	4.2328	0.25674	0.02542	**-1.3828**	-18.683	143.63	< 0.001	[-1.5292, -1.2365]
Control (Kerugoya)									
Pre-Test	115	2.5500	0.57000	0.05300					
Post-Test	103	2.9300	0.60000	0.05900	**-0.3800**	-4.840	211.10	< 0.001	[-0.5400, -0.2300]

Table 4 presents the comparison of pre- and post-intervention scores specifically for the magnitude dimension of self-efficacy in diabetes foot care among patients in the intervention and control groups. In the intervention group (Embu), there was a statistically significant increase in self-efficacy magnitude scores from a mean of 2.85 (SD = 0.745) at baseline to 4.23 (SD = 0.257) after the foot care education intervention. The mean difference of -1.3828 was highly significant ($t(143.63) = -18.683$, $p < 0.001$), with a 95% confidence interval ranging from -1.5292 to -1.2365. This substantial improvement reflects a marked enhancement in participants' perceived ability to undertake progressively difficult foot care tasks, as conceptualized under the magnitude dimension of Bandura's self-efficacy theory.

In contrast, the control group (Kerugoya) showed a smaller but statistically significant improvement in magnitude self-efficacy scores, from 2.55 (SD = 0.570) to 2.93 (SD = 0.600), with a mean difference of -0.38 ($t(211.10) = -4.840$, $p < 0.001$), and a 95% confidence interval of -0.54 to -0.23. While the increase suggests some improvement, likely due to routine care or other external factors, it is considerably less than the gains seen in the intervention group.

The results in the table 5 present the comparison of pre- and post-intervention scores on the strength dimension of diabetes foot care self-efficacy, which refers to the degree of confidence individuals have in performing foot care tasks consistently, even under challenging conditions. In the intervention group (Embu), participants' mean self-efficacy strength score increased

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significantly from 2.54 (SD = 0.66) at baseline to 4.33 (SD = 0.23) post-intervention. The mean difference of -1.78 was statistically significant (t(143.95) = -27.32, p < 0.001), with a tight confidence interval of [-1.91, -1.65]. This substantial improvement indicates that the foot care education intervention was highly effective in boosting participants' confidence in their ability to engage in and maintain recommended foot care behaviors over time.

Table 5: Strength dimension of self-efficacy

Group	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	t-value	df	p-value (2-tailed)	95% CI of the Difference
Intervention (Embu)									
Pre-Test	115	2.54	0.660	0.061					
Post-Test	102	4.33	0.230	0.023	-1.78	-27.32	143.95	< 0.001	[-1.91, -1.65]
Control (Kerugoya)									
Pre-Test	115	2.25	0.590	0.055					
Post-Test	103	2.65	0.600	0.059	-0.40	-4.96	212.60	< 0.001	[-0.56, -0.24]

In the control group (Kerugoya), the strength scores increased from 2.25 (SD = 0.59) to 2.65 (SD = 0.60). The mean difference of -0.40 was also statistically significant (t(212.60) = -4.96, p < 0.001), with a 95% confidence interval of [-0.56, -0.24]. While this improvement suggests a modest gain in confidence, it is considerably less than that observed in the intervention group. The comparative results underscore the significant impact of the diabetes foot care education program on the strength dimension of self-efficacy. Participants in the intervention group exhibited a much greater increase in their confidence to sustain foot care practices, even in the face of difficulties or lapses. This finding aligns with Bandura's theory that repeated practice, mastery experiences, and supportive educational interventions can substantially enhance individuals' perceived strength of efficacy beliefs, leading to better health behavior adherence.

Table 6: Generality Dimension of self-efficacy

Group	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	t-value	df	p-value (2-tailed)	95% CI of the Difference
Intervention (Embu)									
Pre-Test	115	2.05	0.720	0.068					
Post-Test	102	4.27	0.260	0.026	-2.22	-30.67	145.80	< 0.001	[-2.36, -2.07]
Control (Kerugoya)									
Pre-Test	115	1.7783	0.5714	0.0533					
Post-Test	103	2.2621	0.5461	0.0538	-0.4839	-6.374	216	< 0.001	[-0.6335, -0.3342]

This table 6 presents the pre- and post-intervention scores for the generality dimension of diabetes foot care self-efficacy, which refers to individuals' perceived ability to apply self-care behaviors across different situations and contexts. In the intervention group (Embu), the

mean generality score significantly increased from 2.05 (SD = 0.72) at baseline to 4.27 (SD = 0.26) post-intervention. The mean difference of -2.22 was highly statistically significant ($t(145.80) = -30.67$, $p < 0.001$), with a tight 95% confidence interval ranging from -2.36 to -2.07. This substantial gain indicates that participants developed a strong belief in their ability to maintain appropriate foot care practices across various settings and circumstances after receiving the foot care education intervention.

The control group (Kerugoya) also showed a statistically significant improvement in generality scores, increasing from 1.78 (SD = 0.5714) to 2.26 (SD = 0.5461), yielding a mean difference of -0.4839 ($t(216) = -6.374$, $p < 0.001$), with a 95% confidence interval of [-0.6335, -0.3342]. However, the extent of improvement was considerably smaller than that of the intervention group. The findings clearly demonstrate that the foot care education intervention had a profound effect on enhancing self-efficacy in the generality dimension. Participants exposed to the intervention became significantly more confident in their ability to generalize foot care behaviors beyond a single context or environment. Compared to the control group, which showed only a modest increase, the intervention group achieved more than four times the gain in self-efficacy generality scores, highlighting the robust effectiveness of the educational program in equipping patients with transferrable skills and confidence applicable across daily life scenarios.

DISCUSSION

This study demonstrated that a structured diabetes foot care (DFC) education program, reinforced with follow-up sessions, significantly improved patients' self-efficacy across the magnitude, strength, and generality dimensions. These findings underscore the value of targeted educational interventions in empowering patients to perform and sustain recommended self-care practices.

Participants in the intervention group showed a marked increase in their perceived ability to undertake progressively difficult foot care tasks, with mean scores rising from 2.85 to 4.23 ($p < 0.001$). This finding highlights the role of structured education in enhancing patients' confidence to manage increasingly complex aspects of foot care. This includes not only routine practices such as regular foot inspection and appropriate footwear use, but also broader components of self-management, such as glycemic control and the mitigation of risk factors associated with foot ulceration. By contrast, the control group exhibited only modest gains (2.55 to 2.93), suggesting that routine care alone is insufficient for fostering significant improvements. The present results are consistent with recent evidence. A quasi-experimental study in Jordan found that structured, interactive foot care education significantly improved patients' self-efficacy compared with routine care (13). Similarly, scoping review confirmed that combining diabetes education with follow-up sessions yields greater improvements in self-efficacy among patients with diabetes mellitus (DM) (17). Additional studies highlight self-efficacy as a critical mediator of adherence to foot care behaviors, with higher levels strongly linked to better self-management outcomes and lower risk of complications (18).

The intervention also substantially improved patients' confidence in maintaining foot care practices consistently, even in the face of challenges. Strength scores increased from 2.54 to 4.33 ($p < 0.001$) in the intervention group, compared to a smaller improvement in the control group (2.25 to 2.65). According to Bandura (9), the strength of efficacy beliefs reflects the

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degree of certainty individuals attach to their abilities, which influences persistence and resilience. The incorporation of follow-up sessions in this study likely provided reinforcement, mastery experiences, and social support that consolidated these stronger efficacy beliefs. Similar outcomes have been reported in other contexts, where education combined with follow-up produced sustained improvements in diabetes self-care self-efficacy (17,16)

Equally notable was the significant improvement in the generality of self-efficacy, which reflects patients' confidence in applying foot care behaviors across diverse contexts. The intervention group's mean scores increased from 2.05 to 4.27 ($p < 0.001$), compared to smaller gains in the control group (1.78 to 2.26). This suggests that the intervention not only equipped patients with technical skills but also enhanced their ability to generalize these practices to various real-life situations. Such generalization is critical; as consistent foot care must be maintained across different environments to be effective in preventing complications. These results corroborate findings from a systematic review that highlighted the importance of structured, context-sensitive education in promoting transferable self-care skills (19).

CONCLUSION AND RECOMMENDATION

Conclusion

In conclusion, this study demonstrates that structured DFC education, reinforced with follow-up, significantly improves patients' confidence and ability to perform, sustain, and generalize essential self-care behaviors in resource-limited settings. These findings reaffirm Bandura's self-efficacy theory, illustrating how mastery experiences, reinforcement, and social support can empower patients to engage in consistent foot care practices, even under challenging conditions.

Recommendation

Structured diabetes foot care education should be integrated into routine diabetes care at all levels of Kenya's health system. Capacity building for healthcare providers must emphasize patient-centered education and practical follow-up approaches tailored to resource-limited settings. Community-based strategies, including the use of health workers and low-cost digital tools such as SMS reminders, can enhance sustainability. Further longitudinal research is warranted to determine the long-term effects of structured education on foot care practices and complication rates.

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