

## THE PHYSICAL, PSYCHO-SOCIAL, AND FINANCIAL IMPACTS OF DIABETIC FOOT ULCERATION AND AMPUTATION IN MAKKAH AL-MOKARRAMAH , SAUDI ARABIA 2022.

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### Abstract:

#### Background

Diabetes mellitus is a growing public health concern that is affecting people globally and poses a major socioeconomic challenge [1]. Diabetes, when not properly managed, can lead to complications affecting various parts of the body. These include the cardiovascular system, kidneys, and eyes. Chronic ulcers related to diabetes can result in limb amputations. These widespread impacts of diabetes present significant challenges to a patient's quality of life (QoL) and may restrain the daily activity of patients, This is a novel study from Saudi Arabia aimed to Patient perspectives on the physical and financial , impacts of diabetic foot ulceration and amputation, and yet scant attention has been given to improving preventive and educational measures. This article uses a phenomenological approach to explore individuals' lived experiences

of diabetic foot ulcerations to explore factors that can be harnessed to achieve improved outcomes.

**Aim of the study:** To Assessment the impact of Patient perspectives on the physical, psycho-social, and financial impacts of diabetic foot ulceration and amputation in Makkah Al-Mokarramah , Saudi Arabia2022. **Method:** A cross-sectional, was conducted in in hospitals, in Makkah, within Multidisciplinary Diabetic Foot Clinics and/or Vascular Surgery Departments. impact of the Patient perspectives on the physical, psycho-social, and financial impacts of diabetic foot ulceration and amputation, also a self-administered questionnaire was designed and has been send to the study participants, was performed between June 2022 and March 2022. Our total participants were (200). **Results:** shows most of the participants were (31.0%) in the age group 40-50 years, gender the majority of them were male (52.0%) level of education the majority of participant are University degree were (47.0%), the Number of children the majority of participant more than five were (32.0%) the nationality most of participants Saudi were(65.0%) **Conclusion:**

Despite close sensory observation of their feet, people with diabetes face an array of barriers to recognizing and understanding the implications of diabetic foot ulceration, which can lead to delayed care seeking. Nurses can play a critical role in promoting patient education and improving patient self-management of foot ulcers., patient their social activity is also reduced by the need for constant diabetes control, for these many reasons the social worker and psycho-social team has an important role

**Keywords:** Impact, perspectives, physical, psycho-social, financial, diabetic, foot, ulceration amputation, Makkah , Saudi Arabia.

### **Introduction**

diabetic foot, according to the World Health Organization in 2002, is an infection, ulcer, or tissue damage in the lower limb that is accompanied by nerve problems and insufficient blood flow. The diabetic foot ulcer( DFU), a serious consequence of diabetes mellitus, is a typical example of this. About 15% of diabetics have an open wound on their foot, and some of them need hospital care because of an infection or other complications. (1)Hospitalizations for diabetic foot problems are more common in nations with high diabetes prevalence, such as India, South Africa, Brazil, and Tanzania. For diabetics in sub-Saharan Africa, foot ulcers are a serious health risk that can result in high medical expenses and even fatalities (2). A study from Saudi Arabia found that neuropathy; peripheral arterial disease, disease duration, and underlying osteomyelitis are the major risk factors for developing foot ulcers and need to be addressed while educating patients (3) Type 2 Diabetes Mellitus (T2DM) is a major public health crisis around the world, responsible for a staggering and growing burden of disease (2). A lifelong diagnosis that currently has no cure, T2DM is associated with a myriad of complications that tear at the fabric of patients' health and well-being, including micro vascular diseases such as retinopathy, neuropathy, and nephropathy and macro vascular complications such as peripheral artery disease . (3)One complication that is less frequently addressed by both the medical literature and clinical providers is diabetic foot ulcers (DFUs), estimated to affect 6.3% of people with diabetes worldwide (4). DFUs are complicated to treat, leading to an estimated 65% recurrence rate at 5 years post healing . Taken in concert with other frequent comorbidities, ulceration and amputation dramatically reduce life expectancy for

people with diabetes (5) and evidence from diverse countries and settings has shown that those who do survive endure an array of hardships that include impaired physical function, poor quality of life, economic stress, depression and emotional suffering . (2)Of concern, these poor outcomes disproportionately burden racial and ethnic minority and socio-economically disadvantaged populations (6). Ongoing studies into how patients adapt to diabetic foot complications by focusing on two areas : The role of social workers factors in guiding adherence to preventive foot self-care and foot ulcer treatment and the impact of diabetic foot ulceration on an individual's emotional state and QoL . (7)

It should be noted that, care and treatment of diabetic foot is expensive all around the world. In developed countries, more than 5% of diabetics have foot ulcers and 20% of total health care resources spent on care of the diabetic foot in these countries, and when the complicated and need to amputation, this cost will be increased .(8)

The social worker a counseling role, a social worker role is invaluable in aiding patients about physical, psycho-social, and financial impacts of diabetic foot ulceration and amputation. (9) Assessing the patient and diabetic foot ulceration and amputation and previous coping patterns related to diabetic foot (10). A social worker also may educate patients and families about these challenges within a psychosocial module during a diabetes self-care or through individual or family counseling sessions normalizing responses, identifying resources and enabling coping mechanisms) (11)

In addition, patients can be helped or educated to differentiate between physical sensations associated with high and low blood glucose levels (such as anxiousness, irritability, and lethargy) versus foot ulceration and amputation (12). The social worker also may ensure the management of chronic illnesses. Offend the stress of diabetes or complications may exacerbate existing social or work dysfunctions or revive unresolved personal issues (for example, foot ulceration and amputation and self-esteem problems) or family issues (for example, domestic violence and role conflict or strain), also necessitating social work interventions. For some, the potential or acmal occurrence of diabetic complications such as amputations, blindness, and kidney failure can prove overwhelming, leading to suicide ideation or attempts) .(13)

Serious treatment noncompliance may require skilled therapeutic interventions to identify and deal with psychological obstacles within the individual or family systems. Strained supportive resources and relationships also may require assistance to restore personal and family functioning.(14) Psych educational groups for diagnosed foot ulceration and amputation or those with ongoing challenges with self-care skills, self-esteem, assertiveness or those making the transition from professional to self-based care also are advisable. More intensive social work interventions may be necessary when these challenges are complicated by pre-existing foot ulceration and amputation or health concerns. (15)

### **Literature review:**

While one study found that the developing countries not only diabetic foot and its complications are more common, but also even sometimes up to 40% of health care resources are unique to this disease (16). Besides, the burden of this disease is high. The study was conducted in 2001 for

estimation burden of diabetes in Iran; the burden of diabetic foot was estimated at 5848 and by adding the burden of neuropathic diabetic foot was received up to 40,000 (17,18)

Study by Miranda, et al. (2021) found the most important point is that 85% of diabetic foot amputations are preventable with appropriate care and education (19). Ideal management for prevention and treatment of diabetic foot is as follow: regular perception of foot, determine at risk foot, education to patient, social service team and health staff must be available to carry out, appropriate foot coverage, and early treatment of foot problems (20). According to the protocol recommended by the American Diabetes Association (ADA), one of preventive tactic in diabetes care is multidisciplinary team approach that its advantages are shown in several studies (21).

Study by Allison et al.(2020) reported that the social worker may supported to the Patient diabetic foot ulceration and amputation or in conjunction with other professionals (such as psychiatrists and psychologists) to treat more serious patients diabetic foot ulceration and amputation issues inhibiting the management of diabetes. In this role a social work practitioner may screen and treat illnesses with high rates of comorbidity among diabetes patients, such as major diabetic foot ulceration and amputation disorders.(22)

Study did by multidisciplinary team found that can reduce amputation rates, prevent diabetes' complications and save costs. The result of study was shown by multidisciplinary team approach the two-year incidence of diabetic foot ulcers was 30% and 58%, respectively in high risk patients and in group under treatment with standard therapy. (23) The members of team for diabetic foot care usually consists of general practitioner, nurse, educator, Social service team, orthotic, and podiatrists and some consultants; vascular surgeon, infection disease specialist, dermatologist, endocrinologist, dietitian, orthopedic and also it is necessary the access to centers and home care services (24)

Although all team members have influence on reduction the incidence of foot ulcer and amputation (25), however, the role of nurse and Social service are essential. Study investigated the assessment role of the Social service team as a member of team of diabetes care, for prevention and control of diabetic foot in the three areas; education, care and rehabilitation.(19)

### **Rationale**

This disease leads to numerous restrictions in patient functioning. The needs for continuous therapy and medical supervision as well as various complications exert a negative influence on the quality of life (QOL) in this group of patients. One of those complications – the diabetic foot – is a particularly important problem. In many cases it leads to foot ulceration and, in consequence, amputation. These unfavorable aftermaths of diabetes not only cause limitations in physical functioning, but also negatively influence patients' psychosocial functioning and require multidisciplinary support from a therapeutic care team and Social workers. Until recently, research Social workers in diabetes focused almost exclusively on self-care behaviors and the burdens associated with management of glycemia, to the near total neglect of the effects of chronic complications such as diabetic neuropathy and foot ulceration. There has now been some progress in role of the Social worker team, as evidenced by the emergence of patient-centered and theory-based methods to identify psychological factors that influence adherence to foot self-care,

emotional status, and QoL of patients suffering from diabetic foot complications. In response to a steady increase in publications in this field over the past 5 years .

### **Aim of the Study**

To Assessment the impact of the Patient perspectives on the physical, psycho-social, and financial impacts of diabetic foot ulceration and amputation in Makkah Al-Mokarramah , Saudi Arabia2022.

### **Objectives:**

To evaluate the impact of Patient perspectives on the physical, psycho-social, and financial impacts of diabetic foot ulceration and amputation in Makkah Al-Mokarramah , Saudi Arabia2022.

### **Subjects and methods :**

#### **Study design:**

This cross-sectional survey has been conducted among diabetic foot ulceration and amputation patient in the city of Makkah. The study carried for 2 month was performed between June 2022 and March 2022, among diabetic foot ulceration and amputation patient attend

#### **Study setting / study area:**

Patients were selected from a tertiary referral center that treats foot problems in persons with diabetes ( Diabetic Foot Clinics Center and/or Vascular Surgery Departments in hospitals at Makkah). There is in them multidisciplinary limb salvage team . Patients with a history of DFU(s) and/or minor amputation (toe, toes, or part of the foot) and/or major amputation (ankle or above) were identified and approached for participation during regularly scheduled clinic appointment or by phone calls, to assessment the impact of the patient perspectives on the physical, psycho-social, and financial impacts of diabetic foot ulceration and amputation, also a self-administered questionnaire was designed and has been send to the study participants, was performed between June 2022 and March 2022. Our total participants were (200). The study under supervision of Directorate of Health Affairs of Makkah in Saudi Arabia . The study has been carried out in the city of Makkah, Makkah is the holiest spot on Earth. It is the birthplace of the Prophet Mohammad and the principal place of the pilgrims to perform Umrah and Hajj. The most important cities in Saudi Arabia . It is the holy city for all Muslims, and is located in the western area in Kingdom of Saudi Arabia

#### **Study population:**

The study has been conducted among diabetic foot ulceration and amputation patient attend the (Diabetic Foot Clinics Center and/or Vascular Surgery Departments in 3 hospitals at Makkah).

#### **Selection criteria:**

#### **Inclusion Criteria :**

- All Saudi patient diabetic foot ulceration and amputation visits a tertiary referral center that treats foot problems in persons with diabetes.
- patient who are more than 20 years of age
- Patients with a history of DFU(s)
- minor amputation (toe, toes, or part of the foot)
- major amputation (ankle or above)

**Exclusion criteria:**

- Saudi younger than 20 years
- Participants who did not consent to participate in the study, and/or did not answer the questions of the study.
- Patients with language barriers .

**Study Sample:**

The sample size has been calculated by applying Raosoft sample size calculator based on (The margin of error: 5%, Confidence level: 95%, and the response distribution was considered to be 20%) accordingly the Sample size is 300 of diabetic foot ulceration and amputation Saudi patient attending in tertiary referral center and adding 10 more to decrease margin of error. After adding 5% oversampling, the minimum calculated sample has been 200. Computer generated simple random sampling technique was used to select the study participants.

**Sampling technique:**

Systematic random sampling technique is adopted. By using systematic sampling random as dividing the total diabetic foot ulceration and amputation Saudi patient attending in tertiary referral center by the required sample size; (200)

**Data collection methods:**

The self-administered questionnaire is designed based on previous studies and frameworks to assessment Patient perspectives on the physical, psycho-social, and financial impacts of diabetic foot ulceration and amputation in Makkah Al-Mokarramah , Saudi Arabia2022.

The questionnaire was developed in English and was then translated into Arabic. The questions were first pre-tested and were revised and finalized after it was pilot tested. Before completing the survey, participants were required to indicate their consent using a forced response question followed by the survey questionnaires. The survey is estimated to take 10 min to complete .

To collect the information, a set of questions were constructed and developed . The questionnaire consisted of two main sections; the first section focuses on Socio demographic and background information such as age, education level, outcome and gender of the participant's impact of the Social and psychological service patient attend the (Diabetic Foot Clinics Center and/or Vascular Surgery Departments in 3 hospitals at Makkah), Second section focuses on questions role of social work

**A Pilot study**

Was carried out at the questions were first pre-tested and were revised and finalized after it was pilot tested. Before completing the survey, participants were required to indicate their consent using a forced response question followed by the survey questionnaires. This study has been conducted and all suggestions taken into consideration.

**Data analysis**

The Statistical Package for Social Sciences (SPSS) software version 24.0 has been used for data entry and analysis. Descriptive statistics (e.g., number, percentage) and analytic statistics using test for the association and the difference between two categorical variables were applied. A p-value  $\leq 0.05$  has been considered statistically significant.

**Ethical consideration :**

- Permission from family medicine program was obtained .
- Permission from the regional Research and Ethical Committee was being given to conduct our study.
- All the subjects have been participating voluntarily in the study .
- Privacy of information and confidentiality has been maintained .
- Full explanation about the study and its purpose was carried out to obtain their participation.

**Budget:** Self-funded

**Results :**

**Table 1. Distribution of the demographic characteristics of the participants (n=200)**

	N	%
<b>Age</b>		
20-30	42	21
30-40	58	29
40-50	62	31
>50	38	19
<b>Sex</b>		
Male	104	52
Female	96	48
<b>Education</b>		
Secondary school	24	12
Diploma	38	19
Bachelor's degree	44	22
University	94	47
<b>Number of children</b>		
One child	46	23
Two children	54	27
Three to five children	36	18
More than five	64	32
<b>Nationality</b>		
Saudi	130	65
Non-Saudi	70	35
<b>Marital status</b>		
Single	84	42
Married	42	21
Divorced	38	19
Widow	36	18

<b>Family income</b>		
Low	68	34
Middle	44	22
High	88	44
<b>Type of work</b>		
Civil servant	38	19
Self-employed/business	58	29
House wife	76	38
Student	20	10
Farmer	8	4

Table 1 shows that most of the participants were (31.0%) in the age group 40-50 years, followed by age 30-40 were (29.0%), regarding gender the majority of them were male (52.0%) while female (48.0%), regarding level of education the majority of participant are University degree were (47.0%), followed by Bachelor's degree were (22.0%) , regarding the Number of children the majority of participant more than five were (32.0%) while tow child were(27.0%), also regarding the nationality most of participants Saudi were(65.0%) while non-Saudi were (35.0%), regarding the marital stats most of participants single were(42.0%)while married were(21.0%), regarding Family income the majority of participant are high were(44.0%) followed by low were (34.0%), regarding Type of work the majority of participant are house wife were(38.0%) followed by Self-employed/business were (29.0%).

**Table 2. Distribution of Participant Clinical characteristics by diabetic foot ulceration and amputation**

	<b>N</b>	<b>%</b>
<b>Duration of diabetes (yrs.)</b>		
< 10	62	31
> =10	138	69
<b>Diabetic foot ulcer</b>		
Yes	58	29
No	142	71
<b>History of amputation</b>		
Yes	82	41
No	118	59
<b>History of hospitalization</b>		
Yes	48	24
No	152	76
<b>Body mass index (kg/m2)</b>		
Underweight	48	24
Healthy weight	62	31



Overweight	38	19
Obesity	52	26
<b>Complications (&gt; = 2)</b>		
Yes	124	62
No	76	38
<b>Family history of diabetes</b>		
Yes	144	72
No	56	28
<b>Current smoker</b>		
Yes	104	52
No	96	48
<b>Other chronic disease:</b>		
Neuroischemic	64	32
Retinopathy	38	19
Nephropathy	44	22
No	54	27
<b>Insulin therapy:</b>		
yes	144	72
No	56	28
<b>Pain:</b>		
Yes	112	56
No	88	44

Table 2 shows regarding the duration of diabetes (yrs.) most of the participants  $\geq 10$  were (69.0%) followed by  $< 10$  were (31.0%), regarding diabetic foot ulcer the majority of them answer No were (71.0%) while Yes were (29.0%), regarding history of amputation the majority of participant answer No were (59.0%) while Yes were (41.0%), regarding the history of hospitalization the majority of participant answer No were (76.0%) followed by Yes were (24.0%), regarding the body mass index (kg/m<sup>2</sup>) the majority of participant healthy weight were (31.0%) while obesity were (26.0%), also regarding complications ( $\geq 2$ ) most of participants answer Yes were (62.0%) while No were (38.0%), regarding the Family history of diabetes most of participants answer Yes were (72.0%) No were (28.0%), regarding current smoker the majority of participant answer Yes were (52.0%) followed by No were (48.0%), regarding other chronic disease most of participants Neuroischemic were (32.0%) while No were (27.0%) followed by Nephropathy were (22.0%), regarding the insulin therapy most of participants answer Yes were (72.0%) while No were (28.0%), regarding pain the majority of participant answer Yes were (56.0%) followed by No were (44.0%).

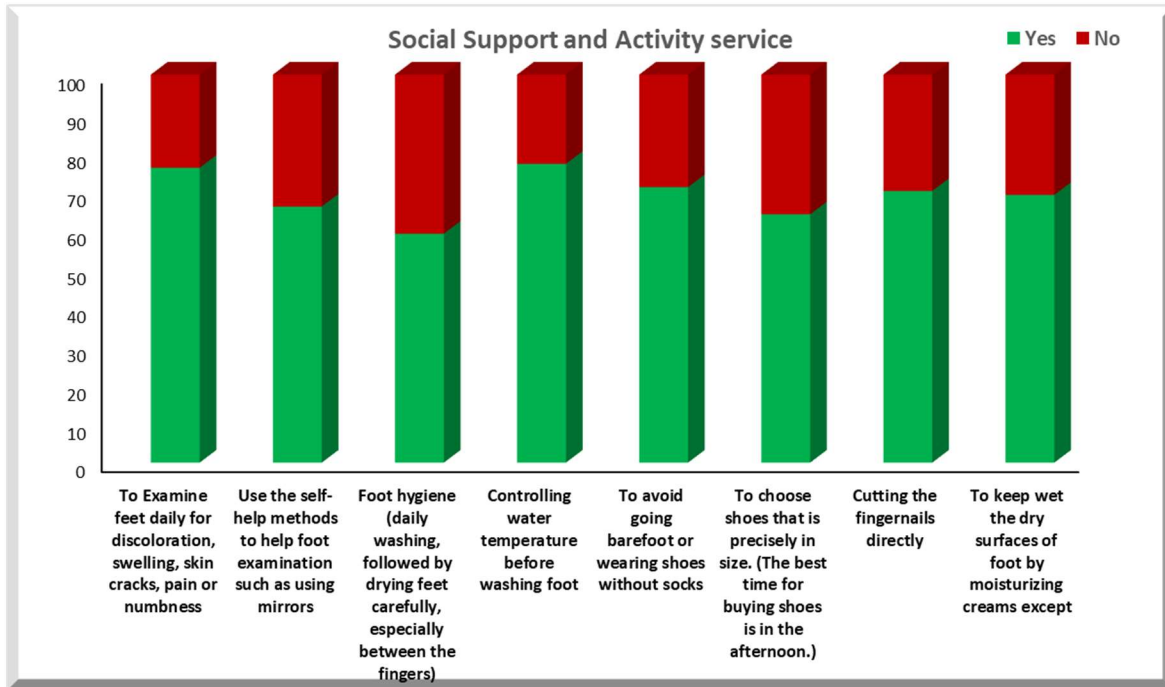
**Table 3 . Distribution of the Social Support and Activity service on diabetic foot ulceration and amputation participants' patient .**

Social Support and Activity service	Yes		No		Chi-square	
	No	%	No	%	X <sup>2</sup>	P-value
To Examine feet daily for discoloration, swelling, skin cracks, pain or numbness	152	76	48	24	54.080	<0.001*
Use the self-help methods to help foot examination such as using mirrors	132	66	68	34	20.480	<0.001*
Foot hygiene (daily washing, followed by drying feet carefully, especially between the fingers)	118	59	82	41	6.480	0.011*
Controlling water temperature before washing foot	154	77	46	23	58.320	<0.001*
To avoid going barefoot or wearing shoes without socks	142	71	58	29	35.280	<0.001*
To choose shoes that is precisely in size. (The best time for buying shoes is in the afternoon.)	128	64	72	36	15.680	<0.001*
Cutting the fingernails directly	140	70	60	30	32.000	<0.001*
To keep wet the dry surfaces of foot by moisturizing creams except	138	69	62	31	28.880	<0.001*

Table 3 shows distribution of the Social Support and Activity service on diabetic foot ulceration and amputation participants' patient, regarding to examine feet daily for discoloration, swelling, skin cracks, pain or numbness most of participants answer Yes were (76.0%), followed by No were (24.0%) while a significant correlation were p-value =0.001 and X<sup>2</sup> 54.080. Regarding use the self-help methods to help foot examination such as using mirrors most of the participants answer Yes were (66.0%) while No were (34.0%), while a significant correlation were p-value =0.001 and X<sup>2</sup> 20.480. Regarding Foot hygiene (daily washing, followed by drying feet carefully, especially between the fingers) most of the participants answer Yes were (59.0%) while No were (41.0%), while a significant correlation were p-value =0.011 and X<sup>2</sup> 6.480. Regarding controlling water temperature before washing foot most of the participants answer Yes were (77.0%) while No were (23.0%), while a significant correlation were p-value =0.001 and X<sup>2</sup> 58.320. Regarding To avoid going barefoot or wearing shoes without socks most of the participants answer Yes were (71.0%) while No were (29.0%), while a significant correlation were p-value =0.001 and X<sup>2</sup> 35.280. Regarding to choose a shoe that is precisely in size . (The best time for buying shoes is in the afternoon) most of the participants answer Yes were (64.0%) while No were (36.0%), while a significant correlation were p-value =0.001 and X<sup>2</sup> 15.680. Regarding cutting the fingernails directly most of the participants answer Yes were (70.0%) while No were (30.0%), while a significant correlation were p-value =0.001 and X<sup>2</sup> 32.000. Regarding To keep wet the dry surfaces

of foot by moisturizing creams except most of the participants answer Yes were (69.0%) while No were (31.0%), while a significant correlation were  $p$ -value =0.001 and  $X^2$  28.880.

**Figure 1 Distribution of the Social Support and Activity service on diabetic foot ulceration and amputation participants' patient**



**Table 4 . Distribution of the role of social worker diabetic foot ulceration and amputation participants' patient**

Role of social worker	Yes		No		Chi-square	
	No	%	No	%	X <sup>2</sup>	P-value
Do you visit to social worker	132	66	68	34	20.480	<0.001*
Social Support to avoid self-care impairment	94	47	106	53	0.720	0.396
Do you heave social worker /behavioral therapy	134	67	66	33	23.120	<0.001*
social worker support to diabetic foot ulceration and amputation very important	160	80	40	20	72.000	<0.001*
Psychological deterioration after diagnosis of diabetic foot amputation need to social worker to support the patient	174	87	26	13	109.520	<0.001*
Social worker helps in social support from family or friends	148	74	52	26	46.080	<0.001*
Need the social worker in accompany patient to appointments in the community	156	78	44	22	62.720	<0.001*

Social worker helps to confer with the patient other providers	128	64	72	36	15.680	<0.001*
Social worker speaks with on patient family or support system (with the patient consent)	134	67	66	33	23.120	<0.001*
Social worker does by ongoing monitoring of care plan improve the self-efficacy	152	76	48	24	54.080	<0.001*
Social worker does by visit the patient in treatment facilities/hospitals	156	78	44	22	62.720	<0.001*
Social worker monitor status of on patient case Visit on patient	152	76	48	24	54.080	<0.001*
Social worker provides prevention education session on patient	150	75	50	25	50.000	<0.001*
Social worker meets the patient upon when need	154	77	46	23	58.320	<0.001*
Need social worker to ask for help if reduction of the visual acuity.	138	69	62	31	28.880	<0.001*

Table 4 shows the role of social worker diabetic foot ulceration and amputation participants' patient, regarding you visit to social worker most of participants answer Yes were (66.0%), followed by No were (34.0%) while a significant correlation were p-value =0.001 and  $X^2$  20.480. Regarding Social Support to avoid self-care impairment most of the participants answer No were (53.0%) while Yes were (47.0%), while no significant correlation were p-value =0.396 and  $X^2$  0.720. Regarding you heave social worker /behavioral therapy most of the participants answer Yes were (67.0%) while No were (33.0%), while a significant correlation were p-value =0.001 and  $X^2$  23.120. Regarding social worker support to diabetic foot ulceration and amputation very important most of the participants answer Yes were (80.0%) while No were (20.0%), while a significant correlation were p-value =0.001 and  $X^2$  72.000. Regarding Psychological deterioration after diagnosis of diabetic foot amputation need to social worker to support the patient most of the participants answer Yes were (87.0%) while No were (13.0%), while a significant correlation were p-value =0.001 and  $X^2$  109.520. Regarding Social worker helps in social support from family or friends most of the participants answer Yes were (74.0%) while No were (26.0%), while a significant correlation were p-value =0.001 and  $X^2$  46.080. Regarding need the social worker in accompany patient to appointments in the community most of the participants answer Yes were (78.0%) while No were (22.0%), while a significant correlation were p-value =0.001 and  $X^2$  62.720. Regarding Social worker helps to confer with the patient other providers most of the participants answer Yes were (64.0%) while No were (36.0%), while a significant correlation were p-value =0.001 and  $X^2$  15.680. Regarding Social worker speaks with on patient family or support system (with the patient consent) most of the participants answer Yes were (67.0%) while No were (33.0%), while a significant correlation were p-value =0.001 and  $X^2$  23.120. Regarding Social worker does by ongoing monitoring of care plan improve the self-efficacy most of the participants

answer Yes were (76.0%) while No were (24.0%), while a significant correlation were p-value =0.001 and  $X^2$  54.080. Regarding Social worker does by visit the patient in treatment facilities/hospitals most of the participants answer Yes were (78.0%) while No were (22.0%), while a significant correlation were p-value =0.001 and  $X^2$  62.720. Regarding Social worker monitor status of on patient case Visit on patient most of the participants answer Yes were (76.0%) while No were (24.0%), while a significant correlation were p-value =0.001 and  $X^2$  54.080. Regarding Social worker provides prevention education session on patient most of the participants answer Yes were (75.0%) while No were (25.0%), while a significant correlation were p-value =0.001 and  $X^2$  50.000. Regarding Social worker meets the patient upon when need most of the participants answer Yes were (77.0%) while No were (23.0%), while a significant correlation were p-value =0.001 and  $X^2$  58.320. Regarding need social worker to ask for help if reduction of the visual acuity most of the participants answer No were (69.0%) while Yes were (31.0%), while a significant correlation were p-value =0.001 and  $X^2$  28.880.

### Discussion

The purpose of this study was to assessment Patient perspectives on the physical, psychosocial, and financial impacts of diabetic foot ulceration and amputation in Makkah Al-Mokarramah , Saudi Arabia2022. Diabetic foot as the most common cause of hospitalization in diabetic patients is one of health system concerns. (26) Most of the time of diabetes healthcare providers is allocated to the prevention and diagnosis of diabetic foot complications. In this regard, multidisciplinary team found that can reduce amputation rates, prevent diabetes' complications and save costs social worker as members of the diabetes care team not only need to be play their role in health care, public education, health system management, patient care and improving the quality of life, but also must attend in special training to use the latest instructions of diabetic foot care in order that provides the effective services to the physical, psycho-social, and financial impacts of diabetic foot ulceration and amputation facilitate promote diabetic patients health(23).

In our study shows that most of the participants were (31.0%) in the age group 40-50 years, gender the majority of them were male (52.0%), regarding level of education majority of participant are university degree were (47.0%), number of children more than five were (32.0%), nationality participants Saudi were(65.0%), marital stats participants single were(42.0%), family income high were(44.0%), Type of work the majority of participant are house wife were(38.0%).(See table 1)

Social workers can instruct diabetic foot ulceration patients in the area of time management principles and skills, aiding them in prioritizing life activities and accommodating diabetic self-care demands within their personal, family, and work schedules(24) .

Social workers may encourage self-advocacy or advocate on behalf of patients for adequate time in the workplace for glucose monitoring, for equitable divisions of household labor, or for greater awareness of the challenges and needs of people with diabetes among family, friends, and the community(27) .

Although advances with diabetic foot ulceration treatment but requires a highly motivated patient with good glycemic control and mastery of additional technical information and skills, in

short, diabetes self-care requires a lifestyle change, and social workers can be indispensable in guiding patients through this process.(28) (See table 2)

For some patients, Social Support and Activity service making these lifestyle changes may require assistance with concrete resources. (29) social workers can assess needs and link diabetic foot ulceration patient with community agencies for assistance, fitness training, additional diabetic foot ulceration education (professionals or material), medical care, health insurance, insulin and glucose monitoring supplies, prescription assistance, transportation, and counseling or support groups(30).

Social workers may provide an impressive array of services. They can coordinate a comprehensive assessment, treatment plan, and intervention, striving for an optimal level of collaboration among professionals, patients, and families. Financially, social work case management can effectively and efficiently use community resources, creating an optimal environment that promotes glycemic control to delay complications and reduce hospitalizations. (31) They also can establish continuity of care, through a comprehensive approach by coordinating interagency efforts, providing ongoing evaluations, and monitoring planned follow-ups. In short, this amalgamation of roles maximizes patient and family functioning through an informed appreciation and skilled assistance with diabetic foot ulceration and amputation(32).(See Table3 and figure 1)

Social worker role in education It has been observed that social worker have an effective role in prevention of foot ulcers and lower limb amputation by educational interventions, help to screening high-risk people and providing health care(22) . It is necessary for all diabetic patients, especially patients at risk for foot ulcers, to be familiar with the basics of foot care. Several studies suggest that patient education and Patient support about foot care is effective in prevention of diabetic foot ulcers (33). Social worker can teach patients how to perform physical examination and take care of their feet on a daily basis (30). For instance, social worker can encourage patients to carry out a series of simple rules in order to help prevent foot ulcers or recurrence, such as checking the shoes before wearing, keeping feet clean and continuing care of the skin and nails. Training about choosing the right shoes is essential as well (29). Diabetic foot care education programs have been proposed considering the consequence of continuing educational programs, which are detailed in (Table 4).

## **Conclusion**

Diabetes and its complications negatively influence the bio-psycho-social functioning of patients . Patients with diabetic foot ulcers, a frequent cause of lower limb amputations and disability, constitute a group with a particularly severe burden. When caring for such a patient, there is a necessity for monitoring of particular support from a therapeutic care team and Social workers during therapy. The patient's psychological state with particular emphasis on presence and severity of anxiety and depressive symptoms is an important element of such support from a therapeutic care team and Social workers. Care life of patients with diabetic foot amputations and the need for psychological support requires social workers to reintegrate them into society, support of the entire therapeutic care team, social workers including emotional and educational support. An improved patient with diabetic foot amputations is essential to motivation for treatment and rehabilitation.

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