

論文の内容の要旨

Examining the Relationship Between Self-Stigma and Self-Management Behaviors in Patients with
Type 2 Diabetes

(2型糖尿病患者におけるセルフスティグマと自己管理行動の関係に関する研究)

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Chronic illness, in particular type 2 diabetes, requires a considerable amount of self-care management by patients in their everyday lives. Additionally, type 2 diabetes is one of the most common chronic illnesses, and its prevalence has dramatically increased worldwide in the past two decades. Likewise, the prevalence of type 2 diabetes in Japan has been on the rise. As the number of patients with type 2 diabetes increases, some preconceived ideas about their particular characteristics result in blame being placed on them, because their condition is considered to be a lifestyle-related disease. People with type 2 diabetes are often subject to stigmatizing attitudes from the general population. Public stigma represents negative reactions of the general public towards a group based on stereotypical attributes that distinguish that group in society. Public stigma is also known as social stigma. Conversely, self-stigma is experienced by individuals who have negative attitudes towards themselves as a result of their condition and/or characteristics. Self-stigma is also referred to as internalized stigma. Public stigma and self-stigma are two distinct constructs. Recently, public stigma has been highlighted and researched in relation to type 2 diabetes. According to these studies, public stigma has a negative impact on diabetes self-care management. However, previous studies have shown that merely perceiving public stigma does not necessarily lead to self-stigma. Self-stigma is the issue that will impact patients' behavioral goals through decreased self-esteem, self-efficacy, and psychological well-being. As a result, patients become reluctant to seek necessary treatment and there is a reduced treatment adherence. Therefore, it is extremely important to understand the extent to which patients experience self-stigma, so that early medical interventions for self-esteem and self-efficacy can be provided to avoid suboptimal treatment outcomes. Nevertheless, there has not yet been a study on self-stigma in patients with type 2 diabetes and how self-stigma could potentially have an impact on their treatment outcomes.

The purpose of this entire study was to examine the relationship between self-stigma and self-management behaviors in patients with type 2 diabetes both qualitatively and quantitatively. First, a qualitative study was conducted to investigate the process of self-stigma and to generate a theoretical hypothesis of it (Study 1). Second, in order to verify the hypothesis formed by Study 1, the Self-Stigma Scale needed to be translated from English to Japanese and assessed in terms of its reliability and validity. The equivalency between the original Self-Stigma Scale and the Japanese version of the scale was also

tested (Study 2). Third, using the Japanese version of the Self-Stigma Scale developed in Study 2, a cross-sectional study was performed to examine the relationship between self-stigma and diabetes self-management behaviors quantitatively (Study 3).

In Study 1, a qualitative study was conducted to explore the process of how stigma can be internalized through negative experiences in patients with type 2 diabetes, by focusing on suboptimal self-care management as a consequence of self-stigma. Twenty-six patients participated at two tertiary referral hospitals. Adults aged 30–64 years and diagnosed with type 2 diabetes for at least three years were eligible. Semi-structured interviews were recorded on audiotapes, transcribed verbatim, and analyzed using a grounded theory approach. The study showed that a core theme, *Keeping a Balance between Patient and Social Roles*, emerged to explain the overall process of experiencing the stigma of type 2 diabetes. The patient role was defined as one in which a patient follows medical advice and takes charge of day-to-day self-care. The social role was defined as one in which a person plays a part as a member of a particular social group such as work or family. Participants with type 2 diabetes had diverse perceptions of their negative experiences related to the illness. It is only when they form a negative image of and relationship to the illness that stigma affects the patient's psychology and behavior in these three processes: *Encountering Negative Experiences*, *Re-Evaluating the Self with Type 2 Diabetes*, and *Reconstructing a Sense of Identity*. While behaving strategically in social situations, participants with type 2 diabetes either accepted, concealed, or rejected their illness. There were four types of strategic actions in adjusting behaviors in social situations among participants with type 2 diabetes: *Adjustment to the Illness*, *Social Disconnection*, *Social Avoidance*, and *Role Conflict*. These actions could be explained using the following two dimensions: a patient's sense of self-worth when taking into account their illness, and a patient's attitude towards social participation. Both the *Social Avoidance* and *Role Conflict* groups lowered their sense of self-worth and we hypothesized these two groups were in a state of self-stigma.

In Study 2, the reliability and validity of a Japanese version of the Self-Stigma Scale (SSS-J) were evaluated using a consecutive sample of 210 outpatients with type 2 diabetes from two university hospitals, one general hospital, and one clinic specializing in diabetes treatment. Confirmatory factor analysis was conducted to assess the factors theorized by the original Self-Stigma Scale. Cronbach's alpha for internal reliability and Pearson's correlations for construct validity were used for evaluation of psychometric properties. Pearson's correlations for test-retest reliability of the SSS-J were also performed. The study showed that the SSS-J was reliable and valid for assessment of the extent of self-stigma in Japanese patients with type 2 diabetes. Confirmatory factor analysis verified the three-factor structure of the SSS-J, consisting of cognitive, affective, and behavioral subscales. The model fit indices were as follows: the goodness-of-fit index was 0.78, the adjusted goodness-of-fit index was 0.70, the comparative fit index was

0.88, and the root mean square error of approximation was 0.07. Cronbach's alpha of the SSS-J was 0.96 (cognitive: alpha = 0.92; affective: alpha = 0.93; behavioral: alpha = 0.83). The SSS-J was associated with self-esteem ($r = -0.43, p < 0.01$), self-efficacy ($r = -0.38, p < 0.01$), and depressive symptoms ($r = 0.39, p < 0.01$). The 2-week test-retest reliability demonstrated satisfactory stability ($r = 0.76, p < 0.01$).

In Study 3, a cross-sectional quantitative study was performed to examine the association between self-stigma and self-care management in patients with type 2 diabetes. We hypothesized that self-stigma would be an independent factor for self-care management in patients with type 2 diabetes and that a higher level of self-stigma would lower a patient's activation level for his/her self-care management. To assess patient's self-care management, the Patient Activation Measure (PAM-13) was used as a suitable approximation since self-management behaviors are clearly associated with patient activation levels. Patient activation is a concept that includes a comprehensive approach to a number of elements related to activation, including the knowledge, skills, beliefs, and behaviors that patients need to manage their illness. A consecutive sample of 209 outpatients with type 2 diabetes from two university hospitals, one general hospital, and one clinic specializing in diabetes treatment was used to test the relationship between self-stigma and patient activation. Using multiple linear regression models, the associations between self-stigma and patient activation scores were systematically examined. Covariates including sex, age, body mass index (BMI), diabetes duration, injection therapy, education, marital status, and size of household were adjusted for. In Model 1, the coefficient of determination was 0.29 ($F(11,197) = 7.35, p < 0.001$). Self-esteem was significantly positively associated with patient activation scores ($b = 0.28, p = 0.001$), while neither self-efficacy nor depressive symptoms were significantly associated with patient activation scores ($b = 0.13, p = 0.101, b = -0.13, p = 0.076$, respectively). When self-stigma was added to the model (Model 2), the coefficient of determination was increased to 0.32 ($F(12,196) = 7.62, p < 0.001$), and the self-stigma was found to be significantly negatively associated with patient activation scores ($b = -0.19, p = 0.006$). In Model 2, self-esteem still had a statistically significant association with patient activation scores; however, the standardized partial regression coefficient of self-esteem was slightly decreased from 0.28 to 0.24.

In conclusion, separate from self-esteem, self-efficacy, and depressive symptoms, self-stigma was independently associated with self-care management in patients with type 2 diabetes. Simply enhancing self-esteem as well as self-efficacy and preventing depressive symptoms are insufficient. Rather, patients need help in developing a positive attitude towards type 2 diabetes and reducing any self-stigma in order to support their self-care management throughout the course of their illness. To optimize the effectiveness of the treatment of diabetes, healthcare professionals should assess whether patients are suffering from self-stigma. Self-stigma can be assessed by observing a patient's attitude towards social activity, including

areas involving self-management of diabetes. This may be characterized by either severely limited social participation, resulting in a seemingly high degree of ‘compliance’ with treatment (*Social Avoidance*), or highly active social participation in an attempt to conceal the illness, resulting in a lesser degree of ‘compliance’ (*Role Conflict*). However, it would be more practical for healthcare professionals to use the validated Japanese version of the Self-Stigma Scale (SSS-J) to assess the levels of self-stigma in individual patients with type 2 diabetes in clinical practice. This is because this self-administered scale is a valuable and handy assessment tool to help healthcare professional identify high-risk self-stigma patients with type 2 diabetes. As a result of using this assessment tool for self-stigma, it would be possible to provide patients with different treatment strategies in addition to early intervention in order to help reduce self-stigma. This could then lead to optimal treatment outcomes.