

Acupressure Based Therapeutic Smart Shoe for Low-Income Countries

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A Healthcare Project by
UETIANS



Diabetes is a serious metabolic disease that has spread rapidly throughout the world, affecting both advanced and developing countries. One of the main causes of the disease is a dramatic shift in people's lifestyles, which may be related to a fast-paced lifestyle and poor dietary circumstances. Along with serious health concerns, diabetes mellitus also places a significant financial and social strain on health-care systems and societies. Diabetes has several economic consequences for society, which includes direct costs of treatment for patients, their families, the health-care system and indirect costs to society and government.

The economic burden of diabetes is inadequately understood in the developing world, where the biggest forecasted increases in prevalence are expected. It can be observed that the diabetic burden increased gradually from 1990 to 2017 and are predicted with a rise from 2018 to 2025 in terms of incidence, prevalence, death and DALYs. The need of the hour is to raise awareness about this disease, its consequences and develop user friendly devices for its optimal treatment. This would enable patients as well as medical and paramedical professionals to better treat their symptoms.

We focused on developing a diabetes-centered therapeutic device based on the principles of neuropathy and reflexology. The aim of the device is monitoring the patient's health condition, avoid distal part amputation through improved oxygen saturation in the blood, and reduce the dependency of medication for patients. The therapeutic device would allow type II diabetic patients to monitor and therapeutically control their diabetes treatment. The Acupressure based therapeutic approach would be fruitful for the gradual improvement of the patient's condition through regular therapy over time.

This Smart Shoe can be manufactured with minimum amount of resources including human, machinery and cost. The cost of the shoe is only 113\$ (20,000pkr) which is minimum as compared to other relevant international standard devices such as Pedar and Tekscan. The cost of the pedar shoe is 2,995\$ (526,685pkr) and tekscan shoe is from 5,995\$ to 6,995\$ (1,054,250pkr-1,230,105pkr). Both brands are highly expensive for a common man.

Team Members



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