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PART IV TIME PERSPECTIVE IN PSYCHOLOGICAL APPLICATIONS

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Changes in Time Perspectives Resulting from Psychotherapy

Abstract

Constructed for clinical use and based on the concept of the feedback and feedforward systems in "cybernetic-psychology," the Time Perspective Scale (TPS) was administered to three clients in order to assess the effects of psychotherapy. Two clients were withdrawn, suffering from a condition known as *hikikomori* in Japan; the other client was diagnosed with PTSD after suffering a major personal loss as a result of the Eastern Japan earthquake and tsunami in 2011. The TPS was administered at pre-, mid-, and post-interventions. In addition, the Hildreth Feeling-Attitude Scale (F-A Scale) and the Kumamoto University Competence Scale (KUCS) were also administered to compare the results of the TPS. Results from the TPS indicated that at the end of the intervention, clients' thoughts were positively focused on the present and the future. In comparison to their negative thoughts concerning the present and the future during the pre-intervention period, two clients displayed positive feedback regarding the past, and all clients displayed positive thoughts about the present as well as positive feedforward thoughts for the future. Similar to the TPS, the F-A Scale and the KUCS indicated that the clients had more positive and more constructive cognitions after the intervention. Therefore, the TPS is a useful questionnaire for assessing the therapeutic efficacy of the time perspective.

Keywords: Time Perspective Scale, memory therapy, *hikikomori*, competence

Zmiany perspektyw postrzegania czasu jako skutek psychoterapii

Streszczenie

Opracowana w celu zastosowania klinicznego i oparta na konstruktach systemów sprzężenia zwrotnego i feedforward w psychologii cybernetycznej Skala Perspektywy Postrzegania Czasu (TPS) zastosowana została w przypadku trzech klientów w celu oceny skutków ich psychoterapii. Dwaj klienci byli wycofani, cierpieli na schorzenie zwane w Japonii *hikikomori*; u innego klienta zdiagnozowano PTSD po stracie osobistej w wyniku wielkanocnego trzęsienia ziemi i tsunami w Japonii w 2011 r. Skala Perspektywy Postrzegania Czasu (TPS) została zastosowana przed, w trakcie oraz po psychoterapeutycznych interwencjach. Zastosowano

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także Skalę Uczuć i Postaw Hildretha (F-A Scale) oraz Skalę Kompetencji opracowaną na Uniwersytecie Kumamoto (KUCS). Wyniki uzyskane w Skali Perspektywy Postrzegania Czasu wykazały, że pod koniec terapii myśli klientów były pozytywnie skupione na teraźniejszości i przyszłości. W porównaniu z negatywnymi myślami dotyczącymi teraźniejszości i przyszłości w okresie poprzedzającym terapię, u dwóch klientów pojawiła się pozytywna informacja zwrotna dotycząca przeszłości, a wszyscy klienci wykazywali pozytywne myśli dotyczące teraźniejszości oraz pozytywne myśli wyprzedzające w stosunku do przyszłości. Podobnie jak w odniesieniu do TPS, skale F-A i KUCS wykazały u klientów po interwencji terapeutycznej wzrost nastawień o charakterze pozytywnym i konstruktywnym. Skala TPS okazuje się zatem narzędziem przydatnym do ceny terapeutycznej skuteczności zmiany perspektywy postrzegania czasu.

Słowa kluczowe: Kwestionariusz Postrzegania Czasu, terapia pamięci, *hikikomori*, kompetencje

Introduction

The concept of time perspective

In order to apply the concept of time perspective to clinical use, Katsumata (1995a) proposed the concepts of past time perspective (including feedback), present time perspective, and future time perspective (including feedforward). Details regarding the time perspective are displayed in Table 1. Katsumata (1995a) also graphically represented the time perspective using the ribbon model, which is shown in Figure 1. The terms of feedback and feedforward in "cybernetic-psychology" were adopted to explain the ribbon model of the time perspective. In this paper, negative feedback is a reduction of the error signal to zero (like a thermostat) or as a negative perception of the result. Positive feedback is regarded as a positive reception of the result, even if the result is negative or an error. Positive feedforward includes individuals' cognitions regarding their positive pre-estimations of future goals and events. On the other hand, negative feedforward are cognitions in which individuals make negative or restrictive pre-estimations of the future. Time perspective is defined as the totality of individuals', groups', and/or society's views of the past, present, and future.

Tab. 1. The concept of time perspective

Dimension	Time perspective	Control system
past	Past time perspective	feedback (negative & positive)
present	Present time perspective	
future	Future time perspective	feedforward (negative & positive)

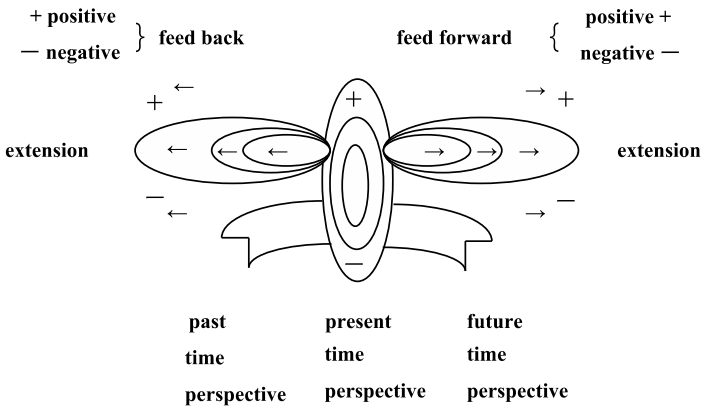

Fig. 1. Ribbon Model of Time Perspective (Katsumata,1995a)

Model of adaptive and maladaptive time perspective

Lens and Moreas (1994) conceptualized differences in our temporal orientations. Past-oriented people relive traumatic or rewarding past events. In contrast, recent-oriented people are completely absorbed in the present, and do not think much about the past and the future. Such individuals do not learn from previous experiences, nor do they take into account the consequences of their behaviours. The final type is exclusively future-oriented people, who forget to enjoy the present because everything they do is in preparation for the future. Generally, it is healthier to perceive and experience continuity among one's past, present, and future. Such thinking provides temporal integration or time competence. The past and future are integrated within the present as the past (as a positive or negative example) and that is directed towards the future.

Katsumata (2007) proposed a model of adaptive and maladaptive time perspectives. The adaptive model includes two features. The first feature is that time perspective is in the process of being integrated with appropriate boundaries between each time dimension. The second feature suggests that positive feedback control concerning the past, positive views of the present, and positive feedforward control (including goal setting, expectation, and hope) are linked. The maladaptive model also has two features. The first feature is that all time dimensions are not integrated. In this case, the mode of time perspective is negative feedback dominance of the past time perspective, and negative feedforward in future time perspective. Therefore, time is stagnant, and individuals may perceive it as unchangeable, resulting in depression and suicidal behaviours. The second feature is when the time perspective is restricted to the present only, without a feedback system from the past and a feedforward system regarding the future. In this case, individuals will engage in maladaptive behaviours, such as asocial or antisocial behaviours. Juvenile delinquents are likely to be present-oriented.

Katsumata (1973) developed the Time Perspective Test for clinical use. Clients list up to twenty-five events within the last two weeks, which include thinking or talking to other people. Although the interview provides a wealth of information, listing so many events is time consuming, resulting in the fact that the interview takes an hour and a half to complete. In 2000, Katsumata also developed the Time Perspective Scale (TPS) as an alternative to the Time Perspective Test. The TPS consists of fifteen items based on Katsumata's (1995a) ribbon model. This scale uses a 5-point Likert scale (1 = very uncharacteristic; 5 = very characteristic), and assesses whether the client's time perspective is positive (more than 3 points) or negative (less than 3 points). To interpret the TPS, the concepts of feedback regarding the past, and feedforward concerning the future are applied. These concepts are based on the theory of "cybernetic-psychology" (Toyoshima, 1993).

Tab. 2. Question Items and Time Perspective in the TPS by Sakuma

Question No.	Question items	Posi./ Nega.
Past Time Perspective		
01	In the past, I had many unpleasant experiences.	-FB
04	Bad experiences in the past are influencing my life at present.	-FB
07	Bad experiences in the past teach us a lot.	+FB
10	I understand my past bad experiences in a positive light.	+FB
13	In the past, I expected everything to work out.	+FB
Present Time Perspective		
02	Currently I have many unpleasant experiences.	-Cog
05	Currently I have few pleasant experiences.	-Cog
08	Currently I have many pleasant experiences.	+Cog
14	I am satisfied with my life right now.	+Cog
11	Now I am enjoying a full life.	+Cog
Future Time Perspective		
03	When I set goals or make plans, I often become apathetic because I feel anxious.	-FF
06	Whenever I think about my future, it makes me feel unpleasant.	-FF
09	When I try to do something, I always make concrete goals and plans.	+FF
12	Even if there is some possibility of failure, I expect to be successful in the future.	+FF
15	If things do not go as expected or as planned, I think we only need to change direction.	+FF
Time Dominancy		
16	Usually I am thinking and concerned about my past.	Past
17	Usually I rarely think about my past or my future.	Present
18	Usually I like looking forward to my future.	Future

Note: – (Negative), + (Positive), FB (Feedback), FF (Feedforward), Cog (Cognition)

The purpose of this study

The purpose of this study is to confirm the effectiveness of three different therapies from a time perspective point of view by using the TPS.

Methods

Participants

Client A was an unmarried, unemployed 43-year-old man, who holds a master's degree in art and design. He described himself as "not good at speaking with others." Before being unemployed, Client A worked as a newspaper deliveryman and a part-time factory worker for several years. During the past 16 years, he has often experienced severe anxiety around people. He received treatment for anxiety at the medical hospital for eight years, but he has discontinued treatment because he believes that the psychotropic drugs were not effective. Recently, Client A experienced severe anxiety about a female co-worker, resulting in quitting his job as a factory worker. He believes that his condition is getting worse. Client A was referred to our office by his pet's veterinarian, who recommended that Client A should meet with a psychological counsellor.

Client B was a 20-year-old high school graduate, living with his father (age 58), mother (age 49) and brother (age 18). According to his father, Client B is interested in video games more than his studies. His lack of interest in studies became greater after his high school graduation. Over the last few years, he has been staying at home, not working or going to school, which resulted in his mother taking him to a public consultation room operated by the city. Although Client B saw the counsellor, he did not answer any questions and refused to go back. One year later, he came to our counselling office with his father. He explained that he had no plans or ideas for his studies and was confused concerning his life goals. Furthermore, he also reported that he had sleep difficulties, such as waking up in the middle of the night, sleeping during the day, and frequently using the restroom on tense days.

Clients A and B were diagnosed with *hikikomori*. *Hikikomori* is a Japanese term which refers to the phenomenon of adolescents or the middle-aged who withdraw from social life. The Ministry of Health, Labour, and Welfare, Japan (2012) defines *hikikomori* as people who refuse to leave their homes, and as those who isolate themselves from society for a period exceeding six months. *Hikikomori* is a new social problem emerging in Japan. Hattori (2013) conceptualized *hikikomori* as the following:

> By the beginning of 2000, this syndrome had spread at almost epidemic proportions. Psychiatrist Tamaki Saito, who coined the term, estimated that there may be over one million cases of hikikomoris, which is about 1% of Japan's total population. In 2010, the government stated that over 1.5 million people suffer from symptoms of this syndrome.
>
> Hikikomori is believed to be the result of an absence of maternal bonding and insecure attachment. When the mother rejects her child, the child responds by splitting into two selves. One self conforms to the mother in order to avoid further abandonment, whereas the other self hides the child's true identity for emotional survival. The syndrome is characterized by individuals craving their mothers' love, being tormented by the ghost of their mother, and as having chronic fear, and distrust of people.

The focus on the relationship between a mother and her child may be the result of typical Japanese parents who are generally passive and use a soft approach with their children. Grubb (2013) explained that, "If my child was inside that door and I didn't see him, I'd knock the door down and walk in. Simple. But in Japan, everybody says give it time, it's a phase or he'll grow out of it."

According to a survey taken by individuals from 15 to 19 years of age by Cabinet Office (2010), the number of individuals with *hikikomori* in Japan is estimated to be about 696.000. Various organizations, including the public employment service, *HellowWor*k, assist *hikikomori* individuals with finding employment (Ministry of Health, 2012). Despite the availability of employment services, there are many people with *hikikomori* who are unable to find employment. These organizations are a secondary step for helping such people, whereas individual therapy should be the first step. Therefore, individuals with *hikikomori* should receive therapy in an effort to help them form, direct, and pursue their goals.

Client C, a 60-year-old Japanese female, attended therapy after the loss of ten relatives in an earthquake and tsunami which struck eastern Japan in 2011. She reported that she is unable to stop crying each night before going to bed. Client C was diagnosed with PTSD.

Measures

The Time Perspective Scale (the TPS; Katsumata, 2000), the Hildreth Feeling-Attitude Scale (the F-A Scale; Hildreth, 1946), and the Kumamoto University Competence Scale (the KUCS; Katsumata & Shinohara, 2000; Katsumata, 2005) were used to assess clients' progress during and after therapy. The TPS assesses whether the client's time perspective is positive or negative in the past, the present, and the future. The KUCS investigates a client's ability to deal with the environment. The KUCS consists of 35 items including five competence factors (i.e. cognitive competence, physical competence, social competence, survival competence, general self-esteem competence). Higher scores indicate relatively constructive competencies, whereas lower scores suggest that some dysfunctions may be included. The F-A Scale is used to evaluate the current psychological condition of the client. This scale consists of eight items including those that assess feelings, mental activities, future perspectives, mental state, attitude towards work, and attitudes towards other people. Higher scores indicate a more positive state of mind.

Sessions for Client A were conducted using Ivey's micro-counselling method (Ivey, Ivey & Zalaquett, 2010). Therapy consisted of five stages, including relationship, story and strength, goals, re-story, and action. In the process of this five-stage interview, the client clarified goals and thoughts with the therapist.

It was estimated that Client B's withdrawal was caused by some dysfunctional competence. Memory therapy (Katsumata, 1993; 1994) was used as a catalyst for activating his contracted competences. The therapist assisted and promoted the client's competences through memory training using mnemonic strategies.

There are various mnemonic strategies such as the link system, the peg system, the phonetic translation system, the loci system, the first letter mnemonics, the SQ3R method (Survey, Question, Read, Recite/Write, Review), the PORST method (Preview, Question, Read, State, Test), and so on. The link system is the most basic mnemonic strategy (Katsumata, 1995b). While proactive linking from a stimulus item to a response item indicates the client's prospective, facilitating, active, and released behavioural traits, retroactive linking from a response item to a stimulus item indicates their regressive, stagnant, passive, closed, and persecute behavioural traits. We used the four rules proposed by Lorayne and Rucus (1974) to help the trainees form effective visual images, which thereby enabled the clients to extend and activate their reduced tendencies. Katsumata used memory therapy, and experienced that such therapy was effective for treating clients who presented with school refusal, selective mutism, stuttering, tics, depression, enuresis, psychogenic stomach ulcers, irritable bowel syndrome, psychogenic convulsions, juvenile delinquency, and underachievement. Once a week, 45 minute memory therapy sessions were performed, with memory training using the link system. The objectives of the sessions were to assist Client B in developing clearer goals for the present and the future, making him ready to continue his studies and promote changes in his life.

Client C received Zen-Counselling. The original purpose of Zen-Counselling is spiritual enlightenment. This type of counselling helps an individual make a direct experience of his/her true nature. The therapist provides suggestions based on the spirit of Zen to the client. In every session, the therapist told Client C to think about the past with a positive outlook, while suggesting that the client realize the doctrines of Buddhism. The client was asked to understand that past events and other people are unchangeable, and that *shou-rou-byou-shi* (i.e. birth, ageing, illness, and death) are inevitable for everyone. The therapist recommended the *arugamama* (as it is) state for Client C. The client was filled with positive feedback and positive feedforward thoughts.

Results

Client A

The client stated in the middle of the therapy: "I can now clarify my real desires. Writing novels will give me a feeling of satisfaction and accomplishment. That would be a real reason for living. When I am writing a novel, I feel relaxed and I do not get worried about relationships with other people as much as I did before." The client decided on a goal and tried to achieve it by attempting to publish his writing in a magazine. Moreover, he talked to the therapist about volunteering in his community by cleaning the walkways to a shrine. His social competence of social interchange was enhanced.

TPS. This questionnaire utilized a 5-point Likert scale, and consisted of eighteen items. The mid-point of 2.5 was used to determine positive (i.e. 2.5 or higher) or negative states (i.e. lower than 2.5). The mean scores of the client's past perspectives

were assessed at the pre- and mid-interventions, revealing that the client had negative states. However, Client A's emotions became more positive during the post-intervention. In addition, the client's scores on the TPS for his present and future perspectives also became more positive during the post-intervention.

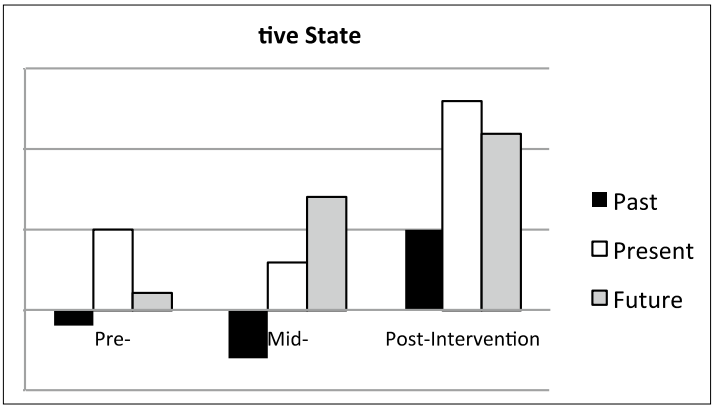

Fig. 2. The TPS for Client A

F-A Scale. The client's feeling and attitude mean scores showed an increasingly positive trend as well. His responses to two items: "I am irritated by most people" and "I always get angry with everyone" changed during the post-intervention stage to "I am unconcerned with most people" and "When I like the person, I have relationship with him/her. And if I dislike the person, I have no relationship with him/her".

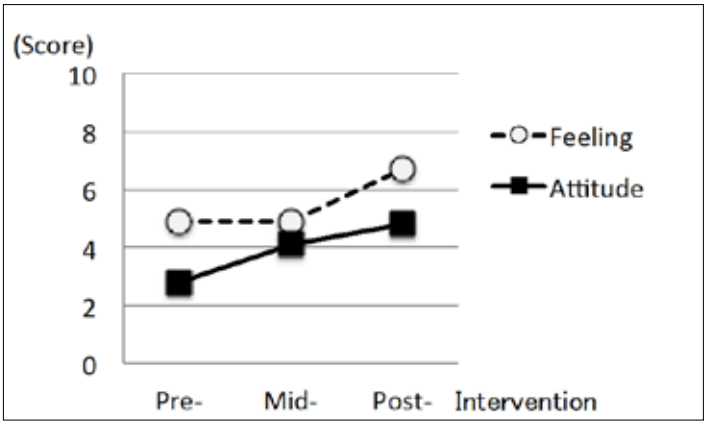

Fig. 3. The F-A Scale for Client A

KUCS. Figure 4 shows the result of the KUCS at each intervention. Although his social competence scores were low at each intervention interval, his score for general self-esteem competence increased gradually from the pre-intervention (M = 1.7) to the mid-intervention (M = 2.4), as well as from the mid-intervention

to the post-intervention (M = 2.9). There were considerable changes in Client A's responses to the emotional stability and being needed by others items.

At the follow-up stage, conducted one year after post-intervention, the KUCS was administered. Competences were nearly identical to the post-intervention stage. Specifically, cognitive, survival and general self-esteem competences were positive.

Fig. 4. The KUCS for Client A

Client B

He reported that he experienced the memory training as fun. After the memory therapy, he decided to take a university entrance exam, and to study both mathematics and English. He also went to a coming-of-age ceremony, and reconnected with friends that he had not seen in two years. They all play table tennis every week.

TPS. The TPS score for Client B at the pre-intervention stage was negative for the past (see Fig. 5). At the mid- and post-interventions, this score changed to positive. The scores for the present were positive across each intervention, gradually increasing by the post-intervention.

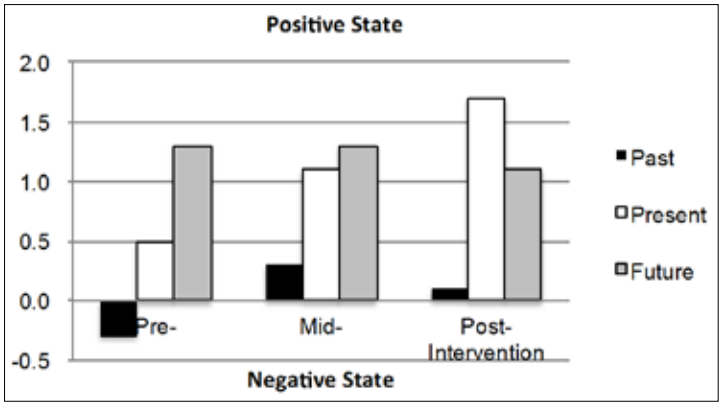

Fig. 5. The TPS for Client B

F-A Scale. At the intake interview, the mean scores of feelings and attitudes were both low and each were under the mid-point of 5 (see Fig. 6). Mean attitude scores rose at the mid- and post-interventions, but they were still under the mid-point. In addition, mean feeling scores were above the mid-point at the mid- and post-interventions.

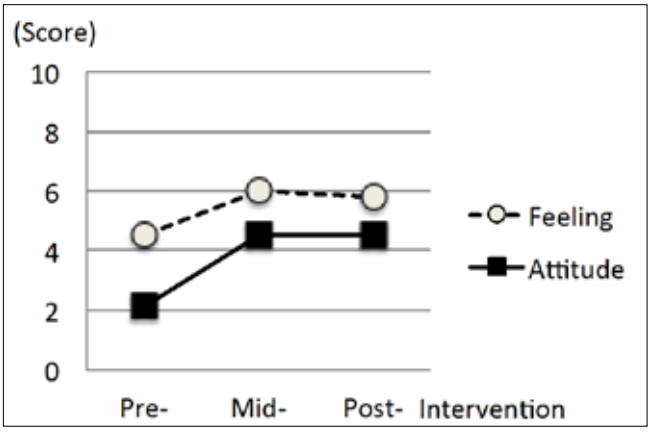

Fig. 6. The F-A Scale for Client B

KUCS. The client did not recognize his own changes in competences in the middle of therapy. However, by the end of therapy, he felt the enhancement of survival competence and general self-esteem competence (see Fig. 7). Client B's mother filled out the KUCS regarding her son. She also reported that he had increases in the survival and the general self-esteem competences.

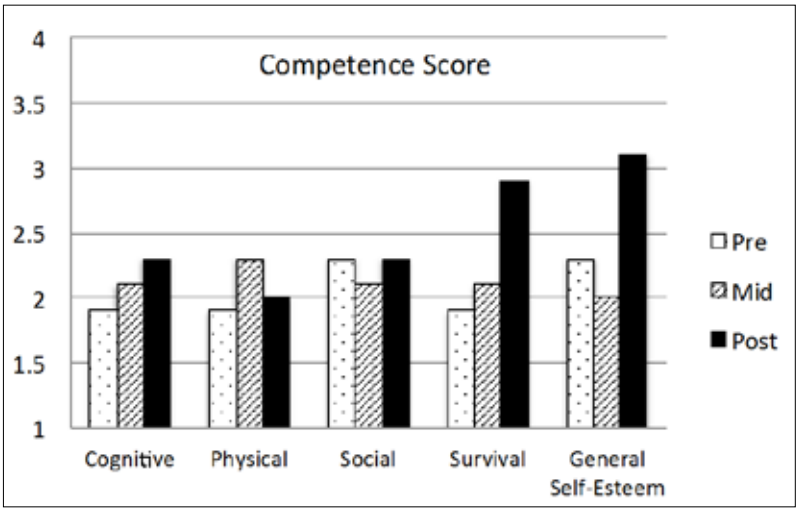

Fig. 7. The KUCS for Client B

Client C

Zen-Counselling changed Client C's negative cognitions for the past to positive ones. By accepting some Buddhist doctrines, she gradually began to think about the good memories of the past and the gratitude she felt toward her relatives. She did not express grief, but instead thanks toward her relatives.

TPS. Soon after the earthquake, the TPS scores of Client C were "slightly positive" for the past, and "negative" for the present and the future. After therapy, these scores became "extremely positive" for the past, and "positive" for the present and the future (see Fig. 8).

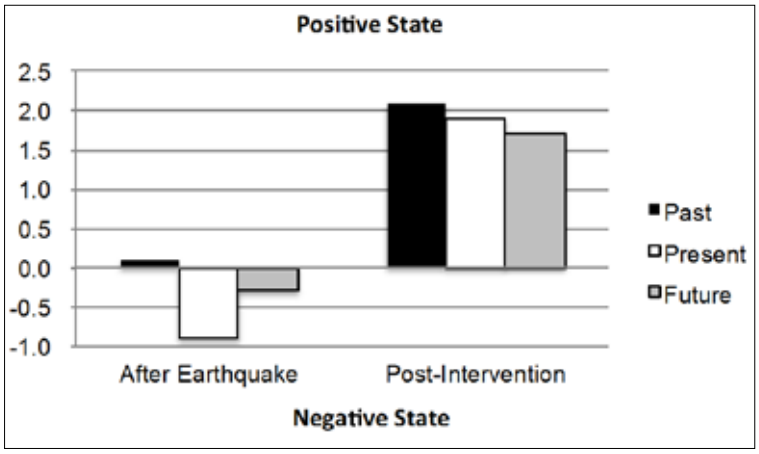

Fig. 8. The TPS for Client C

F-A Scale and KUCS. At the end of therapy, the scores measured by the F-A Scale (see Fig. 9) and the KUCS (see Fig. 10) had increased to more positive and more constructive states.

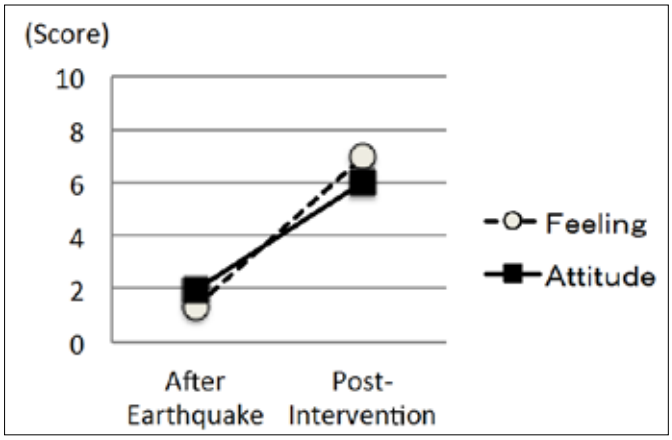

Fig. 9. The F-A Scale for Client C

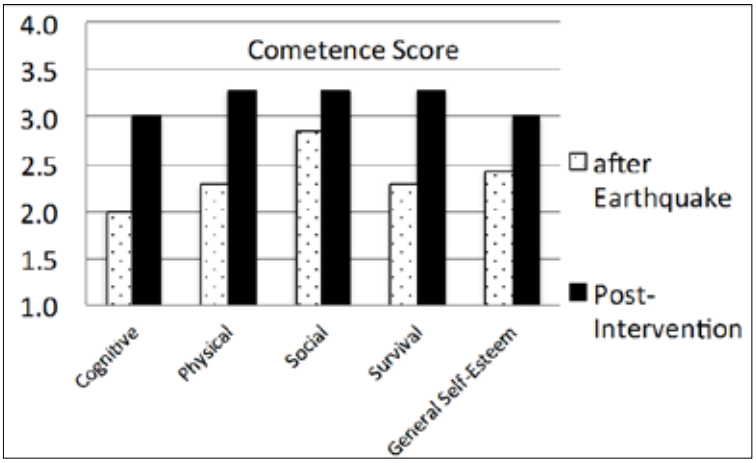

Fig. 10. The KUCS for Client C

Discussion

In this paper, the TPS was administered to three clients, along with the KUCS and the F-A Scale. In addition, the three clients received different therapeutic approaches, including the five-stage interview, memory therapy, and Zen-Counselling.

The TPS scores for the past perspectives of Clients A and B changed, reflecting a renewed focus on the present. At the post-intervention interval, both Client A and B clarified their present goals. At the end of therapy, their scores on the F-A Scale showed a positive mental state. From the KUCS, their general self-esteem competences were especially enhanced, which may be due to positive changes in their time perspectives. Client C lost many of her relatives in a major earthquake and its aftermath. Her time perspective was strongly influenced by her present negative cognitions. One year after her loss, she underwent Zen-Counselling, and began to report positive perspectives as a result of the therapy. Furthermore, her past perspective became extremely positive. She was able to engage in meaningful mourning because of her focus on positive feedback through the "*arugamama*" state. The higher scores of the KUCS and the F-A Scale support the effectiveness of the therapy, especially the general self-esteem competence, which consists of the three As (i.e. affection, acceptance, approval) of emotional stability and self-confidence.

All clients made changes in their time perspectives, which brought about positive changes in their future time perspectives. The TPS was useful for assessing clients' feedback and feedforward thinking, which contributed to their adaptation for life. We recommend that the TPS be utilized in future research focused on the time perspective.

Conclusions

It is important for therapists to assess the time perspective of clients as many clients may have a maladaptive time perspective. The TPS provides valuable information to the therapeutic process regarding the client's positive and negative feedback about the past, their positive and negative cognitions about the present, and their positive and negative feedforward thoughts concerning the future. We conclude that the TPS is useful for assessing the therapeutic efficacy of the time perspective.

References

Cabinet Office, Government of Japan (2010). *Hikikomori* ni kansuru jittaityousa [The fact-finding survey of *hikikomori*].

Grubb, H. (2013). Japan: The Missing Million.. Retrieved from http://news.bbc.co.uk/2/hi/programmes/correspondent/2334893.stm

Hattori, Y. (2013). Hikikomori and Japan. Retrieved from http://hikikomorijapan.com/jp/

Hildreth, H. M. (1946). A battery of feeling and attitude scales for clinical use. *Journal of Clinical Psychology*, *2*, 214-221.

Ivey, A., Ivey, M., & Zalaquett, C. (2010). *International interviewing and counseling: Facilitating client development in a multicultural society*. Belmont: Cengage Learning.

Katsumata, T. (1973). Studies of Time Perspective Test (1) – The design of TPT. *The Memoirs of the Faculty of Education*, *Kumamoto University*, *22*, 155-162.

Katsumata, T. (1990). The analysis of the time perspective test protocol in an attempted suicide. *The Memoirs of the Faculty of Education*, *Kumamoto University*, *39*, 319-340.

Katsumata, T. (1993). Therapeutic hypothesis on memory therapy. *The Memoirs of the Faculty of Education*, *Kumamoto University*, *42*, 279-283.

Katsumata, T. (1994). Procedures of memory therapy. *The Memoirs of the Faculty of Education*, *Kumamoto University*, *43*, 247-265.

Katsumata, T. (1995a). Concept and structure of time perspective. *The Memoirs of the Faculty of Education*, *Kumamoto University*, *44*, the Humanities, 307-318.

Katsumata, T. (1995b). Mnemonic strategies and materials in memory therapy: A method of producing memory materials by the link system. *The Memoirs of the Faculty of Education*, *Kumamoto University*, *44*, 319-332.

Katsumata, T. (2000). Time perspective scale (TPS). Unpublished manual.

Katsumata, T. (2005). *Konpitansu Shinrigaku* [*Competence Psychology*]. Tokyo: Baifukan.

Katsumata, T. (2007). Application of concept of time perspective to psychotherapy. *Komazawa Annual Reports of Psychology*, *9*, 43-48.

Katsumata, T., & Shinohara, H. (2000). Development and validation of KU Competence Scale: Elementary school children. *The Memoirs of the Faculty of Education*, *Kumamoto University*, *49*, 109-119.

Lens, W., & Moreas, A. (1994). Future time perspective: An individual and a societal approach. In Z. Zaleski (Ed.), *Psychology of Future Orientation*. Lublin: Towarzystwo Naukowe KUL.

Lorayne, H., & Rucus, J. (1974). *The Memory Book.* New York: Ballantine Books.

Ministry of Health, Labour and Welfare, Japan (2012). *Hikikomori* kanren sesaku [Policy related to *hikikomori*].

Toyoshima, Y. (1993). Psycho-cybernetics. (In Japanese). Kyoto: Nakanishiya.

Zimbardo, P. G., & Boyd, J. (1999). Putting time in perspective: A valid, reliable individual-difference metric. *Journal of Personality and Social Psychology*, *77*, 1271-1288.