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ARTICLE

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Introduction

This paper aims to develop a reliable and valid scale for measuring solution-focused and problem-focused communication that can be easily applied in the Japanese workplace. A two-factor scale for measuring solution-focus and problem-focus has already been proposed by Kitai (2020), in which reliability and validity were confirmed. However, this was based on a relatively small sample (N=183) study; the data were collected from a single company and thus had high internal homogeneity.

The current study tested the reliability and validity of this scale using data from an online questionnaire with over 500 respondents drawn from many companies. The results of this assessment are used to develop an effective scale for studying solution-focus and problem-focus in the workplace.

The Solution-Focused Approach

The solution-focused approach was developed in the 1980s as a form of psychotherapy by practitioners such as Steve de Shazer and Insoo Kim Berg. Rather than pursuing the root of a client's problem (the problem-focused or 'problem-solving' approach), solution-focused therapy seeks to resolve problems by assessing the strengths and potential of clients and attempting to maximize and utilize these.

Recognized as an effective treatment within the field of psychology, the solution-focused approach is increasingly being adopted in several other areas. Its recent application in education research and practice is particularly well known (Franklin et al., 2007; Özdem & Sezer, 2019; Sezer, 2017). Naturally it has also been widely applied in business, with solution-focused methods proposed for employee coaching, performance evaluation, and strategy development.

Nonetheless, most research on the solution-focused approach relies on case studies, meaning the approach still requires verification through other methods (Trepper & Franklin, 2012). Research comparing the solution-focused approach with the problem-focused approach is scarce. The development of a scale for evaluating each of the two approaches is required for the progress of this research field.

Literature Review

Although there is a large body of research on the solution-focused approach, as noted above, there are currently few studies comparing this approach to the problem-focused approach. Table 1 lists the comparative studies that have been performed to date.

Table 1

Research comparing the solution-focused and problem-focused approaches

Study	Sample
Kauffeld and Meyers (2009)	Employees of 3 German companies (N=221)
Wehr (2010)	University students in Germany, Experiment 1: (N=140), Experiment 2: (N-92)
Grant and O'Connor (2010)	Graduate students in Australia (N=39)
Grant (2012)	University students in Australia (N=225)
Neipp et al. (2015)	University students in Spain (N=204)
Braunstein and Grant (2016)	University students in Australia (N=140)
Theeboom et al. (2016)	University students in Netherlands, Experiment 1: (N=61), Experiment 2: (N=54)
Grant and O'Connor (2018)	University students in Australia (N=512)
Abdulla and Woods (2020)	Female middle school students in London (N=115)
Grant and Gerraed (2020)	Psychology major university students in Australia (N=80)

Apart from Kauffeld and Meyers (2009), all these studies compared the effects of solution-focused versus problem-focused approaches on dependent variables. Most conduct a comparative analysis of dependent variables before and after asking respondents solution-focused and problem-focused questions. The results consistently point to a solution-focused approach being more effective than a problem-focused approach (Kitai, 2020). For instance, one of the earliest studies, by Grant and O'Connor (2010), targeted graduate students in their comparison, and found that the solution-focused questions were more effective than problem-focused ones in terms of both problem resolution and respondents' emotions.

Building on the results of these prior studies, we developed a scale for measuring the levels of solution-focused and problem-focused communication in the Japanese workplace (Kitai, 2020). We found that a two-factor scale was valid for measuring these approaches and created a composite scale with high internal reliability. Moreover, we demonstrated that while the solution-focused approach had a considerable effect on work engagement and employee engagement, use of the problem-focused approach showed almost no relationship to these variables. These results indicate a degree of validity and reliability of the scale created by Kitai (2020).

However, the results of Kitai (2020)'s study were based on a comparatively small and homogeneous sample (N=183) drawn from a single company. The study needs to be replicated in a larger and more heterogeneous sample. Therefore, this study used an online survey company to target a Japan-wide, comparatively large-scale sample (N=504) in order to test the validity and reliability of the construct behind our scale. We examine the convergent validity of the scale by investigating the relationship between the scale and the same dependent variables used in prior studies, to identify whether the same trends are observed as in the prior studies. The dependent variables used in this study are positive affect, negative affect, understanding of the problem, and self-efficacy. We also analyzed the relationship between our scale and a separate scale that measures solution-focus (Solution Building Inventory) in order to test both the convergent and discriminant validity.

Variables and Hypotheses

1. The Solution-Focused vs Problem-Focused Communication Scale

This scale consists of the 16 items used by Kitai (2020). As noted above, Kitai (2020) demonstrated that a two-factor model of solution-focused versus problem-focused communication was the best fit. In that paper, the results of confirmatory factor analysis led to the exclusion of Question item 12 (Any good thing, however small, can be a topic of discussion) and Question item 14 (Small improvements don't enter conversation) from the two-factor model. However, in the current study we include these question items.

We also made a modification to Question item 3 (When a problem arises, many conversations focus on its cause and/or finding the culprit). Given the word 'culprit' (*hannin* in Japanese) has extremely negative connotations, we replaced this with 'the responsible party' (*seki'ninsha*). For each of the 16 question items, responses were measured on a 5-point scale, where 1 was 'not at all' and 5 was 'precisely' (see Appendix).

2. Positive Affect and Negative Affect

Existing studies have frequently used positive and negative affect as dependent variables in questions about solution-focused and problem-focused coaching (Braunstein & Grant, 2016; Grant, 2012; Grant & Gerraed, 2020; Grant & O'Connor, 2010; 2018; Neipp et al., 2015; Theeboom et al., 2016). Except for Theeboom et al. (2016), all used the Positive Affect and Negative Affect Schedule (PANAS) developed by Watson et al. (1988)[1]. According to Watson et al. (1988), positive affect is the degree of feelings such as excitement, enthusiasm, and alertness. High positive affect refers to a state of high energy and attentiveness, in which a person is enjoying activities, and low positive affect refers to feeling sad and helpless.

Meanwhile, negative affect refers to the inhibition of objectivity, grudgingly going about one's activities, and feelings such as anger, contempt, irritability, upset, guilt, fear, or nervousness. A state of low negative affect means feeling calm and composed.

Watson et al. (1988) developed PANAS to measure positive and negative affect with 10 adjectives, and proceeded to test validity. In the current study, we used the items in the Japanese version of PANAS, which was developed by Kawahito et al. (2011). According to Kawahito et al. (2011), the Japanese version of PANAS reproduced the same two factors related to positive and negative affect as the original version of the scale. Positive affect had a weak positive correlation with happiness and satisfaction, and negative affect had a weak positive correlation with depression. For each of these 20 items, we followed Kawahito et al. (2011) and elicited responses based on a 6-point scale (from 1 = does not apply at all to 6 = very much applies).

Prior research found that the solution-focused approach results in greater promotion of positive affect and reduction of negative affect compared with the problem-focused approach. Specifically, solution-focused questions are effective in that they increase attentiveness and activity in individuals, and reduce anger, guilt and fear. Therefore, we can expect the solution-focused communication scale to exhibit a stronger positive correlation with positive affect and negative correlation with negative affect than the problem-focused communication scale.

Hypothesis 1a: Solution-focused communication will have a greater mitigating effect on negative affect than problem-focused.

Hypothesis 1b: Solution-focused communication will promote more positive affect than problem-focused

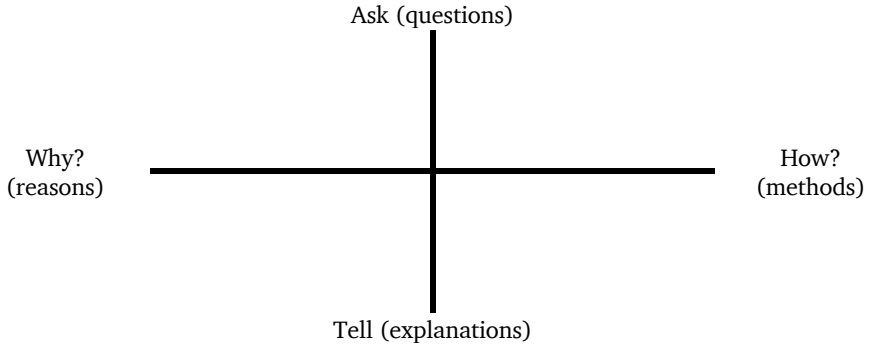
[1] Theeboom et al. (2016) used the UWIST Mood Adjective Checklist to measure affect. This scale measures an individual's mood using 3 sub-scales: energetic arousal, tense arousal, and hedonic tone (Matthews et al., 1990). Theeboom et al. (2016) measured positive and negative affect using energetic arousal and tense arousal, respectively. Note that the Japanese version of UWIST (Japanese UWIST Mood Adjective Checklist: JUMACL) developed by Shirasawa et al. (1999) is made up of 2 factors, energetic arousal and tense arousal.

3. Understanding of The Problem

Grant and O'Connor (2010) is the only study to have used a measure of understanding of the problem. However, we included this measure in our analysis as we consider it an important indicator for testing the difference between the effects of the solution-focused and problem-focused approaches. Grant and O'Connor (2010) used the ask-tell matrix (Whitmore, 1992) shown in Figure 1 to discuss the difference between questions in the solution-focused and problem-focused approaches.

Figure 1

The Ask-Tell Matrix



Prepared with reference to Grant and O'Connor (2010), p.103.

The ask–tell axis in this matrix represents the difference between coaches' approaches to clients, i.e. whether the coach asks questions of the client, or provides explanations or suggestions. The how–why axis represents the differences in the content of this, i.e. whether the question or explanation is about how something happens or why something happens.

According to Grant and O'Connor (2010), the key to the solution-focused approach to coaching is a focus on the how-ask quadrant. Rather than asking about causality to determine *why* things occurred, it is preferable for the coach to spend more time asking *how* the best outcome can be achieved. On the other hand, the problem-focused approach assumes that knowledge about the causal factors behind a problem is necessary for the client to move towards their objective. Thus, the problem-focused approach focuses on use of the why-ask quadrant.

We are interested in which is more useful for the degree of understanding of the problem – focusing on the solving method or the root cause of the problem. The findings of Grant and O'Connor (2010) suggested that solution-focus has a greater effect, meaning that solution-focused communication is likely to have a stronger correlation with understanding of the problem.

To measure understanding of the problem, we used the same question item as Grant and O'Connor (2010): 'I understand the nature of this problem', which was translated into Japanese. A 6-point response scale was used for this question, with 1 being 'not at all' and 6 being 'precisely'. Where our study differed from theirs was that the problems in question in their study were those experienced by students, while in ours they were those experienced by adults in the workplace.

Hypothesis 2: Solution-focused communication promotes greater understanding of the problem than problem-focused.

4. Self-Efficacy

Self-efficacy has been used as a variable in several prior studies (Braunstein & Grant, 2016; Grant, 2012; Grant & Gerrard, 2020; Grant & O'Connor, 2010; 2018; Neipp et al., 2015). It is defined as 'the conviction that one can successfully execute the behavior required to produce the outcomes' (Bandura, 1977, p. 193). People with high self-efficacy tend to explore their environment and actively exert influence on it. A large body of research exists on the topic

of self-efficacy, and we know it has a strong relationship with success in the workplace. A meta-analysis by Stajkovic and Luthans (1998) found the correlation between these factors to be 0.38.

Solution-focused questions draw attention to the client's strengths and potential. The result is that people recall past experiences of successful undertakings, meaning we can expect self-efficacy to increase. In fact, all prior studies have found that the solution-focused approach contributes to greater increases in self-efficacy than problem-focused approaches. Thus, we may reasonably assume that solution-focused communication has a stronger relationship with self-efficacy than problem-focused communication.

To measure self-efficacy, we used the same single question item as Grant and O'Connor (2010): 'I feel very confident that I know how to solve this problem', which was translated into Japanese. A 6-point response scale was used, with 1 indicating 'not at all' and 6 indicating 'precisely'. As with understanding of the problem, our study differed from Grant and O'Connor (2010) in that rather than problems experienced by students, we studied problems faced by adults in the workplace.

Hypothesis 3: Solution-focused communication will promote greater self-efficacy than problem-focused.

5. The Solution Building Inventory

In the current study we also used the Solution Building Inventory (SBI) to test the convergent validity and discriminant validity of our scale. SBI was originally developed by Smock et al. (2010), and is a scale comprised of 1 dimension and 14 items. These researchers identified the following differences between problem solving and solution building. In the problem-solving process, understanding of the cause of the problem is necessary to find the most appropriate solution. The most appropriate solution to the problem is then selected from several alternative solutions. On the other hand, in the solution building process, there is no direct relationship thought to exist between the problem and the solution. In this process, one is encouraged to find part of a solution which already exists. SBI is thought to measure the level of solution-focused thinking used when an individual solves a problem.

Smock et al. (2010) designed a questionnaire based on three components of solution building: a clear vision of the solution, awareness of exceptions to the problem, and hope for the future. However, their factor analysis revealed that a single-factor structure was the best fit.

While SBI is thought to measure the degree of solution-focus on the individual level, our scale attempts to measure the level of solution-focused or problem-focused communication in the workplace. Although the two scales are of course related, we believe they differ on the conceptual level. We therefore predict that there will be discriminant validity between our scale and the SBI.

At the same time, solution-focused communication is indeed thought to encourage solution-focused problem solving. Solution-focused brief therapy does encourage clients to think in a solution-focused manner by asking solution-focused questions. On the other hand, problem solving communication does not promote solution-focused problem solving. Therefore, we can expect that SBI will have a stronger relationship with the solution-focused communication scale.

A Japanese version of SBI has already been developed. Takagi et al. (2015) founded the SBI-J, and Takagi et al. (2019) revised this into the SBI-R and confirmed its validity[2]. In the current study, we used SBI-R. A 5-point scale of responses (from 1 = does not apply at all to 5 = very much applies) was used against the 14 SBI-R question items.

Hypothesis 4a: Solution-focused communication is a different construct to solution building.

Hypothesis 4b: Solution focused communication promotes greater solution building than problem focused.

Methods

To verify the scale, we used data from a questionnaire distributed through an online survey company. Responses were received from 504 panel members. Respondents were between age 20 to 50 and were all permanent employees. The survey was conducted in January 2021.

[2] The validity of SBI-R has also been tested through its correlation with the hope scale (Kato & Snyder 2005) and the optimism scale (Sakamoto & Tanaka 2002; Takagi et al., 2019).

Results

1. Descriptive Statistics

The age distribution of the respondents is given in Table 2. 90 participants (9.9%) were in managerial roles, and 454 (90.1%) were in non-managerial roles. 252 (50%) respondents were male and 252 (50%) were female.

Table 2

Frequency Distribution of Age

Age	Frequency	%
20-29 years old	126	25%
30-39 years old	126	25%
40-49 years old	126	25%
50-59 years old	126	25%
Total	504	100%

2. Factor Analysis

We conducted a factor analysis (maximum likelihood method) on the solution-focused vs problem-focused communication scale. Three factors were extracted with an eigenvalue greater than 1.[3] The pattern matrix of rotation based on these 3 factors showed that all the solution-focused items scored highly on the first factor. For the second factor, all the problem-focused items scored highly except for Question item 8, while for the third factor, only Question item 8 scored highly.

Table 3

Model Fit

		χ^2	GFI	AGFI	RMR	NFI	CFI	RMSEA	AIC
1 factor	All items	1301.788	.654	.547	.161	.623	.641	.151	1365.788
	Excluding Q8	1125.243	.680	.573	.159	.655	.672	.151	1185.243
2 factors	All items	562.327	.864	.820	.096	.837	.862	.094	628.327
	Excluding Q8	474.464	.880	.839	.098	.855	.878	.093	536.464
3 factors	All items	560.820	.864	.818	.095	.838	.862	.095	628.820

Based on this, we set factor numbers between 1 and 3, and performed a confirmatory factor analysis to determine the fit of each model. The indices used to evaluate fit were goodness-of-fit (GFI), adjusted goodness-of-fit (AGFI), root mean square residual (RMR), normed fit index (NFI), comparative fit index (CFI), root-mean-square error of approximation (RMSEA), and Akaike's Information Criterion (AIC).

Looking at Table 3 we can see that, except for RMR, all the indicators identified the two-factor model that excluded Question item 8 as the model of best fit. However, this was based on a relative evaluation of fit, so is not a model of absolute good fit. Nonetheless, because the two-factor model that excluded Question item 8 was a reasonably good fit, we considered this within the range of acceptability and adopted this model. Figure 2 gives the results of the confirmatory factor analysis for this two-factor model. In this model, the 8 items created to measure solution-focus were affected by

[3] The eigenvalue and % of variance for each factor was as follows: First factor (5.498, 34.364), second factor (2.927, 18.292), third factor (1.169, 7.305). The cumulative variance was 59.961%.

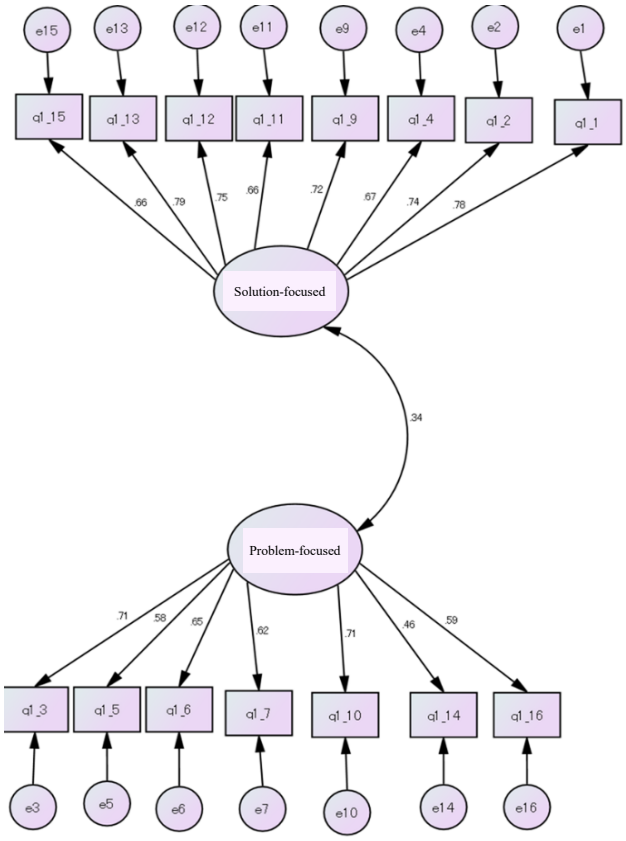
different latent factors to the 7 items (with Question item 8 excluded) created to measure problem-focused. Therefore, we named the latent factors 'Solution-focused communication' and 'Problem-focused communication'.

Next, we measured the reliability of the scale based on this two-factor model. The results determined a high reliability of the scale, with Solution-focus at 0.897 and Problem-focus at 0.811.

We conducted a factor analysis on PANAS20 (maximum likelihood method) and extracted 3 factors with an eigenvalue greater than 1. However, the scree plot showed a gradual incline from 3 factors onwards, indicating a two-factor structure. The cumulative variance of the 2 factors was over 50% (56.9%), further indicating the validity of the two-factor model. Looking at the factor loading, the 10 items that make up negative affect in PANAS's a priori dimensions loaded highly onto the first factor, while the 10 items that make up positive affect loaded highly onto the second factor. Thus, we can interpret the first factor as representing negative affect and the second factor as representing positive affect. We measured the reliability of each, and negative affect scored 0.915 while positive affect scored 0.895, both sufficiently high values.

Figure 2

Results of the confirmatory factor analysis (2 factors, excluding Question item 8)



Next, we conducted a factor analysis on the 14 solution building items. However, this identified only 1 item with an eigenvalue greater than 1. All the items scored highly for this 1 factor, so we consider this factor to represent solution building. The reliability of the 14 items was high at 0.943.

Based on the results of each of the factor analyses, we took the mean of each item and made it the score of that item. The means and standard deviation of solution-focused and problem-focused communication, negative and positive affect, understanding of the problem, self-efficacy, and solution building are given in Table 5.

3. Testing Discriminant Validity

Let us first test Hypothesis 4a. Campbell and Fiske (1959) proposed the use of the following equation to test discriminant validity. Assume we want to test the discriminant validity of variables x and y. In the formula, r_{xy} is the correlation between x and y, r_{xx} is the reliability of x, and r_{yy} is the reliability of y.

$$\frac{r_{xy}}{\sqrt{r_{xx} \times r_{yy}}}$$

There is no standard value for discriminant reliability, but Campbell and Fiske (1959) demonstrated that where the value is less than 0.85, discriminant validity is likely to exist between 2 variables. However, if the result is greater than 0.85, there is significant overlap between the 2 constructs and they are likely to be measuring the same thing, meaning there is no discriminant validity.

When we applied the above formula to solution-focused communication and solution building, the value returned was 0.482, indicating that there is discriminant validity between solution-focused communication and solution building.

4. Testing Convergent Validity

In order to test the convergent validity of the scale, we investigated its relationship with the PANAS scale, understanding of the problem, self-efficacy for resolving the problem, and SBI. We used correlation analysis and multiple regression.

Table 4 contains the correlation coefficients for solution-focused vs problem-focused communication for each of the variables, and the difference between these correlations[4]. From this we can see that solution-focused communication has a significant positive correlation with everything but negative affect. Meanwhile, problem-focused communication has a positive correlation with all the variables, however, except from negative affect, this relationship was weaker than that of solution-focused communication in every instance. Conversely, the correlation between negative affect and problem-focused communication was stronger than that with solution-focused communication. There was no overlap in confidence interval for the correlation coefficient of any of the pairs, and the difference between the correlation coefficients was significant at the 0.1% level.

Table 4

Correlations between solution-focus vs problem-focus, and PANAS, understanding of the problem, self-efficacy, and SBI

	Negative affect	Positive affect	Understanding of the problem	Self-efficacy	Solution building
Solution-focused	.015 [-0.073, 0.102]	.442*** [0.369, 0.510]	.376*** [0.298, 0.448]	.376*** [0.298, 0.449]	.443*** [0.369, 0.510]
Problem-focused	.241*** [0.156, 0.321]	.232*** [0.147, 0.313]	.166*** [0.080, 0.250]	.125** [0.038, 0.210]	.149** [0.063, 0.234]
Z value	4.298***	4.303***	3.976***	4.942***	5.910***

Asterisks represent significance, in this and all following tables: *** p<0.001, ** p<0.01, * p<0.05
Above: Pearson product-moment correlation coefficient
Below: Confidence interval (95%)

Finally, we used multiple regression to test our hypotheses (see Table 6). The dependent variables used were PANAS negative and positive affect, understanding of the problem, self-efficacy, and solution building. We began by inputting into Model 1 age, gender (dummy variable: female =1, male=0), occupation (dummy variable: managerial=1, non-managerial=0), and into Model 2 Solution-focused and Problem-focused and analyzed the change between coefficients and the coefficient of determination. Collinearity was ruled out, as the VIF values were between 1.036 and 1.116.

[4] To test the difference between correlations between 2 variables within the same sample (Steiger's Z test), we used Cal's Computators (University of Nebraska-Lincoln, https://psych.unl.edu/psycrs/statpage/comp.html).

Where the dependent variable was negative affect, Problem-focused had a positive effect, while Solution-focused showed no effect. The 95% confidence intervals for Solution-focused and Problem-focused were [-0.181, 0.036] and [0.219, 0.460] respectively, showing no overlap. As for positive affect, both Solution-focused and Problem-focused had a significant positive effect. The 95% confidence intervals for Solution-focused and Problem-focused were [0.341, 0.509] and [0.005, 0.192] respectively, showing no overlap. For understanding of the problem, only Solution-focused had a significant effect, and the 95% confidence intervals for Solution-focused and Problem-focused were [0.405, 0.652] and [-0.117, 0.158] respectively, showing no overlap. For self-efficacy, only Solution-focused had a significant effect, and the 95% confidence intervals for Solution-focused and Problem-focused were [0.374, 0.616] and [-0.026, 0.244] respectively, showing no overlap. This was also the case for solution building, where only Solution-focused had a significant effect, and the 95% confidence intervals for Solution-focused and Problem-focused were [0.312, 0.460] and [-0.051, 0.113] respectively, showing no overlap.

Table 5

Variable Correlation Matrix

	Mean	SD	Age	Gender dummy	Occupation dummy	Solution-focus	Problem-focus	Negative affect	Positive affect	Understanding of the problem	Self-efficacy
Age	40.170	10.886									
Gender dummy	0.500	0.501	-0.037								
Occupation dummy	0.099	0.299	0.203***	-0.186***							
Solution-focused	2.853	0.796	-0.030	-0.012	0.109*						
Problem-focused	3.007	0.717	-0.067	-0.124***	0.023	0.291***					
Negative affect	3.061	0.965	-0.123***	-0.018	-0.042	0.015	0.241***				
Positive affect	3.156	0.829	-0.089*	-0.187***	0.107*	0.442***	0.232***	0.267***			
Understanding of the problem	3.480	1.159	0.070	-0.096*	0.162***	0.376***	0.125**	-0.100*	0.487***		
Self-efficacy	3.730	1.138	0.092*	-0.035	0.166***	0.376***	0.166***	-0.147**	0.382***	0.744***	
Solution building	3.205	0.713	0.096*	-0.011	0.120***	0.443***	0.149**	-0.210***	0.524***	0.568***	0.595***

N=504

Table 6

Multiple Regression Results

	Negative affect		Positive affect		Understanding of the problem		Self-efficacy		Solution building	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Age	-0.120**	-0.104*	-0.115*	-0.087*	0.039	0.060	0.061	0.085*	0.075	0.100*
Gender dummy	-0.027	0.005	-0.173***	-0.166***	-0.068	-0.070	-0.004	0.001	0.012	0.011
Occupation dummy	-0.022	-0.019	0.099*	0.048	0.141**	0.097*	0.153**	0.110*	0.107*	0.054
Solution-focused		-0.060		0.408***		0.363***		0.346***		0.431***
Problem-focused		0.252***		0.085*		0.013		0.069		0.031
R^2	0.016	0.073***	0.053	0.244***	0.032	0.165***	0.031	0.167***	0.020	0.211***

Figures are standardized regression coefficients.

Discussion

This study tested the validity of our solution-focused vs problem-focused communication scale. Factor analysis resulted in two factors which roughly reflected dimensions. Regarding the discriminant validity between the Solution Building Index SBI-R (Takagi et al., 2019) and the solution-focused communication scale, the results indicated that the two scales measure different constructs, confirming Hypothesis 4a.

Convergent validity was tested by using correlation analysis and multiple regression to examine the relationship between our scale and the PANAS dimensions given in prior literature, understanding of the problem, self-efficacy, and solution building. First, as to PANAS, solution-focused had a stronger effect on positive affect than did problem-focused, confirming Hypothesis 1b. No effect was identified in terms of solution-focused on negative affect, while problem-focused was found to elicit a positive effect. We therefore cannot confirm Hypothesis 1a. The reasons for this may be related to the context of the Covid-19 pandemic in which the survey was conducted, which may have meant lower than normal motivation among employees and a more negative reaction to the problem-focused approach.

Next, as to understanding of the problem, self-efficacy, and solution building, all were found to be affected more strongly by solution-focused than by problem-focused. These results confirm Hypotheses 2, 3, and 4b.

The above results demonstrate that the solution-focused vs problem-focused communication scale that we developed has a very similar relationship to the dependent variables as is documented in the existing literature on coaching. We therefore would argue that we have successfully confirmed the convergent validity of our scale.

This finding has the following implications. First, having confirmed the validity of the scale it can now be utilized in research going forward. This opens the potential to deepen our understanding of solution-focused and problem-focused communication and their relationships with variables other than the ones investigated here. Second, this confirms the effectiveness of solution-focused communication for employees, given that, as noted above, prior studies have all been limited to interventions with students. Third, this study has demonstrated the effectiveness of solution-focus in Japan, as prior studies were all conducted in Australia and Europe, and we found no studies had been conducted in Asia. This indicates that solution-focus may be effective across cultures, meaning an important finding.

Finally, we would like to comment on the limitations of the current study. The first limitation is that we used cross-sectional data, which means it is difficult to draw conclusions on causality. Future studies should conduct analyses with longitudinal data. The second limitation is that we used individual-level data, meaning we were unable to conduct analysis at the group level. Because communication is a collective phenomenon, future research should focus on solution-focused vs problem-focused communication at the group or workplace level. Finally, the current study was unable to confirm the effectiveness of the problem-focused approach. There remains a need to elucidate the advantages and disadvantages of the solution-focused and problem-focused approaches through future research in the context of different occupations and fields.

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Appendix

Solution-focused / Problem-Focused Communication Scale

次の質問は、みなさんの職場あるいは職場外でメンバー同士で普段交わされる会話の内容に関するものです。各文をよく読んで、みなさんが普段どのように感じているかを判断し、最も適当な番号を答えてください。

5=全くその通り
4=ややその通り
3=どちらでもない
2=やや違う
1=全く違う

1	メンバーの「成功」や「成長」に関する話題がよく交わされている
2	組織の「強み」や「可能性」に関する会話が多い
3	問題が起こったとき、その原因や責任者探しの会話が多い
4	互いに賞賛や感謝の言葉を交わすことが多い
5	すでにある「強み」よりも「何が足りないか」に関する会話が多い
6	お互いの「欠点」や「短所」に関する話題が多い
7	問題が起こったとき、「どうすればうまくいくか」よりも、「なぜこんなことが起きたのか」が話題となる
8	理想の未来よりも現実に関する話題が多い
9	仕事や組織の「理想」や「夢」について互いに語り合うことが多い
10	何か障害にぶつかったとき、「できない理由」について語られる
11	何が障害にぶつかったとき、「どうすればできるのか」について語られる
12	よいことであればどんな小さなことでも話題になる
13	「これからどうなりたいのか」に関する会話がたがいに交わされる
14	小さな改善ぐらいでは話題に上らない
15	「うまくいけばどうなるのか」に関する話題が多い
16	「失敗すればどうなるのか」に関する話題が多い

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