



**SAGA**

**THE 13TH INTERNATIONAL NURSING CONFERENCE**

# **CONTINUOUS INNOVATION FOR SUSTAINABLE HEALTH AND CLIMATE RESILIENCE**

**PROCEEDING**

THE 13<sup>TH</sup> INTERNATIONAL NURSING CONFERENCE

**CONTINUOUS INNOVATION  
FOR SUSTAINABLE HEALTH  
AND CLIMATE RESILIENCE**

**PROCEEDING**

**FACULTY OF NURSING UNIVERSITAS AIRLANGGA**

**in collaboration with PUSTAKA SAGA**

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THE 13<sup>TH</sup> INTERNATIONAL NURSING CONFERENCE

# **CONTINUOUS INNOVATION FOR SUSTAINABLE HEALTH AND CLIMATE RESILIENCE**

PROCEEDING

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## **PENERBIT**

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## FOREWORD

The book is made as the ongoing effort to embrace rapid changes in our world. We need to prepare and leverage innovative approaches in dealing with social, economic, and environmental changes. Also, we have to help the population achieve sustainable health and improve climate resilience, mainly through nursing education, research, and practice.

This book covers the recent discussion made by nursing scholars in various topics including nursing education, community nursing, clinical nursing, management and leadership, research practice, as well as innovations for the COVID-19 challenge. It also covers discussion on nursing disaster management, non-communicable diseases, mental health and wellbeing, maternal and child health, tropical diseases, health law and policies, climate change, health-related issues, and sustainable development goals.

It has been more than two years since we live in the COVID-19 pandemic that we hope will end soon. To welcome the new era, nurses need to be active in advocating sustainable health and climate resilience for the better future. As the largest health workforce, nurses have pivotal roles in making changes with innovative strategies and actions. Nurses should realize that, with togetherness and collaborations, they are not only able to treat patients individually but also address problems in the society and environment. That is the spirit that we want to bring: *Continuous Innovation for Sustainable Health and Climate Resilience*.

We hope this book provides good contribution in increasing the quality of health care services and nursing scholarships. We thank our authors who have been willing to share their ideas and expertise to the readers. Thank you.

INC 13 COMMITTEE

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# Correlation between Self-Acceptance and Quality of Life in Patients with Type 2 Diabetes Mellitus

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## ABSTRACT

**Introduction:** The problem that often occurs in patients with Type 2 Diabetes Mellitus (T2DM) is the decline in quality of life. Increasing self-acceptance can improve the quality of life in T2DM patients. This study aimed to analyze the relationship between self-acceptance and quality of life in T2DM patients.

**Methods:** This study used an observational-analytic design with a cross-sectional approach. As many as 84 T2DM patients were involved by a consecutive sampling technique. Data collection was conducted using the Unconditional Self-Acceptance Questionnaire (USAQ) and Diabetes Quality of Life (DQOL) questionnaire. *Data analysis was performed by the Spearman rank correlation test with a significance level of 0.05.*

**Results:** The result showed that the median value of self-acceptance was 124 (*min-max=77-139*). The median value of quality of life was 49 (*min-max=29-60*). There was a moderate positive correlation between self-acceptance and quality of life in T2DM patients (*p-value: 0.001; r: 0.540*). The higher the level of self-acceptance, the better the quality of life.

**Conclusion:** This study suggests the importance of assessing the aspect of self-acceptance to improve the quality of life in T2DM patients.

**Keywords:** Self-acceptance, quality of life, type 2 diabetes mellitus

## INTRODUCTION

Diabetes Mellitus (DM) has a negative impact on the patient's quality of life due to emotional changes, limited conditions, and poor acceptance process (Silva *et al.*, 2018). Research by Chaidir, Wahyuni and Furkhani (2017) showed that 47 of 89 DM patients (52.8%) had a poor quality of life. A study by Alfian, Herlyanie and Purwantini (2018) revealed that 63 of 82 DM patients (76.8%) had a poor quality of life supported by high patient glucose levels. Research in Jember showed that 69 of 146 T2DM patients (47.3%) had poor quality of life (Azila, 2016).

The low quality of life causes reduced self-control, worsening blood glucose control, increasing the risk of complications and the onset of DM symptoms. Quality of life measures an individual's ability to overcome physical problems and maintain long-term health and well-being (Jain, Shivkumar and

Gupta, 2014). One of the efforts to improve the quality of life is through good self-acceptance. The stage of self-acceptance is closely related to how DM patients adapt to problems with their physical condition (Bieñ *et al.*, 2015). Self-acceptance in DM patients affects the behavior that individuals raise in overcoming the issues of their condition. High self-acceptance in DM patients will show better well-being and quality of life and impact good self-management, significantly impacting the HbA1c value (Schmitt *et al.*, 2018). Self-acceptance contributes 48.7% to the motivation of the patient's recovery in dealing with their condition's problems. The purpose of self-acceptance for people with DM is that individuals accept their shortcomings and can overcome their emotional states such as anger, depression, and guilt (Sofiyah, 2016).

The research by Yan, Marisdayana and Irma (2017) showed that 66.2% of 77 DM patients had low self-acceptance. After being diagnosed with type 2 DM, individuals said they lacked confidence, felt different from others, and were easily offended by other people's criticism of their condition. The contribution of self-acceptance to enthusiasm in dealing with problems with the physical condition of DM patients was still low at 48.771% (Hasan, Lilik and Agustin, 2013). The Schmitt *et al.*, (2018) study indicated that 135 DM patients (22.3%) had low self-acceptance. This condition results in individuals having four times the risk of being in poor glucose control and the risk of complications.

Good self-acceptance efforts in chronic diseases such as DM make individuals highly aware of their health problems. The existence of self-acceptance facilitates adaptation in individuals to find inner peace for a better quality of life and reduces the risk of disease-related complications (Silva *et al.*, 2018). This study aimed to analyze the relationship between self-acceptance and quality of life in type 2 DM patients.

## **METHODS**

### **Study Design**

The design of this research was analytic observational with a cross-sectional approach. This study analyzed the relationship between self-acceptance and quality of life in type 2 diabetes mellitus patients.

### **Population, Samples, and Sampling**

The population of this study was type 2 diabetes mellitus patients who visited the Internal Medicine Unit of Level III Baladhika Husada Hospital, Jember, East Java. The average number of visits by type 2 DM patients per month from January to September 2018 was 197 people. The sample in this study was type 2 DM patients who visited the Internal Medicine Unit of Level III Baladhika Husada Hospital Jember and met the criteria. The inclusion criteria were: being diagnosed with type 2 DM; DM duration > three months; able to communicate well; aged between 20-79 years old; willing to be respondents in the study. The exclusion criteria were: type 2 DM patients who have physical limitations such as blindness, deafness, and physical disability; type 2 DM patients with cognitive impairment such as Alzheimer's, dementia, and other cognitive disorders (through the Mini-Mental State Examination [MMSE] assessment), and type 2 DM patients with comorbidities such as stroke or heart disease or discomfort conditions that do not allow them to participate in the study. The sample calculation used G\*power with effect size: 0.30, error probability: 0.05, power (1- $\beta$  error probability): 0.80, obtained as many as 84 respondents as a sample. The sampling technique was consecutive sampling.



## **Instruments**

The Unconditional Self-Acceptance Questionnaire (USAQ) was used to measure self-acceptance. This questionnaire was translated and modified by Widiastuti and Yuniarti (2017). The validity test result was  $r=0.335-0.737$ , while the reliability test result using Cronbach's alpha was 0.923 (Widiastuti and Yuniarti, 2017). The questionnaire contains 21 questions with four indicators, namely individuals accepting themselves unconditionally (6 items), individuals realizing that humans have weaknesses (5 items), individuals realizing positive and negative things within themselves (5 items), individuals realizing themselves as valuable persons (5 items). The total score of the questionnaire is between 21-147, while the score for each indicator is between 1-7. The higher the value, the better the self-acceptance of type 2 DM patients.

The Diabetes Quality of Life (DQOL) questionnaire measured quality of life. The DQOL questionnaire was translated and tested for validity and reliability by Chusmeywati (2016). The validity test was  $r=0.600$ . Cronbach's alpha's reliability test was 0.676 (Chusmeywati, 2016). The instrument consists of 12 questions divided into two indicators: the satisfaction patients felt regarding the disease and its treatment (7 items) and the impact felt by patients due to DM (5 items). The total score range is between 12-60, while the score for each indicator is between 1-5. The higher the value, the better the quality of life for type 2 DM patients.

## **Procedure**

Data collection was carried out in the internal medicine unit of the Level III Baladhika Husada Hospital Jember. The researcher coordinated with nurses at the Internal Medicine Unit of Level III Baladhika Husada Hospital Jember regarding the determination of samples. Next, the researcher explained the aims and objectives of the study to the respondents and asked for approval from the consent form if they were willing to participate in the study. MMSE assessment was conducted on respondents aged >60 years old. After that, the researcher explained to the respondents how to fill in the demographic data, USAQ, and DQOL questionnaires. If the respondents had filled out the questionnaire, the researcher checked the completeness of the respondent's answers.

## **Data Analysis**

Data analysis used the Spearman-rank test with a significance value of 0.05.

## **Ethical Clearance**

This research was conducted after obtaining approval from the Research and Community Service Institute of the University of Jember (No: 4644/UN25.3.1/LT/2018) and Level III Baladhika Husada Hospital Jember (No: B/614/XI/2018).

## **RESULTS**

### **Characteristics of Respondents**

Table 1 reveals that the median value of the respondent's age was 60 years, ranging between 35-77 years. The range of illness duration was 1-27 years with a median of 5 years. The number of females (69%) was more than males (31%). The most common educational background was Junior High School (23.8%). Most of the respondents were married (77.4%) and housewives (52.4%).

Table 1. Characteristics of respondents.

Characteristics	n (%)	Median (min-max)
Age (years old)	-	60 (35-77)
Diabetes Duration (years)	-	5 (1-27)
Gender		
Male	26 (31%)	-
Female	58 (69%)	-
Education Level		
None	11 (13.1%)	-
Elementary School	18 (21.4%)	-
Junior High School	20 (23.8%)	-
Senior High School	19 (22.6%)	-
University	16 (19%)	-
Marital status		
Single	1 (1.2%)	-
Married	65 (77.4%)	-
Widow	18 (21.4%)	-
Employment status		
Housewife	44 (52.4%)	-
Farmer	2 (2.4%)	-
Civil servant	13 (15.5%)	-
Entrepreneur	17 (20%)	-
None	3 (3.6%)	-
Private employee	5 (6%)	-

### Self-Acceptance

Table 2 shows the mean value of self-acceptance was 120.42 with a median value of 124 (min-max= 77-139). The highest mean value (5.87) was in the indicator of individuals realizing themselves as valuable persons. While the lowest mean value (5.65) was in the indicator of individuals accepting themselves unconditionally.

Table 2. Self-Acceptance of respondents

Variable	Mean	Median	Min-max
Self-acceptance	120.42	124	77-139
Individuals accept themselves unconditionally	5.65	5.67	3.17-6.67
Individuals realize that humans have weaknesses	5.71	6	3.20-6.80
Individuals realize positive and negative things within themselves	5.71	5.8	3.80-7
Individuals realize themselves as valuable persons	5.87	6	4-7

### Quality of Life

Table 3 indicates the mean value of quality of life was 48.80 with a median of 49 (min-max=29-60). Patients' satisfaction regarding the disease and its treatment had a higher mean value (4.09) than the indicator of the impact felt by patients due to DM (4.03).

Table 2. Quality of life of respondents

Variable	Mean	Median	Min-max
Quality of life	48.80	49	29-60
Satisfaction felt by patients regarding the disease and its treatment	4.09	4.07	2.17-5
The impact felt by patients due to DM	4.03	4.10	1.20-5

### Correlation between Self-acceptance and Quality of Life in Type 2 DM Patients

Table 4 shows a positive moderate correlation between self-acceptance and quality of life in Type 2 DM patients (p-value = 0.001, r = 0.540). A positive correlation indicates the higher the value of self-acceptance, the better the quality of life.

Table 3. Correlation between Self-acceptance and Quality of Life in Type 2 DM Patients

Variable	Quality of life	
Self-acceptance	r	0.540
	p value	0.001

## DISCUSSION

### Self-Acceptance of Type 2 DM Patients

The basic concept of comprehensive management of the chronic disease is the self-acceptance of disease conditions. Self-acceptance is used as a form of adaptation to find inner peace, a better quality of life, and reduce the risk of disease complications (Silva *et al.*, 2018). This study showed that the mean value of the respondents' self-acceptance was 120.42. This value was close to the maximum score of the USAQ questionnaire (147); this indicates that respondents had good self-acceptance. Yhani and Karyono (2014) research also revealed a high self-acceptance score from 40 patients with type 2 DM.

Self-acceptance can be influenced by age, gender, marital status, and DM duration. In this study, the average age of the respondents was 58.58 years. High self-acceptance scores in middle adulthood are because they have a lot of experience in the past. From experience, they can think better about changes in their health and accept their condition (Yhani and Karyono, 2014). The research of Shallcross *et al.* (2013) explained that increasing a person's age is associated with experiences that encourage better self-acceptance. Regarding gender, there were more female respondents than male respondents in this study. Women have good self-acceptance because women are more open in identifying themselves with others. This condition makes family and friends help and support changes in their condition so that individuals are more accepting of their situation (Mathew *et al.*, 2012). Most respondents in this study were married. Married people tend to be able to accept themselves because they have someone who is trusted to share problems about their condition and who is considered capable of providing support in all conditions (Okwaraji *et al.*, 2017). About the length of DM duration, the results revealed that the average DM duration in this study was 7.08 years. Individuals suffering from type 2 DM between 1 to 7 years show effective coping, thereby increasing the individual's self-acceptance value. This condition is also caused by the longer suffering from type 2 DM so that individuals can understand their situation and carry out independent care (Shayeghan *et al.*, 2016).

The results disclosed that the indicator of individuals realizing themselves as valuable persons had a higher average value than other indicators. High self-esteem individuals affect self-acceptance because even though individuals make mistakes and experience failures, individuals still feel like valuable people. This condition will impact the management of type 2 diabetes (Widodo, Bahari and Halis, 2015). On the other hand, individuals with low self-esteem only focus on negative aspects and spend little time thinking positively (Okwaraji *et al.*, 2017). Individuals who have low self-esteem are prone to depression; the impact of depression is that individuals feel worthless, incompetent, and inadequate (Orth and Robins, 2013). Based on this study's results, the aspect where individuals realize themselves as valuable persons is crucial to increasing the self-acceptance of type 2 DM patients.

The indicator that had the lowest average value was that the individuals accept themselves unconditionally. This indicator relates to the factor of identification with people who have good self-adjustment, self-respect, positive social attitudes, and a stable self-concept. A low value on this indicator could be due to a lack of social support for patient condition changes. Social support affects the increase in control of people with type 2 diabetes because they need support from others. According to Shao *et al.* (2017) social support can encourage behavioral changes to disease conditions, positive mental and emotional changes in oneself, and strengthen beliefs and self-confidence, impacting physical health.

### **Quality of Life of Type 2 DM Patients**

Quality of life is an individual's perception of his condition in living life in the context of the culture and value system they adhere to and related to their goals, expectations, standards, and concerns. Quality of life consists of various multidimensional aspects such as physical health, psychological state, level of independence, social relationships, personal beliefs, and environment (World Health Organization, 1997). The results of this study revealed that the average quality of life was quite good at 48.80, closer to the maximum value of the DQOL questionnaire of 60.

Quality of life can be influenced by age, gender, marital status, and DM duration. The average age of respondents in this study was 58.58 years. Increasing age can improve the quality of life; individuals in old age have gone through a period of change in their lives, so they tend to evaluate their lives with positive behavior (Wahyuni and Anna, 2015). Regarding gender, the number of female respondents in this study was more than males. According to Rantung, Yetti and Herawati (2015) gender is related to the quality of life in type 2 DM patients. Women are more interested in their health status, which affects self-care behavior that will impact normal glucose levels to improve their quality of life.

In terms of marital status, most of the respondents in this study were married. Study by Wahyuni and Anna (2015) showed a relationship between marital status and quality of life. This is associated with support from partners in carrying out consistent care such as monitoring diet, support for physical activities and sports, treatment support, and helping to obtain information so that it affects the quality of life of type 2 DM patients. Research by Tamara *et al.* (2014) disclosed that as many as 41 married people (89.1%) have a better quality of life. This is because marriage positively impacts health because of the partner's attention. Patients with marital status have higher self-esteem and are a source of adaptive coping to stressors so that their quality of life is better. In this study, the average length of DM duration was 7.08 years. The longer an individual suffers from type 2 DM, the better the quality of life. This condition is influenced by the aspect of the patient's condition acceptance generated by high spirituality and facing illness by surrendering to God more (Wahyuni and Anna, 2015).

The patient's satisfaction indicator has a higher value than the impact felt by the patient. Based on research conducted by Retnowati and Satyabakti (2015), aspects of satisfaction felt by type 2 DM patients include relationships with family and the existence of sufficient and quality free time to make the quality of life high for individuals. The indicator of impact has a low value due to the perceived impact related to sexual disorders, feeling limited by the rules for consuming food, not understanding the condition of the disease, often experiencing physical symptoms such as pain, and feeling worried about the emergence of disease complications.

### **The Correlation between Self-Acceptance and Quality of Life in Type 2 DM Patients**

One aspect that can affect the quality of life in type 2 DM patients is the self-acceptance of the disease. The existence of self-acceptance contributes to better self-motivation, goal achievement, and overcoming disease difficulties (Bień *et al.*, 2015). This study indicates a moderate positive correlation between self-acceptance and quality of life in type 2 DM patients. It means that the higher the value of self-acceptance, the higher the quality of life.

Type 2 diabetes mellitus will be experienced by patients throughout their life and requires ongoing treatment to maintain normal glucose levels. Ongoing special needs such as undergoing pharmacological therapy, positive lifestyle changes, monitoring glucose levels, and concerns about disease complications affect patients' quality of life with type 2 diabetes (Yudianto, Rizmadewi and Maryati, 2008). Quality of life is an individual's perception of well-being, including physical, psychological, social, and spiritual conditions (Zurita-Cruz et al., 2018). According to Kumar and Krishna (2015), the existence of a good quality of life in type 2 DM patients will positively impact treatment management efforts to prevent disease complications. Laoh and Tampongangoy (2015) explains that a good quality of life can facilitate the treatment process for type 2 DM because there is a high awareness of health. Quality of life is one of the main goals of self-care in patients with type 2 diabetes. If blood glucose levels can be appropriately controlled, physical complaints due to acute and chronic complications of type 2 diabetes can be avoided.

Each individual has their way of improving the quality of life, one of which is self-acceptance. Self-acceptance is a condition in which individuals can actualize themselves by accepting all the advantages and disadvantages that exist within themselves (Bernard, 2013). The self-acceptance stage is a crucial stage related to the relationship between patients and type 2 DM. Good self-acceptance in chronic diseases such as type 2 DM makes individuals highly aware of the health problems they experience (Silva et al., 2018). High self-acceptance helps individuals in various ways which include facilitating individuals in adjusting to their disease conditions, giving individuals a sense of security, increasing self-confidence to live, actively participating in type 2 DM treatment, having an optimistic and hopeful attitude towards life, and able to overcome difficulties in dealing with the disease (Bień et al., 2015).

In this study, it was found that there was a significant relationship between self-acceptance and quality of life in type 2 DM patients. Type 2 DM patients with high acceptance can improve their quality of life. Type 2 DM patients use self-acceptance to adapt to their disease to find inner peace to enhance a better quality of life and reduce the risk of complications. The moderate relationship between self-acceptance and quality of life indicates that self-acceptance plays a significant role in influencing the quality of life in type 2 DM patients.

## **CONCLUSIONS**

There was a moderate positive correlation between self-acceptance and quality of life in type 2 DM patients. The higher the level of self-acceptance, the better the quality of life. Assessing the aspect of self-acceptance is required to increase the quality of life in patients with type 2 DM.

## **CONFLICT OF INTEREST**

The Authors declare that there is no conflict of interest.

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