Nurses' frame of mind in diabetes education: Teaching styles and their formative processes

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Nurses' frame of mind in diabetes education

—Teaching styles and their formative processes—

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ABSTRACT

Aim : The present study was undertaken to conduct a structural analysis of nurses' attitudes as related to diabetes education and to identify the processes leading to these attitudes.
Methods : The grounded theory approach was used to clarify nurses' frame of mind in diabetes education. With 22 nurses as subjects, interviews were carried out, and participatory observations were conducted at care giving locations.
Results : Seven teaching patterns were recognized, and were categorized into two teaching styles, depending on the presence or absence of "life emotions" : "life emotions not apparent" and "life emotions apparent" teaching styles. Also, "accumulation of a nurse's own experience" emerged as how the "life emotions not apparent" teaching style forms, while "accumulation that attaches significance to experience on life emotions" emerged as how the "life emotions apparent" teaching style forms. The availability of a formative process for changing from the former to the latter teaching style then became clear.
Conclusions : "Life emotions" is a concept that forms a factor in the provision of care. A nurse's possessing a "life emotions apparent" teaching style should prove valuable from the standpoint of beneficial educational effectiveness that enables diabetic patients to have a change of consciousness directed to therapeutic behavior.

KEY WORDS

diabetes education ; nurses' attitudes ; teaching style ; formative process ; life emotions

Introduction

Introduction

If patients with diabetes mellitus are to continue receiving the treatment necessary to the control of their disease, it is essential that they change their daily habits and remain aware of their disease during all aspects of daily life. However, the advice given by medical professionals to diabetic patients concerning their daily life is often difficult to implement for social reasons[1-4]. The diabetic patient may feel guilt or a sense of constraint in the relationship to his/her family members, and in some cases the family members' lack of understanding about the disease makes it difficult for the diabetic patient to lead life in a manner that is conducive to good blood glucose control[1].

Kawaguchi[5] conducted a case study of the education provided to patients with chronic disease and separate behaviors or statements made by nurses that did not appropriately evaluate the efforts patients were making, or reflected negative views of the patients. Kohira et al.[6] demonstrated that nurses often fail to evaluate appropriately the actual situation of the individual patient, if nurses interpreted diabetes patients by comparing patients' actual situations, which nurses should use as their starting point for care, with the patient's conditions that nurses seemed to expect to characterize their patients. Many investigators have shown that excessively high expectations on the part of nurses could lead to the nurses behaving in negative ways toward their patients. This means that effective education of diabetic patients is

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not being universally provided at present, constituting a serious problem. In Japan, the number of diabetic patients continues to increase. This being the case, there is an urgent need for nurses to understand the difficulties diabetic patients face during everyday life, and for them to devise methods of patient education that encourage patients to conduct their lives in a positive manner. Even when nurses involved in patient education have copious knowledge and skill as educators, they cannot provide effective patient education unless they make efforts to understand the daily realities faced by diabetic patients. In other words, we may surmise that the level of education being provided by nurses to diabetic patients can be assessed by learning what attitudes the nurses have about their patients.

Close attention has recently been paid to patient education based on the self-efficacy theory[7] or on empowerment techniques[8]. Although it has been proposed that these methods can be useful in regard to patient education, their use does not inherently involve consideration of the aspects of the attitudes or skills of the nurses actually involved in patient education. Kawaguchi et al.[5] created a model for nurses to follow when practicing patient education. However, their model did not deal with the effects or roles that the attitudes of individual nurses would have during their nursing practice. Nor did it show what influences nurses' attitudes have on patient education or how the nurses' current attitudes have been formed. To identify a valid method of educating diabetic patients, it seems useful to employ such technical approaches as the one devised by Benner[9] which rates nurses involved in education on a five-point scale (ranging from the level of novice to the level of master or expert).

In the present study, a structural analysis of nurses' attitudes was conducted to identify the processes leading to these attitudes, in the hope that the findings obtained would lead to the development of a valid technique for educating diabetic patients and also an effective method of training nurses involved in the education of diabetic patients.

Methods

1. Procedures

This study was a qualitative inductive study using a grounded theory approach[10, 11]. Data were collected by a semi-structured interview and the participant-observer method.

Prior to each semi-structured interview, the nurse's consent was obtained, after she was informed about the objectives of the study, the fact that enrollment of nurses in the study was voluntary, that each participant nurse had the right to withdraw consent at any time, and how privacy would be protected. This information was provided by means of a printed leaflet, and the nurses demonstrated their consent by signing a letter of consent. During the interview, we used three open ended questions : (1)Please cite the situation where your patient education was successful ; (2)Please cite the situation where your patient education was unsuccessful ; (3)Please talk about possible effects of your teaching on patients. Each nurse's interview lasted for 30-60 minutes. The total time spent interviewing all the nurses was about 950 minutes. The interviews of those nurses who consented to the use of a tape recorder were recorded and later transcribed into written records.

When the participant-observer method was used, the examiner participated in nursing activities as a day shift nurse, with the consent of the head nurses and all the nursing staff members involved. The examiner participated in the daily patient information exchange between nurses at change of shifts, conferences, and actual nursing care, and observed the atmosphere of the ward as a whole and nurses' care of their patients. Seventeen days(about 100 hours in total) were spent in participant observation. Notes were written on a total of 102 pages of B5 size notebook paper. Most of the data collected by the participant observers were used as auxiliary data to confirm the data collected by interviews, but some of the data from participant observation, related to the time of the nurse interviews, were reproduced for full-scale analysis.

Data analysis was performed in accordance with the procedure developed and described by Strauss & Corbin[12] under the supervision of an investigator who was experienced with research using the grounded

theory approach. The first step was to extract the parts of the thorough written records or the participant observer records related to given themes along with their context. Then, the meaning of these parts was categorized, referring to individual cases. As the number of cases analyzed increased, categorization became increasingly more abstract. In parallel with these processes, theoretical sampling for comparison of opposite or similar pairs was performed to confirm the validity and appropriateness of the categories. After a core category was identified, the associations among different categories around the core category were analyzed, assigned meaning, and a graphic representation was drawn. At the point when the data yielded from new cases was explainable by using the created theoretical system, we made the judgment that we had reached theoretical saturation and completed data collection.

2. Period and subjects

The body of data was collected between December 2000 and September 2001. The subjects of this study were nurses who had been involved in the education of diabetic patients and worked clinically as nurses for 3 years or more. The minimum career duration of 3 years was selected for the following two reasons : (1) Benner defined full-fledged nurses as nurses with at least 3 years of clinical experience ; and (2) we thought that becoming a full-fledged nurse would mean that the nurse had established her/his identity and solidified attitudes as a nurse. Thus, 22 nurses involved in the education of diabetic patients at two internal medicine wards at the K University Hospital were enrolled in this study (11 nurses from Ward A and 11 from Ward B). The 2 wards were not specialized in diabetes mellitus, but both of them were in charge of patients with chronic diseases in general, including chronic endocrine, cardiovascular, gastrointestinal and other diseases. The difference between the two wards was as follows. On Ward A, a nurse in a leadership position had introduced a patient education program specific to this ward for diabetic patients admitted to this ward for educational purposes, and an education team consisting of doctors, nurses, pharmacists and dieticians worked actively at patient education. Therefore, during participant observation on Ward A, the examiner attended the interviews of patients and their families conducted by this experienced leader-nurse (a leader of the diabetic patient education team who had a long career in diabetic patient education and was a professor at a university). Following the selection of nurses on Ward A, we selected nurses on Ward B using theoretical sampling techniques. We selected nurses from these two wards because we intended to compare the attitudes of nurses on Ward A(the ward where a leader-nurse was present and a unique educational program had been introduced) with the attitudes of nurses on Ward B, which lacked these characteristics. On the basis of the data collected from the two wards, we ascertained that theoretical saturation had been reached, and hence we completed data collection.

Table 1 lists some of the background characteristics

Table 1. Background of subjects

Age

	20-25 (years)	26-30 (years)	31-40 (years)	41-50 (years)	Total
Ward A	2	5	1	3	11
Ward B	2	3	3	3	11
Total	4	8	4	6	22

Clinical career

	3-5(years)	6-10 (years)	11-20 (years)	21-30 (years)	Total
Ward A	4	4	0	3	11
Ward B	4	1	3	3	11
Total	8	5	3	6	22

Teaching career

	Less than 3 (years)	3-5(years)	6-10(years)	11-20 (years)	Total
Ward A	1	8	1	1	11
Ward B	3	4	2	2	11
Total	4	12	3	3	22

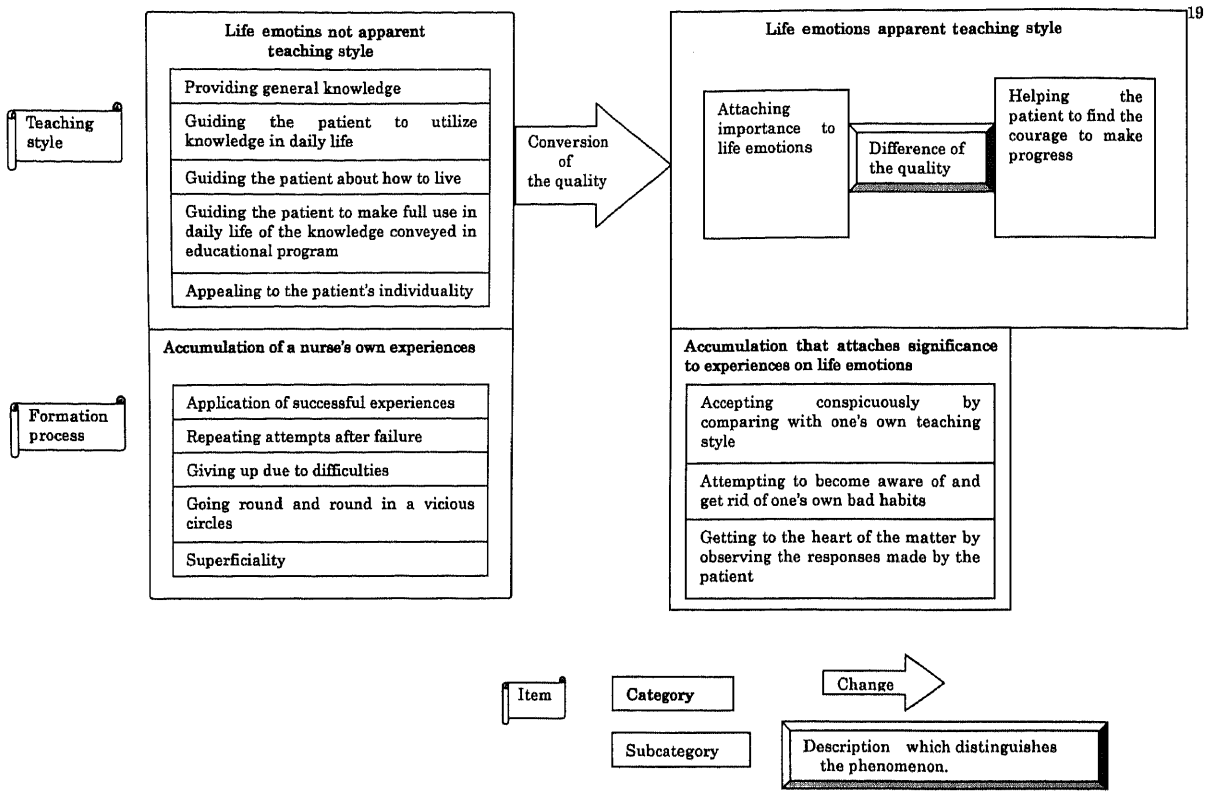

Figure 1. Conceptual scheme of teaching style and formation process

of the 22 nurses involved in patient education who were enrolled to this study. They were all female.

3. Reliability of the results

When analyzing the data collected, we repeated discussions with the supervisor, nurses studying nursing care for diabetic patients and nurses engaged in various other fields of study. The results obtained were presented to 4 nurses (including some subjects of this study) and we confirmed that the results appropriately reflected current medical and nursing opinion concerning education for diabetic patients.

Results

1. Overall structure

Seven abstract educational activities were identified among the attitudes of the nurses involved in diabetes education. These activities were classified into 2 teaching styles. The 7 activities identified were : "providing general knowledge", "guiding the patient to utilize knowledge in daily life", "guiding the patient about how to live", "guiding the patient to make full use in daily life of the knowledge conveyed in the educational program", "appealing to the patient's individuality", "attaching importance to life emotions" and "helping the patient to find the courage to make progress." These activities were classified into two styles, depending on the presence or absence of the core concept of "life emotions" : (1) a teaching style lacking in the perspective of life emotions or life emotions not apparent teaching style and (2) a teaching style making use of the perspective of life emotions or life emotions apparent teaching style. Individual nurses could be identified as following one or the other of these two teaching styles. The style making use of the perspective granted by life emotions was only seen in the ward where there was a leader-nurse, and this style was adopted by only a limited number of nurses.

The two teaching styles differed from each other in terms of how they had emerged within the nurse. The life emotions not apparent teaching style grew out of "accumulation of a nurse's own experiences". This style contained five subcategories, i.e., "the application of successful experiences", "repeating attempts after failure", "giving up due to difficulties", "going round and round in a vicious circle" and

Table 2. Subcategories of "life emotions not apparent teaching style" and examples

Teaching style	Description	Example
Providing general knowledge	General knowledge on diabetes mellitus is provided to patients, without adequate consideration of the individuality. Patients often accept it as general information, but they sometimes pretend to understand it or reject it.	"At our ward, it is a rule to provide such information to patients. We give information routinely under this rule." (Nurse A)
Guiding the patient to utilize knowledge in daily life	Knowledge which seems to be essential for daily living is given, taking practical examples. The patients accept it as an alternative if the provided knowledge fits their own life. Sometimes, they pretend to listen to the nurse or reject the information at all.	"(When asked "Have you attempted to know details of the patient's daily life?") I did not do so to such an extent. The patient was a housewife, whose major duties were sending children to school and make housework. I provided guidance only related to ordinary daily living" (Nurse B)
Guiding the patient about how to live	The nurse guides the patient to lead daily living in a way favorable for the treatment of the disease. The patient follows the advice for a while but eventually stops.	"To keep the patient on a favorable way of daily life, I advised the patient to take bread every morning and ask catering service for lunch (the catering service provides nutritionally well-balanced meals). I selected a service provider which meets my criteria." (Nurse C)
Guiding the patient to make full use in daily life of the knowledge conveyed in educational program	Based on detailed information on the patient's past living style, the nurse advises the patient about how to live, providing the detailed knowledge needed. This can lead to establishment of a reliable relationship with the patient and to alteration of the patient's behavior. However, if the nurse doubts the patient's compliance with the advice after discharge or much time elapses after discharge, the patient may discontinue following the advice, sometimes leading to readmission to the hospital.	"I think it better to provide knowledge in a concrete form, advising the patient that this way of living is preferable in this situation. The patient will be more interested in the knowledge provided in such a way." (Nurse D)
Appealing to the patient's individuality	The nurse helps the patient, paying attention to the psychological state of the patient verbally expressed by the patient him/herself at a given time. In other words, the nurse attempts to remain understanding the patient's difficulties or pain, making use of her imaginative power. The nurse is well aware of a relationship of trust with the patient. However, since the essence of the patient's mind is not visible, it is difficult for the nurse to guide the patient to alter his/her consciousness. The nurse is sometimes caught in the patient's feeling and a vicious cycle may begin.	"I advise the patient without hurry. The patient is slowly responding to my advice. If scolding and encouragement based on love are repeated, the patient may change his/her way of thinking. When the patient leaves the hospital, I sometimes feel like to say, "I will telephone you everyday to ask your state". In fact, it will be difficult to do so." (Nurse E)

"superficiality". The life emotions apparent teaching style was formed by "accumulation that attaches significance to experience on life emotions". This style contained 3 subcategories, i.e., "accepting conspicuously by comparing with one's own teaching style", "attempting to become aware of and get rid of one's own bad habits" and "getting to the heart of the matter by observing the responses made by the patient".

It was possible to observe the nurse's transition from using the life emotions not apparent teaching style to that teaching style based on life emotions. It was also noted that the quality of education differs between the 2 teaching patterns (subcategories ; "attaching importance to life emotions" and "helping the patient to find the courage to make progress") within life emotions apparent teaching style.

Fig. 1 represents these concepts schematically.

2. Definition of the core concept of "life emotions"

The concept "life emotions" points to the mental activities of a nurse when she/he attempts to perceive in depth what the patient has expressed or what the patient seems to be thinking or feeling, with the goal of helping the diabetic patient harmonize the treatment of the disease with his/her daily life. This perspective has been found to be the nursing viewpoint that is used primarily when attempting to educate diabetic patients. Supplying information to patients and providing support to patients tailored to their daily lives were performed on the basis of this sensitivity.

3. Definitions and details of the two teaching styles

1) Life emotions not apparent teaching style

Definition : This is a style of diabetes education which lacks life emotions and does not involve attempts to help the patient harmonize treatment with daily life.

The nurses with this teaching style tend to feel difficulty communicating intimately with the patients who are somewhat depressed, passive, hesitant to talk about their background or affliction, and reluctant to listen to advice. However, even with this teaching style, the nurse's influence on the patient is sometimes successful, if the patient has relatively strong volition, good powers of understanding, is leading a stable daily life, and/or is docile or mild in character. This teaching style often produces no or limited perceivable response. The 5 subcategories of this style and examples of this type of education are shown in Table 2.

2) Life emotions apparent teaching style

Definition : This is the style of diabetes education

Table 3. Subcategories of "life emotions apparent teaching style" and examples

Teaching style	Description	Example
Attaching importance to life emotions	This teaching style is based on nurse's efforts to perceive what the diabetic patient feels, although not expressed verbally, and lays emphasis on this perception. The nurse is aware of a relationship of trust with the patient. The nurse can feel that she/he is touching the life emotion of the patient. The nurse sometimes returns to the previous life emotion not apparent teaching style. In such cases, the nurse reflects on her teaching style and resumes the life emotions apparent style.	"We should bear in mind the outcome produced by diabetes mellitus in the patient's daily living. Although the patients want to be active socially, but they are advised to refrain from working too much, e.g., working overnight. The inability to do what one wants to do causes stress. We should consider such aspects of this disease. Diabetic patients suffer various disadvantages in daily activity, e.g., restriction of meals and personal relationship." (Nurse F)
Helping the patient to find the courage to make progress	The patient's life emotion is understood in a comprehensive context, involving the family, and other personal relationships. In this way, the nurse can catch things that the patient may not be aware of, but that are hampering the patient's daily living. The capabilities of the patient are also assessed. The nurse then helps the patient to find the courage to make progress, while respecting the patient's life emotion and abilities. With this style of teaching, the patient and the family can find the courage to make progress, even when the teaching period may be short. As a result, the patient's consciousness and behavior related to self-care will change qualitatively.	A patient (X) in her early 30's with type I diabetes mellitus which developed during adolescence. She had poor blood glucose control and developed diabetic nephropathy. She was hospitalized due to exacerbation of symptoms. Nurse Y (a leader-nurse) interviewed this patient. The nurse judged that this patient required changes in family's roles and awareness which had been formed over about 20 years after disease onset, and that arrangements should be made by nurses. The patient had been caught in a vicious cycle of independence → efforts → exacerbation. The balance between independence and dependence was unstable. The nurse told the patient that she would physically collapse unless some changes were made. The patient wept at this advice which touched the heart of the issue. The nurse advised the patient how to lead daily life, while listening to what the patient said. As a concrete plan, the nurse proposed the patient to receive help of the mother for some of the housework which the patient had done before. The nurse also noted the importance of the patient's relationship to the boy friend serving as an emotional supporter (no such supporter was found among her family members). The patient decided to part from him by some reason, but the nurse proposed her to continue this relationship with the boyfriend. On the following day, the patient began to ingest 90% of the meals served at the hospital (she had taken only a little of the food before). Later, interview of the patient and her mother was held. The mother wept when she knew that her daughter had long lived in solitude due to diabetes mellitus. The mother accepted to assume a part of the housework. The patient's relationship to the boyfriend was repaired. The nurse said: "I have adequate memories of individual cases and utilize such experiences when needed. I feel like I can perceive the heart of an issue just by touching the patient." (Participant observation of an interview made by the leader-nurse Y)

that involves the nurse's use of life emotions and that helps the patient harmonize treatment of the disease with daily life.

Depending on the life situations of the patient, it is sometimes difficult to achieve close or intimate communication with the patient during this type of education, just as it is difficult during life emotions not apparent style of education. However, there was no case observed during this type of education in which the patient's willpower was indispensable for the effects of education to become perceptible. The educational effects of this style are often strongly perceptible. The 2 subcategories of this style and examples of this type of education are shown in Table 3.

4. Definition and details of the process leading to the formation of the two different teaching styles

1) Accumulation of one's own experiences

Definition : The life emotions not apparent teaching style is formed through accumulation of the nurse's own experiences.

The nurse develops this teaching style through repetitions of trial and error, on the basis of understandings gained at team conferences and the patient's responses to the nurse's actions. Table 4 shows the five subcategories of this process.

2) Accumulation that attaches significance to experiences on life emotions

Definition : Life emotions apparent teaching style grows through efforts to understand experiences empathically, and is formed to the teaching pattern 'attaching importance to life emotions'.

Nurses acquire this teaching style through an accumulation of empathic experiences, in the context of observing the nursing activities of a leader-nurse with copious experience in diabetes education, and when they become involved in nursing care in the presence of such a leader-nurse. This process can be viewed as learning from the model of the leader-nurse. However, the 'attaching importance to life emotions' teaching pattern was not acquired by all the nurses involved in nursing care in the company of the leader-nurse. Table 5 shows the 3 subcategories of this process.

5. Process of qualitative change in the two teaching styles and variations in the quality within life emotions apparent teaching style

Through learning from a model of the leader-nurse, nurses did change their teaching style from the life emotions not apparent to life emotions apparent one. Within the life emotions apparent teaching style, the activity "helping the patient to find the courage to

Table 4. Subcategories of "accumulation of a nurse's own experiences" and examples

Subcategory	Description	Example
Application of successful experiences	The ways of nursing to which patients responded satisfactorily are used when dealing with other patients after some modifications tailored to individual patients.	"Data on blood glucose are handed to the patient. The patient is then asked to draw lines on the graph, stating: "in your case, the level is now 300. It will exceed 400. So you need to draw a line of 400." Even when the blood glucose is normal, this graph clearly shows the condition of each patient. A change after insulin therapy is also readily understandable on this graph. I have always used this method. It was also applicable to this case." (Nurse J)
Repeating attempts after failure	If the nurse's action is rejected by the patient or is found to be inappropriate for the patient, another attempt is made.	"Only some particular method fits a patient. In such cases, we feel that why this method does not fit this case despite the successful application of the same method to the previous case. We find that the method of approach needs to be changed from case to case. Therefore, failure in one attempt is not serious. Another attempt will succeed." (Nurse K)
Giving up due to difficulties	As attempts in patient education fail, the nurse gives up acting on the given patient due to difficulties.	"It is natural that a patient leading a well-controlled life at hospital shows normal blood glucose levels. The problem is whether the patient can continue such life after discharge. Our efforts at hospital will be in vain unless the patient's life after discharge is considered. Many nurses feel like giving up when facing this problem." (Nurse L)
Going round and round in a vicious cycle"	Although the nurse attempts to make efforts to deal with a difficult issue, the result is unfavorable. The nurse does not give up and falls into dilemma. This cycle is repeated.	"Even when the patient observes patient Y who has undergone leg amputation, I cannot feel anything real. This is probably because the path the patient has to overcome is long. Even when the nurse tells this to the patient, it will be difficult for the patient to understand it." (Nurse M)
Superficiality	The nurse is not very enthusiastic about patient education. The nurse practices teaching in a perfunctory way.	"(When asked whether or not the nurse has experienced responses from the patient for only listening to her) I held a repeated conference with the patient's husband immediately before discharge, because the husband was cooperative and was expected to exert a favorable influence on the patient after discharge. (When asked whether or not the nurse had an impression that this would be successful) I felt this would lead to success." (Nurse N)

Table 5. Subcategories of "accumulation that attaches significance to experiences on life emotions" and examples

Subcategory	Description	Example
Accepting conspicuously by comparing with one's own teaching style	The nurse finds that the life emotions -based teaching by a leader-nurse differs from one's conventional teaching style. The nurse thus finds value in the way practiced by the leader-nurse. The nurse then acquires the style of teaching through repetition of practice and comparison with the leader-nurse's practice.	"(When asked whether or not the influence from the lead nurse was great) The influence was great. I was astonished by the way of interview made by Mrs. Y and by reading the assessment report submitted by her. I felt that she had appropriately caught the characteristics of diabetes and touch the heart of the issue. I thought that the clinical path practice would be joyful if done in this way. I previously interpreted clinical path to mean that the nurse prepares adequately for teaching. I found this interpretation to be incomplete." (Nurse O)
Attempting to become aware of and get rid of one's own bad habits	The nurse becomes aware of unfavorable aspects of her teaching style as a bad habit and attempts to attach importance to life emotions when providing patient education.	"In the past, I was probably unaware of such a way of dosing and proceeded with teaching at my own pace. I tended to attribute the unfavorable results of teaching to the lack of the patient's enthusiasm. I recently found this as a bad teaching style which tends to fail." (Nurse P)
Getting to the heart of the matter by observing the responses made by the patient	The nurse, using a life emotions-based teaching style, is satisfied with the responses of the patient (changing his/her consciousness and behaviors). The nurse gets to the heart of patient education.	"(When asked about the action of Nurse Y and responses of the patient's wife during a family interview made by the leader-nurse Y) Mrs. Y said to the patient's wife, that she should not force her husband to refrain from doing something. Instead, she said that the wife should encourage her husband to be able to do better the next time. She said that unless this kind of approach is made, it would be difficult for the patient's wife to persuade her sick husband to periodically visit the clinic once monthly and to follow instructions on diet. While attending this interview, I felt that the way adopted by Mrs. Y had not been used by me. Her way of interview was able to correct the relationship between the patient and his wife. (When asked whether or not the wife accepted the advice) The wife accepted the advice faithfully. The wife said, to open the mind of my husband, I should have recognized this situation earlier." (Nurse Q)

make progress" was only seen in the practice of the leader-nurses and differed qualitatively from the other activities of this style.

Discussion

1. Comparison with the latest paradigm of diabetes education

The project to develop methods of patient education that promote active involvement, deciding for oneself, and self-care on the part of patients with chronic disease (headed by Kawaguichi[5]) aims at creating concepts, models and theories pertaining to patient behavior and psychology that are useful in patient education. Within the framework of this project, case reports on many diabetic patients have been published, detailed analyses of practical cases of patient education by nurses have been conducted, and elements inherent in nursing care have been extracted for the creation of practical models of patient education by nurses[13,14]. The present study was not designed to explain each element of nursing care ; instead it focuses on analyzing teaching styles provided in the context of nursing care while making interpretations of interactions with patients on the basis

of the nurses' knowledge and experiences.

In patient education, it is considered important to enhance the patient's sense of efficacy, because this allows the patient to become confident in him/herself and practice self-care more enthusiastically[7]. To this end, attempts are made to use the patient's own resources effectively by using a small-step method, in which the patient is led to experience a sense of achievement related to his/her own capabilities[15]. The success of this method is highly dependent on the patients themselves with less emphasis laid on the circumstances surrounding them. Empowerment in diabetes education[8] is interpreted as meaning that patients with diabetes mellitus are helped so that they can find their own ability to control their disease. In this method, the supporter respects the patient's thoughts and feeling and listens to what the patient says, with the goal of guiding the patient to make his/her own decisions about treatment. This resembles the concept of the counseling mentality, which has come to be considered an important element of nursing.

In contrast to this method, the approach of "helping the patient to find the courage to make progress", identified as an activity of the life emotions apparent teaching style, involves taking a more active position vis-a-vis the patient. The teaching nurse in this case presents the patient a direction in which to make an effort, determined on the basis of an overall evaluation of the patient's relationship with family members and other people in his/her environment. The responses of patients to nurses using this approach often touch the heart of the issue and cause dramatic changes in the consciousness and behaviors of the patients and their family members. A unique outcome of the present study is the discovery of this style of patient education, which aims at deepening the patients' awareness through the nurses' actions, but also importantly focus on life emotions based on personal relationships surrounding the patients.

2. "Life emotions", an important concept meaning "caring" in diabetes education

Nurses who practice patient education from a perspective based on life emotions can feel to touch the empathic nature of their patients. In such cases, the patient's life emotions often serve as a key factor in promoting an alteration of his/her behavior for effective treatment of diabetes mellitus. It is difficult for nurses to touch a core of life emotions not explicitly revealed by the diabetic patient. Perceiving life emotions on the part of the nurse can trigger the promotion of changes in the patient's behavior associated with treatment. Interactions between nurse and patient that stimulate the patient to make changes can well be called "caring".

The usefulness of caring in diabetes education has been referred to by Rayman & Ellison[16] and Nonami et al.[17]. However, this view has not yet been widely accepted as a general concept in the field of diabetes mellitus. Mayeroff[18] stated that the essence of care, aimed at helping the care-receiver make progress, can be found in the teaching pattern of "helping the patient to find the courage to make progress" which is only used by leader-nurse who uses the life emotions apparent teaching style.

3. "Skill" of nurses in diabetes education

The acquiring life emotions apparent teaching style is a process that resembles taking one more step upwards. There was a process which changed qualitatively from the life emotions not apparent style. The presence of a leader-nurse seems to play an important role in the acquisition of this style. After having a meaningful experience touching life emotions in the presence of such a leader-nurse, a nurse with the life emotions not apparent teaching style acquires the perception of life emotions, but no such conversion of teaching style took place on the ward where no leader-nurse was present. This also provides evidence that the presence of a leader-nurse allows the nurses to learn from a model[19].

Although there were some nurses who acquired the life emotions apparent teaching style, only the leader-nurse had acquired the ability to help the patient find the courage to make progress. These two issues differed markedly and qualitatively from each other in terms of the ability to change the consciousness or behavior of patients. In the present study, there were no nurses in whom the former led to the latter. This means that a qualitative conversion did not occur between these two factors, and a difference in the qualities of the two was observed in the present study. The educational achievement of helping the patient to

find the courage to make progress, which was accomplished by the lead nurse, can be seen as a "master touch", because the evaluation of the staff members and the impression of the interviewing nurses is that this activity can easily alter the consciousness of patients.

Benner[9] rated the skills of nurses on a five-point scale. According to her classification, nurses whose skills reached the middle or higher of level 4 can be thought of as experienced nurses. Nurses at level 5 (master class nurses) can assess a situation in an intuitive manner, based on their experience, and can locate a problem precisely. Experienced practitioners can move smoothly and flexibly (like flowing water) and with a high degree of skill, without needing to be conscious of characteristics and rules. Benner pointed out qualitative differences between experienced nurses (called backbone nurses or masters) and less experienced nurses, and showed that changing quality can lead to improved nursing practice.

As stated above, there was a qualitative conversion between the life emotions not apparent teaching style and life emotions apparent one. If this finding is combined with Benner's five-level model, we may speculate that experienced nurses who have undergone a conversion in quality and are called backbone or master nurses are likely to use the life emotions apparent teaching style.

Regarding the educational activity of helping the patient to find the courage to make progress, a lead nurse made the following comment : "With this method, information about an individual case is firmly internalized by me, and I can utilize the information when it is needed. Simply touching the patient allows me to see the heart of the issue." This statement is consistent with Benner's[9] remarks about master nurses who can evaluate the situation in an intuitive manner based on their rich experiences and can locate a problem precisely. Therefore, the educational activity of helping the patient to find the courage to make progress within the framework of the life emotions apparent teaching style can be seen as a master touch.

4. Clinical application of the study's outcome

The results of this study indicate that the presence of perspective for life emotions in the teaching style of nurses conducting diabetes education can be an indicator for appraising the education. The results of participant observation also suggest that the atmosphere on a ward cultivating the life emotions apparent teaching style can play a significant role in patient education. It is essential for each nurse to recognize the importance of life emotions and to make sure that her/his educational activities are based on empathy with the patient.

5. Open issues

Studying how patients perceive their diabetes education will contribute to finding a way to provide such education in which there is no discrepancy in awareness between the nurse and the patient. Efforts to improve the skill of nurses to provide diabetes education should be continued to further improve this kind of program.

Conclusion

1. Two teaching styles for patient education about diabetes provided by nurses were identified, i.e., "life emotions not apparent" style and "life emotions apparent" one. The former was found to have formed through "accumulation of a nurse's own experiences", and the latter through "accumulation that attaches significance to experiences on life emotions".
2. "Life emotions" is an element of caring. The results of this study suggest that the effort to acquire the life emotions apparent teaching style through interactions with patients is important to achieve effective diabetes education.
3. The educational activity of helping the patient to find the courage to make progress within the framework of the life emotions apparent teaching style can be thought of as a master hand in diabetes education. The results of this study suggest the importance of continuing the efforts to seek such practical skills and establish effective nursing techniques for diabetes education.

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糖尿病教育における看護師の態度の構造
－教育スタイルとその形成プロセス－

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要　　旨

本研究は，糖尿病教育における看護師の態度の構造を明らかにすることを目的にグラウンデッドセオリーアプローチを用いて行なった。22名の看護師を対象とした半構成的面接と看護が行なわれている場における参加観察を行なった。その結果，７つの教育のパターンが見出され，【生活心情】の有無によって，【生活心情がみえていない教育スタイル】と【生活心情がみえている教育スタイル】の２つの教育スタイルに分類された。また，教育スタイルの形成の仕方として，【生活心情がみえていない教育スタイル】には【自分なりの経験の積み重ね】が，【生活心情がみえている教育スタイル】には【生活心情に触れる体験を意味づける積み重ね】が見出された。そして，前者の教育スタイルから後者の教育スタイルへと変化する形成プロセスが存在することが明らかになった。

【生活心情】はケアリングの要素となる概念である。看護師が【生活心情がみえている教育スタイル】を持つことは，糖尿病患者が療養行動に向けて意識変容できる効果的な教育効果という点から有用であると考えられた。