



## THE PREVALENCE AND RISK FACTORS OF PLANTAR FASCIITIS AMONGST THE 40 YEARS ABOVE POPULATION.

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**ABSTRACT** **Background:** one of the commonest causes of heel pain is plantar fasciitis. Prevalence of which is less studied. Through this study, we want to estimate the prevalence and risk factors of plantar fasciitis amongst the 40 years above population. **Methods:** An Observational study was conducted on 100 patients with heel pain attending five randomly selected primary health care centres. An interview questionnaire was structured to recognize the socio-demographic data, medical history of heel pain and independent risk factors for plantar fasciitis. Diagnosis was based on history and clinical examination. **Results:** A total of 100 participants were included in the study. With regards to participant age groups, 100 (100%) of the participants were between 40-50 years old; 63 (63%) were between 51 and 60 years of age; 33 (33%) were 61 and above and 4 (4%) were older. As for the gender split, (51%) of the sample group were males, while 49 (49%) were females. Regarding their employment status, 55(55%) of the participants were employed, 13 (13%) were unemployed, and 32(32%) had irregular employment. **Conclusion:** Plantar fasciitis is very common in primary health care settings. Obesity, sedentary lifestyle, wearing inappropriate shoes, frequent walking and long standing were shown to be risk factors.

**KEYWORDS :** Plantar fasciitis, Obesity, long standing, physiotherapists.

### INTRODUCTION

Plantar fasciitis occurs because of degenerative irritation of the plantar fascia that originates at the medial calcaneal tuberosity of the heel. The plantar fascia can be torn because of repetitive strain or trauma, among other factors, resulting in an overuse injury. Several factors can contribute to plantar fasciitis, but overuse stress is the most common cause. A sharp pain felt at the heel is the classic presentation, and it is possible to find a heel spur in some cases. In about half of the cases, heel spurs also occur, although they are not directly responsible for this condition.

It typically presents as sharp pain which is localized at the anterior aspect of the calcaneus. Many at times it is asymptomatic. Individuals may have bony heel spurs, but many patients with Plantar fasciitis do not have a spur.<sup>1</sup> Plantar fasciitis is a common cause of heel pain, affecting 10% of the general population. Men, usually between ages 40 and 70, are affected more than women.<sup>2</sup> The pain is worst early in the morning and often improves with activity. Patients mostly complaints of pain in the sole or heel during weight-bearing which is relieved once it is stopped.<sup>3</sup> On examination, tenderness over the medial aspect of the calcaneus is marked. Diagnosis is based on clinical history and because of the patient's physical examination. Pain associated with Plantar fasciitis may be throbbing, shearing, or piercing, especially with the first few steps in the morning or after periods of inactivity.<sup>4</sup>

The plantar fascia can be torn because of repetitive strain or trauma, among other factors, resulting in an overuse injury. In addition to pes planus, pes cavus, and limited ankle dorsiflexion, excessive pronation and supination may also contribute to plantar fasciitis. As a result of a pes planus, the plantar fascia is subjected to increased strain. Because the foot does not evert or absorb shock effectively, pes cavus can cause excessive strain on the heel. The condition is frequently associated with runners and older adults, but obesity, heel pad atrophy, aging, and occupations that require prolonged standing can also be risk factors.

Seronegative spondyloarthropathies have been found to have a relationship with plantar fasciitis, but systemic factors are unknown in approximately 85% of cases.<sup>5,6</sup> Plantar fasciitis is the most common cause of heel pain presented to outpatient clinics. While we are not aware of the exact incidence and prevalence of plantar fasciitis by age, estimates suggest that more than one million doctor visits occur annually because of plantar fasciitis.<sup>7,8</sup>

### AIM

The prevalence and risk factors of plantar fasciitis amongst the 40 years above population.

### OBJECTIVES

- This study is to determine the causative factors of the prevalence of plantar fasciitis among the population.

- This study is to determine the risk factors of the prevalence of plantar fasciitis among the population.

### MATERIALS AND METHODS

This study targeted all adult male and female amongst the 40 years above population.

The study included an adult population who were willing to participate and who had pain that was localised to the medial aspect of the heel, regardless of the duration and onset of their pain and the presence or absence of restriction of ankle and foot movement.

We excluded populations with a history of hip, knee, foot, or ankle surgery or stress fractures of the calcaneus, pregnant women.

A questionnaire was prepared, distributed throughout social media to the study population, and verified, and the questionnaire data were entered. All participants were informed about the objectives of the study. Their consent to participate was requested.

### RESULTS

A total of 100 participants were included in the study.

Following data displays the socio-demographic profiles of the participants.

With regards to participant age groups, 100 (100%) of the participants were between 40-50 years old; 63 (63%) were between 51 and 60 years of age; 33 (33%) were 61 and above and 4 (4%) were older.

As for the gender split, (51%) of the sample group were males, while 49 (49%) were females.

Regarding their employment status, 55(55%) of the participants were employed, 13 (13%) were unemployed, and 32(32%) had irregular employment.

TABLE 1

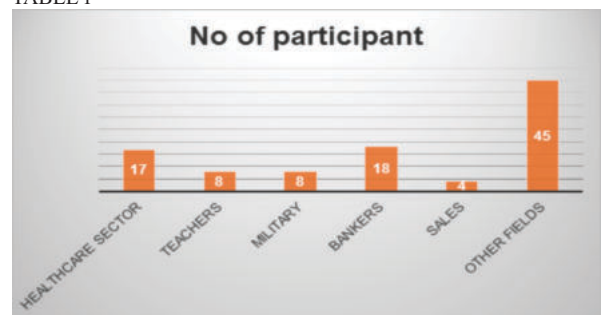
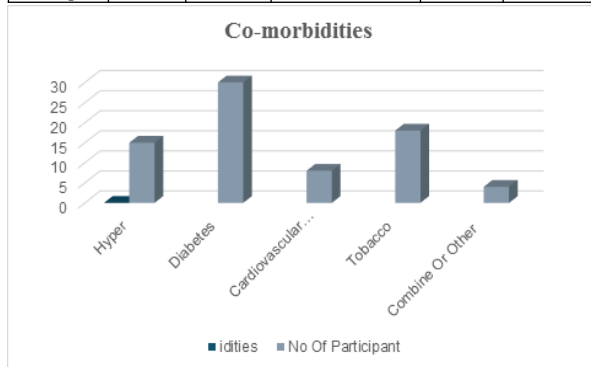


Table 1 demonstrates the job profile of the participants. With regards to the field of work, 17 (17%) were working in the healthcare sector, 8 (8%) were teachers, 8 (8%) were working in the military, 18 (18%) were bankers, 4 (4%) were in sales, and 45 (45%) worked in other fields.

Job	Healthcare Sector	Teachers	Military	Bankers	Sales	Other Fields
No of participant	17	8	8	18	4	45

Table 2 presents the comorbidities of the participants. Out of the total number of participants, 15 (15%) had hypertension, 30 (30%) had diabetes, 8 (8%) participants had cardiovascular disease, 20 (20%) reported tobacco use or had tobacco-related conditions, while 27 (27%) had combine or other comorbidities.

Comorbidity	Hypertension	Diabetes	Cardiovascular Disease	Tobacco	Combine Or Other
No Of Participant	15	30	8	18	4



**DISCUSSION:**

Plantar fasciitis is an important health promotion it is the most common cause of heel pain in adults. In the current study the prevalence of plantar fasciitis was among patients attending with heel and foot problems which approximate the finding of the literature. Other studies reported that plantar fasciitis affects 1 in 10 people at some point during their lifetime and most commonly affects people between 40–60 years of age.<sup>9,10</sup>

Results showed that the following factors predicted a higher rate of plantar fasciitis: being 40 to 50 years old; having weakness of the calf muscles and intrinsic foot muscles; jobs requiring a great amount of time standing or walking; jobs requiring a moderate amount of time standing or walking; jobs requiring three to six hours per day of standing or walking; and jobs requiring six to 12 hours per day of standing or walking. In the current study there was a significant relationship between plantar fasciitis with obesity, sedentary lifestyle, wearing inappropriate shoes, long standing and chronic diseases, which coincides with the findings of Beeson et al., who found that risk factors included overuse such as from long periods of standing, increase in exercise, and obesity.<sup>11</sup>

The plantar fasciitis patients in the present study had a job that required long standing. Several studies have shown an association between work-related prolonged weight-bearing and plantar fasciitis. In their case series, Lapidus and Guidotti's patient population included a predominance of occupations that necessitate continual standing or walking, such as waiters, maids, and kitchen workers.<sup>12</sup> Studies have suggested a strong association between an increased body mass index and the development of plantar fasciitis in the non-athletic population; A study done by Yin et al.<sup>13</sup> reported that tight and inappropriate footwear have also been identified as a significant risk factor, which agrees with our study finding that shows 66% of plantar fasciitis patients wear inappropriate shoes. Some other studies showed an increased prevalence in men as was reported by Taunton et al. that found a significant sex difference within their study population, as 54% of those affected were males and 46% were females.<sup>14</sup> While others showed an increased prevalence in women as reported by Rano et al.<sup>15</sup> There are no theories within the current literature hypothesizing the reason for a difference in the prevalence of plantar fasciitis between the two sexes, whether it is due to a function of different hormones or structural differences caused by genetic variations, as is suggested by the increased incidence of anterior cruciate ligament tears in women

compared with men so Using well cushioned footwear so no correlation could be established between type of footwear and planter fasciitis.

**CONCLUSION:**

It is interesting to note that a significantly higher prevalence of plantar fasciitis was noted in Obesity, sedentary lifestyle, wearing inappropriate shoes, frequent walking and long standing were shown to be risk factors.

**Limitations:**

- Small sample size
- Validity and Precision of the fitness device used to count steps.

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