

11-2021

Impact of Self and Therapists' Evaluation of Responses to Miracle Question and Goal: Survey of Japanese Undergraduate and Graduate Students

Gen Takagi

Tohoku Fukushi University Sendai, Japan, gtakagi.pr@gmail.com

Taku Hiraizumi

Miyagi University Sendai, Japan, hiraizumit@myu.ac.jp

Kazuma Sakamoto

Tohoku University Sendai, Japan, kazumokeke@gmail.com

Miki Hagidai

Shibata Gakuen University Hirosaki, Japan, m.hagidai@gmail.com

Follow this and additional works at: <https://digitalscholarship.unlv.edu/journalsfp>

Recommended Citation

Takagi, Gen; Hiraizumi, Taku; Sakamoto, Kazuma; and Hagidai, Miki (2021) "Impact of Self and Therapists' Evaluation of Responses to Miracle Question and Goal: Survey of Japanese Undergraduate and Graduate Students," *Journal of Solution Focused Practices: Vol. 5 : Iss. 2 , Article 3.*

Available at: <https://digitalscholarship.unlv.edu/journalsfp/vol5/iss2/3>

This Article is protected by copyright and/or related rights. It has been brought to you by Digital Scholarship@UNLV with permission from the rights-holder(s). You are free to use this Article in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/or on the work itself.

This Article has been accepted for inclusion in Journal of Solution Focused Practices by an authorized administrator of Digital Scholarship@UNLV. For more information, please contact digitalscholarship@unlv.edu.

*ARTICLE***Impact of Self and Therapists' Evaluation of Responses to Miracle Question and Goal: Survey of Japanese Undergraduate and Graduate Students**

Gen Takagi

Tohoku Fukushi University Sendai, Japan

Taku Hiraizumi

Miyagi University Sendai, Japan

Kazuma Sakamoto

Tohoku University Sendai, Japan

Miki Hagidai

Shibata Gakuen University Hirosaki, Japan**Abstract**

Solution-Focused Brief Therapy is a psychotherapy which does not focus on the problem, but on the clarification of the goal state and the extension of the exception. The purpose of this study was to examine the effects of both clients' and therapists' evaluations of goal clarification on the variables which is considered important in SFBT. A total of 223 participants who responded to all questionnaires were the subject of the analysis. The results of this study showed a correlation between self and therapists' evaluations for the imagination of the Miracle Question, the concreteness of the goal, and the reality of the goal. On the other hand, none of the relationships were strongly correlated, confirming that the self evaluation and the therapists' evaluation differed to a certain extent. Goal-related evaluation by the therapist had a positive impact on solution building, solution orientation, and causal analysis. Besides, self evaluation related to Miracle Question and goal had a positive impact on self-efficacy and degree of problem-solving. These findings indicate that self and therapists' evaluations related to Miracle Question and goal have a diverse effect on problem-solving.

Introduction

Solution-Focused Brief Therapy (SFBT) is a psychotherapy proposed by de Shazer et al. (1986). de Shazer (1984) pointed out that the therapist and client have an equal and cooperative relationship. This view helped to establish the notion that clients have the capacity and resources for resolution. Furthermore et al. (1988) showed that conversations about change are associated with treatment outcomes, and the SFBT questioning technique was developed to elicit conversations about change from clients. With these backgrounds, SFBT considers that understanding the problem does not necessarily lead to solving the problem (De Jong & Berg, 2013), and attempts to build a solution collaboratively by focusing on the client's wishes and resources.

Greene and Grant (2003) state that "if you know where you are headed it is easy to get there. So, imagining a future helps you to reach it" (p. 25). The characteristic of solution building is to focus on the clarification of the goal state and the extension of exceptions (De Jong & Miller, 1995). In SFBT, Miracle Questions (MQ) are used to clarify the goal state that reflects the client's desires (de Shazer & Dolan, 2012). MQ is a guidepost for support because it defines the client's

desired future and life after problem-solving (de Shazer, 1982). Greene and Grant pointed out that both a fuzzy vision of the solution by MQ and a specific goal following that vision is necessary. Therefore, in the process of goal clarification, a well-formed goal should be set in addition to MQ's. As the condition for well-formed goal, de Shazer (1991) points out the following: the goal should be (1) important to the client, (2) limited to the situation, specific, actionable, and measurable, and (3) realistic. Such goals make the solution image clearer, and the hopes for future life and the efficacy for problem increase (Jordan & Quinn, 1994; Shilts et al., 1997). Thus, clarification of the solution image and setting of specific goals by MQ play an important role in SFBT. In summary, the clarification of the solution image by MQ and the setting of specific goals will help to build the solution.

Next, Exception Questions are those questions that focus on the time when a problem is not occurring, or when something is a little better. Even the most persistent problems are not absolutely always present, and there are always some exceptions (Greene & Grant, 2003). When clients start looking for exceptions, they can find and reproduce previously unrecognized exceptions (Berg & Dolan, 2001). Solution-focused principles and techniques help clients to utilize their inherent, perhaps unconscious thought processes and experiences of situations to have them find the solution (Greene & Grant, 2003).

De Jong and Berg (2013) recommend looking for exceptions after the Miracle Question for two reasons. First, at the beginning of the therapy, clients are so focused on talking about the problem that they are unlikely to notice exceptions. At that point, it may seem out of place to ask questions to find exceptions. However, after the client has given a concrete description of his or her life when the miracle occurred, the search for exceptions can begin quite naturally. Second, such an order makes it easier for the client to find exceptions that are directly related to the miracle (a detailed description of what they want to be different in their life). These are the exceptions that are most helpful in building the solution because they are closely related to what the client wants. Thus, it is important to look for exceptions after the well-formed goal has been set.

Worksheet of SFBT

In recent years, self-care tools that do not require therapist involvement, such as worksheets and the internet, have been developed and shown to be effective (Cuijpers & Schuurmans, 2007). In SFBT, there have been studies on the effects of worksheet format, for example, Grant (2012) showed that worksheets structured around MQ increased problem solving and self-efficacy compared to problem-focused questions. Besides et al. (2019) developed a worksheet consisting of EQ and MQ and found that it increased the degree of problem-solving, self-efficacy, and solution building. Thus, while the effectiveness of a worksheet consisting of SFBT techniques was demonstrated, the impact of individual elements of SFBT was not examined in detail. Therefore, this study focuses on clarifying the solution image and setting specific and realistic goals among the elements of SFBT, and examines its effectiveness in detail.

Many studies on goals have been conducted in Personal Project and industrial domains. In research on Personal Project, personal goals have been linked to subjective well-being (Brunstein, 1993). From an approach-avoidance perspective, Emmons (1996) categorizes goals into three categories: what we want to achieve, what we want to maintain, and what we want to avoid. Avoidance goals, even if achieved, simply acquire the absence of negative consequences, not the presence of the positive consequences that are needed to meet the needs of the individual (Elliot & Sheldon, 1998). In fact, Coats et al. (1996) found a negative correlation between avoidance goals and optimism and self-esteem, and a positive correlation with depression. In addition, cultural differences were also examined, and while avoidance goals were negatively associated with subjective well-being in the United States, no significant correlation was found in Korea (Elliot et al., 2001). In Japan avoidance goals may not have negative effects. However, there is no cultural difference in the fact that approach goals are more likely to confirm outcomes than avoidance goals, and approach goals are more important in solution building. Furthermore, Elliot and Friedman (2007) pointed out the importance of shifting from pursuing avoidance goals to pursuing approach goals. In Japan, Kurosawa (2012) has proposed the condition of "do" rather than "don't" as a condition for goal in the SFBT, and this study also requests that approach goals be set in accordance with this condition.

Research on performance in the industrial domain has shown that concrete and difficult goals lead to higher performance (Locke & Latham, 2013). In addition, Emmons (1992) showed from a quantitative study that abstract goals are associated with psychological distress such as depression. Therefore, it is expected that having concrete goals will

lead to better performance and mental stability. On the other hand, difficulty can have negative effects such as lowering morale and efficacy if the task is complex or at a level that the individual feels is unachievable (Locke & Latham, 2013). In particular, the achievement of various goals in daily life requires complex task execution, such as the need to change strategies in interaction with the environment. In order to maintain a sense of self-efficacy in solving such tasks, it is important that the reality of the goals be highly evaluated. From the above, it is important to clarify the image of the solution and to set specific and realistic goals as the clarification of goals in solution-oriented short-term therapy. Therefore, by measuring the imagination of the solution image, the concreteness of the goal, and the reality of the goal separately, we examine the individual effects of these elements.

The Purpose of This Study

The setting of specific and achievable goals is particularly crucial in SFBT. Emmons (1992) shows from a quantitative examination that abstract goals are associated with psychological distress, such as depression. On the other hand, there is still no research that has quantitatively examined the influence of goal clarification on the variables such as solution building, which is considered important in SFBT. Also, no research has discussed in detail what influences the evaluation of characteristics on goals from both therapists and individual subjective aspects. Subjective client evaluation of goals may not always coincide with assessment by therapists. For example, a client may feel that a goal is specific and realistic, but from the therapists' point of view, it may seem insufficiently specific or that a more realistic goal is needed. Therefore, the purpose of this study was to examine the effects of both clients' and therapists' evaluations of goal on the variables which is considered important in SFBT. In SFBT, the importance of goal has been cited as a condition for good goals. However, the importance of the goal is largely subjective to the client and difficult to assess by others. In addition, since this study deals with goals set by the client, rather than goals given by others, there is little possibility that unimportant goals will be set. For these two reasons, we decided to focus on concreteness and reality among the goals.

As a measure of effectiveness, we used the scale of Solution Building Inventory (SBI). Smock et al. (2010) identified three important components of solution building: having a clear vision of the desired state, recognizing exceptions, and having hope about the future. Based on these important components, a solution building inventory was developed to evaluate the ability to build solutions (Smock et al.). In particular, in the process of clarifying goals using the Miracle Question, solution building is thought to be enhanced because the participants imagine a desirable state and set specific and realistic goals. In SFBT, solution building is the most important variable, and when solution building is enhanced, self-efficacy and coping strategies are thought to change positively.

On the other hand, since the solution building is not a direct measure of self-efficacy or coping strategies themselves, four indicators of effectiveness were used: self-efficacy, degree of problem solving, ideal level of life, and coping strategies to capture the positive changes caused by SFBT in detail. Self-efficacy is confidence in solving problems, and people with high self-efficacy tend to be optimistic, confident in their actions, and proactive in carrying them out (Kelder et al., 2015). Therefore, increasing self-efficacy is an essential element for improving problem situations. SFBT techniques have been shown to increase self-efficacy (De Jong & Berg, 2013; Grant, 2012; Takagi & Wakashima, 2019), and it is expected that imagining solutions and setting specific and realistic goals will increase self-efficacy.

Next, the degree of problem-solving is a measure of whether the problem is serious or close to resolution. De Jong and Hopwood (1996) examined the effectiveness of SFBT using a problem-solving index graded on a scale of 0 to 10, and reported that 74% of the students improved by one point or more. In addition, the ideal level of life is an index that measures whether the current life is far from the ideal or close to the ideal. Pakrosnis & Cepukiene (2012) point out that the effects of SFBT can have a positive impact not only on the specific topics and situations discussed in therapy, but also on various aspects of the client's life. Therefore, it is expected that in SFBT, not only the specific problem but also the client's whole life will improve. In summary, the degree of problem solving and ideal level of life will be enhanced by fully imagining the solution and setting concrete and realistic goals.

Finally, coping strategies are indicators that measure how people cope with problems. Tsukahara (2010) classified coping strategies into two categories: primary control, which directly attempts to solve the problem itself, and secondary control, which attempts to solve the problem by adjusting the perception of the problem. And both primary and secondary controls were found to be effective in reducing depressive symptoms. As Greene and Grant (2003) recommend determining an action plan after goal clarification, it is important to create a change in the way clients

deal with their problems in SFBT. On the other hand, how the imagination of the solution image, the concreteness of the goal, and the realism of the goal affect coping strategies has not been examined. Therefore, the present study examined the effects on coping strategies in an exploratory way.

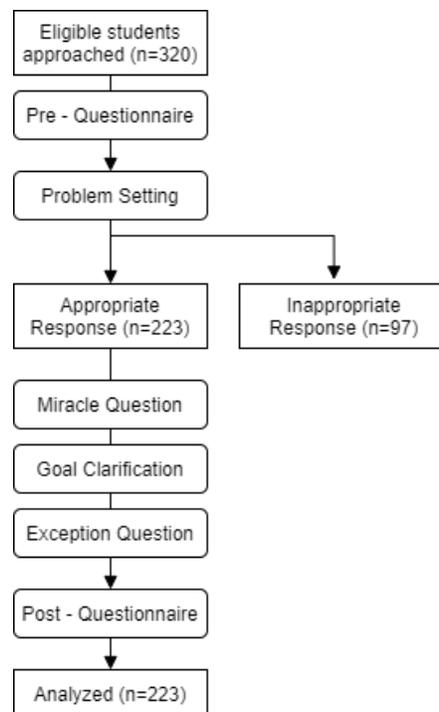
Method

Procedure

The survey for this study was conducted in November and December 2018. Japanese undergraduate and graduate students were recruited to participate in this study through an internet research company. The internet research company registered people who wanted to cooperate in the research, and through the internet research company's platform, it was possible to request them to cooperate in the research. In the recruitment of survey collaborators, the participants were asked to cooperate in the study by explaining on the permission screen the contents of the study, the questionnaire form, that they were not obliged to answer the questions, and that their answers were statistically processed and their personal information would not be identified. Only those who agreed to cooperate in this study could proceed to the questionnaire response screen. Participants responded twice to the effectiveness measure, just before and just after responding to the worksheet based on SFBT (see Figure 1). In this study, we did not seek cooperation from people who needed counseling or were familiar with SFBT, but rather randomly disseminated the survey through an Internet research company and obtained cooperation from those who agreed to cooperate. In addition, no individual or group counseling was conducted in the implementation of this study, and the participants were asked to work on their own problems.

Figure 1

Experimental Design



Participants

320 undergraduate and graduate students participated in the survey. They were asked to respond to the questions about problems, MQ, and goal clarification with worksheets. The 97 respondents who answered “Not particularly”, “Nothing” or “I don't know” to the question about the problem were not included in the analysis for two reasons: (1) there is a high possibility that the respondents are trying to minimize their response efforts, and there is a concern that their response attitude may not be appropriate, and (2) it is difficult to work on clarifying MQ's and goals unless a problem is set. Therefore, 223 (74 males and 149 females; age range = 18-25 years, mean age = 20.77, SD = 1.62) were included in the analysis of this study.

Questionnaire

Demographic Data

Participants were asked about their gender and age.

Solution Building Inventory

Solution Building Inventory was measured using 14 items from the questionnaire, which was originally developed by Smock et al. (2010). This questionnaire can assess an individual's ability to identify exceptions, solutions, and hope in the future. Takagi et al. (2015) developed a Japanese version of this scale. Moreover, Takagi et al. (2019) revised the Solution Building Inventory Japanese version into easy-to-understand Japanese expression. This scale has a one-factor structure. Items were scored on a five-point Likert scale ranging from “1=strongly disagree” to “5= strongly agree”. The total score of the 14 items was used as an indicator of solution building.

Self-Efficacy

Self-efficacy was measured using 10 items from the General Self-Efficacy Scale, which was originally developed by Jerusalem and Schwarzer (1992) and then translated into Japanese by Ito et al. (2015). This scale has a one-factor structure. Items were scored on a four-point Likert scale ranging from “1= not at all true” to “4= exactly true”. The total score of the 10 items was used as an indicator of self-efficacy.

Degree of Problem-Solving

Degree of problem-solving was measured using 1 item, referring to Iwamoto et al. (2016), we asked, “A score of 0 means the problem is very serious and bad, and a score of 10 means the problem is manageable on your own. What score do you think the problem is now for you?”. The score of this item was used as an indicator of degree of problem-solving.

Ideal Level of Life

Ideal level of life was measured using 1 item, we used the same format as the questioning of the ideal level of life, asked “A score of 0 means that your life in general is very serious and the worst, and a score of 10 means that your life is very ideal. What score do you think your current life is?” The score of this item was used as an indicator of an ideal level of life.

Coping Strategy

Coping strategy was measured using 20 items from the primary and secondary control scales developed by Tsukahara (2010). This scale has the following four subscales: solution orientation (6 items), causal analysis (4 items), meaning

acceptance (6 items), and thought adjustment (4 items). Items were scored on a five-point Likert scale ranging from “1= strongly disagree” to “5= strongly agree”. The validity and reliability of this scale has been confirmed by Tsukahara (2010). This scale can measure both coping strategies that attempt to solve the problem itself and coping strategies that adjust one's perception of the problem, and since SFBT is expected to produce changes not only in solving the problem itself but also in adjusting one's perception of the problem, this scale was used. Solution orientation is a proactive problem-solving coping and is measured by items such as “I will do something about it by my own efforts. Next, causal analysis is a coping strategy that analyzes the causes of the problem and is measured by items such as “I will try to solve the problem by my efforts.” Solution-oriented and causal analysis are positioned as primary controls that directly attempt to solve the problem itself. Next, meaning-acceptance is a coping mechanism that elicits the positive meaning of the problem and is measured by items such as “I think this was a meaningful experience in my life.” Lastly, thought adjustment is a coping mechanism that adjusts thoughts positively, and is measured by items such as “If I can overcome this, the rest of my life will surely get better.” Meaningful acceptance and thought adjustment are positioned as secondary controls that attempt to solve the problem by adjusting the perception of the problem.

Structure of the Questions on the Worksheet

Questions That Ask About the Problem

They were asked to describe a problem with the instruction, “Tell me about a problem that has had an ongoing negative impact on your life.”

Assessing the Problem

In order to confirm their assessment of the problem, we asked the following questions. First, to ascertain the attribution of causes to the problem, we asked “Do you think you are the cause of this problem or do you think it is caused by others, the environment, etc.?”, and requested a response on a scale ranging from 1 (strongly agree that I am the cause) to 5 (strongly agree that others, environment are the cause). Second, to ascertain their efficacy of solving the problem they answered, we asked “How much do you feel you can cope with this problem by yourself?”, and requested a response on a scale ranging from 1 (don't feel it at all) to 5 (feel it strongly). Third, to ascertain the motivation to solve the problem, we asked, “How motivated are you to solve this problem?” and requested a response on a scale ranging from 1 (very low) to 4 (very high). Finally, to ascertain how much the problem is affecting life, we asked, “How much of a negative impact does this problem have on your life?” and requested a response on a scale ranging from 1 (very small) to 4 (very big). In this study, the evaluation of the problem was not used in the analysis, because the purpose of this study was to examine the effects of evaluations of the responses to MQ and goal clarification on important variables in SFBT.

Miracle Question

Participants' were required for answers to the Miracle Question by asking, “If a miracle happened and this problem went away, how do you think your life would be different? Please be as specific as possible, even if it's just your imagination or your hopes”. They were also asked about the degree of their imagination, and they were asked to rate on a scale ranging from 1 (not at all) to 4 (very well). This self evaluation of imagination for MQ is denoted as self-MQ-image.

Goal clarification Participants were required to set their goals by asking, “Set goal based on the answer to the MQ. Make a goal that meets the following conditions.” The conditions are as follows:

- Action-level goals that are as specific and visible as possible
- As small and realistic a goal as possible (the first small signs, not the ultimate goal)
- The positive goal of “I will” rather than the negative goal of “I won't”.

They were also asked about the concreteness of their goal, and they were asked to rate on a scale ranging from 1 (not at all specific) to 4 (very specific). They were also asked about the reality of their goal, and they were asked to rate on a scale ranging from 1 (very difficult) to 4 (very easy).

Exception Question

Participants were required to answer their exception by asking, "Look back on a time when the goals you set were achieved in some measure or when the severity of the problem was a little better. What was different about you at that time that made it so? And what can you do to help increase those situations?"

Ideas for Solving the Problem

Participants' were required to answer ideas for solving the problem by asking, "Please answer what you can do to solve your problem for the week ahead."

Assessing Ideas for Solving the Problem

In order to confirm their assessment of ideas for solving the problem, we asked the following questions. First, to ascertain the effectiveness against the ideas for solving the problem, we asked, "How useful do you feel the idea is going to be?" and requested a response on a scale ranging from 1 (completely useless) to 5 (completely useful). Second, to ascertain the reality of the ideas for solving the problem, we asked, "How likely do you feel you are to realize the idea?" and requested a response on a scale ranging from 1 (never do that) to 5 (definitely do that). Third, to ascertain the novelty of ideas for solving the problem, we asked, "How different is that idea from anything you have ever thought of?" and requested a response on a scale ranging from 1 (Completely different) to 5 (Exactly the same). In this study, the evaluation of ideas for solving the problem was not used in the analysis, because the purpose of this study was to examine the effects of evaluations of the responses to MQ and goal clarification on important variables in SFBT.

Evaluation of Responses to Miracle Question

The content of responses to the MQ was assessed for imagined concreteness by two university faculty members (first and second authors) with Ph.D's. specializing in SFBT. First of all, the following criteria were prepared for the evaluation (see Table 1).

Table 1

Criteria for evaluating imagined concreteness for Miracle Question

0 Inappropriate goal

1 The goal is entirely unspecific

2 The goal is not very specific

3 The goal is somewhat specific

4 The goal is very specific

Next, two people rated the 23 responses to the Miracle Question, which is 10% of all 223 analyzed responses, and calculated the rate of concordance. As a result, the inter-rater reliability was .887, which was almost a perfect coincidence. Therefore, the first author assessed the content of the remaining responses to the Miracle Question. This value was used as the therapist's evaluation score for the concreteness of the imagination to MQ. This therapist's evaluation of imagination for MQ is denoted as therapist-MQ-image.

Evaluation of Responses of Goal

The content of responses of the goal was assessed for concreteness and reality by the same two people mentioned previously. First of all, the following criteria were prepared for the evaluation (see Table and 3).

Table 2

Criteria for evaluating concreteness of the goal

0	Inappropriate goal
1	The goal is entirely unspecific
2	The goal is not very specific
3	The goal is somewhat specific
4	The goal is very specific

Table 3

Criteria for evaluating the reality of the goal

0	Inappropriate goal
1	The goal is no realistic at all
2	The goal is not very realistic
3	The goal is somewhat realistic
4	The goal is very realistic

Next, the two people rated the 23 responses of the goal, which is 10% of all 223 analyzed responses, and calculated the rate of concordance. As a result, the inter-rater reliability for concreteness was .951, and for reality was .933, which were almost a perfect coincidence. Therefore, the first author assessed the content of the remaining responses to the goal. This value was used as the therapist's evaluation score for the concreteness of the goal and reality of the goal. This therapist's evaluation of concreteness and reality of goal is denoted as therapist-Goal-concrete and therapist-Goal-reality.

Data Analysis

SPSS (version 24.0) was used to analyze the data. Cronbach's alpha coefficient was used to check the reliability of the scale. In examining the correlations, Pearson's correlation coefficient was calculated. A stepwise method was used in the multiple regression analysis to identify variables that influence the variables considered important in SFBT. All statistical analyses used a two-tailed test. In all statistical evaluations, a p-value of less than 0.05 was considered to indicate a significant difference.

Results

Descriptive statistics and scale reliability

The average score of each scale was calculated and used as a score. Besides, alpha coefficients were calculated to confirm the reliability of the scales. The results showed that solution building was .91, self-efficacy was .88, solution-oriented was .88, causal analysis was .82, and meaning acceptance was .89, and positive thought adjustment was .74, with all scales above .70 with sufficient reliability indicated. The descriptive statistics for each are shown in Table 4.

Table 4

Descriptive statistics of scale (N=223)

Variables	<i>M</i>	<i>SD</i>
Solution Building	3.27	0.72
Self-Efficacy	2.45	0.53
Degree of Problem-solving	4.94	2.17
Ideal Level of Life	4.98	2.04
Coping Strategy		
Solution Orientation	3.48	0.90
Causal Analysis	3.40	0.93
Meaning Acceptance	3.27	1.00
Thought Adjustment	3.49	0.92

Also, self-MQ-image scores, therapist-MQ-image scores, self-Goal-concrete scores, and therapist-Goal-concrete scores, self-Goal-reality scores, and therapist-goal-reality scores were used in the analysis. The descriptive statistics for each are shown in Table 5.

Table 5*Descriptive statistics of the evaluation score (N=223)*

	M	SD
self-MQ-image	3.12	0.80
self-Goal-concrete	2.72	0.80
self-Goal-reality	2.29	0.78
therapist-MQ-image	2.65	1.00
therapist-Goal-concrete	2.70	0.86
therapist-Goal-reality	2.62	0.84

Changes in scores before and after work sessions

Corresponding t-tests were conducted to examine changes in scores before and after work sessions (see Table 6). The results showed that significant differences were obtained for all variables, with higher scores after the work than before.

Table 6*Changes in scores before and after work sessions (N=223)*

Variables	Before Score		After Score		t-Score
	M	SD	M	SD	
Solution Building	3.27	0.72	3.40	0.82	-2.81**
Self-Efficacy	2.45	0.53	2.57	0.64	-3.31**
Degree of Problem-solving	4.94	2.17	5.33	2.19	-4.13***
Ideal Level of Life	4.98	2.04	5.18	2.14	-2.43*
Solution Orientation	3.48	0.90	3.67	0.92	-4.30***

Causal Analysis	3.40	0.93	3.54	0.99	-3.15**
Meaning Acceptance	3.27	1.00	3.46	1.00	-4.54***
Thought Adjustment	3.49	0.92	3.62	0.96	-2.91**

* $p < .05$ ** $p < .01$ *** $p < .001$

Relationship between self and therapist grading of responses

Correlation analysis was conducted to examine the relationship between self-evaluation and therapists' evaluation of the responses to the work (see Table 7). The results showed that self-MQ-image showed a significant positive correlation with self-Goal-concrete, therapist-MQ-image, therapist-Goal-concrete, and therapist-Goal-reality. Self-Goal-concrete showed a significant positive correlation with self-Goal-reality, therapist-MQ-image, therapist-Goal-concrete, and therapist-Goal-reality. Self-Goal-reality showed a significant positive correlation with therapist-Goal-reality. The therapist-MQ-image showed a significant positive correlation with therapist-Goal-concrete and therapist-Goal-reality. Finally, therapist-Goal-concrete showed a significant positive correlation with therapist-Goal-reality.

These results showed a correlation between self and therapists' evaluations for all of MQ-image, Goal-concrete, and Goal-reality. On the other hand, none of the correlations were strongly correlated, confirming that the self evaluation and the therapists' evaluation differed to a certain extent. Besides, while self evaluation indicated that higher MQ-image was associated with higher self-Goal-concrete, no association with self-Goal-reality was shown. On the other hand, therapists' evaluation showed that the higher the MQ-image, the higher the therapist-Goal-concrete and therapist-Goal-reality. These results suggest that the higher the concreteness of the imagination for the MQ from a therapist's point of view, the higher the concreteness and reality of the goals.

Table 7

Relationship between self and therapist's evaluations of responses (N=223)

		1	2	3	4	5	6
1	self-MQ-image	—					
2	self-Goal-concrete	.17*	—				
3	self-Goal-reality	-.01	.30***	—			
4	therapist-MQ-image	.14*	.15*	.08	—		
5	therapist-Goal-concrete	.14*	.22***	.13	.48***	—	
6	therapist-Goal-reality	.18**	.28***	.19***	.44***	.75***	—

* $p < .05$ ** $p < .01$ *** $p < .001$

The impact of self and therapists' evaluations of the responses on the variables which is considered important in SFBT

In order to examine the impact of self and therapists' evaluations of the responses on the variables which is considered important in SFBT, change scores were obtained by subtracting the pre-scores from the post-scores for solution building, self-efficacy, degree of problem-solving, ideal level of life, and coping strategies. If this change score is large in the positive direction, it indicates that the score increased after the work. Multiple regression analysis was conducted with self and therapists' evaluations of the responses as the independent variable and the change scores as the dependent variable (see Table 8 and 9). In the analysis, the stepwise method was used in accordance with the purpose of this study, which is to identify the variables that affect the variables which is considered important in SFBT.

Table 8

The impact of self and therapists' evaluations of the responses on the psychological aspects (N=223)

	Solution Building	Self-Efficacy	Degree of Problem-solving	Ideal Level of Life
self-MQ-image	.08	.15*	.00	-.07
self-Goal-concrete	.00	.06	.04	-.03
self-Goal-reality	.00	.02	.16*	-.09
therapist-MQ-image	.03	.08	.09	.14
therapist-Goal-concrete	.14*	.06	.07	-.04
therapist-Goal-reality	.08	-.01	.04	-.01
R^2	.01	.02	.02	.00

Note. For the excluded variables that were not significant, the standard regression coefficients at the time of entry are noted. For the models that did not show significant variables, we noted the R^2 when all variables were forced in.
* $p < .05$ ** $p < .01$ *** $p < .001$

The results showed that therapist-Goal-concrete had a positive impact on solution building. Therefore, the more specific goals are set from a therapist's point of view, the higher the solution building becomes. Self-MQ-image had a positive impact on self-efficacy. Therefore, the more concrete imagination for miracle questions are subjectively perceived, the higher the self-efficacy becomes. None of the independent variables had a significant effect on the ideal level of life.

Regarding coping strategies, for solution orientation, therapist-Goal-concrete is a positive impact. This results suggests that those who can set goals that are highly specific from a therapist's perspective are more solution-oriented. Besides, therapist-Goal-reality had a positive impact on causal analysis. This results suggests that those who can set

realistic goals from a therapist's point of view had a higher level of causal analysis. None of the independent variables had a significant effect on the other sub-factors of the coping strategy.

Table 9

The impact of self and therapists' evaluations of the responses on the coping strategy (N=223)

	Solution Orientation	Causal Analysis	Meaning Acceptance	Thought Adjustment
self-MQ-image	.07	-.01	-.02	-.02
self-Goal-concrete	-.05	-.07	-.02	.00
self-Goal-reality	-.11	-.02	-.08	-.09
therapist-MQ-image	.04	.02	.02	-.01
therapist-Goal-concrete	.21**	.00	.01	.10
therapist-Goal-reality	.02	.15*	.12	-.02
R^2	.04	.02	.00	-.01

Note. For the excluded variables that were not significant, the standard regression coefficients at the time of entry are noted. For the models that did not show significant variables, we noted the R^2 when all variables were forced in.
* $p < .05$ ** $p < .01$ *** $p < .001$

Discussion

The results of this study showed a correlation between self and therapist's evaluations for both the imagination of MQ, the concreteness and reality of Goal. On the other hand, none of the correlations were strongly correlated, confirming that the self evaluation and the therapists' evaluation differed to a certain extent. De Jong and Berg (2013) point out that therapists need to organize and highlight useful information in order to set goals and utilize resources effectively. Since the therapist can evaluate the goals from a different perspective from that of the client, it is important to provide feedback to make the goals more concrete and realistic, and to encourage the client to gain new insights.

The effects of the imagination of Miracle Question, the concreteness and reality of the goal on the variables considered important in SFBT

The results of this study indicate that concreteness of goal evaluated by the therapist showed a positive impact on solution building. Therefore, by setting goals that therapist would rate as highly concrete, the client's solution building is enhanced. Besides, concreteness of goal evaluated by therapist also had a positive impact on solution orientation. Solution orientation and solution building are similar concepts; however, while solution building is a concept specific to SFBT practice, solution orientation is a concept presented as part of a coping strategy. Solution orientation is a coping

strategy that focuses not on “what is the problem” but on “how to solve it.” Therefore, increasing concreteness of goal evaluated by therapist is likely to increase the proactive solution and attempted coping. Emmons (1992) showed that abstract goals are associated with psychological distress such as depression. The results of the present study support this, and suggest that setting more concrete goals and engaging in SFBT work, such as exception questions, may promote a more positive attitude toward dealing with problems and building solutions.

Self evaluation of imagination of MQ had a positive impact on self-efficacy. Shilts et al. (1997) reports a more hopeful feeling after answering the MQ. The results of this study are supportive of this. It is also crucial for self-efficacy to feel sufficiently imagined from the client's point of view, rather than the therapist's. Therefore, it is important to confirm the client's imagination for MQ, rather than judging that the therapist has sufficiently imagined it. Also, detailed consideration should be given to how to implement the MQ in order to make the client feel more imagined. For example, De Jong and Berg (2013) mentions that one of the cautions in the implementation of MQ is to “take several pauses, giving the client time to understand the questions and to see different aspects of their experience.” It also pointed out that the questions must continue to ask clients in a way that allows them to express a satisfactory image of the future, rather than ending with MQ only (De Jong & Berg, 2013). The results of this study suggest that client satisfaction is essential for self-efficacy, and that it is vital to work with clients through questions and responses so that they can fully imagine the solution.

Self evaluation of "reality of goal" had a positive impact on the degree of problem resolution. De Jong and Berg (2013) stated that questioning feasibility for clients who exhibit unrealistic goals allows them to review their ideas. Accordingly, the client's assessment of the reality of their goals could likely change their perception of the degree of problem-solving. In practice, therapists select a way of responding by assessing reality in order to make the client's goals realistic. However, the effective practice requires that clients feel that their goals are achievable through the therapists' approach, thus increasing the degree of problem-solving. On the other hand, reality of goal evaluated by therapist showed a positive impact on causal analysis. Therefore, the increased reality of the goal assessed by therapists facilitates the client's analysis of the causes of the problem. From the above, feasible goals should be set collaboratively from both therapists and client perspectives. Locke and Latham (2013) showed that in the industrial domain, specific and difficult goals lead to higher performance. However, it has been pointed out that the level of difficulty can have a negative impact on morale and efficacy when the target is a complex task or when it is at a level that the individual does not feel is achievable (Locke & Latham). The problems presented by clients in SFBT are more complex than those targeted by research in the industrial domain. In fact, this study showed that the higher the reality of the goal, the better the impact. Thus, it can be said that setting highly realistic goals in SFBT can improve the problem situation.

Finally, all evaluations showed no effect on the ideal level of life, meaning acceptance, and thought adjustment. The imaginative nature of MQ and character of goals are not expected to have any effect on perceptions of life. Similarly, they do not affect coping strategies by cognitive transformations, such as meaning acceptance and thought adjustment. On the other hand, the comparison of pre- and post-scores revealed significant changes in all variables. Therefore, regardless of the content of responses to MQ and goal clarification, implementing SFBT work is likely to increase the ideal level of life, meaning acceptance, and thought adjustment. This study examined the effects of evaluation on responses to MQ and goal clarification, but the effects of the implementation of SFBT work need to be compared with those of the control group, and more detailed investigation is required in the future. Besides, the results presented in this study are limited in that they are short-term impacts. In the future, it will be essential to conduct a one-month longitudinal survey to confirm the long-term impact of the goal.

SFBT practices for Japanese people

Since the subjects of this study are only Japanese, it is necessary to examine their cultural background. Kunio Yanagida (1875-1962), a Japanese folklorist, pointed out that in Japan, the word “crowd” (tide of public opinion) has been in vogue for a long time, and when a new trend emerges, the Japanese culture tries to follow it without checking its value. And, as interaction with foreign flourished, this tendency intensified, and people began to uncritically accept the opinions of a few superior people without thinking for themselves (Yanagida, 2015). The Japanese tendency to uncritically accept the trends around them greatly facilitated the acceptance of Western culture. As a result, the spirit of Western utilitarianism and capitalism has been adopted in Japan today. Regarding the spread of utilitarianism in Japan,

Daisetsu Suzuki (1870-1966), a Japanese Buddhist scholar, said, "There are times when we think we are using machines, but in fact we are being used by machines. When we try to produce achievements efficiently, we become fixated on that purpose, and we cannot do what we really want to do as we want to do it purely, freely as human beings, beyond the calculating interests. They will not be able to exercise their true independence and creativity, a way of life that emanates from a deep human standpoint" (Takemura, 2018). Furthermore, Kunio Yanagida points out that "Japanese people have originally formed themselves based on the sanctions brought by outsiders in a small society. This tendency is more pronounced in today's world of social networking sites, where many people live their lives by referring to the value standards of others and focusing on so-called "worldliness" rather than realizing what they really want to do. It is precisely in this kind of Japan that it is important for people to consider what they want to be based on their own value standards and to have clear goals through SFBT. In fact, the results of this study showed that the SFBT approach is effective even in Japan. In particular, the fact that the self evaluated imagination of MQ had a positive effect on self-efficacy suggests that it is useful for Japanese people who are concerned about the world to think about how they want to be according to their own value standards. On the other hand, we need to be cautious about whether or not the results obtained in this study are culturally influenced. The reason for this is that this study targets only Japanese people, and therefore, it is not possible to make comparisons between cultures. It is a future task to investigate the effects of self and therapist's evaluations of MQ and goal on people from various cultural backgrounds, and to examine the cultural differences.

Clinical implications and limitations

In summary, the results of this study indicate that the therapist's evaluation of the concreteness of the goals, the self and therapist's evaluation of the realism of the goals, and the self evaluation of the imagination of the MQ are associated with good results. Although it should be noted that this study was conducted on Japanese subjects only, and that it was conducted in a worksheet format, three clinical implications can be drawn from the results of this study. First, when the therapist asks the MQ, he or she should work to increase the imagination of the solution image, which will increase the client's confidence in solving the problem. In particular, it is important to check the degree of imagination of the MQ with the client, rather than judging it only from the therapist's point of view, because the client's sense of being able to imagine sufficiently leads to good results. Second, when the therapist works to increase the concreteness of the client's goals, it is expected that solution building will be facilitated. Based on the results of this study, it is important to try to clarify the goal until the therapist feels that it is a concrete goal, because good results were obtained when the therapists evaluated it as a concrete goal. Third, it is expected that the degree of problem solving and causal analysis will increase as the therapist works to increase the reality of the client's goals. In particular, in order to increase the degree of problem solving, it is important for the therapist to pay attention to the reality of the client's evaluated goal and to work to increase this. As described above, the impact of the therapist's and client's perspectives on evaluating MQ and goal is diverse, and it is important to use both effectively rather than sticking to one perspective. Therefore, it can be concluded that it is important to proceed with the therapy in a collaborative process, utilizing the evaluation of MQ and goal from both the therapists' and client's perspectives.

Finally, two limitations of this study are discussed. First, from a therapist's perspective, the researcher assessed the imagination of the MQ, goal concreteness, and reality based on the content of the responses to the worksheets. This point may differ from the evaluation of responses to MQ and goal given orally in actual therapy. Therefore, a more detailed study is needed when applying the results of this study to therapy. In addition, since the consistency rate of the two people who evaluated in this study was high, we thought that the validity of the evaluation was sufficient. However, it is a future task to obtain rating data from more therapists and to conduct research based on highly generalized evaluations that many therapists agree on. In addition, it is necessary to examine whether a third party's perspective is needed or the therapist's perspective by comparing the therapist's evaluation with those of people who do not have expertise in clinical psychology. Secondly, the results presented in this study are limited in terms of short-term effects; while the immediate effects of working with SFBT were evident, longer-term effects need to be identified. For example, people who are able to set concrete and realistic goals may be able to achieve those goals, but it will take some time to achieve them. Therefore, it is necessary to conduct a longitudinal survey with a survey period of one month or six months.

Acknowledgements

This study was supported by a research grant from the Division for Interdisciplinary Advanced Research and Education at Tohoku University. The contributors to this study, including the research collaborators, are gratefully acknowledged for all their help in conducting this study.

References

- Berg, I. K., & Dolan, Y. (2001). *Tales of solutions: A collection of hope-inspiring stories*. W W Norton & Co.
- Brunstein, J. C. (1993). Personal goals and subjective well-being: A longitudinal study. *Journal of Personality and Social Psychology*, 65(5), 1061-1070.
- Coats, E. J., Janoff-Bulman, R., & Alpert, N. (1996). Approach versus avoidance goals: Differences in self-evaluation and well-being. *Personality and Social Psychology Bulletin*, 22(10), 1057-1067.
- Cuijpers, P., & Schuurmans, J. (2007). Self-help interventions for anxiety disorders: An overview. *Current Psychiatry Reports*, 9(4), 284-290.
- De Jong, P., & Berg, I. K. (2013). *Interviewing for solutions*. Cengage Learning.
- De Jong, P., & Hopwood, L. E. (1996). Outcome research on treatment conducted at the Brief Family Therapy Center. In S. D. Miller, M. A. Hubbl, & B. L. Duncan (Eds.), *Handbook of solution-focused brief therapy* (pp. 272-298). Jossey-Bass.
- De Jong, P., & Miller, S. D. (1995). How to interview for client strengths. *Social Work*, 40(6), 729-736.
- de Shazer, S., & Dolan, Y. (2012). *More than miracles: The state of the art of solution-focused brief therapy*. Routledge.
- de Shazer, S. (1982). *Patterns of Brief Family Therapy: An Ecosystemic Approach*. Guilford Press.
- de Shazer, S. (1984). The death of resistance. *The Family Process*, 23(1), 11-17.
- de Shazer, S. (1991). *Putting difference to work*. W W Norton & Co.
- de Shazer, S., Berg, I. K., Lipchik, E., Nunnally, E., Molnar, A., Gingerich, W., & Weiner-Davis, M. (1986). Brief therapy: focused solution development. *The Family Process*, 25(2), 207-221.
- Elliot, A. J., & Sheldon, K. M. (1998). Avoidance personal goals and the personality illness relationship. *Journal of Personality and Social Psychology*, 75(5), 1282-1299.
- Elliot, A. J., & Friedman, R. (2007). Approach-avoidance: A central characteristic of personal goals. In B. R. Little, K. Salmela-Aro, & S. D. Phillips (Eds.), *Personal project pursuit: Goals, action, and human flourishing* (pp. 97-118). Lawrence Erlbaum Associates Publishers.
- Elliot, A., Chirkov, V. I., Kim, Y., & Sheldon, K. M. (2001). A cross-cultural analysis of avoidance (relative to approach) personal goals. *Psychological Science*, 12(6), 505-510.
- Emmons, R. A. (1992). Abstract versus concrete goals: Personal striving level, physical illness, and psychological well-being. *Journal of Personality and Social Psychology*, 62(2), 292-300.
- Emmons, R. A. (1996). Striving and feeling: Personal goals and subjective well-being. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 313-337). Guilford.
- Gingerich, W. J., de Shazer, S., & Weiner-Davis, M. (1988). Constructing change: A research view of interviewing. In E. Lipchik (Ed.), *Interviewing* (pp. 21-33). Aspen.

- Grant, A. M. (2012). Making positive change: A randomized study comparing solution-focused vs. problem-focused coaching questions. *Journal of Systemic Therapies*, 31(2), 21-35.
- Greene, J., & Grant, A. M. (2003). *Solution-focused coaching: Managing people in a complex world*. Momentum Press.
- Ito, K., Schwarzer, R., & Jerusalem, M. (2005). Japanese adaptation of the general self-efficacy scale. <http://userpage.fu-berlin.de/~health/japan.htm>
- Iwamoto, S., Ito, Y., Shida, N., & Hanada, R. (2016). The technique of brief therapy. In National Foundation of Brief Therapy (Eds.), *Interactional Mind VIII* (pp. 47-73). Hokuju Shuppan.
- Jerusalem, M., & Schwarzer, R. (1992). Self-efficacy as a resource factor in stress appraisal processes. In R. Schwarzer (Eds.), *Self-efficacy: Thought control of action* (pp. 195-213). Taylor & Francis.
- Jordan, K. & Quinn, W. H. (1994). Session two outcome of the formula first session task in problem-and solution-focused approaches. *American Journal of Family Therapy*, 22(1), 3-16.
- Kelder, H. S., Hoelscher, D., & Perry, L. C. (2015). How individuals, environments, and health behaviors interact. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior: Theory, Research, and Practice* (pp. 159-182). Jossey-Bass.
- Kurosawa, S. (2012). *Brief therapy with worksheets: Solution-focused & externalizing ideas and techniques for immediate use in schools*. Honno mori Shuppan.
- Locke, E. A., & Latham, G. P. (2013). *New developments in goal setting and task performance*. Routledge.
- Pakrosnis, R., & Cepukiene, V. (2012). Outcomes of solution-focused brief therapy for adolescents in foster care and health care institutions. In C. Franklin, T. S. Trepper, W. Gingerich, & E. McCollum (Eds.), *Solution-focused brief therapy: A handbook of evidence-based practice* (pp. 299-326). Oxford University Press.
- Shilts, L., Rambo, A., & Hernandez, L. (1997). Clients helping therapists find solutions to their therapy. *Contemporary Family Therapy*, 9(1), 117-132.
- Smock, S. A., McCollum, E. E., & Stevenson, M. L. (2010). The development of the solution building inventory. *Journal of Marital and Family Therapy* 36(4), 499-510.
- Takagi, G., & Wakashima, K. (2019). The effect of a worksheet based on the miracle question and the exception question. *Journal of Japanese Clinical Psychology*, 37(4), 393-399.
- Takagi, G., Wakashima, K., Kozuka, T., Yu, K., & Sato, K. (2019). The development of the revised version of solution building inventory Japanese version. *International Journal of Brief Therapy and Family Science*, 9(1), 1-7.
- Takagi, G., Wakashima, K., Sato, K., Ikuta, M., Hanada, R., & Jordan, S. S. (2015). The development of solution building inventory Japanese version: Validation of the SBI-J. *International Journal of Brief Therapy and Family Science*, 5(1), 19-25.
- Takemura, M. (2018). *Words of the Japanese Spirit: Daisetsu Suzuki*. Sogensha.
- Tsukahara, T. (2010). Back / up effects of primary/secondary control strategies in negative situations. *Japanese Journal of Educational Psychology*, 58(2), 186-197.
- Yanagida, K. (2015). *What is Japanese?* Kawade Shobou Shinsha.

Gen Takagi
Email: gtakagi.pr@gmail.com

Taku Hiraizumi
Email: hiraizumit@myu.ac.jp

Kazuma Sakamoto
Email: kazumokeke@gmail.com

Miki Hagidai
Email: m.hagidai@gmail.com