Validation of a Reorganized Training Program Using a Cognitive Behavioral Therapy Approach to Enable Community Pharmacists to Provide Empathic Patient Counseling

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(Received May 28, 2018; Accepted September 21, 2018)

To enable community pharmacists to provide empathic patient counseling, we developed and validated a training program based on the cognitive behavioral therapy approach (CBT-A) in our previous study. The major focus points of the re-structured training program were “inclusion of basic communication skills”, “exemplifying correspondence involving CBT-A using pre-recorded video (VTR)”, and “approach methods for cases where counter-evidence is unavailable”. The training program lasted for 4 h per day, for a total of 8 h. We also performed role-play scenarios on information gathering and medication guidance for simulated patients before and after training, and evaluated patient satisfaction with counseling, patient counseling alliance scores, and the degrees of the psychological distance between patients and pharmacists. Participants had high satisfaction with the discussion and role-play aspects of the training, as in our previous study. Participants also showed high satisfaction with “exemplifying correspondence involving CBT-A using VTR”. Counseling time was significantly longer when using CBT-A compared to ordinary information gathering and medication guidance, but patient satisfaction and patient counseling alliance scores were both higher, and the psychological distance between patient and pharmacist was lower. Accordingly, if patients cannot solve their own problems, even when pharmacists provide polite responses and expertise, patients can be guided in their problem solving using CBT-A. It suggested that using CBT-A could solve the problem of patients with anxiety due to problems that cannot be solved only via drug-centered approach.

Key words—community pharmacist; patient counseling; cognitive behavioral therapy approach; training program; satisfaction of patient; psychological distance

INTRODUCTION

In the “Yakuzaishi no Shorai-Vision (in English as Pharmacist Vision)” issued in 2013, in response to the question, “What kind of place is the pharmacy for the patient?”, the most common answers were “somewhere you can consult about medicine”, “somewhere you can consult about health and illness”, “somewhere you buy OTC medicine, etc.”, and “somewhere you can feel free to consult about other matters”. Furthermore, respondents reported that the most common reason for always using the different pharmacy is “that there are near the hospitals”. But respondents reported that most common reason for always using the same pharmacy is “that there are some pharmacists I can trust”, followed by “it is environment where I do not hesitate to ask questions”. On the other hand, pharmacists responded to the question “What is the ability you most wish to develop in the future?” with “counseling ability”, followed by “prescription guidance ability”.1)

Later on, the “Kanja no tameno Yakkyoku Vision (in English as Pharmacy Vision for Patients) from 2015” stated that in order to be particularly attractive to patients, pharmacists or pharmacies require not only expertise but also better communication skills, various ways of counteracting patient anxiety about taking medication, and, perhaps most importantly, continual training to improve their performance, communication skills, etc.2)

Furthermore, it is reported that the drug store should be utilized as the door to public health consultations,3) and communication skills of community pharmacist were listed as a major training item.4)

With the establishment of the “Kakaritsuke yakuzaishi (in English as Family pharmacist)” and
“Kenko support Yakkyoku (in English as Health support pharmacy)” systems, the scope of consultation for community pharmacists has expanded from medicines and diseases to a wide range of health-related matters, both physical and psychological. Recent research has shown that low-intensity cognitive behavioral therapy (CBT), which utilizes the essence of CBT, proves effective not only for alleviating problems caused by mental disorders such as depression and schizophrenia, but also for physical disorders. For example, coronary heart disease, medication adherence, depression, and blood glucose control for patients with type 2 diabetes, undergone breast cancer surgery, restrict water intake in hemodialysis patients, atopic dermatitis and program for cancer patients. There are also some findings from the field of health promotion and field of stress management.

We thought that for community pharmacists to be able to satisfy social needs as a mental health support agent, they require more empathic patient counseling.

To this end, we developed and validated a training program that utilizes a CBT approach (CBT-A). We carried out training to acquire so that pharmacists can use CBT-A for patients and validation were that changes in patient counseling alliance and psychological distance between patients and pharmacists. In our previous study, we used scenario that were after the pharmacist completed general information gathering activities that concentrated on closed-ended communications tended to focus more on information-managing program focused on the following three points: inclusion of basic communication skills, exemplifying correspondence involving CBT-A using pre-recorded videos, and use of an approach method for cases where counter-evidence is unavailable.

We thought that patient anxiety and other such problems cannot be solved solely via approaches that focuses on diseases and drugs.

Nakayama et al. reported that pharmacists’ communications tended to focus more on information-gathering activities that concentrated on closed-ended questions and frequent counseling, or directing utterances about the medication than on considering the patient’s background. Therefore, in this study, we change the role-play situations as follows. “community pharmacist carry out the general information gathering and medication guidance while attempting to resolve patients’ problems and support their problem solving, without the problems being directly pointed out”, “case setting in order to verify the effect on patients exhibiting biased cognitions” and “rather than patients provide problems for pharmacists, but pharmacists notice patients’ anxiety (based on their facial expressions or utterances) and advise and assuage the patient accordingly”.

In addition to reporting on the effects of this training program for pharmacists, we sought to confirm the effect of CBT-A on ordinary medication guidance for patients.

Therefore, we verified the change in patient satisfaction with medication guidance.

**METHOD**

Focus of Training Program The training program focused on the following three points: inclusion of basic communication skills, exemplifying correspondence involving CBT-A using pre-recorded videos, and use of an approach method for cases where counter-evidence is unavailable.

Program Verification Method

Study design and subjects Figure 1 shows the study design in detail. The subjects were pharmacists from 14 community pharmacies in Tokyo, Saitama, Chiba, and Kanagawa prefectures who agreed to participate in the study.

We excluded any pharmacist who met the following
criteria as same as our previous study\(^{19}\); (1) had less than 1 year of experience as pharmacist, (2) had any experience of learning psychotherapy (e.g., cognitive behavioral therapy or motivational interviewing), (3) more than 1 year of work experience at a hospital or pharmacy specialized in psychiatry or psychosomatic medicine.

Twenty-four pharmacists who received explanations of the purpose and contents of this study, and who met these criteria, became the subjects. To minimize differences in subjects’ communication skills before the training, we administered the 22-item Japanese Interpersonal Communication Competence Scale (JICS)\(^{21}\), which is configured to measure communication ability according to the specific characteristics of Japanese culture before subjects underwent training. We then grouped subjects according to their total scores on the JICS. Among the 24 subjects, 6 with scores below the first quartile and 6 people with scores above the third quartile were randomly assigned in equal numbers to Groups 1 (G1) and 2 (G2). The remaining 12 subjects were then randomly assigned in equal numbers to these two groups. We confirmed that there was no difference in JICS scores between the groups via a Mann-Whitney \(U\) test.

The training program was conducted over 2 d in 4-h sessions (for a total of 8 h). The interval between the first and second session was about 2 weeks for both participant groups. G1 completed the program in August 2016 and G2 in August and September 2016. Before and after the training program, subjects engaged in simulated role-play of scenarios involving information gathering and medication guidance at pharmacies. The difference from the our previous verification\(^{19}\) is that, this role-play was like as the general medication guidance in pharmacy, using of prescriptions, medication history, medicine information provision forms, medicine record notebooks, medicine envelope, etc.

The simulated patients (SPs) that participated in the role-play belonged to the “Nichidai Yakugaku SP Kai” and had at least 5 years of experience in playing SPs. Numbers of SPs were 4. They had also completed case-based training sessions.

This study was conducted with the approval of the Ethics Review Committee of Nihon University School of Pharmaceutical Sciences.

**Setting of cases for role-play** We used 2 cases for the role-play, which are summarized in Table 1.
The first concerns a patient prescribed diabetes medicine (Case DM), while the second is a patient prescribed antihypertensive medicine and medicine for dyslipidemia (Case HT). GI participated in the Case DM role-play during the pre-training (Pre) and Case HT at post-training (Post), while G2 was exposed to the cases in reverse order. While the disease and medication differed between the cases, they shared similar patient problems and backgrounds. In addition, they had similar settings in terms of medication history, such as progress notes, major adverse events (e.g., hypoglycemia, rhabdomyolysis), and medication adherence, to which the pharmacist must pay attention.

### Measurements and Data Analysis

**Evaluation of training program** The training program was evaluated via a questionnaire at Post.

The questionnaire specifically consisted of “explanation was easy to understand” (Explanation), “Slides and handouts used were easy to see” (Document), “explanation using a comic was easy to understand” (Comic), “showing an example using pre-recorded video was easy to understand” (VTR) and “Exercises using thought record table was easy to understand” (Record Table), “understanding was deepened by discussion” (Discussion), “understanding was deepened by role-play” (Role-Play), “understanding was deepened by procedure of training program” (Procedure) and “training was overall satisfaction” (Satisfaction). Subjects rated items on the questionnaire on a 6-point Likert scale (1 = extremely disagree, 2 = moderately disagree, 3 = slightly disagree, 4 = slightly agree, 5 = moderately agree, 6 = extremely agree), after which the median was calculated.

We also evaluated its correlation with overall satisfaction via Spearman’s rank correlation coefficient to investigate the influence on satisfaction.

**Patient counseling time (PCT)** We thought it important for the pharmacist to be concerned with the PCT, so we measured it. We compared the PCT between Pre and Post via the Wilcoxon signed rank test.

**Satisfaction with patient counseling by pharmacist (SPC)** SPC was evaluated using a questionnaire administered to SPs after the role-play. The questionnaire specifically consisted of 2 items assessing level of correspondence with the pharmacist (Correspond-

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**Table 1. Summary of Case Diabetes and Case Hypertension**

<table>
<thead>
<tr>
<th></th>
<th>Case DM</th>
<th>Case HT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prescription (Medicine list)</strong></td>
<td>Vildagliptin (100 mg) twice after breakfast and dinner × 30 d</td>
<td>Candesartan (8 mg) once after breakfast × 30 d</td>
</tr>
<tr>
<td></td>
<td>Metformin (1000 mg) twice after breakfast and dinner × 30 d</td>
<td>Amlodipine (2.5 mg) once after breakfast × 30 d</td>
</tr>
<tr>
<td></td>
<td>Glimepiride (0.5 mg) once after breakfast × 30 d</td>
<td>Rosuvastatin (2.5 mg) once after dinner × 30 d</td>
</tr>
</tbody>
</table>

**Concomitant medicine**
- Anti-inflammatory patch
- Non-contributory

**Summary**
- GI: Started drug treatment 3 years ago. She has visited the pharmacy once per month starting one year ago. Her adherence is high, but there is no more medicine.
- GH: Blood pressure initially was high (168/98), but recently it has calmed down (142/82).

**HbA1c**
- GI: Initially was high (9.6), but recently it has calmed down (7.5).
- GH: Initially was high (8.2), but recently it has calmed down (7.5).

**Thought of the patient**
- GI: I’ve tried hard to not eat my favorite sweet things for three years.
- GH: I’ve tried hard to not eat my favorite salty dishes such as pickles and miso soup for three years.

**At the moment that was said, everything felt empty and I had no motivation to treat myself.**

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**Measurements and Data Analysis**

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The questionnaire specifically consisted of "explanation was easy to understand" (Explanation), "Slides and handouts used were easy to see" (Document), "explanation using a comic was easy to understand" (Comic), "showing an example using pre-recorded video was easy to understand" (VTR) and "Exercises using thought record table was easy to understand" (Record Table), "understanding was deepened by discussion" (Discussion), "understanding was deepened by role-play" (Role-Play), "understanding was deepened by procedure of training program" (Procedure) and "training was overall satisfaction" (Satisfaction). Subjects rated items on the questionnaire on a 6-point Likert scale (1 = extremely disagree, 2 = moderately disagree, 3 = slightly disagree, 4 = slightly agree, 5 = moderately agree, 6 = extremely agree), after which the median was calculated.

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**Patient counseling time (PCT)** We thought it important for the pharmacist to be concerned with the PCT, so we measured it. We compared the PCT between Pre and Post via the Wilcoxon signed rank test.

**Satisfaction with patient counseling by pharmacist (SPC)** SPC was evaluated using a questionnaire administered to SPs after the role-play. The questionnaire specifically consisted of 2 items assessing level of correspondence with the pharmacist (Correspond-
ence), including “The pharmacist listened to my appeals and words” and “The pharmacist empathized with my appeals and words”; 3 items assessing the pharmacist’s descriptions (Description), including “The pharmacist’s description was polite”, “The pharmacist’s description was easy to understand”, and “The pharmacist’s description was insufficient (reverse scored)”; 2 items assessing the pharmacist’s problem solving and ability to promote behavior change (Change), including “I could solve my problems through patient counseling” and “I thought that I could change my feelings and behavior through patient counseling”; and 2 items assessing the counseling time and satisfaction with the content of the counseling (Satisfaction), including “Satisfied with the time for patient counseling” and “Satisfied with the contents of patient counseling”. All items were answered on a 6-point Likert scale (1 = extremely disagree, 2 = moderately disagree, 3 = slightly disagree, 4 = slightly agree, 5 = moderately agree, 6 = extremely agree). This scale was reversed for the reverse score item noted above.

We evaluated differences in satisfaction between cases (at Pre and Post) using the total score of all items and the scores of the 4 large-classifications (Correspondence, Description, Change and Satisfaction) via Mann-Whitney U test. To examine the training effect, we assessed differences in total scores between Pre and Post using the Wilcoxon signed rank test. In addition, the internal consistency of the scale at Pre and Post was evaluated with Cronbach’s α.

Patient counseling alliance (Alliance) and psychological distance (Distance) To assess patient counseling alliance (Alliance) and psychological distance (Distance) between patients and pharmacists, we used the Working Alliance Inventory Short Form Modified Japanese version (WAIS-M).

Horvath et al. reported that the quality of the treatment alliance has three components, “Task”, “Bond” and “Goal” between client and therapist then they verified the Working Alliance Inventory (WAIS),22

Tracy et al. verified the Working Alliance Inventory Short Form (WAIS) consisting of 12 questions.23

WAIS-M has been modified with reference to WAIS and the internal consistency of this scale was evaluated by Cronbach’s α same as our previous verification.19 We calculated the total score (Total) and three subscale scores: agreement on the tasks for medication adherence (Task), development of an affective bond (Bond), and agreement on the goals of medication adherence (Goal).

Fitzpatrick et al. reported that although both client and therapist-rated alliance scores increased over time, neither divergence on the alliance changed over the course of treatment.24 We defined the “divergence on the alliance between patients and pharmacists” as Distance. At each time Pre and Post, Distance were evaluated by the difference between the pharmacist’s score and the patient’s score.

The WAIS-M was administered to both the SP and pharmacists after both role-play. The scale has two reverse score items.

Differences in scores between Case DM and Case HT were evaluated by the Mann-Whitney U test, while the Wilcoxon signed rank test was used to evaluate Alliance (differences between Pre and Post) and Distance (differences between the patients and pharmacists).

The significance level was set at $p < 0.05$.

RESULTS

Characteristics of Subjects The characteristics of all subjects are shown in Table 2.

<table>
<thead>
<tr>
<th>Sex (Male : Female)</th>
<th>Group 1</th>
<th>Group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 : 9</td>
<td></td>
<td>2 : 10</td>
</tr>
<tr>
<td>Years of experience as a pharmacist</td>
<td>5 (2–20)</td>
<td>3 (1–20)</td>
</tr>
<tr>
<td>JICS Median (Min–Max)</td>
<td>72.5 (54.0–99.0)</td>
<td>75.5 (58.0–99.0)</td>
</tr>
</tbody>
</table>

There was no significant difference in JICS between both groups ($p = 0.750$).

Evaluation of Training Program Figure 2 shows the results concerning pharmacists’ evaluation of training program.

The most highly evaluated items were Discussion, Role-Play, Comic and VTR.

Correlations with satisfaction Table 3 shows correlation coefficients for the items making up the tool used to measure satisfaction with the training program.

Satisfaction correlated with all other items, with the strongest correlations being for Procedure ($\rho =$...
Table 3. Correlations with Satisfaction ($\rho$)

<table>
<thead>
<tr>
<th></th>
<th>Explanation</th>
<th>Document</th>
<th>Comic</th>
<th>VTR</th>
<th>Record Table</th>
<th>Discussion</th>
<th>Role-Play</th>
<th>Procedure</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanation</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Document</td>
<td>0.608**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comic</td>
<td>0.498*</td>
<td>0.682**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VTR</td>
<td>0.491*</td>
<td>0.685**</td>
<td>0.698**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Record Table</td>
<td>0.529**</td>
<td>0.690**</td>
<td>0.556**</td>
<td>0.856**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td>0.470*</td>
<td>0.658**</td>
<td>0.587**</td>
<td>0.702**</td>
<td>0.713**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role-Play</td>
<td>0.540**</td>
<td>0.656**</td>
<td>0.593**</td>
<td>0.699**</td>
<td>0.714**</td>
<td>0.952**</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procedure</td>
<td>0.493*</td>
<td>0.672**</td>
<td>0.561**</td>
<td>0.689**</td>
<td>0.664**</td>
<td>0.607**</td>
<td>0.633**</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.637**</td>
<td>0.772**</td>
<td>0.546**</td>
<td>0.699**</td>
<td>0.612**</td>
<td>0.614**</td>
<td>0.645**</td>
<td>0.817**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

$**p < 0.01, *p < 0.05$. 

0.817), Document ($\rho = 0.772$), and VTR ($\rho = 0.699$).

Evaluation of PCT

Between cases The median PCT was 350.0 s in G1 and 312.0 s in G2 ($\rho = 0.729$) at Pre, while at Post, the median PCT was 540.5 in G1 and 529.5 s in G2 ($\rho = 0.603$). Thus, there were no significant differences between cases.

Between Pre and Post The median PCT was 343.5 s at Pre and 529.5 s at Post. This difference was significant ($p < 0.001$).

Evaluation of SPC

Reliability of SPC tool The Cronbach’s $\alpha$ for the whole SPC scale was 0.948 at Pre and 0.950 at
Table 4. Satisfaction with Patient Counseling by Pharmacist (between Cases)

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G1</td>
<td>G2</td>
</tr>
<tr>
<td>Total</td>
<td>17.5</td>
<td>17.5</td>
</tr>
<tr>
<td>Correspondence</td>
<td>3.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Description</td>
<td>8.0</td>
<td>7.5</td>
</tr>
<tr>
<td>Change</td>
<td>3.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>4.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Mann-Whitney U test. n = 24.

Table 5. Satisfaction with Patient Counseling by Pharmacist (between Pre and Post)

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G1</td>
<td>G2</td>
</tr>
<tr>
<td>Total</td>
<td>17.5</td>
<td>34.5</td>
</tr>
<tr>
<td>Correspondence</td>
<td>3.0</td>
<td>9.5</td>
</tr>
<tr>
<td>Description</td>
<td>8.0</td>
<td>9.5</td>
</tr>
<tr>
<td>Change</td>
<td>2.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>4.5</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Wilcoxon signed rank test. n = 24.

Table 6. Patient Counseling Alliance (between Cases)

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G1</td>
<td>G2</td>
</tr>
<tr>
<td>Total</td>
<td>25.5</td>
<td>23.0</td>
</tr>
<tr>
<td>Task</td>
<td>8.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Bond</td>
<td>12.0</td>
<td>11.0</td>
</tr>
<tr>
<td>Goal</td>
<td>5.5</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Mann-Whitney U test. n = 24.

Table 7. Patient Counseling Alliance (between Pre and Post)

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G1</td>
<td>G2</td>
</tr>
<tr>
<td>Total</td>
<td>25.0</td>
<td>49.5</td>
</tr>
<tr>
<td>Task</td>
<td>7.5</td>
<td>16.5</td>
</tr>
<tr>
<td>Bond</td>
<td>12.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Goal</td>
<td>5.5</td>
<td>16.0</td>
</tr>
</tbody>
</table>

Wilcoxon signed rank test. n = 24.

Post.

The Cronbach’s α of the 4 large-classifications were as follows: Correspondence (Pre: 0.941, Post: 0.972), Description (0.622, 0.465), Change (0.980, 0.954), and Satisfaction (0.936, 0.951).

Because the Cronbach’s α of the Description classification was low, we evaluated both the correlation coefficient and the principal component loading for all 3 items in this large-classification.

Because the correlation coefficients (Pre: 0.433, Post: 0.194) and the principal component loadings (0.359, 0.074) of the “The pharmacist’s description was insufficient (reverse scored)” were low, we removed this item and calculated the Cronbach’s α coefficients again. The Cronbach’s α for the total scale (Pre: 0.967, Post: 0.977) and Description classification (0.915, 0.943) improved after deleting this item.

Since acceptable values were obtained, we used only 8 items in the following analyses.

Between cases The SPC scale scores at Pre and Post for both groups is shown in Table 4. We observed no significant differences between Case DM and Case HT for the total or any large-classifications scores at either Pre or Post.

Between Pre and Post Table 5 shows the SPC scale scores at Pre and Post.

We observed significant differences in both the total score and all 4 large-classifications scores. Furthermore, when looking at the individual items, there were significant differences between scales for all item scores.

Alliance and Distance

Reliability of WAIS-M The Cronbach’s α of all items in the WAIS-M was 0.983 at Pre and 0.984 at Post. The Cronbach’s α values of the 3 subscales were as follows: Task (Pre: 0.951, Post: 0.962), Bond (0.979, 0.957), and Goal (0.955, 0.969).

Difference in alliance between cases The Alliance scores for each case at Pre and Post is shown in Table 6.

There were no significant differences between cases in the Total or in any of the subscales at each time point.

Difference in alliance between Pre and Post The Alliance scores at Pre and Post are shown in Table 7.

We observed significant differences in Total and all subscales between Pre and Post.

Distance (between patients and pharmacists) The Distance at Pre and Post are shown in Table 8. We observed significant differences in the Total and subscale scores at Pre but not at Post.

DISCUSSION

All contents of the training program had the certain satisfaction ratings by trainee.

We found that trainees were satisfied with VTR, which was newly added to this program, because sup-
implementing the approach method for cases where counter-evidence cannot be guided (which received poor satisfaction ratings in our previous study).

These findings cannot be attributed to differences between the two cases, as the PCT, SPC scale, and WAIS-M did not differ between the cases.

The PCT was significantly extended at Post. On the other hand, SPC was significantly increased at Post for all scores (Total, Correspondence, Description, Change, and Satisfaction scores). Also, Alliance was significantly higher at Post for all scores (Total, Task, Bond, and Goal). These suggest that using the CBT-A at medication guidance increased the PCT, SPC and Alliance.

PCT appears to widely differ according to the report. Yamada et al. reported 204.0 s,25 Kirino reported 186.0 s26 and report of the Ministry of Health, Labour and Welfare of Japan reported 340.8 s.27 In addition, Imanishi et al. suggested that the pharmacists have particular difficulty with providing medication guidance within a certain period of time and have greater time restrictions.28 Muraoka reported that three characteristics of pharmacists that “medicine-oriented counseling”, “counseling based on insufficient understanding of patient’s explanatory model” and “short duration of medication counseling (average time: 270.0 s)”, and the pharmacists carried out “Manipulation of conversation by pharmacist” and “medicine centered instruction” during medication counseling.29 Furthermore, Sashima et al. reported that “politeness (such as consideration and consciousness)” and “patient understanding (such as understanding feelings and demands)” affected for overall evaluation by patients, whereas information provision did not affect.30 Also, Chen reported that patients tended to be more satisfied with the pharmacy staff’s correspondence than with the explanations received and waiting time, which in turn had a profound impact on their overall satisfaction with the pharmacies.31

In this study, the median PCT was 343.5 s at Pre and 529.5 s at Post. Accordingly, before patients had been corresponded using CBT-A by pharmacists, the PCT was approximate to that reported by the Ministry of Health, Labour and Welfare—in other words, using the CBT-A significantly prolonged the PCT. However, it must be noted that in the patient satisfaction questionnaire, time satisfaction did not decrease significantly. At Pre, the SPs noted that pharmacists generally approached them only using a medication-and disease-oriented approach. In some cases, however, the patient’s problems could not be reached because of unilateral patient counseling that lacked consideration of the patient’s thoughts and feelings. On the other hand, at Post, SPs seemed to feel that understood themselves by pharmacists. This is perhaps because, in addition to using the medication/disease-oriented approach, the pharmacist confirmed and empathized with the thoughts and feelings of their patient using CBT-A. Therefore, we thought that although the PCT increased, patients’ satisfaction went unaffected because patients evaluated the time as sufficient for resolving their own anxiety and problems.

Therefore, we thought that helping to solve patients’ problems (e.g., non-adherence because patient have an anxiety concerning medication) in addition to ensuring good correspondence and easy-to-understand descriptions leads to an increase in overall satisfaction among patients.

For Distance, significant differences were found in the Total and all subscales at Pre, but not at Post. This is similar to what was found in our previous study, where the psychological distance was near because the pharmacist made empathic progress through collaborative work with the patient, ascertained the patient’s thoughts and feelings, and paid attention to changes in the patient’s thoughts and feelings.

In our previous study, CBT-A was presumed to aid patient counseling from the very beginning by reducing the distance.19 Watanabe et al. found that, many pharmacists “providing adequate drug administration guidance”
intuitively used psychotherapies similar to coaching, CBT, and motivational interviewing in everyday guidance activities, despite not having learned these therapies systematically. On the other hand, few of the pharmacists that “not provide adequate drug administration guidance” used coaching, CBT, or motivational interviewing methods. Based on these results, they reported that pharmacists who are able to intuitively use CBT-A might be able to provide even better guidance through systematic learning, whereas pharmacists who do not use CBT-A intuitively might provide adequate medication guidance through such learning.32)

In summary, pharmacists do seem to provide expert knowledge on medication and diseases in a manner that is easy for patients to understand when necessary, but might not be able to resolve patients’ problems in this manner. Therefore, we thought that by focusing on patients’ thoughts and feelings using CBT-A, and supporting their problem solving, patient satisfaction can be increased and the distance to the patient narrowed.

Some limitations exist in this study. First, since the study subjects participated on a voluntary basis and so on exclusion criteria of subjects are based on the self-assessment, they may be interested in CBT-A than the general pharmacists, potential a selection bias. Second, since this main result is based on answered of 4 SPs, their answers may be different from general patients at community pharmacy. And the potential for response bias as a result of using self-report questionnaires must be taken into consideration. Although because of the evaluations continued, it might be possible that the evaluations of SPs were consistent, these findings might be limited in generalizability, for reasons such as they might used to the evaluations. Third, since the cases used in this study were patients setting with representative cognitive distortion, the result may be different for the patient with other cognitive distortion. Finally, since the skills of CBT-A were not compared between Pre and Post, the results of this study were not based on the skills of CBT-A. We believed that the results of this study would be proved following. “verification by more the pharmacists and SPs (and the general patients)”, “evaluation by the psychotherapists using working alliance inventory observer form”, and “using skill evaluation index of CBT-A that would be created and verified in future”.33)

CONCLUSION

In this study, to enable community pharmacists to provide empathic patient counseling, we improved an existing training program by newly adding the topics of “inclusion of basic communication skills”, “exemplifying correspondence involving CBT-A using pre-recorded video”, and “an approach method for cases where counter-evidence is unavailable”. At Post, patients’ satisfaction with the medication guidance and the PCT both increased significantly. Furthermore, patient counseling via CBT-A was helpful in decreasing the psychological distance between the patient and pharmacist.

Although the patient counseling time was extended, patients’ satisfaction with the counseling time was not impaired, and their overall satisfaction with the patient counseling was high because pharmacists were better able to resolve patients’ own problems were solved and their own feelings and behavior improved.

If patients cannot solve their own problems even when pharmacists provide polite responses and expertise, patients can be guided in their problem solving using CBT-A.

It suggested that using CBT-A could solve the problems of patients with anxiety due to problems that cannot be solved only via drug-centered approach.

Acknowledgments The authors are grateful to pharmacists of CS Group and the participants of Nichidai-Yakugaku SP kai, who cooperated in this study.

Conflict of Interest There is no conflict of interest to be disclosed.

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