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TITLE Stepping Beyond Fit: Cultural, Climatic, and Belief-Driven Influences on Adherence in Diabetic Footwear Use

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ABSTRACT (maximum 450 words. Please use the following or similar headings: Background/Methods/Results/Conclusions)

Background:
Therapeutic footwear is a clinically validated intervention for preventing diabetic foot ulcers and lower limb amputations. However, adherence to prescribed footwear remains a global challenge. Traditional models of prescription and outcome measurement often focus on biomechanical efficacy while overlooking the broader socio-cultural, environmental, and belief-driven factors that shape patient behaviour. This study explores how culture, religion, climate, and personal beliefs influence adherence in diabetic footwear use, particularly in diverse and multicultural populations.

Methods:
A mixed-methods approach was employed, drawing from clinical audits, practitioner surveys, and N-of-1 study designs conducted as part of a broader investigation into patient-centred therapeutic footwear outcomes. The study synthesised data from patients and practitioners across multicultural settings, with particular emphasis on regions with high prevalence of diabetes and strong cultural or religious norms (e.g., South Asia, the Middle East, and Pacific regions). Qualitative data were analysed thematically to identify recurring patterns of adherence barriers linked to cultural practices, climate discomfort, footwear appearance, and spiritual or social beliefs.

Results:Findings revealed that cultural practices—such as removing shoes indoors, religious foot rituals, and dress codes—significantly impact daily footwear adherence, particularly in home and religious settings. Patients expressed reluctance to wear bulky or stigmatizing footwear that conflicted with social identity, modesty norms, or workplace dress expectations. Additionally, climatic discomfort, especially in hot and humid environments, contributed to reduced usage of enclosed footwear styles. Personal beliefs about foot health, aesthetics, and perceived need for footwear were also found to mediate adherence. Notably, practitioners reported limited training or tools to address these psychosocial factors within standard care protocols.

Conclusions:
Adherence to diabetic footwear is not solely a biomechanical or clinical challenge—it is a cultural, environmental, and psychosocial one. Current practices must evolve towards a culturally competent and climate-responsive model that respects patients' lived realities while maintaining therapeutic efficacy. Design and prescription strategies should incorporate climate-appropriate materials, culturally acceptable aesthetics, and belief-sensitive education. These findings advocate for a shift towards human-centred care models in diabetic foot management, ensuring that footwear solutions are not only medically effective, but also socially and culturally wearable. Future directions include developing culturally tailored clinical guidelines and co-designed footwear solutions that honour patients' values, promote dignity, and enhance long-term adherence.

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