



## ***The Effect of Patient Self-Esteem on The Motivation to Treat Diabetic Foot Ulcers***

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**Abstract.** Diabetic foot ulcers negatively impact the self-esteem of diabetes mellitus patients. Their self-esteem affects their motivation to recover. This was caused by the intention of being negative towards themselves. It affects the intrinsic motivation of the patients. This study used a questionnaire to obtain the data. Frequency distribution and Spearman Rank (Rho) correlation test with a significant level of 5% were used as the statistical tests. Spearman Rank result test was  $p\text{-value}=0.000$  with a correlation coefficient of 0.0519. Based on the study results, it can be concluded that there is an effect of patient self-esteem on their motivation to treat diabetic foot ulcers at Asri Wound Care Center Medan.

**Keywords:** diabetic foot ulcer treatment; motivation; self esteem

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## 1. Introduction

Diabetes mellitus is an untreatable chronic disease, but the blood sugar levels can be controlled. This chronic disease occurs when the pancreas does not produce enough insulin or when the body uses the insulin ineffectively. In 2015, *International Diabetes Federation* recorded 415 million people suffering from diabetes Mellitus. The number is expected to rise to 642 million people by 2040. In 2014, there are 96 million adults suffered from diabetes in 11 countries in Southeast Asia. Half of them were not diagnosed with diabetes. In Southeast Asia, the diabetes prevalence among adults raises from 4.15% in the 1980s to 8.6% in 2014 (Srimiyati, 2018).

In North Sumatra, the number of patients with diabetes mellitus keeps increasing every year. Based on the data from North Sumatra Health Department, 25,838 people suffer from diabetes mellitus type I and 84,843 people suffered from diabetes mellitus type II from 2017 to 2018 (Dinkes Provinsi Sumatera Utara, 2018). North Sumatra became one of the provinces with the highest prevalence of patients with diabetes mellitus, with 2.3 % that is diagnosed based on the symptoms. Thus, North Sumatra has become one of the ten provinces with the highest diabetes mellitus prevalence in Indonesia (Kemenkes RI, 2018).

The rising prevalence of patients with diabetes mellitus results in more incidence rate of complications. They are at risk of foot ulcers which are commonly chronic and challenging to cure. Around 15% of patients with diabetes suffer at least one leg ulcer in their life, which ends in the amputation of foot fingers, foot, or limb. This condition negatively affects on patient's self-esteem and confidence who has foot ulcers (Maryunani, 2013).

One with a diabetic foot ulcer has low confidence because the wound creates a foul scent and disturbing sense of smell (unpleasant odor). A diabetic foot ulcer is one of the complications showing that diabetes is a chronic disease. Chronic disease can affect one's self-concept. The study shows that chronic disease will decrease one's quality of life and self-esteem. Clients suffering from chronic foot ulcer or gangrene tend to have low self-esteem because it relates to independent function. Suffering from the disease for a long time cause the client is at risk of low self-esteem because they have lost control of their perception of health (Adabiah, 2014). When an individual suffers from chronic disease and is dependent on family members and caregivers, this dependency will reduce their self-esteem (Salomé, Pellegrino, Blanes, & Ferreira, 2011).

Based on Salome, Maria, Blanes, and Ferreira's research conducted in 2011, their results showed that the self-esteem of patients with a diabetic foot ulcer would affect their motivation to recover. Their negative perception of themselves will affect the patients' intrinsic motivation. A successful diabetes mellitus treatment depends on the patient's motivation and self-awareness to carry out self-treatment management designed to control the symptoms and prevent complications. The motivation of patients with diabetes mellitus can fluctuate due to more prolonged treatment and higher costs causing psychological issues such as frustration, anxiety, and depression. These

issues will affect patients' motivation to do self-treatment. If their motivation is low, it will affect the efficacy of the patient self. Thus, the self-treatment management of diabetes mellitus will not work well. Therefore, nurses should provide an effort to raise the motivation and self-efficacy of diabetes mellitus patients (Rembang, Katuuk, & Malara, 2017). This study aims to know the effect of patient self-esteem on the motivation to treat diabetic foot ulcers at Asri Wound Care Center Medan.

## 2. Research Methods

This study uses a descriptive-correlative design with a cross-section approach. That is to examine the correlation/effect of two variables in a specific situation or a group of objects that emphasizes the measurement time/observational of the independent/dependent data variables one time at a time. By administering questionnaires or collecting data at the same time (Nursalam, 2016). This study was conducted at Asri Wound Care Center Medan from 25 March – 26 April 2021. The population of this study is 39 diabetic foot ulcer patients at Asri Wound Care Center. The samples are all 39 diabetic foot ulcer patients and no dropout sample. A type of nonprobability sampling was used, that is, Total sampling. The researcher collected the data by handing out questionnaires directly to the respondents. For the questionnaire on the self-esteem variable, the researcher used *the Rosenberg Self-Esteem Scale*. The questionnaire has been tested for its validity and reliability using an internal consistency test, resulting in an  $\alpha$  value of 0.77. For the questionnaire of motivation variable, the researcher used *the Client Motivation for Therapy Scale*. The questionnaire has been tested for its validity and reliability using an internal consistency test, resulting in an  $\alpha$  value of 0.70. Before conducting this research, the researcher obtained ethical clearance from the ethical committee of STIKes Flora.

Univariate analysis was used to identify the frequency distribution of demography data, independent variable (self-esteem), and dependent variable (motivation to treat the wound). All variables were descriptively analyzed by counting their frequency (Nursalam, 2016). Bivariate analysis was used to identify whether there is an effect of Patient Self-Esteem on The Motivation to Treat Diabetic Foot Ulcers at Asri Wound Care Center Medan. Spearman Rank (Rho) correlation technique was used as the analytical technique. It measures the effect between two variables with Ordinal scales. Data analysis on spearman Rank (Rho) test with the provision of the Z count  $>$  table,  $H_0$  is rejected. Meaning that there is a significant effect. If Z count  $<$  Z table,  $H_0$  is accepted. Meaning that there is no significant effect (Pamungkas & Usman, 2017).

### 3. Research Results

#### Respondent Characteristics

**Table 1** The Frequency Distribution based on Respondents Characteristics at Asri Wound Care Center Medan

Characteristic	Frequency	%	Self-Esteem				Motivation			
			Sufficient	%	High	%	Sufficient	%	Good	%
<b>Age</b>										
18-65 years	32	82.1	13	33.3	19	48.7	13	33.3	19	48.7
66-79 years	6	15.39	3	7.69	3	7.69	1	2.56	5	12.8
80-99 years	1	2.5 %	0	0	1	2.56	1	2.56	0	0
Total	39	100,0	16	41.0	22	56.4	15	38.4	24	61.5
<b>Sex</b>										
Male	21	53,80	9	23.0	12	30.7	9	23.0	12	30.7
Female	18	46,20	7	17.9	11	28.2	6	15.3	12	30.7
Total	39	100,00	16	41.0	23	58.9	15	38.4	24	61.5
<b>Education</b>										
Elementary	2	5,10	0	0	2	5.12	1	2.56	1	2.56
Junior high	6	15,40	4	10.2	2	5.12	2	5.12	4	10.2
Senior high	16	41,00	5	12.8	11	28.2	4	10.2	12	30.7
Undergraduate	15	38,50	6	15.3	9	23.0	8	20.5	7	17.9
Total	39	100,00	15	38.4	24	61.5	15	38.4	24	61.5
<b>Duration of Illness</b>										
<6 months	26	66,70	10	25.6	16	41	10	25.6	16	41
6 months - 1 year	10	25,60	3	7.69	7	17.9	4	10.2	6	15.3
>1 year	3	7,70	3	7.69	0	0	1	2.56	3	7.6
Total	39	100,0	16	41	23	58.9	15	38.4	25	64.1

Table 1 shows that 15 respondents (38.5%) were aged 46-55 years, 13 respondents (33.3%) were aged 56-65 years, seven respondents (17.9%) were aged >65 years, three respondents (7.7%) age 36-45 years, and one respondent (2.6%) age 26-35 years. In terms of sex, 21 respondents (53.8%) are male, and 18 respondents (46.2%) are female. Regarding education, 16 respondents (41%) are high school graduates. Fifteen respondents (38.5%) are undergraduates. Six (15.4%) are junior high graduates, and two (5.1%) are elementary graduates.

**Table 2** Cross Tabulation of The Correlation of Patient Self-Esteem on The Motivation to Treat Diabetic Foot Ulcers

		Motivation		Total	
		Decent	Good	N	%
<b>Self-esteem</b>	Moderate	11	5	16	41,00
	High	4	19	23	59,00
	N	15	24	39	100%
<b>Total</b>	%	38,50	61,50	100%	

Table 2 shows that 16 respondents (41%) have moderate self-esteem. Eleven of them have decent motivation, and 5 have high motivation. Twenty-three respondents (59%) have high self-esteem. Four of them have decent motivation, and 24 respondents have high motivation.

**Table 3** Analysis Result of Spearman Rank (Rho) Correlation

	Sig	Correlation Coefisient
Spearman's rho Self-esteem* Motivation	0,000	0,519

Table 3 shows the bivariate test using Spearman Rank (Rho) test with a significant level of 5%, resulting in a p-value  $< \alpha 0,000 \leq 0,05$ . It means that  $H_a$  rejected  $H_0$ . Thus, there is a significant solid effect of Patient Self-Esteem on The Motivation to Treat Diabetic Foot Ulcers with a correlation coefficient of Spearman Rank (Rho) of 0.519. There is also a positive effect, meaning that if the Self-Esteem variable rises, so does the Motivation variable. It is vice-versa. The coefficient correlation of 0.519 of Spearman Rank (Rho) has a strong engagement because, according to Sujarweni (2014), the nature of the correlation will decide the correlation direction.

#### 4. Research Discussion

##### a. Respondent Characteristics

Regarding sex, most male respondents suffer from diabetic foot ulcers, with 21 respondents (53.8%). Men have many activities outside the house. They are responsible for being the breadwinner that demands them to do light or heavy activities even though they suffer from diabetes mellitus. Thus, they are at risk of having diabetic foot ulcers (Adabiah, 2014; Ahmad, 2018). This study aligns with Tentolouris’s research result that shows males are more prone to suffer from diabetic foot ulcers than women.

Regarding education level, most respondents are High school graduates (16 people, 41%). Education affects respondents’ knowledge, experience, and how they cope with the disease. A broad knowledge of the disease one is currently suffering from will build a positive attitude toward treatment (Maryunani, 2013; Mulya & Betty, 2014; Yulita, Mudayatiningsih, & Yasin, 2017).

### **b. Patient Self-Esteem**

In terms of self-esteem, twenty-three respondents (59%) have high self-esteem. Respondents who are high school graduates (16 people, 41%) and undergraduates (15 people, 38.5%) have high self-esteem. It shows that the higher the education level, the higher one's self-esteem. Yulita et al. (2017) support this statement by saying that social class, characterized by education, occupation, and income determines self-esteem. Yulita et al. (2017) also stated the same idea saying that people with higher education have more experience. Higher self-esteem was built on pleasant and unpleasant experiences. In Yulita et al. (2017)'s research, Maslow (2003) stated that the higher the education level, the broader the knowledge. Also, the lower the education level, the lower one's self-esteem.

Thus, there is a difference in coping self-esteem between people with higher education and people with lower education. The higher one's education level, the easier for them to obtain information that broadens their knowledge. In contrast, people with low education levels are inhibited in their development by facing new matters (Ahmad, 2018). The researcher argues that other things affect self-esteem besides education, occupation, and income. There is age, spirituality/religion, family support, duration of suffering foot ulcer, and counseling. Age affects one's self-esteem because when one gets older, their self-esteem reduces gradually. The causes are physical and psychological changes happening to themselves that lead to reduced self-esteem. Religion also affects the self-esteem of patients with diabetic ulcers. That statement aligns with Husna & Linda (2014)'s research. Their research showed a substantial correlation between spirituality and the self-esteem of diabetic ulcer patients. Their research revealed that the patients who believed in God thought the disease was a tribulation. God gave him the disease, and He will also cure it. Men can only pray, try their best, and never be ashamed of their disease.

In contrast, Sofiana, Elita, & Utomo (2012) research on the correlation of stress and self-concept of patients with type II diabetes mellitus showed that most patients have low self-esteem (20 people, 66.7%) due to suffering from complications. One of them is diabetic ulcers. The researcher also argues that there is a self-esteem difference between patients who treat their diabetic foot ulcers and who do not do it. It is because modern wound treatment gives patients hope for recovery. Thus, their self-esteem rises. Therefore, there will be a difference in coping with one's self-esteem between people with higher education and people with lower education. The higher one's education level, the easier for them to receive any information resulting in broader knowledge. In contrast, people with low education levels are inhibited in their development on facing new matters.

### **c. The Motivation to Treat Diabetic Foot Ulcers**

In this research, most respondents (24 people, 61.5%) have good motivation to treat diabetic foot ulcers. Motivation can define one's quality attitude in the context of studying, learning, or other life events. Thus, it is expected that motivation can form an activity or attitude based on the

supportive family, specifically for patients with diabetic foot ulcers who undergo modern wound treatment (Kavanagh, 2014; Rembang et al., 2017; Setiawan, Irawan, & Mahmudah, 2017).

Sixty-one respondents (96,8%) are highly motivated to treat diabetic foot ulcers. Man's most basic need is the physiological need. It is the most basic need to fulfill before other needs arise (Fajariyah, 2012). According to Saam & Wahyuni (2014), motivation is a driven cause or the drive for someone to reach a particular goal. One motivates to do something because of the urgency of needs. These needs will be directed toward reaching specific goals. Setiawan et al. (2017) classified motivation as internal and external. Those types of motivations for patients suffering from diabetic foot ulcers drive them to change their behavior. Commonly, it includes intrinsic and extrinsic indicators. Intrinsic indicators include desires, wants, drives, needs, hopes, and ideals. While extrinsic indicators include self-observational, advice and recommendations, and encouragement from others.

High motivation is built due to motivation coming from within (intrinsic). By having the desire and wants to undergo diabetic foot ulcer treatment, the patient is driven to have a high motivation to recover. External motivation is the patient's predisposition factors in doing diabetic foot ulcer. Those factors include family support, community, and health workers, specifically nurses (Setiawan et al., 2017). The researcher argues that there are other factors affecting patients' motivations. Not only the above factors. Patients' self-esteem also affects them to undergo diabetic foot ulcer treatment. Thus, it is essential to improve the patient's self-esteem first so the patient will be motivated to undergo the treatment.

#### **d. The Effect of Patient Self-Esteem on The Motivation to Treat Diabetic Foot Ulcers at Asri Wound Care Center Medan**

From the three tables above, respondents with decent self-esteem also have decent motivation (11 respondents) and good motivation (5 respondents). Respondents with high self-esteem also have decent motivation (4 respondents) and good motivation (19 respondents). Respondents with decent self-esteem tend to be motivated to do the treatment for their diabetic foot ulcers. Meanwhile, respondents who have high self-esteem tend to have good motivation to do the treatment for their diabetic foot ulcers. This study states that there is an effect of patient self-esteem on the motivation to treat diabetic foot ulcers with  $p\text{-value} = 0.000 < \alpha 0,05$  (*significancy* value). Spearman Rho correlation value is 0.519 showing that the correlation direction is positive, meaning the correlation is substantial. This study also shows a *significancy* value of 0.000. It means a meaningful correlation exists between The Effect of Patient Self-Esteem on The Motivation to Treat Diabetic Foot Ulcers at Asri Wound Care Center Medan.

Maslow pointed out that there is a hierarchy of five human needs. First, physiological needs. It consists of food, drink, and other physical needs. Second, safety needs. It includes protection from

physical and emotional harm. Third, social needs. It includes the needs for affection, belonging, acceptance, and companionship. Fourth, esteem needs. It includes the need to be respected internally or externally. Fifth, Self-actualization needs. It includes the need for growth, achievement of one's potential, and self-fulfillment (Yulita et al., 2017).

In Maslow's theory, esteem needs are a part of self-esteem. It defines *self-esteem* as the evaluation or assessment of oneself from individual interactions with people around them and appreciation, acceptance, and treatment. The aspects of self-esteem used to consist of meaningfulness, strength, competence, virtue, and personal value. The theory also discloses that self-esteem is an individual's attitude towards him/herself in the range of negative to positive or low to high dimensions (Yulita et al., 2017).

Self-esteem will determine one's behavior. Someone with high self-esteem tends to behave positively, while someone with low self-esteem tends to behave negatively. The author assumes that appreciation, acceptance, and others' treatment will encourage one to fulfill those aspects. Also, that person will tend to behave in a way that leads to his/her goals (Ahmad, 2018). One who has high self-esteem will assess himself positively. One thought that one is valuable, worthwhile, and meaningful, which can gain acceptance, support, and affection from others. All of these things will raise an individual's motivation. It is shown by the ability to set goals realistically and make decisions independently. Motivation is the desire within a person that causes him to act for a reason to achieve a goal. Thus, motivation is a drive governed by goals and rarely exists in a void. Words such as need, want, desire and drive are the same as motive words, which is the origin of motivation (Ahmad, 2018).

From the theory above, the author assumes that those characteristics give a person a high motivation to carry out diabetic foot wound treatment. They will try and be enthusiastic about planning, determining, and preparing their treatment optimally. The results of the author's research support this assumption at Asri Wound Care Center Medan, in which the results obtained  $p \text{ value} = 0,000 < \alpha 0,05$ . A spearman rho correlation value of 0.519 shows that the correlation direction is positive, meaning the correlation is substantial. The value also indicates that the greater the value of one variable, the greater the value of the other variable. For instance, the greater the value of X variable (Self-esteem), the greater the value of Y variable (Motivation).

## 5. Conclusions and Recommendations

It can be concluded that most respondents have high self-esteem and good motivation. There is a significant correlation between The Effect of Patient Self-Esteem on The Motivation to Treat Diabetic Foot Ulcers at Asri Wound Care Center Medan. Having good self-esteem will affect the motivation of diabetic foot ulcer patients to do diabetic foot ulcer treatment. The patient needs to improve their self-esteem to have a solid motivation to recover. Another crucial thing is that there



should be a family approach to improve patient self-esteem. In future studies, it is essential to look at family support in improving the self-esteem of patients with a diabetic foot ulcers.

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