

## Regular Article

## Do people cope with situations as they say? Relationship between perceived coping style and actual coping response

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**Aim:** The coping style that individuals think they will use when encountering stressful situations may differ from actual coping response in real situations.

**Methods:** In a longitudinal study on some 500 university students, perceived coping style was identified using the Coping Inventory for Stressful Situations on the first occasion. In the subsequent eight test occasions, which occurred on a weekly basis, the students were asked about a negative life event that occurred during the past week and the actual coping responses they used.

**Results:** The perceived coping style and the actual coping response matched well for task-oriented and emotion-oriented coping. For avoidance-oriented coping, however, perceived coping style and actual coping response were weakly correlated.

**Conclusion:** Epidemiological studies on coping and mental health should discriminate coping style and coping response. Clinicians should be cautious about patients' own information about avoidance-oriented coping.

**Key words:** coping response, coping style, validity.

COPING IS ONE of the most extensively studied concepts in psychology, social work and psychiatry.<sup>1–3</sup> The concept of coping, however, is complex. Beutler *et al.*, and Moos and Holahan noted that it encompasses two concepts.<sup>4,5</sup> The first is that of stable coping style that characterizes an individual's interaction with his or her stressful environment. The second involves coping skills or techniques that people use to manage specific stressful situations. The coping style perspective may be viewed as dispositional and thus interpreted as part of an individual's personality. Thus, researchers have been interested in understanding coping style within the framework of personality.<sup>6,7</sup> The coping skills perspective may be

determined more fully by an individual's current situation. For example, McCrae has reported that type of stressor (i.e. loss, threat, or challenges) has a consistent and significant effect on the choice of coping response.<sup>8</sup> For example, positive thinking is used significantly more frequently for an event regarded as a challenge than for an event regarded as a loss or threat.

Numerous self-report measures have been developed, including the Coping Inventory for Stressful Situations (CISS)<sup>9</sup> and the Ways of Coping Questionnaire.<sup>10</sup> These instruments are used to measure coping style or coping response. It is intuitively obvious that an individual may think that he or she will use a specific type of behavior, but may not do so in reality. In other words, an individual's actual coping response may differ from what one might expect given his or her dispositional coping style. If coping responses in a specific category are determined mainly by a dispositional style such as personality, one might expect minimal discrepancies between two perspectives – coping style and coping

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response – in that category. In contrast, if coping responses are determined mainly by situational factors, we could expect more substantial discrepancies between the two perspectives. An important subject of study, then, would be to determine how much an assessment of coping style made while an individual is not in a stressful situation correlates with actual coping response during a stressful situation.

Carver *et al.* correlated the coping categories described in the dispositional and situational versions of the same scale, the COPE.<sup>11</sup> The authors first gave the dispositional version to a group of undergraduate students, then asked the students to complete the situational version, keeping in mind actual coping responses used during the most stressful event of the previous 2 months. Of reported score correlations of 14 scales of the two versions of the COPE, seven had correlation <0.3. Similar findings have been reported by Ptacek *et al.*<sup>12</sup> These reports have cast doubt on whether asking people about how they cope with stressful situations in general will inform us of how they actually behave when facing such a situation in reality. Using Japanese university students, Sasaki and Yamasaki reported that perceived coping styles would predict actual coping behaviors, but their report studied the participants at one time.<sup>13</sup> Hence it was subject to shared reporter bias.

Other instruments widely used for the assessment of coping such as the CISS<sup>9</sup> have rarely been studied with regard to the association between perceived coping style and actual coping response. Furthermore, studies on coping style and response come mainly from Western countries. Rarely are they reported from Asian countries. In particular, it was reported that as compared to people in Western countries Japanese subjects would underestimate positive aspects of psychological states.<sup>14–16</sup> Therefore it may be that Japanese subjects would report about problem-solving coping to a lesser extent than was actually done. Uchida and Kitayama, in their analysis on US and Japanese participants' spontaneously produced descriptions of happiness and unhappiness, found that, unlike descriptions of happiness, those of unhappiness included various culture-specific coping actions: whereas US subjects focused on externalizing behavior such as anger and aggression, Japanese subjects highlighted transcendental reappraisal and self-improvement.<sup>17</sup> Japanese subjects may take avoidance-oriented actions more often than they report they would.

This study prospectively described the extent to which perceived coping style instructs actual behavioral choices when participants encounter everyday stressful situations. We used the well-validated CISS as the measure of perceived coping style. To assess actual response during stressful situations, we invented a brief inventory whose items correspond to those of the CISS.

## METHOD

### Participants

The present report is derived from a nine-wave prospective longitudinal follow-up study on depressed mood and suicidality in Japanese university students. The participants were from two universities (one nursing and one non-medical) in Kumamoto, Japan. An invitation to participate in the survey was made during lectures. Although 848 students were eligible, not all of them attended each occasion and 2–3% of students who did attend chose not to participate in the study. Thus, usable data were obtained from 504–547 students on each occasion (Table 1). The mean age of the participants was approximately 19 years, and approximately one-quarter of the participants were men. The greater ratio of women in the present sample was due to inclusion of students of a nursing university.

### Measurements

#### CISS

The CISS is a self-report measure of coping styles.<sup>9</sup> It consists of 48 items rated on a 5-point scale (0, not at

**Table 1.** Test occasion and subject details

Test occasions	<i>n</i>	Men (%)	Age (years), mean ± SD
Wave 1	546	22.7	19.0 ± 1.5
Wave 2	545	22.8	19.0 ± 1.5
Wave 3	547	23.4	19.1 ± 1.5
Wave 4	525	22.9	19.1 ± 1.5
Wave 5	521	22.6	19.1 ± 1.5
Wave 6	512	23.8	19.0 ± 1.3
Wave 7	504	24.0	19.0 ± 1.4
Wave 8	509	22.2	19.1 ± 1.3
Wave 9	531	23.0	19.0 ± 1.3

all; 4, very much). There are three subcategories: task-oriented coping; emotion-oriented coping; and avoidance-oriented coping. Task-oriented coping is reported to be adaptive, and those who use it outline priorities, determine a course of action, and follow through with the action specified.<sup>2</sup> Emotion-oriented coping involves blaming oneself and becoming preoccupied with worry. Those who engage in avoidance-oriented coping participate in other activities as a way of ignoring the problem. Higher scores on a given CISS subcategory indicate a greater use of the corresponding coping style. Furukawa *et al.* have provided a Japanese translation of the measure.<sup>18</sup> Furukawa *et al.* have reported good internal consistency, good test–retest reliability, almost the same factor structure as that of the original English version, and good prospective prediction of the onset of psychological maladjustment by the emotion-oriented coping style.<sup>18</sup> This study also showed good Cronbach's alpha coefficients: task-oriented coping, 0.90; emotion-oriented coping, 0.87; and avoidance-oriented coping, 0.82. In this study, mean values were substituted for missing items when at least 39 out of 48 CISS items were answered.

### Actual coping responses

The actual coping responses (ACR) is an ad hoc self-report measure to assess actual coping responses that participants used on every occasion. Participants were first asked about negative life events they had experienced in the past week, then were asked to rate their actual response in three areas that corresponded to the coping style categories of the CISS. These coping responses could be described as task-oriented ('Considered the situation and made a plan of action'), emotion-oriented ('Felt anxious or worried'), or avoidance-oriented ('Did something else and tried not to think of it'). Items were rated on a 5-point scale (0, not at all; 4, very much). Each coping response was measured by a single item that asked about coping behaviors the participants actually engaged in during an adverse event, whereas the CISS asked what they expected they would do if they were to experience an adverse event.

### Procedure

The university students received a set of questionnaires distributed by a class lecturer, and returned them immediately upon completion, before the class

ended. The fact that students had a right to refrain from participation was both announced orally and written on the questionnaire face sheet. It was also announced that refraining would not result in any academic disadvantages. Anonymity was confirmed, but due to the need to match questionnaires obtained from the same student on different occasions, students were asked to create a unique 'nickname' for use whenever they completed a questionnaire. The CISS was included in the questionnaire on the first occasion. A copy of the questionnaire was distributed weekly. The ACR was included in the first as well as the subsequent eight occasions. This study project was approved by the Ethics Committee of the Kumamoto University Graduate School of Life Sciences (equivalent to an Institutional Review Board).

### Statistical analysis

First, we examined whether the CISS subcategory scores differed between men and women. Then we examined whether the students used the same coping responses consistently across the nine test occasions. To do this, we correlated the ACR item scores across the nine occasions.

We then correlated each of the CISS subcategories with each of the ACR subcategories on each test occasion. Not all participants experienced negative life events on each occasion. Hence such participants were excluded for these analyses. Because of correlations found between the three CISS subcategory scores (task- and emotion-oriented coping,  $r = 0.18$ ,  $P < 0.001$ ; task- and avoidance-oriented coping,  $r = 0.39$ ,  $P < 0.001$ ; emotion- and avoidance-oriented coping,  $r = 0.31$ ,  $P < 0.001$ ), the partial correlation between each of the CISS subcategories with each of the ACR subcategories on each test occasion was calculated after controlling for the scores of the other two CISS subcategories. Considering the nature of multiple comparisons, we set the  $\alpha$  level at  $P < 0.001$ .

All statistical analysis was conducted using SPSS version 13.0 (SPSS, Chicago, IL, USA).

## RESULTS

### Gender differences

Of the CISS subscales, emotion-oriented and avoidance-coping showed gender differences. Women scored higher in emotion-oriented coping

(women, 22.1 ± 11.0; men, 18.6 ± 10.6; *P* < 0.01) and avoidance-oriented coping (women, 28.2 ± 10.3; men, 23.6 ± 10.1; *P* < 0.001).

### Correlation of each ACR item across the nine occasions

The ACR item scores, with few exceptions, correlated significantly across time points. Correlation ranged between 0.234 and 0.554 for the task-oriented ACR item, between 0.086 and 0.465 for the emotion-oriented ACR item, and between 0.175 and 0.510 for the avoidance-oriented ACR item. These observations suggest that the three types of coping responses of the

ACR were moderately stable over all the test occasions. The three subcategory scales of ACR showed good internal consistency over the test occasions (Cronbach's alphas were 0.8575, and 0.80, respectively).

### Correlations between perceived coping style and actual coping response

As shown in Table 2, there were fairly consistent category-specific correlations between perceived coping style and the actual coping response. Thus, students who believed they possessed a task-oriented coping style reported on all nine subsequent test

**Table 2.** Coping response and correlation with CISS score

Actual coping behaviors	CISS			<i>n</i>	Mean ± SD
	Task-oriented coping	Emotion-oriented coping	Avoidance-oriented coping		
Wave 1 TOC	<b>0.41***</b> [0.43***]	-0.01 [-0.07]	0.06 [-0.09]	508	1.8 ± 1.3
Wave 1 EOC	0.02 [-0.01]	<b>0.35***</b> [0.37***]	-0.01 [-0.11*]	508	2.5 ± 1.2
Wave 1 AOC	0.11* [0.04]	0.04 [-0.02]	<b>0.19***</b> [0.16***]	507	1.7 ± 1.1
Wave 2 TOC	<b>0.35***</b> [0.36***]	-0.01 [-0.06]	0.06 [-0.05]	457	1.6 ± 1.2
Wave 2 EOC	0.06 [0.00]	<b>0.28***</b> [0.26***]	0.12 [0.05]	459	2.2 ± 1.3
Wave 2 AOC	0.11* [0.05]	0.05 [-0.10]	<b>0.20***</b> [0.17**]	459	1.6 ± 1.1
Wave 3 TOC	<b>0.31***</b> [0.29***]	0.02 [-0.01]	0.09 [-0.02]	430	1.5 ± 1.2
Wave 3 EOC	-0.11* [-0.13*]	<b>0.24***</b> [0.26***]	-0.00 [-0.03]	431	2.1 ± 1.2
Wave 3 AOC	0.13* [0.09]	0.10 [0.06]	0.14** [0.09]	431	1.5 ± 1.1
Wave 4 TOC	<b>0.32***</b> [0.31***]	0.02 [-0.00]	0.08 [-0.03]	399	1.5 ± 1.2
Wave 4 EOC	0.01 [-0.00]	<b>0.39***</b> [0.39***]	0.02 [-0.08]	399	2.1 ± 1.3
Wave 4 AOC	0.06 [0.01]	0.13* [0.10]	0.13* [0.10]	399	1.5 ± 1.1
Wave 5 TOC	<b>0.23***</b> [0.21***]	0.04 [0.01]	0.08 [-0.01]	407	1.7 ± 1.2
Wave 5 EOC	0.01 [-0.03]	<b>0.27***</b> [0.27***]	0.05 [-0.00]	409	2.1 ± 1.3
Wave 5 AOC	-0.02 [-0.04]	0.05 [0.04]	0.06 [0.06]	408	1.6 ± 1.2
Wave 6 TOC	<b>0.33***</b> [0.30***]	0.11* [0.07]	0.14* [0.01]	384	1.5 ± 1.1
Wave 6 EOC	0.01 [0.01]	<b>0.27***</b> [0.29***]	-0.03 [-0.10]	384	2.2 ± 1.2
Wave 6 AOC	0.03 [0.02]	0.09 [0.08]	0.03 [0.00]	384	1.6 ± 1.1
Wave 7 TOC	<b>0.33***</b> [0.29***]	0.09 [0.04]	0.16** [0.02]	369	1.6 ± 1.2
Wave 7 EOC	0.00 [-0.05]	<b>0.26***</b> [0.24***]	0.12* [0.05]	370	2.1 ± 1.3
Wave 7 AOC	0.02 [-0.01]	0.05 [0.03]	0.08 [0.06]	370	1.5 ± 1.2
Wave 8 TOC	<b>0.30***</b> [0.26***]	0.17** [0.13*]	0.14* [0.01]	374	1.5 ± 1.2
Wave 8 EOC	-0.06 [-0.08]	<b>0.29***</b> [0.30***]	-0.01 [-0.05]	377	2.1 ± 1.3
Wave 8 AOC	0.10 [0.03]	0.15** [0.11]	0.18** [0.13*]	375	1.6 ± 1.2
Wave 9 TOC	<b>0.30***</b> [0.26***]	0.11 [0.06]	0.16** [0.05]	395	1.7 ± 1.2
Wave 9 EOC	0.08 [0.06]	<b>0.30***</b> [0.31***]	0.03 [-0.07]	395	2.2 ± 1.3
Wave 9 AOC	-0.00 [-0.04]	0.11* [0.10]	0.08 [0.06]	395	1.5 ± 1.1

\**P* < 0.05; \*\**P* < 0.01; \*\*\**P* < 0.001. [n], partial correlation coefficients controlled for by the other two CISS subcategory scores; **bold**, *P* < 0.001. AOC, avoidance-oriented coping; CISS, Coping Inventory for Stressful Situations; EOC, emotion-oriented coping; TOC, task-oriented coping.

occasions that they had engaged in task-oriented coping response. A similar case existed with regards to emotion-oriented coping style and response, with students reporting emotion-oriented response on all nine subsequent test occasions. Correlation of perceived coping style and actual response, however, was relatively poor in the case of avoidance-oriented coping. Thus, students who thought they possessed an avoidance-oriented coping style in fact engaged in this type of response only on two of nine subsequent test occasions. The results were almost the same even after eliminating confounding effects of the other CISS subscale scores.

The results were almost the same when men and women were separately analyzed (Table S1). Significance of correlation coefficients was lost in some cases due to the smaller number of participants, particularly men.

## DISCUSSION

The present study suggests that actual coping response is partially influenced by perceived coping style, particularly for those that are task-oriented or emotion-oriented. Thus, the present study endorses the use of perceived coping style as predictive of an individual's actions in a real situation at least for these two coping categories. The correlation of coping response scores over the nine-wave period also suggests that people are likely to adopt the same coping response repeatedly in different situations. The magnitude of the correlation between perceived and actual coping, however, was moderate, and similar to that reported by Carver *et al.* and Ptacek *et al.*<sup>11,12</sup> While actual coping is to some extent determined by perceived dispositional coping style, it is also determined by the variability of stressors that individuals encounter. Researchers should be sure to consider these environmental factors when studying coping behavior. At the same time, perceived coping style may be a valuable way of assessing people's coping style and response. Unlike the task-oriented and emotion-oriented coping responses, however, the avoidance-oriented coping response is not able to be predicted from the perceived coping style. Hence avoidance-coping behaviors may be more a function of the content of occurring negative life events rather than reflected by dispositional coping style. Detailed analyses of the stressful situation and the actual coping behavior may cast more light on this possibility.

A drawback of the present study was that both perceived coping style and actual coping response were reported by the participants. The validity of self-report regarding actual response should be verified by researchers in a laboratory situation or by investigators observing the participants in their everyday lives. Such research strategies, however, may make it difficult to measure coping responses that are intrapsychic, such as emotion-oriented coping.

Another methodological drawback was the use of single items for the three types of actual coping response. We used our ad hoc measure in order to have a precise match with the coping categories of the CISS. Multiple items are better as a measure of each coping category and thus should be used in future replication studies. This was not practical in the present study, however, because the set of questionnaires included many other measures not reported here and because the participants may have felt enormous pressure to complete the entire questionnaire once every week for almost 3 months. In future studies, the same item contents may be necessary for both perceived coping style and actual coping response.

A third drawback of this study was the lack of detailed information about negative life events that the participants had experienced in the past week before each test occasion. Magnitude of coping response may be associated with the content as well as degree of stressful life events. It may be insightful if future study uses situations that are universally stressful to students. These may include term-end examination and, for nursing students, clinical education.

Finally, we should be careful in interpreting the data because of use of a student subject group, given that age may be a significant determinant of coping style and response as well as the types of life event that people encounter. Similarly, because one of the present universities specialized in nursing, the present sample was heavily biased towards female participants. Thus, further investigations should include a wider age range with equal gender ratio.

Considering these shortcomings, the present study has demonstrated that the perception of coping style when not encountering a stressful situation is partially reflected by the actual response used when facing such a situation, particularly for the task-oriented and emotion-oriented coping styles. Actual coping response, however, should be cautiously distinguished from perceived coping style.

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## SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

**Table S1** Partial correlation between the three subcategories of the CISS and the three Actual Coping Behaviors in each occasion for men and women separately.