

**UNCERTAINTY IN ILLNESS AND PSYCHOLOGICAL STATUS IN PATIENTS WITH DIABETES MELLITUS**

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**ABSTRACT**

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Poor psychological well-being is an important issue that must be addressed in managing Diabetes mellitus. Uncertainty of diabetes mellitus indicates the inability of individuals to determine the meaning of events associated with a disease. The uncertainty of diabetes mellitus causes stress because of the uncertainty in the disease process. The purpose of this study was to determine the description of Uncertainty in illness and psychological status in Diabetes mellitus clients in the Jember Health Center Area. The design of this study was explanatory survey with cross sectional approach. The study population was all Diabetes mellitus clients in the Jember Community Health Center. The sample size of 250 Diabetes mellitus clients was recruited by simple random sampling technique. The data used in this research is descriptive statistical analysis so that the results will be obtained in the form of a frequency distribution. The results showed that the highest level of client expectations was with a low expectation rate of 51.2%. The highest level of distress of respondents who had Diabetes mellitus was in the category of distress by 50.4%. The level of anxiety felt by most respondents was in the category of disturbance by 47.6% and uncertainty was in the less category by 63.2%. A greater understanding of the nature of uncertainty and psychological status in this context may not only provide a unique picture and challenge of Diabetes mellitus clients, but also illustrate how future interactions between health care providers, education programs, and interventions will be increased in Diabetes mellitus clients.

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**BACKGROUND**

Diabetes mellitus is a chronic, complex disease and management requires significant treatment, making it difficult for patients to manage diabetes mellitus. Diabetes mellitus clients are required to overcome the challenges of the condition, how to overcome the disease, adjust motivation, intellectual and emotional (Davies, 2019). Clients of diabetes mellitus often discuss the difficulty of adjusting to the diagnosis. Specifically, diabetes mellitus clients report difficulties regarding the acceptance of a diagnosis requiring time that requires constant self-management. This is a different response from a psychological reaction or type of sadness to rejection and avoidance (Ünal, 2018). Besides diabetes mellitus shows

the inability of individuals to determine the meaning associated with the disease. The uncertainty of diabetes mellitus causes stress due to illness, treatment and side effects (Davies, 2019).

The mortality rate due to Diabetes mellitus disease worldwide reaches 1.5 million people with a prevalence of Diabetes mellitus estimated at 9% of the total world population (Cho et al., 2018). The prevalence of Diabetes mellitus sufferers in Indonesia in the order of 12 world with the number of patients as many as 12 million people and is expected to increase to 21.3 million by 2030. The population of Diabetes mellitus sufferers in Indonesia is estimated to increase between 1.5 to 2.5% with a population of about 200 million people, means fewer 3-5 million people in Indonesia suffer from diabetes (Riskesdas,

2018).

Uncertainty in Diabetes mellitus clients shows aspects in the experience of the disease. Disease can interfere with the stability of life received, and the results of this disease can be unpredictable (Caruso, Giammanco, & Gitto, 2014)). Many aspects that influence the uncertainty situation, in this case, influence the psychological influence on experience. A number of studies have reported the negative impact of uncertainty on psychological outcomes characterized by anxiety, depression, hopelessness and psychological distress. More than 40% of diabetics experience psychological distress (Ogurtsova, Guariguata, & Whiting, 2015). This is caused by high pressure on changes in medication and health welfare since the time of diagnosis of diabetes mellitus. An international survey of Attitudes, Wishes and Needs (DAWN2), covering more than 16,000 in 17 countries on four continents, reports that the proportion of people with diabetes mellitus tends to experience diabetes-related depression around 13.8% and 44.6%, and poor quality of life overall is 12.2%. Symptoms of depression increase affecting one in four adults with type 2 diabetes mellitus by 27%. Depression levels of diabetes mellitus clients range from 8-15% representing the severity of depression which involves a decline in social and occupational functions (Chew, 2014).

The high level of poor psychological well-being is an important problem that must be addressed in diabetes management. However, psychological well-being is understood as an important goal of diabetes management, often little attention is given to overcoming the psychological aspects of diabetes (Ramkisson, Pillay, & Sartorius, 2016). Diabetes mellitus clients struggle to optimize their diabetes control, often due to psychological and social problems. About a third of diabetics have psychosocial problems that hamper the ability of diabetes mellitus clients to manage the diabetes (Christina, Feig, & Duque-serrano, 2017).

Clients of diabetes mellitus have been found to have increased symptoms of anxiety conditions. The impact of anxiety symptoms is significant for diabetics. Anxiety is associated with persistence not consistent with diabetes self-management behavior, decreased quality of life and worsening coping mechanisms (Paper, 2018). Specific anxiety in the experience of diabetes, such as fear of hypoglycemia or needle phobia, can be a significant barrier to self-care activities. In addition, studies of depression in diabetics show depressive episodes that are longer in duration and are more persistent than those ob-

served in the general population (Christina et al., 2017). Depression is known to have a two-way relationship with diabetes. Increased depressive symptoms are associated with worsening glycemic management, greater glycemic travel, greater severity of various diabetes complications, persistence inconsistent with independent diabetes management behavior, greater functional disability and a higher risk of mortality (Paper, 2018). The client of diabetes mellitus is constantly challenged with urgent disease demands and uses various approaches to overcome these problems. An important element of diabetes mellitus care is self-care and depends on the patient's own responsibility for the management of personal psychology and social situations (Ducat, Rubenstein, & Philipson, 2015).

The theory of uncertainty in disease provides a comprehensive framework for viewing chronic disease experiences and functioning to promote optimal adjustment. This theory helps explain the stress associated with treatment diagnosis, chronic illness, the process by which individuals assess the uncertainty inherent in the disease experience and the importance of caregivers providing information in understanding disease uncertainty (Chen, Kao, & Cheng, 2018). One way to increase the success of deflection in overcoming psychological DM clients is to use the theory of uncertainty in illness approach. The purpose of this study is to determine the description of uncertainty in illness and psychological status in Diabetes Mellitus clients in the Jember Health Center Area.

## METHOD

The design of this study was explanatory survey with cross sectional approach. The study population was all DM clients in the Jember Community Health Center. Sample size is 250 DM clients using Slovin formula and recruited by simple random sampling technique with DM Client criteria that have unstable blood sugar regulation, DM clients that have been diagnosed with DM > 5 years, DM clients with age range 26-60 years, Level Minimum client education is junior high school (SMP) graduates. The research variables are psychological status (Hope, Diabetes distress, Anxiety) and uncertainty of the disease process (Uncertainty in illness).

The instrument used in this study was a modification of the hope questionnaire from the Herth Hope Index, Diabetes distress, Hospital Anxiety and Depression Scale (HADS) and the Modified Uncertainty Questionnaire from the MUIS-C questionnaire. The questionnaire used in this study has been tested for validity with  $r$  tables 0,425-0.894 while the reliability

value of the questionnaire with Cronbach alpha value 0.814-0.974. This research was conducted for a month from December 2019 to January 2020 conducted at the Jember Regional Health Center.

The data used in this research is descriptive statistical analysis so that the results will be obtained in the form of a frequency distribution. Data analysis aims to obtain a description of the psychology and uncertainty of the disease process (uncertainty in illness) Diabetes Mellitus which is done by calculating the total score of each respondent. Ethics in research conducted in the Jember puskesmas area refer to the 2017 National Health Research and Development Ethics Guidelines and Ethics and pass the Ethics Commission at the Faculty of Nursing at Airlangga University in Surabaya.

## RESULT

The description of psychological variables in this study are expectations, Diabetes distress and anxiety as well as the uncertainty of the disease process (uncertainty in illness) and the following description of research results based on psychological variables.

The results of the calculation of psychological variable descriptive data in the table above show that of the 250 respondents, the highest level of client expectations was with a low expectation rate of 51.2%. The level of distress of respondents. Who had the highest Diabetes mellitus was in the category of distress by 50.4%. The level of anxiety felt by most respondents was in the category of disturbance by 47.6%.

The results of the calculation of the descriptive variable uncertainty variable (Uncertainty) in table 2 show that of the 250 respondents, it is in the less than 63.2% category.

## DISCUSSION

Descriptive analysis of psychological factors has an influence on uncertainty. Psychological factors consisting of hope, diabetes distress and anxiety affect uncertainty. This is in line with research (Bailey & Stewart, 2014), uncertainty associated with stress and anxiety and can fluctuate in the path of disease, the most important thing is that during the decision phase of the diagnosis of patient treatment (Aligood, 2014). The effect of uncertainty on psychological outcomes is mediated by the effectiveness of coping efforts to reduce uncertainty which is assessed as a hazard.

Uncertainty is defined as a situation involving cognition where the subject cannot assign a value to an event or object and cannot predict the results accurately due to lack of signal, and unclear and inaccurate information (Li, 2019). Mishel (1998) put forward the theory of uncertainty in illness, that is, uncertainty in the illness suffered, uncertainty starts from only one aspect of self, but can spread to other aspects, uncertainty is greater with increasing disturbance to aspects of self-identity and one's life (Ogurtsova et al., 2015).

According to the theory, uncertainty develops from several antecedents variables (provider structure, stimulus framework, and cognitive capacity), which are mediated by personality characteristics and primary judgments (Chen et al., 2018). Mediators between uncertainty and the outcome of uncertainty include: optimism and information seeking (Brown, 2018).. Mishel explained in the theory of uncertainty in illness that draws from the model of the process of information and personality research from the discipline of psychology, which characterizes uncertainty as a cognitive state due to insufficient signals or signs to form schemes, or internal representations of certain events or situations (Brown, 2018). The process of evaluating each individual on uncertainty is what is dangerous and what opportunities can occur, or what are the negative and positive outcomes that occur (Goutzamanis et al., 2018).

Uncertainty in perception is uncertain because individuals cannot determine things related to the disease. Uncertainty occurs when individuals cannot assign definite values to the object / event due to lack of signs and information (Middleton, LaVoie, & Brown, 2012). Mishel categorizes uncertainty as something new, complexity, ambiguity, and unpredictability and lack of information. Clients with high education have more ability to access information about their illnesses so as to minimize the state of uncertainty in themselves and improve psychological status (Middleton et al., 2012).

Uncertainty surrounding health conditions substantially influences the way individuals understand, integrate, and communicate about illness, although the uncertainty associated with acute illness can subside through healing or treatment, chronic illness poses unique challenges for individuals because doubts can persist or become cycles over time (Mullins et al., 2017). Uncertainty is often associated with chronic disease experience (Mishel, 1990), but the nature of uncertainty is not necessarily uniform in various conditions or diseases because it has variations with unique symptoms, complications, treatment

Table 1. Distribution of Psychological Variables (Hope, Diabetes Distress, and Anxiety) to Diabetes Mellitus Clients in the Jember Health Center in 2020

Variabel	Frequency	Percentage %
a. Hope index:		
Low	128	51,2
Hight	122	48,8
b. Diabetes Distress:		
Distres	126	50,4
Normal	124	49,6
c. Anxiety :		
Abnormal	90	36,0
Disturbance	119	47,6
Normal	41	16,4

Table 2. Distribution of Uncertainty Variables in Diabetes Mellitus Clients in the Jember Health Center in 2020

Uncertainty Variables	Frequency	Percentage %
Good	92	36,8
Less	158	63,2

plans, and regimens (Chen et al., 2018). Uncertainty comes from several sources within the stimulus framework, including consistency (in) patterns, symptom events, and familiarity of experience or health procedures (Bailey & Stewart, 2014).

The level of distress of Diabetes mellitus patients in this study is in the category of distress and the majority of Diabetes mellitus clients experience anxiety disorders followed by low expectations of Diabetes mellitus clients (Christina et al., 2017). These results are strengthened by the statement of the Diabetes mellitus client in which the client expressed a high sense of concern related to the disease process that was suffered as well as the belief in low hopes of recovery which triggered the Diabetes mellitus client to experience distress. This is in line with a number of studies (Aligood, 2014) which show that the negative influence of uncertainty on psychological outcomes has characteristics as anxiety, psychological distress and loss of hope.

Good expectations for Diabetes mellitus clients will be able to reduce uncertainty and improve coping and psychosocial adaptation of Diabetes mellitus clients. The researcher analyzes that expectation basically determines the psychological condition of the Diabetes mellitus client (Garrett & Doherty, 2014). Diabetes mellitus clients who have good expectations will reduce feelings of anxiety and distress so that feelings of uncertainty (uncertainty) can be

overcome and can increase psychosocial adaptation. The psychological condition of the Diabetes mellitus client will be good if the anxiety that is felt can be overcome well this has an effect because if the anxiety of the Diabetes mellitus client is high then it will be a frustrating product that causes the disruption of achieving the desired goal (Ah. Yusuf, Fitryasari, & Nihayati, 2015).

Anxiety in Diabetes mellitus clients can be expressed directly through physiological and behavioral changes or indirectly through cognitive and affective responses. Including the occurrence of symptoms or coping mechanisms developed as a defense against anxiety (W.Stuart, 2013). This is consistent with the Diabetes mellitus client's statement during the interview where the client described feelings of anger, stress, sadness and helplessness, these expressions were expressions of fear and excessive vigilance (Davies, 2019).

The most important psychological trait is resistance to stress, where resistance is associated with a number of psychosocial factors and active coping styles (Chew, 2014). Diabetes mellitus clients who have life goals and efforts to recover are effective ways to increase one's resistance to distress, but if the client experiences severe distress then the client cannot control or control himself and may be more vulnerable to future stresses and also increases feelings of high uncertainty (Mullins et al., 2017).

Researcher's assumptions related to the research findings are that the psychological component of DM clients is mostly in the disorder category. This is indicated by external sources in the Diabetes mellitus client which include loss of one's value due to the illness, dilemma, and pressure on the disease. While internal sources are a threat to physical integrity due to disease. This is important to remember, however the difference in this category is only theoretical. Diabetes mellitus client response to the stressor whatever the nature and origin, is a unity. No particular event creates the same stress for everyone or even for the same person at different times. The psychological well-being of Diabetes mellitus patients will affect the uncertainty of the disease process and increase psychosocial adaptation with the acceptance of the disease process suffered.

## CONCLUSION

Diabetes Mellitus clients' perceptions about the seriousness of diabetes affect the way they cope with the disease. Diabetes mellitus, including the degree to which a person receives a diagnosis, how the individual adjusts to routine self-care, how to cope with health development and the potential for development associated with diabetes. Regarding life as a diabetic is stress that survival requires handling psychological problems and the patient's psychological reaction to diabetes.

Referring to the results of research needed to conduct nursing care to improve psychosocial adaptation of Diabetes Mellitus clients so that it will improve the quality of services and forms of prevention against psychological disorders that often occur in Diabetes Mellitus clients.

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