Abstract
The present study characterizes self-management awareness in patients on maintenance dialysis. We conducted interviews with 9 patients on maintenance dialysis which were then analyzed by comparative content analysis. This was done in order to gather information to support future self-management. Seven categories emerged as a result of this analysis. Patients on maintenance dialysis were aware of “a continuation and the need for dialysis treatment,” perceived that “they were handling self-management successfully,” and were aware that they were “proper managers” able to carry out daily living. In addition, they sought support for their self-management through “family and understanding people willing to assist them.” Furthermore, these patients, now given the opportunity to reflect on their past selves, adopted the attitude, “when I was not limited, and now that I am.” Lastly, after comparing themselves to others, these patients perceived that “each person’s way of managing determined their future.” We observed that patients on maintenance dialysis had unique self-management practices, and each was in search for their own “way of life, a way of being and dying in the future.” The findings in this study suggest that in order for patients on maintenance dialysis to achieve self-management and proper daily living, caregivers must provide support for the development of such self-management. This would allow relationships with other patients to develop, including relationships with family.

Introduction
The number of patients receiving dialysis treatment in our country reached approximately 280,000 at the end of 2008. Recently, this number has increased due to patients with diabetic nephropathy. These patients now account for a third of the total, while the remaining two thirds are patients with non-diabetic nephropathy. Depending on the primary disease, a report indicates that the average age of patients with non-diabetic nephropathy at the time of dialysis is in the 30’s.

Typically, about 3 years from the start of dialysis, body conditions tend to stabilize. This results in a period characterized by the patient's desire to be active through work and exercise, just like any healthy individual. A long period of self-management ensues where bodily conditions and the situations in which patients are placed are taken into consideration. During such long periods it is uncommon for patients to consistently act in a rational manner. Instead, patients tend to act more out of convenience. For long-term support of self-management, relationships, mainly between patient and caregiver, are crucial. In order to ensure that these relationships function efficiently, we thought it was necessary to understand patient self-management awareness.

Purpose
To understand self-management awareness in patients on maintenance dialysis and to gain insight as to the proper nursing practices
necessary to support future self-management.

**Methods**

*Data Collection*

We conducted semi-structured interviews with 9 patients on maintenance dialysis from whom we obtained research consent. Each interview was recorded verbatim, included speakers’ facial expressions and attitudes, and was supplemented with researcher’s comments. The average interview duration time was 30 min. Each interview ended after judging that there was nothing further to discuss.

*Data Analysis and Procedure*

We used the comparative analysis approach outlined by Bertaux (1997) which accounts for generalities and similarities. In the analysis procedure, interpretations were made as to what was said in relation to the concept of management considered in this study. Subsequently, data were decoded, read out in their entirety so that the meaning and content could be comprehended, and then categorized. An analysis of an individual’s conversation was made, comparing it to that of a supervised conversation, extracting both commonalities and differences. The analysis was complete after judging that any new self-awareness item had reached a saturation point. Each extracted category was named after retracing their mutual relations. We increased the validity of the data by obtaining supervision from experts on qualitative research.

*Reliability of Analyses*

Data reliability was secured by subsequently correcting and supplementing the contents provided by participant and researcher interpretations.

*Ethical Considerations*

We obtained proper consent after providing a sufficient explanation regarding voluntary participation, policies on privacy protection, and potential publication in a research article.

**Results**

We conducted interviews on participant self-management awareness and obtained the following results after analyzing the contents. Table 1 shows participant characteristics.

*Self-management awareness classification*

Following comparative analysis, self-management awareness was classified into 7 categories (shown in Figure 1). In addition, each classification was generated after summarizing the comments shown in quotes.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Characteristics of the subjects.</th>
<th>N = 9</th>
</tr>
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<tbody>
<tr>
<td><strong>Age (years)</strong></td>
<td><strong>Gender</strong></td>
<td><strong>Hemodialysis (years)</strong></td>
</tr>
<tr>
<td>A</td>
<td>55</td>
<td>Female</td>
</tr>
<tr>
<td>B</td>
<td>55</td>
<td>Female</td>
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<td>C</td>
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<td>I</td>
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<td>Male</td>
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</tbody>
</table>
Category 1: Awareness of continuation and necessity for dialysis treatment
Comments summarized here include: “I’m willing to commute to receive dialysis because if I don’t then I won’t feel well,” “After two years, I feel that I need to go,” “It’s like a routine for me now,” “It’s just a matter of getting used to it,” “All I can say now is that it’s my duty and if I don’t do it I’ll die,” “I do it because I feel well the day after,” and “Even though I’m still a patient on dialysis, now that I have started I don’t feel like a lost cause. I can hang in there.”

Category 2: Self-management uniqueness
This category was generated from comments such as: “I have asthma, so I’d better do it my own way. If I don’t take more fluids than others then it will become harder for me to clear my throat of phlegm, worsening my condition,” “It’s normal for me to eat and exercise when I go in for dialysis,” “I make the necessary adjustments to the amount of fluid I drink as I am told that I need to consume about 5% of my body weight,” “When drinking water, I thought it would be best to drink it in small amounts rather than to gulp it down,” and “I take care to lower my stress because if that’s all I have in my mind it would be bad for me. I like to fish, do farm work, karaoke, and I do things with friends in order to lower my stress.”

Category 3: A proper manager
This category was generated from comments such as: “When we get together, I find myself saying things like ‘this is no good,’ or ‘let’s prepare it this way’ or ‘isn’t it great doing it this
way,’ even if we’re talking about the same vegetable,” “As for exercise, I like to walk around the pool, but I’m thinking about walking elsewhere as well,” “I like my vegetables boiled for good bowel movements,” “I hold back on the amount of food I eat,” “I devised a way to drink in small portions,” and “I tell myself to eat a small amount of food and to be more aware.”

Category 4: Family and understanding people who are willing to assist

Comments summarized here include: “Whenever I don’t feel well they help out with things like cleaning and doing my laundry,” “My wife makes accommodations to her tastes for me, like when she prepares meals or tea,” “They like to help out with things I can still do, like microwaving my meals,” “They tell me that I should lie down,” and “Because they consider this to be quite serious, they are really cooperative.”

Category 5: When I was not limited, and now that I am

This category was generated from comments like: “I take care of dinner preparations in the morning before going in for dialysis,” “I quit working in my rice paddies, so now I work hard doing other farm work,” “In other words, I can’t continue living the way I used to,” “I’m not doing anything different in particular,” and “I can’t help it. After all, I have to take care of my own meals.”

Category 6: Management practices will determine the future

Comments summarized include: “I tend to constipate easily, so it’s a matter of adjusting and doing things a certain way. I have had cerebral infarctions before due to my constipation, so I check my blood pressure daily,” “I tell myself that it’s the lifestyle, and when I don’t do things right my blood pressure gets bad,” “In the end it depends on me for it to get better or worse,” and “I drink water, but do so thinking that it’s a terrible thing.”

Category 7: Way of life, the way of being and dying in the future

Comments include: “I underwent dialysis, and I am having difficulties just as everyone else. But I adopt a positive attitude because I want to live, even if the shunt operation is painful,” “My grandchildren are still young and I’d like to see them get married, so I want to be cheerful in front of everybody,” “My husband tells me I should not hide my pain, but I think it would be a shame if it turned out to be the last time everyone saw me. I would regret it if they were left with the impression of such a face if I could not see them again. I want to leave them with the impression that I was a smiling mother,” “I want to live without being helped or a burden to anyone,” “Well, what happens, happens. When I die, I die,” and “If I could escape, I would.”

Discussion

Patients on maintenance dialysis are more likely to have negative feelings towards maintaining dialysis treatment and for physical impairments, and may be less willing to accept themselves. Throughout this study, we observed a tendency in which these factors made self-development difficult in these patients. However, we did observe that their awareness had evolved. Each patient identified his or her abilities and potentials, and realized how to use them to his or her advantage. With assistance from family, each patient lived life in a positive way by determining his or her own values and abilities. In no way did a patient's awareness of maintaining dialysis depend on his or her “life space.”

Conclusions

We successfully generated 7 categories for self-management awareness in patients on maintenance dialysis. These included,
“Awareness of continuation and necessity for dialysis treatment,” “Self-management uniqueness,” “A proper manager,” “Family and understanding people who are willing to assist,” “When I was not limited, and now that I am,” “Management practices will determine the future,” and “Way of life, the way of being and dying in the future.”

In order to achieve adequate self-management practices in patients on maintenance dialysis, it is important to consider how each person develops his or her own ways of self-management. It is also important to efficiently maintain relationships, especially with other dialysis patients.

This study provided additional material to the contents reported at the 20th Japan Psychonephrology Study Group (Sapporo).

References

