



A Study on Feasibility of Establishing a Podiatry Unit in a Tertiary Hospital

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Abstract: *Introduction:* The current feasibility study is to be analysed for the possibility of establishing a podiatry unit in PMR hospital Hyderabad. This study focuses on the better performance in means to facilitate the service to the diabetic foot patients. This study is performed with the way of framing close ended questionnaires stating the goal of the study. *Aims:* Study also aims to gather opinion of health care staff and patients about need for podiatry services. *Materials and methods:* The data gathered with questionnaire is from various participants of sample size approximately 100. Qualitative and quantitative form of analysis are being used in this study. Qualitative analysis is used for purposive sampling and quantitative analysis is used for convenience sampling. *Results:* There is statistical significance impact of opinion of patients in the overall experience on foot ulcer treatment towards the overall ease of podiatric equipment availability for the patients for the treatment. Overall experience in management varies high then there is a variation occurring in the other two variables, the seeking support and the availability of podiatry equipment's. The significance value in the above regression test, explains about the significance correlation among those variables the preparedness of patients to acquire surgery from same tertiary care centre and overall experience of the patients in management for foot ulcers. Nearly 37% of probability of predictor variable is prevailing to have specific relation on the dependent variable Ease of availability of Prescribed podiatry equipment including removable cast walkers and dressings. *Conclusion:* The podiatry consists of delivery of services associated to the issues in foot health. The prominent challenge to provide the podiatry-services seems complex and it necessitates on-going variation of role flexibility, knowledge, skills and working practices.

Keywords: podiatry-services, Diabetes, Ease of availability, cast walkers and dressings.

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INTRODUCTION

Podiatry involves delivery of services relating to foot health problems. Most of the work of podiatry in India is carried out in non-specialised clinics and hospital settings. The challenge of providing podiatry services is complex and requires on-going change of working practices, role flexibility, skills and knowledge. We want to explore the feasibility of establishing a specialised podiatry unit in our tertiary hospital which was comprise both a Market and Financial Analysis of the Project. Incidence of diabetes and other chronic conditions is increasing rapidly which is associated with increasing foot disorders. Along with this increasing age of the population was likely lead to more than one long-term health condition along with increasing frailty podiatry teams provide assessment, diagnosis and treatment of disease and conditions affecting the foot and lower limb. Treatment varies from nail treatment to complicated problems such as foot ulcers and complex biomechanical assessment and treatment.

A specialised podiatry unit encompasses involvement of Multi-disciplinary team and works in close liaison with other departments such as vascular surgery, orthopaedics, microbiology and physiotherapy. The unit should also have facilities to deliver laser, acupuncture, orthotic services and other specialist therapy. Foot complications in diabetes are a leading cause of the global burden of disability. Global prevalence of foot complications include 131.0 million people with diabetes-related lower-extremity problems, incorporating 105.6 million with neuropathy only, 18.6 million with foot ulcers, 4.3 million with amputation without prosthesis, and 2.5 million with amputation with prosthesis. Lower extremity complications also result in a reduction in quality of life.^{1,2}

The economic burden inflicted on the health care systems and the individual with diabetes and foot complications is considerable. There are several initiatives taken by the various governments to increase the podiatry services. Developing countries such as Brazil, India and China have formed their policies of healthcare to improve podiatry services. Approximately 90% of the cost was caused by foot ulcers rather than amputations. Although amputations can have a

catastrophic effect on individual lives, and unit costs are considerable, the much increased incidence of ulceration results in higher aggregate costs. Regarding the distribution of costs by healthcare setting, two thirds of costs were in primary, community, or outpatient settings.

Recent systematic reviews have highlighted the increasing costs for diabetic foot disease in several health economies. Successful management of the diabetic foot requires the expertise of a multidisciplinary care team which gives integrated care focused in a foot clinic. Members of the team consist of podiatrist, nurse, orthotist, microbiologist, physician, radiologist and surgeon, including, orthopaedic surgeon, vascular surgeon and plastic surgeon. In addition to above we need to consider the cost of infrastructure including the space and equipment. availability efficient lab and radiology services is also an important component for establishing podiatry services. Establishment of a clinic in a tertiary hospital should encompass the above which has have significant effect on available human and financial resources.^{3,4,5}

MATERIALS AND METHODS

Data collection is the tool used to collect information from the respondents based on a particular research subject . With respect to the present study, the primary data were be collected from a group of healthcare professionals of various clinics and hospital in 5 km radius from pmh hospital Hyderabad. Patient questionnaire was be given to the patients to fill both at the hospital and patients receiving treatment of their foot problems in catchment area. The questionnaires was also be sent to Local general practioners /general physicians/ surgeons/ orthopedicians /diabetologists and other specialist doctors such as neurology and rheumatology. Internal survey was be done involving the concerned specialist departments including vascular surgeons/ orthopedicians /general surgeons and physicians. This is an informal interview regarding care of patients with foot problems. They are encouraged to give their opinion regarding the present foot care services and establishing a specialist podiatry unit at the care hospital hitech city. Data was be gathered regarding number of admitted patients with foot problem, data regarding foot surgeries including amputation are gathered and data from OP clinics. Data was be collected about presence of specialised units in the neighbourhood area. Liaison with managerial staff regarding location of the unit within the site is reviewed. Present clinics who are offering informal foot services was be approached. Data regarding the cost of podiatry equipment and other infrastructure needed was be obtained. The data regarding expenses of recruiting of staff was also be gathered from The primary data refers to the fresh data collected from the respondents directly. They are free to answer their views for the framed questions. Thus the data is gathered from a set of respondents by interviews through the researcher. As the primary data is acquired in actual- time it is more accurate and real in nature. The main advantage of using primary data collection is that the data gathered is more reliable because it has not been collected from any of the second-hand sources like any printed notes or books. The major ways of gathering data is observing, asking and investigating a target group. Primary data is more like a raw- substance and it is collected through long process but it is worth-enough.

With the support of framed questionnaire, the data are collected from the particular sample respondents, and quantitative methodology is utilised for the data analysis. The data was be recorded using excel sheet to reveal the variables. The software tool of SPSS is used for the subsequent estimation stage to analyse the variables entered in the Microsoft excel. The outcomes are estimated using five evaluation approaches. The methods used by the researchers are regression, correlation, descriptive statistics, frequency distribution and ANOVA analysis. Correlation is applied to describe the association between the two variables. Regression is implemented to represent the influence of a single variable upon other variables. ANOVA is a statistical tool and it is used to find the difference between the means of 2 independent collections by the analysts. Descriptive statistics denotes the representation, collecting and the formation of data. It is employed for briefing the characteristics of data sets. Frequency distributions are defined as the visual displays which form frequency counts and this helps the information concluded in a simple manner. The implications are performed on the basis of results of the study and further enhancement is suggested for the implementation of the research in future. The usage of SPSS software in this research makes the results to be effective and consistent to count the values. The collected data was enumerated with the usage of excel and SPSS software. Correlation, Regression and ANOVA and are accomplished to evaluate the organized hypothesis. The data estimation comprises of 3 levels namely, Level 1: MS-Excel is used to incline the demographic variables, and the design of frequency distribution is done.

Level 2: To list the data that are analysed by statistics to predict the median range, the mean standard deviation of several variables in this research is a significant step. Hence SPSS software is employed in this research.

Level 3: Regression, ANOVA and Correlation evaluation are employed to evaluate the organized hypothesis.

Certain ethics was be followed while conducting the research analysis. As the study is based on feasibility of establishing a podiatry unit in a tertiary hospital, the research deals with highly confidentiality based responses. Before the researcher's interview, information is passed to the respondents priory. The respondents are not forced by any means to give their responses. Only willing respondents are selected for the interview. Only the responses to the questionnaire is

asked to the respondents, their private reports are not forced to be exposed by them. Since the research study uses only original data for data analysis, it doesn't contain any false data. These are the ethical consideration used by the researcher for the research analysis, which are accurate to their knowledge based upon this research study.

RESULTS

The below section illustrates results of quantitative method and qualitative assessment. The first section of the chapter brings out the quantitative analysis by acquiring the responses from the health-care professionals.

Table 1. Descriptive Statistics.

| | Number | Mean | SD | Minimum | Maximum |
|-----------------------------------|--------|------|-------|---------|---------|
| Informal podiatry services | 7 | 2 | 0.001 | 2 | 2 |
| Clinic run by podiatrist | 10 | 2.60 | 0.843 | 1 | 4 |
| Specialist driven podiatry clinic | 19 | 1.05 | 0.229 | 1 | 2 |
| Total | 36 | 1.67 | 0.828 | 1 | 4 |

The higher mean value is obtained for the responses informal podiatry services in the tertiary care centre. Hence it implies that the health care professionals, have opinion having informal podiatry services within the hospital.

Table 2. ANOVA Test

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 16.653 | 2 | 8.326 | 37.397 | .000 |
| Within Groups | 7.347 | 33 | .223 | | |
| Total | 24.000 | 35 | | | |

It implies the one-way anova test for independent variable the format of podiatry was ideal for patient referral and the feasibility need to establish the podiatry unit within the tertiary care-centre. The significance value obtained is 0.000 that is lesser than p value 0.05, hence it explicates the statistical significant impact of independent variable format of podiatry was ideal for your patient referral on the need of exploring the podiatry unit department within the hospital. It states that there is an impact of the podiatry format, to insist the need to start a new podiatry department within the hospital.

Table 3. Descriptive Statistics

| | | Number | Mean | SD | Minimum | Maximum |
|--|-------|--------|------|-------|---------|---------|
| Need for specialised podiatry clinic/ services in your locality | Good | 6 | 2.83 | 0.983 | 1 | 4 |
| | Poor | 30 | 1.43 | 0.568 | 1 | 3 |
| | Total | 36 | 1.67 | 0.828 | 1 | 4 |
| Number of patients who attends your clinic/hospital with foot problems per month | Good | 6 | 3.00 | 0 | 3 | 3 |
| | Poor | 30 | 2.97 | 0.669 | 1 | 4 |
| | Total | 36 | 2.97 | 0.609 | 1 | 4 |

The higher mean value of 3.00 is obtained for the responses informal podiatry services in the tertiary care centre. Hence it implies that the health care professionals, have opinion having informal podiatry services within the hospital.

Table 4. ANOVA Test -II

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | .966 | 3 | .322 | .447 | .021 |
| Within Groups | 23.034 | 32 | .720 | | |
| Total | 24.000 | 35 | | | |

The significance value 0.02, with lesser than 0.05, indicates that there is significant impact of number of patients visiting the hospital for the foot problems to have the necessity to launching the podiatry clinical-services within the locality.

Table5 : Correlation Test - I

| | | | | |
|--|--|--|--|---|
| | | number of patients who attends your clinic/hospital with foot problems per month | need for specialised podiatry clinic/services in | rate the clinical care your patients with foot care |
|--|--|--|--|---|

| | | | | |
|--|---------------------|-------|---------------|---------|
| | | | your locality | |
| number of patients who attends your clinic/hospital with foot problems per month | Pearson Correlation | 1 | -.019 | .021 |
| | Sig. (2-tailed) | | .009 | .009 |
| | N | 36 | 36 | 36 |
| need for specialised podiatry clinic/services in your locality | Pearson Correlation | -.019 | 1 | -.639** |
| | Sig. (2-tailed) | .009 | | .000 |
| | N | 36 | 36 | 36 |
| rate the clinical care your patients with foot care | Pearson Correlation | .021 | -.639** | 1 |
| | Sig. (2-tailed) | .009 | .000 | |
| | N | 36 | 36 | 36 |

** . Correlation is significant at the 0.01 level (2-tailed).

The significance value of the correlation test seems to be 0.09 and 0.00 lesser than p value(0.05) This proves the existence of correlation among the variables. The positive value of Pearson correlation co-efficient, exposed positive correlation among the number of patients visit to hospital, rating of clinical services in specifically foot-care and the necessity to bring out the podiatry units within the hospital.

The R square, in the regression test, explicates the .417, insists 41% of probability to have correlation degree on the dependent variable to establish the podiatry unit. The degree of correlation can be described through regression test.

Table-6: Anova Table

| Model 1 | Sum of squares | df | Mean square | F | sig |
|------------|----------------|----|-------------|--------|------|
| Regression | 9.996 | 2 | 4.998 | 11.778 | 0.00 |
| Residual | 14.004 | 33 | 0.424 | | |
| Total | 24.00 | 35 | | | |

Dependent Variable: need for specialised podiatry clinic/services in your locality

b. Predictors: (Constant), How likely you was refer patients to a specialised podiatry clinic, what format of podiatry was ideal for your patient referral

As per the inference of above table, it is clearly defined that around 41% degree of the predictor is having probability to have significant impact on the independent variable.

Table-7: Co-efficient Table

| Model 1 | Unstandardized coefficients | | Standardized coefficient | t | sig |
|--|-----------------------------|-----------|--------------------------|--------|-------|
| | B | Std Error | Beta | | |
| (Constant) | 1.998 | 0.798 | | 2.505 | 0.017 |
| what format of podiatry was ideal for your patient referral | -0.500 | 0.163 | -0.479 | -3.075 | 0.004 |
| How likely you was refer patients to a specialised podiatry clinic | 0.320 | 0.200 | 0.249 | 1.601 | 0.011 |

a. Dependent Variable: need for specialised podiatry clinic/services in your locality

The significance value 0.017, 0.004 and 0.011 in co-efficient, evidence the existence of significant correlation among the variables format of podiatry services available in hospital, likeliness of the health-care professionals to have preference on the specialised podiatry clinic or units within tertiary-care centre. The likeliness of the health-care professionals, varies as the format of podiatry to be ideal for the patient referral. Similarly the results can be obtained vice versa as well.

Table-8: Quantitative assessment from Patient Reponses

| | Number | Mean | SD | Minimum | Maximum |
|-------|--------|------|-------|---------|---------|
| Yes | 21 | 2.00 | 0.00 | 2 | 2 |
| No | 35 | 1.86 | 0.879 | 1 | 3 |
| Total | 56 | 1.91 | 0.695 | 1 | 3 |

variable ease of availability of Prescribed podiatry equipment including removable cast walkers and dressings(dependent variable) and the preparedness of the patients to have surgery performed under the same conditions/place again ulcers (independent variable) . The higher mean value is obtained for the responses ‘yes’. Hence it implies that the patients have opinion to insists that they have more prepared to choose this tertiary care-centre for surgery again. This overall explains the preference rate of the patients to choose this hospital.

Table-9: ANOVA - III

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | .268 | 1 | .268 | .550 | .004 |
| Within Groups | 26.286 | 54 | .487 | | |
| Total | 26.554 | 55 | | | |

The significance value 0.004 that is lesser than 0.05. this significance value proved the presence of statistical significant impact of independent variable preparedness of the patients to have surgery performed under the same conditions/place again ulcers on the ease of availability of Prescribed podiatry equipment including removable cast walkers and dressings. This results states that this preparedness of the patients to have treatment or surgery in the same hospital, influences to have ease of availability or the feasibility need of exploring the podiatry unit in the hospital inclusive of removable cast walkers and dressings

Table 10: Descriptive Statistics

| | Number | Mean | SD | Minimum | Maximum |
|------------------|--------|------|-------|---------|---------|
| Highly satisfied | 6 | 1.00 | 0.00 | 1 | 1 |
| Satisfied | 13 | 1.46 | 0.877 | 1 | 3 |
| Poor | 25 | 2.32 | 0.476 | 2 | 3 |
| Very poor | 12 | 2.00 | 0.00 | 2 | 2 |
| Total | 56 | 1.91 | 0.689 | 1 | 3 |

Descriptive statistics of the independent variable overall experience in management of foot ulcers and dependent variable Ease of availability of Prescribed podiatry equipment including removable cast walkers and dressings. The high mean-value in descriptive data for the responses ‘Poor’ , brings out the conclusion that the majority opinion of the patients is poor towards the question to state the overall experience of foot ulcer treatment within the hospital.

Table 11: ANOVA Test

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 11.883 | 3 | 3.961 | 14.039 | .000 |
| Within Groups | 14.671 | 52 | .282 | | |
| Total | 26.554 | 55 | | | |

Similarly, in addition to descriptive, the significance value 0.000, lesser than 0.05, indicates the rejection of null hypothesis and accepting the alternate hypothesis. The significance value lesser than 0.05, evidence that there is statistical significance impact of opinion of patients in the overall experience on foot ulcer treatment towards the overall ease of podiatric equipment availability for the patients for the treatment. The need of podiatry equipment’s, indirectly means the eservices of podiatry unit within the hospital.

Table 12: Correlations test

| | | Overall experience in management of foot ulcers | Ease of availability of Prescribed podiatry equipment including removable cast walkers | of your foot problem, how did you seek help? |
|--|--|---|--|--|
| | | | | |

| | | | dressings | |
|--|---------------------|-------|------------------|-------|
| overall experience in management of foot ulcers | Pearson Correlation | 1 | 0.511 | 0.700 |
| | Sig. (2-tailed) | | 0.0 | 0.0 |
| | N | 56 | 56 | 56 |
| Ease of availability of Prescribed podiatry equipment including removable cast walkers and dressings | Pearson Correlation | 0.511 | 1 | 0.281 |
| | Sig. (2-tailed) | 0.0 | | 0.036 |
| | N | 56 | 56 | 56 |
| When you had your foot problem, how did you seek help? | Pearson Correlation | 0.700 | 0.281 | 1 |
| | Sig. (2-tailed) | 0.00 | 0.036 | |
| | N | 56 | 56 | 56 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The correlation among the variables overall experience in management of foot ulcers, seeking support of the patients during the foot problems and the Ease of availability of Prescribed podiatry equipment including removable cast walkers and dressings is established through correlation test. The significance value in this test are 0.000 and 0.036, that states the existence of correlation or the effect between the variables. The positive values of Pearson correlation co-efficient value indicates the positive correlation among the variables. If the overall experience in management varies high then there is a variation occurring in the other two variables, the seeking support and the availability of podiatry equipment's. Similarly the two variables also have inter-relationship with each other.

a. Predictors: (Constant), overall experience in management of foot ulcers, would you be prepared to have surgery performed

Represents the model summary of the regression test. The R-square, in the regression test, explicates the 0.319, insists 32% of probability to have correlation degree on the dependent variable to establish the podiatry unit. The degree of correlation can be described through regression test.

Table 13: Anova Table

| Model 1 | Sum of squares | df | Mean square | F | sig |
|------------|----------------|----|-------------|--------|------|
| Regression | 10.070 | 2 | 5.035 | 16.188 | 0.00 |
| Residual | 16.484 | 53 | 0.311 | | |
| Total | 26.554 | 55 | | | |

a. Dependent Variable: Ease of availability of Prescribed podiatry equipment including removable cast walkers and dressings

b. Predictors: (Constant), overall experience in management of foot ulcers, would you be prepared to have surgery performed

The significance value in the above regression test, explains about the significance correlation among those variables the preparedness of patients to acquire surgery from same tertiary care centre and overall experience of the patients in management for foot ulcers.

Table 14: Coefficients

| Model 1 | Unstandardized coefficients | | Standardized coefficient | t | sig |
|---|-----------------------------|-----------|--------------------------|--------|-------|
| | B | Std Error | Beta | | |
| (Constant) | -0.943 | 0.608 | | -1.550 | 0.127 |
| what format of podiatry was ideal for your patient referral | 0.674 | 0.212 | 0.474 | 3.182 | 0.002 |
| How likely you was refer patients to a specialised podiatry | 0.635 | 0.113 | 0.836 | 5.614 | 0.011 |

| | | | | | |
|--------|--|--|--|--|--|
| clinic | | | | | |
|--------|--|--|--|--|--|

a. Dependent Variable: Ease of availability of Prescribed podiatry equipment including removable cast walkers and dressings

All the values in the regression test does have significance value lesser than 0.05, hence this test explicates that about 37% correlation degree prevails among the preparedness of patients to acquire surgery from same tertiary care centre and overall experience of the patients in management for foot ulcers. Nearly 37% of probability of predictor variable is prevailing to have specific relation on the dependent variable Ease of availability of Prescribed podiatry equipment including removable cast walkers and dressings. This clearly defines that the overall experience of the patients , paves way for the availability of the podiatric equipment's, that insists the necessity of bringing out the podiatry unit in this tertiary care unit.

The main motive of the present qualitative research study is to analyse feasibility approach for the establishment of podiatry unit in tertiary-care centre in Hyderabad. The study also intends to identify the challenges faced by hospital, in order to explore those podiatry services, from the perspectives of doctors (health-care professionals) nurses, patients and the physicians.

DISCUSSION

The above section enumerates the refined themes obtained from the responses of the fifteen doctors, 4 nurses and one physician. Several codes are generated from the responses of those qualitative respondents. The codes were organised to come up with some themes such as chronic conditions of the patients, their overall opinion about the lacking of podiatry services, solutions for their requirements and the challenges the management and the professionals face to launch the podiatry unit.

The researchers' Riaz and Miyan⁶ have suggested in their study to compare the consequences of DFUs relating to LEA rate and healing in subjects, pre and post practising of MDFCT (Multidisciplinary Foot Care Team) at the tertiary unit in Pakistan. Therefore, the retrospective cross-sectional research has been utilised. The Domiciliary foot-care services as well as stationed 24hrs call (phone) helpline services has also established in order to develop the DFU compliance. The basic demographic details, subject characteristics contains gender, age, diabetes duration, BMI (Body Mass Index), diastolic and systolic blood pressure, foot ulceration history and foot ulceration type has been noted down on the initial visit. Hence, biochemical lab report and findings of DFUs related to amputation or healing also acquired. The physician has been practised in DF (Diabetic Foot) surgery, a mini OT (Operational Theatre) has developed and Neurothesiometer utilisation and portable Doppler has been introduced. DFCA's (Diabetic Foot Care assistants) have been trained in order to offer diabetic foot-care under the medical supervision. SOPs (Standard Operating Procedures) have improved, collaboration with vascular surgeons, general surgeon, and orthopaedic surgeon had taken part and an interventional Radiologist have involved in DFU treatment management. Hence, the existing research determines that, the amputation rate has importantly decreased after the MDT introduction in the DFU treatment. Significant development has observed in DFU outcomes related to amputation through MDT approach.⁶

Similarly, the self-care diabetic practice shows an important role in preventing and maintaining DF difficulties, but minimum obligation to the self-care training. Therefore, the conventional study estimates an impact of developing an etiquette for DF patients rendering to their concerns, medication use and needs. Such as, a quasi-experimental study design has utilized in OP (Out Patient) clinics in Egypt. The existing research consist of 100 patients (adult) diagnosed with type 1 and type 2 diabetes for six months. Hence, foot ulcers increase through the mixture of several origins, consists of PA (peripheral arterial) and PN (peripheral neuropathy) diseases. Due to neuropathy, above 50 percentage of the patients with diabetics have heavy loss in sensory that might be the asymptomatic. Thus, ulcer problems might effect through patient's incapability to identify the initial symptoms of infection, skin tissue breakdown, and change in a skin temperature, along with inadequate vascular perfusion. The outcomes of the existing research exposed that 79 percentage of patient suffered due to tingling or burning feet or legs; 74% criticised of irritation present in the limbs (lower), activity of foot or leg pain, and loss the sensation of the lower extremity; and also 80% variations of body skin lesions and skin colour. Therefore a comparison among the post and pre-interventions (protocol) indicated that the post-intervention about patient's foot-care awareness and the self-care training totals have been greater. Hence, based on diabetic foot, a health education awareness program should be available and persistently given to DF patients in order to develop the health of the patient and to minimize the threat of social, emotional and physical effects of an issue.⁷

On the basis of legal literature and psychology, a layer of socio-economic cost which also known as hidden cost has been included. Totally, 11 provinces have been equally assumed for the means of amputation, draft calculation and comparable cost. Eventually entered electronic registry captured the contemplative review of data was performed. The

Pietermaritzburg Surgical Service (PMSS) and the Pietermaritzburg Metropolitan Trauma Service (PMTS) in KwaZulu-Natal province at South Africa maintains the clinical data that are collected in real time. Psychological value cannot be over-emphasized to the Patients, who have immediate in-depth foot assessment, with foot care education, with identification of the at-risk foot, footwear education and examination. As Podiatrists are specialised diabetic foot health practitioners, they should convey the medical identity and promotes the mission regarding to the importance of feet for diabetic patients. In second level, these compounding costs possibly lead to the socio-economic losses. In multidisciplinary diabetes team, the main purpose and role of Podiatrists has to evidently decrease the diabetes related amputations.⁸

In order to treat foot ulcers caused by diabetes, multi-disciplinary and multi-faceted approach which includes podiatrists and other health care professionals are needed, however, very few research has been accompanied to understand the live skill of the treatment of podiatric that is diabetes based foot ulcers as well as to recognise the ulcer management activities of diabetic patients. Hence, the suggested study has been aimed to found the podiatric treatment experience of foot ulcers related to diabetes in tertiary care outpatient (OP) setting. Consciously, recruited participants those have diabetes related foot ulcers from OP podiatry clinic in the tertiary hospital of metropolitan area. Moreover, to found the live experience of people who received podiatric treatment, semi-structured interviews had been conducted, which helped to understand the impacts takes place on their day-day regular lifestyle. Relied on the COREQ (Consolidated Criteria for Reporting Qualitative Research) checklist, the study has been reported. Thematic analysis method has been used to analyse the data. Participants used the information which has tailored for individual needs. Ulcer dressing and offloading devices has been often complex. Participants experienced the podiatric treatment as lengthy and involved great effort. The suggested study has suggested that in order to maintain the consistency, practical strategies can be used by podiatrists for the person, hygiene standard, demonstration of great structural and to provide good experiences of podiatric ulcer care, innovation can be used in terms of adopting equipment and information which suits the lifestyle of individual. In order to improve the understanding towards the podiatric DFU treatment impacts on occupation, RG- further research can be used.⁹

A diabetic foot ulcer has increased the morbidity, mortality, reduced quality of life and cost and diabetic mellitus has major complications in diabetic foot ulcer. Treatments in diabetic foot care are prolonged, expensive and recurrent hospitalization creates economic consequences and employment losses creates social problems. The main purpose of the suggested project has provided good understanding and skills on DFC and to implement education between diabetes patients' about diabetic foot care. The suggested project conducted an experiment by using quantitative quasi design with 31 diabetic patients with age of 65 years and they also had the risk of developing diabetic foot ulcers. Developed nations like North America, the services for foot care have high cost of insurance premiums and healthcare. But developing nations like Africa has only few resources, hence no incentives have been given to the physicians and nurses for treating diabetic foot ulcers and to provide training and services. In general, treatment of diabetes and foot ulcers includes huge cost factor; neuropathy, one of the complications of diabetes and cost has been increased to manage complications. The outcome of the suggested research had been given as diabetic foot care practices, diabetic foot care complications and diabetic foot care knowledge in both pre and post intervention period. Based on the result, the authors' observed that diabetic foot complications have been reduced by using quality improvement intervention. Hence, for diabetic patients, diabetic foot care education acted as an impressive intervention. Diabetic foot care education tends to be more enhanced and attained long run legitimacy with the participation of all stakeholders. This initiative of setting primary cares was more strengthened by using interdisciplinary team. Diabetic foot care education program would attain sustainability with the help of stakeholders' participation.¹⁰

According to International guidelines suggestion, including podiatrist in MDDFC (Multidisciplinary Diabetic Foot Care) has been important. Diabetes causes over 50 to 70 percentage of the LLA (lower limb amputations) and also diagnosis of diabetic foot ulcer has become difficult. The main cause for lower limb amputation causes ulcer; peripheral vascular disease and diabetic peripheral neuropathy are other factors which also causes the same problem. The suggested study described about the application from 2009 – 2018. The main aim was to explain the provision of DFC in NHS (National Health System) of Catalonia in the period of 2009 to 2018 which includes the causes, needed codes for diagnosis, number of professionals and patients involved and handling the treatment filled by the podiatrist in every discussion for the period of 2018 – 2020. For the program activities and demand for program services descriptive analysis has used. The database consists of patients, visits and podiatrists for every year. Primary care used the knowledge factor which associated clinically and the purpose of podiatry centre to prevent DFUs. Diabetic foot has been evaluated with its associated health care services and have more demand from the beginning. But the cost of early diagnosis of complications of diabetes had reduced the treatment cost. Based on the DF health program executed in Catalonia, it has been observed that followed through a progressive, linear and growing trend in terms of registered visits,

podiatrists and patients. Among people, it found that health programs have greater demand. In order to identify the treatments and diagnosis, coding systems have been used for such demand.¹¹

PHP (Plantar Heel Pain) has the major foot disorder which needs to be treated and various healthcare providers that includes physical therapists, podiatrists, orthopaedic surgeons, primary care physicians and chiropractors. PHP, commonly termed as Plantar fasciitis, it consists of different pathoanatomical features and the condition includes thickening or degeneration, plantar fascia inflammation, heel fat pad pathology, heel spurs and nerve irritation. The aim of the suggested study has to find an interdisciplinary care effects for PHP, after initiating podiatric treatment it includes the physical therapy treatments. During the period of 6 months, initially it resulted with alteration in FAAM (Foot and Ankle Ability Measure). After that, modification in NPRS (Numeric Pain Rating Scale) and patient stated with realisation over the period of six weeks and one year endpoint. ITT (Intention to treat) was primary enquiry, through covariance analysis standard scores were adjusted; PP (per-protocol) analysis was secondary analysis had been conducted with those people who finished the treatment. ITT analysis had been conducted with 95 individuals and PP analysis had been conducted with 79 individuals. FAAM primary outcome changed from baseline to six months and both group showed significant improvement, but there was no group differences. The normal podiatric care with physical therapy (PT) approach or the uPOD (usual podiatric care) were the secondary outcomes. At 6 weeks, group demonstrated more improvement in NPRS in ITT enquiry. Hence, the FAAM primary outcome showed no significant benefits of uPOD with PT at 6 weeks. PP analysis and secondary outcome showed more benefits of uPOD with PT, and it found in the person or individual who completed their treatment. The pragmatic design have limits outcomes which related to specific interventions such as stretching, physical therapy, injections or exercise for limb strengthen; and have reduced copying in particular intervention. Since the treatment was pragmatic and multimodal, in order to explain the specific interventions mechanism, further research has to be done, and also to find the factors which shows response regarding patient treatment approaches or to specific treatments.¹²

CONCLUSION

The burden of foot complications within community does not seem to be insubstantial, however many patients in this tertiary care-centre does not have accessibility for the podiatry services. The study persuaded to follow an empirical study, having both quantitative and qualitative assessment. The participants includes the Health-care professionals and patients of hospital expressed their keenness which accepts for getting accessibility towards the specialised podiatry-services. The assessment of the location, reveals that none of specialised podiatry-clinic were available in the study area, however one tertiary care-centre were there but it has informal podiatry-services. Most of primary-care and secondary care in neighbour-hood area does not have accessibility for providing podiatry services. Hence this study, paves the pathway, as the feasibility study about the location, regarding the establishment of podiatry department within hospital.

FUTURE RECOMMENDATIONS

The diverse and wide level of barriers to establish the podiatry-unit, which limit the ability of hospital practitioners to differ the routing practices of clinics ought to get addressed. To identify the podiatric practices domain necessary for the competent methods, might offer the suitable framework, to ensure that all the major podiatry skill areas could be targeted through change process initiatives. A proper future podiatry vision can be made for encouraging the open-learning culture, wherein the podiatrist professional share unsuccessful and successful attempts, for varying the current practices. In order to deliver the bottom-up change, the concept of flexibility seems necessary in the system, in terms of day to-day practices and hospital structure. However if the podiatry unit has been established, the multi-disciplinary collaboration and working among the peers and inside the organisation results to wide personal professional benefits, patient benefits and the operational benefits. A prominent move towards the high multi-disciplinary working podiatry methods would thus nurture a focussed desire and high positive mind-set in implementing a change within tertiary care-centre. Additionally efficient personal and operational change programmes, could be high reflective, and such collaborative practices construct healthy, working and supportive relationship among the professionals and patients. This thrives as essential aspect to enhance the population and patient's health outcomes.

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