



## The Presence of Comorbidity, Being a Male, and Foot Care Practice were Factors that Predict the Occurrences of Diabetic Foot Ulcers

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### Abstract

**Background:** Diabetic foot ulcer (DFU) is one of the most complications of diabetes mellitus related with major horribleness and mortality. DFU is the major cause of contamination and lower limit removals in diabetic patients. In spite of this, there was a meagre finding on related variables of foot ulcer among diabetes mellitus.

**Methods:** Facility-based cross-sectional think about was conducted among diabetes mellitus patients at BGH from Admirable 1, 2021 - 30, 2021. The approved instrument of the Nottingham Appraisal of Useful Foot care (NAFF) was utilized to survey the diabetic foot self-care hone. Multivariate calculated relapse was utilized to analyse the affiliations between the subordinate factors and autonomous factors. Information was analysed employing a measurable bundle for social science (SPSS adaptation 23).

**Conclusion:** The predominance of diabetic foot ulcers among diabetic patients in BGH was found to be tall. The nearness of comorbidity, being a male, and foot care hone were variables that foresee the events of diabetic foot ulcers. Subsequently, the progressing therapeutic instruction on the foot care hones ought to be given to diabetes mellitus patients.

**Keywords:** Prevalence; Diabetic foot ulcer; associated factor; south western Ethiopia

### Introduction

Diabetes mellitus (DM) could be an incessant and life-threatening metabolic clutter characterized by multiple long-term complications influencing nearly every system within the body. It is additionally classified beneath one of the metabolic maladies and one of four needs of non-communicable maladies that had given greatest effect on the wellbeing, social and financial status around the world [1]. Diabetic foot ulcer (DFU) is one of the most complications in diabetes mellitus (DM) with a lifetime chance of 15% in all diabetic patients and is related with major dismalness, mortality, costs, and diminished quality of life. As the rate of diabetes mellitus is expanding all inclusive, the increment in complications is additionally obvious [2].

Diabetic foot is characterized as the nearness of disease, ulceration and/or annihilation of profound tissues related with neurological anomalies and different degrees of fringe blood vessel illness (Cushion) within the lower appendage in patients with diabetes [3]. The pathogens included in these contaminations change from high-impact to anaerobic species, which may incorporate *Staphylococcus* spp., *Streptococcus* spp., *Proteobacteria*, *Pseudomonas aeruginosa* and coliform microbes [4].

It could be a noteworthy cause of dismalness and can lead to drawn out healing center remains, which is prove by the truth that ~20% of diabetes-related hospitalizations are related to DFU. The mortality rate in patients with DFU is additionally tall and is roughly twice that of the patients without ulceration [5]. Other than dreariness and mortality, the toll of financial burden in terms of coordinate and indirect costs is additionally tall for those having DFU. It is additionally evaluated that 24.4% of the full wellbeing care consumption among the diabetic populace is related to foot complications [6].

Increased age, male sex, fringe vascular malady, fringe neuropathy, and renal illness, expanded body mass list, destitute diabetes control, and longer term of diabetes were common chance variables for passing after ulceration [7]. Hence early distinguishing pieces of proof of the

potential chance variables is imperative to anticipate the advancement of foot ulcers and its related horribleness [8].

A larger part of considers on diabetic foot ulcers have primarily been conducted in tall and middle-income locales and few thinks about on this condition have been conducted in Africa, a lion's share of which have been conducted in urban zones in this way the measurements don't offer a clear portrayal of the circumstance [9]. So also, exceptionally few ponders have been conducted in Ethiopia and as such no predominance and related variables have been examined in our consider region in spite of it being among a country region. On best of that in our consider range, more than half of the diabetes mellitus patients had destitute information of diabetic foot ulcer care which might increment the predominance of foot ulcers. So, these think about points to evaluate the size and related variables of DFU among mobile diabetic patients of Bedele common clinic [10].

### Patients and Methods

Institutional-based clear cross-sectional quantitative consider plan was conducted in BGH, which was found in Bedele town, Bunno Bedele zone, Oromia, southwest Ethiopia. It may be an open legislative healing center and serves almost 770,568 individuals. It is found 480 km from Addis Ababa, the capital city of Ethiopia. It has five major wards, to be specific medical, surgical, paediatrics, Gynecology/Obstetrics and Mobile ward; conjointly it has three clinics to be specific TB clinic, Craftsmanship clinics and Dental clinics. The consider was conducted

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from Eminent 1, 2021 to Eminent 30, 2021 [11].

The dependent variable incorporates the predominance of diabetic foot ulcers while free factors incorporate socio-demographic characteristics like age, sex, instructive level, conjugal status, pay, and put of home, occupation and clinical components like diabetic complications, nearness of comorbidity, length of diabetes and sorts of diabetes. The Wagner classification of diabetic foot ulcers was utilized to survey the seriousness of foot ulcers [12].

The information was entered into the computer utilizing EPI-manager 4.0.2 program. Information checking and cleaning were done by the foremost examiner on the day by day premise amid collection some time recently real examination. The examination was done utilizing measurable computer program for social sciences (SPSS) 24. IBM (Worldwide Commerce Machines). Clear information was produced and put in terms of recurrence and rate. That comes about were communicated as extents and as implies  $\pm$  Standard Deviations (SD) [13]. Multivariable calculated relapse was utilized to analyse the affiliations between subordinate variable and free factors by utilizing unrefined chances proportion (COR) and balanced chances proportion (AOR) at 95% certainty level.

Each variable was assessed autonomously in a bivariate examination and the affiliation was decided utilizing cross-tabulation and COR with 95% CI. All factors related with the predominance of foot ulcers at a likelihood level of less than or break even with to 0.25 on the bivariate examination were entered into a multivariable calculated relapse investigation to control for confounders. A p-value of less than 0.05 is considered measurably noteworthy [14].

The predominance of diabetic foot ulcers in our think about range was 24(14.81%). Bivariate and multivariable investigation was performed between diabetic foot ulcer and autonomous variable. That comes about of the multivariable calculated relapse examination uncovered that male patients with diabetes mellitus were 2 times (AOR = 2.143; 95% CI: 0.691–6.65) more likely to create foot ulcers compared to females [15]. Patients who had destitute diabetic foot care hone had 3.8(AOR = 3.761; 95CI: 1.188–11.90) more likely to create diabetic foot ulcers than their partners. So also Diabetic mellitus patients having a co-morbidity had 2.5 (AOR = 2.507; 95CI: 3.270–5.95) more likely to encounter a diabetic foot ulcer than the patients who have a single illness.

## Discussion

The increment within the predominance of diabetes is gone with by an increment in its complications such as foot ulcers and lower limit removals. This thinks about surveyed the size and related components of diabetic foot ulcers at MKCSH, south western Ethiopia. The think about found that the frequency of diabetic foot ulcers among diabetic patients at the NRH was 24(14.81%). Usually lower than the think about of TASH 20.7%.Eastern Ethiopian healing center 21.1%. The contrast may be due to variation patient streams, settings and way of life varieties of think about members. Considers within the Gondar and open clinics found in Gamo and Gofa zones, Ethiopia found predominance of 13.6% and 15.5%. The figures are comparable, but on the off chance that the contrasts were critical, this may be a reflection of territorial varieties within the predominance of diabetes mellitus and the neighbourhood working hazard variables of diabetic foot ulcer infection [16].

Poor self-care hone seem increment the improvement of diabetic foot ulcers since they did not wash their possess feet frequently, and did not assess their feet. We found a tall size of diabetic foot ulcers among guys. As result, we anticipate the effect of the malady on the family's economy since the economy of the family depends on the

efficiency of the guys in our set-up. Subsequently, the patients ought to be taught with respect to diabetic foot ulcer care hones to decrease the predominance of foot ulcer. Other than this, the tall clinical burden of diabetic foot ulcer-like removals might happen in the event that the preventive instrument was not taken for diabetic foot ulcer patients [17].

## Conclusion

The predominance of diabetic foot ulcers among diabetic patients in BGH was found to be tall. The nearness of comorbidity, being a male, and foot care hone were variables that anticipate the events of diabetic foot ulcers. Subsequently, the continuous therapeutic instruction of wellbeing experts who care for diabetic foot ulcers ought to incorporate data on the foot care hones and uncommon consideration ought to be given to patients having comorbidity.

## Declaration of Competing Interest

No competing interests exist.

## Acknowledgment

None

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