

# Assessing the cross-cultural content validity of the Personal Report of Communication Apprehension scale (PRCA-24)<sup>1</sup>

CHARLES B. PRIBYL<sup>2</sup>

*Faculty of Foreign Languages, Hokuriku University, Taiyogaoka,  
Kanazawa 920-11, Japan*

JAMES A. KEATEN

*Department of Speech Communication, University of Northern Colorado,  
Greeley, Colorado 80639, USA*

MASAHIRO SAKAMOTO

*Faculty of Foreign Languages, Hokuriku University, Taiyogaoka,  
Kanazawa 920-11, Japan*

FUSAKO KOSHIKAWA

*Department of Psychology, Faculty of Literature, Waseda University,  
Toyama, Shinjuku-ku, Tokyo 162, Japan*

---

**Abstract:** Despite its popularity in the USA, the most common communication apprehension (CA) measurement scale, the Personal Report of Communication Apprehension scale (PRCA-24), has been used in just three studies in Japan. Further, validity analyses have not been reported for Japanese samples. This article attempts to analyze the content validity of the PRCA-24 on Japanese college students. Results indicate that the PRCA-24 may be of use in determining some, but not all, types of CA among Japanese students. Suggestions for future CA research in Japan are offered.

**Key words:** communication apprehension, PRCA-24, cross-cultural, gender, content validity.

---

Communication apprehension (CA), as defined by McCroskey (1977), is “an individual’s level of fear or anxiety associated with either real or anticipated communication with another person or persons” (p. 78), and affects all modes of communication. Generally, there are two forms of CA: trait-like CA and state-like CA. The trait-state distinction can be thought of as range of possibilities on a continuum. At

one end of the continuum, trait-like CA is defined as “a relatively enduring, personality-type orientation toward a given mode of communication across a wide variety of contexts” (McCroskey, 1984, p. 16). State-like CA is at the other end of the continuum, and is considered a response to situational factors rather than personality-based factors. State-like CA can be characterized as “a transitory orientation

---

<sup>1</sup> This study was supported by special research grants from Hokuriku University (1995, 1996).

<sup>2</sup> Requests for reprints should be sent to Charles B. Pribyl, Faculty of Foreign Languages, Hokuriku University, 1-1 Taiyogaoka, Kanazawa 920-11, Japan.

toward communication with a given person or group of people” (McCroskey, 1984, p. 18). CA research, in short, centers on measuring and treating those who suffer from anxiety about communicating (Richmond & McCroskey, 1995).

Communication apprehension is commonly measured with the Personal Report of Communication Apprehension (PRCA-24), considered “the most popular and valid measure of trait-like CA” (Rubin, Palmgreen, & Sypher, 1994, p. 292). The PRCA-24 was developed in response to criticism that the first PRCA (McCroskey, 1970) did not reflect common communication situations (McCroskey, Beatty, Kearney, & Plax, 1985; McCroskey & Richmond, 1980).

The PRCA-24, a measure of trait-like CA (McCroskey, 1982), consists of 24 statements regarding feelings toward communicating. Respondents are asked to rate their level of agreement with each statement using a five-point Likert format (see Appendix). The PRCA-24 was designed to assess feelings about communicating in four contexts (six questions per context): group discussion, meetings, dyad, and public speaking. These four contexts have been consistently reported as being extracted as four distinct dimensions in US samples (Ayers, 1988; Richmond & McCroskey, 1995; Rubin, Graham, & Mignerey, 1990). Scores on the PRCA-24 can range from a minimum of 24 to a maximum of 120. A higher score indicates a higher level of reported apprehension. McCroskey et al. (1985) report that the PRCA-24 is high in internal consistency, with alpha reliability estimates ranging from .93 to .95.

On US populations, research data support the content validity as well as the criterion validity of the PRCA-24 (McCroskey et al., 1985). Beatty (1987) found that scores on the public-speaking dimension of the PRCA-24 predicts general avoidance and withdrawal behavior. Beatty, Forst, and Stewart (1986) discovered that the public-speaking score on the PRCA can predict speech duration.

Research also upholds the construct validity of the PRCA-24. Keaten, Kelly, Begnal, Heller, and Walker (1993) noted that the PRCA-24

was correlated strongly to reticence, and Keaten and Kelly (1994) observed that the PRCA-24 was correlated significantly to self-reports of communication competence. CA is also negatively correlated with extroversion (–.58) (McCroskey, Daly, Richmond, & Falcione, 1977). In total, the PRCA and its variants have been administered to over a quarter of a million people since its development. There is also strong empirical evidence supporting claims of reliability of the PRCA-24 on US populations (see Rubin, Palmgreen, & Sypher, 1994).

However, there are no published reports of the validity of the PRCA-24 when administered to Japanese populations, even though the questionnaire has been used in Japan three times (Klopf & Cambra, 1979; McCroskey, Gudykunst, & Nishida, 1985; Nishida, 1988). Therefore, the purpose of this study was to address the issue of the content validity of the PRCA-24 on a Japanese population.

## Method

The PRCA-24 was translated from English to Japanese by a Japanese bilingual and an American bilingual. Back-translation was performed by a Japanese professor of English. Through the use of a focus group, the translation was judged to be equivalent (Newmark, 1988), and was pilot tested to ensure accuracy. The focus group spent considerable time discussing the specialized terms, and the Japanese words used for each of the four dimensions were carefully chosen. A focus group to discuss the items on the questionnaire consisted of 28 college freshmen.

The sample for this study was drawn from a major private university in Tokyo. The class selected in Japan was a lecture-style introductory psychology course, with a total of 283 students (120 men, 163 women) available for this sample. Subjects were given ample time at the beginning of class to complete the PRCA-24. Participants were drawn as a purposive, non-random sample (see Frey, Botan, Friedman, & Kreps, 1991). Questionnaire data were analyzed using SPSS.

## Results

### *Principal-components analysis*

A principal-components analysis of the PRCA-24 was conducted using Varimax rotation. Factors with eigenvalues of less than one before rotation were not included in the factor model. Eliminating factors with eigenvalues less than one is a common procedure and is the default setting on SPSS. A principal-component analysis of the PRCA-24 revealed a four-dimensional

structure consisting roughly of the four contexts of the PRCA: group discussion (questions 1 to 6); meetings (questions 7 to 12); dyad (questions 13 to 18); and public speaking (questions 19 to 24) (Table 1). Loadings on the group and meeting subdimension, however, were not consistent with those of US samples. The four-factor model explained approximately 61% of the variation in PRCA-24 scores. An unrotated factor analysis indicated that all but four questions (2, 4, 16, 17) loaded on the first dimension.

**Table 1.** Principal-components analysis of PRCA-24 factor structure

Statement	Factor 1 (public speaking)	Factor 2 (group discussion)	Factor 3 (dyads)	Factor 4 (meetings)
1		.80951		
2		.63630		.41390
3		.70444		.35481
4		.77925		
5		.51011		.30305
6		.56832		.61167
.....				
7	.47995			.60805
8		.32163		.66278
9	.39036			.63658
10	.44440	.48556		
11		.54980	.32889	
12			.33059	.63148
.....				
13			.58578	
14			.63364	
15			.79754	
16			.78454	
17			.61266	.30231
18			.73380	
.....				
19	.67608			.39766
20	.66851			
21	.62594			.55673
22	.72028			
23	.66280			
24	.66977			
.....				
Eigenvalue	9.54	2.07	1.79	1.19
Percent of variation	39.7	8.6	7.5	5.0
Cumulative variance	39.7	48.3	55.8	60.8

Factor loadings of less than .3 were omitted.

Dotted lines indicate the original dimensions of the questionnaire (group discussion, 1 to 6; meetings, 7 to 12; dyad, 13 to 18; public speaking, 19 to 24) (McCroskey, 1982).

### Central tendency and dispersion measures

Means and standard deviations were calculated for both the PRCA-24 and the corresponding subdimensions (Table 2). Participants reported the most fear in the public-speaking context (mean = 20.39,  $SD = 4.75$ ), followed closely by the meetings context (mean = 20.08,  $SD = 4.14$ ), followed by group discussion (mean = 19.14,  $SD = 5.13$ ), and dyads (mean = 17.18,  $SD = 4.72$ ).

### Internal-consistency estimates

Internal consistency of the PRCA-24 was assessed using Cronbach's alpha. The internal consistency of the PRCA was high ( $\alpha = .93$ ), with lower estimates for the subdimensions (group discussion  $\alpha = .87$ , meetings  $\alpha = .81$ , dyad  $\alpha = .85$ , and public speaking  $\alpha = .86$ ).

### Difference analysis of gender

To assess the statistical significance of the difference between genders, two multivariate

analyses of variance (MANOVA) were conducted. These indicated a statistically significant difference between males and females,  $F(4, 277) = 3.07, p < .02$ . A series of *t*-tests were conducted to isolate the source of the difference. Results revealed a significant difference within the public-speaking subdimension. In particular, the score for females (mean = 20.91,  $SD = 4.33$ ) was significantly higher,  $t(280) = 2.42, p < .02$ .

### Correlation matrices

Table 3 lists the correlation coefficients of the PRCA-24. The subdimensions of the PRCA-24 are significantly related to the overall PRCA-24 score. Looking at subdimension-total correlations, the strongest was the score on the meetings subdimension ( $r = .90$ ).

## Discussion

Japanese college student means for the PRCA-24 and subdimensions were higher overall when compared with those of their US counterparts, which is consistent with other studies conducted in Japan (Klopf & Cambra, 1979; McCroskey et al., 1985; Nishida, 1988).

Students in Japan report the highest levels of apprehension in the area of public speaking. This parallels results found by Nishida (1988). However, US students also report the most fear in the public-speaking context (Richmond & McCroskey, 1995).

There was a statistically significant difference between genders on public-speaking scores in Japan, an occurrence also observed by Nishida (1988) on a Japanese sample. In the USA, no clear pattern of gender differences has been

**Table 2.** PRCA-24 means table

Instrument/ subscale	Japanese sample		American sample <sup>a</sup>	
	Mean	SD	Mean	SD
PRCA	76.70	15.54	65.60	15.30
Public speaking	20.39	4.75	19.30	5.10
Dyad	17.18	4.72	14.50	4.20
Meeting	20.08	4.14	16.40	4.80
Group	19.14	5.13	15.40	4.80

<sup>a</sup> Data taken from normative means published by Richmond and McCroskey (1995).

**Table 3.** Correlation matrix of PRCA-24, and dimensions

Scale/dimension	PRCA	Group	Meeting	Dyad	Public speaking
PRCA	–	.8165**	.9005**	.7912**	.8252**
Group	.8165**	–	.7085**	.4865**	.5012**
Meeting	.9005**	.7085**	–	.6128**	.7082**
Dyad	.7912**	.4865**	.6128**	–	.5494**
Public speaking	.8252**	.5012**	.7082**	.5494**	–

\*\* $p < .01$  (one-tailed probability).

reported. Leary and Kowalski (1995) conclude the results of gender differences in CA levels is "inconsistent and inconclusive" (p. 123).

We speculate that gender roles and social expectations contribute to the differences in public-speaking scores. Research by Hofstede (1980) suggests that masculinity and femininity help to determine the values of a society. According to Hofstede, masculinity refers to the degree to which masculine values can be found in a society. In a comparison of 40 countries, Japan ranked first in terms of masculine traits. Thus, public speaking may be thought of as a male-oriented role, while women are not expected to speak out. In other words, women may, in a culturally appropriate way, be expected to be submissive in public settings. Cultural expectations and lack of experience may be responsible for higher PRCA-24 public-speaking scores among Japanese students, especially females.

A principal-components analysis of the PRCA-24 suggested confusion exists between the group-discussion and meetings subdimensions; factor analysis of this study's data resulted in different subdimensions than those found in previous research (Klopf & Cambra, 1979; McCroskey et al., 1985; Nishida, 1988). Factor structures extracted from data in this study suggest that Japanese students may not recognize differences between the concepts of a meeting and a group discussion. In essence, the reactions to the words "group discussion" and "meetings" may evoke mixed feelings among Japanese and US students. The differences in feelings may be due to the "high-context nature" of Japanese culture (Hall, 1976).

In a "high-context culture" (Japan), the dynamics of a meeting or group discussion may be different from that of a "low-context culture" (USA), because high-context cultures rely more on the unspoken. Samovar and Porter (1995) note, "Anticipating and obviating interpersonal antagonism allow the Japanese to avoid impudent and discourteous behavior" (p. 108). Support for this can be found, as Japanese students may be using the terms group discussion and meeting interchangeably. For example, some students thought group

discussions were "places to exchange opinions" while other students believed that a meeting is "a place where one can make a strong assertion." A few students, however, made clear distinctions between group discussion and meetings.

In the USA, meeting and group dimensions are related but empirically distinct (Levine & McCroskey, 1990). US students consider a group discussion to be less formal than a meeting and report slightly more apprehension associated with meetings (mean = 16.4) than with group discussions (mean = 15.4) (Richmond & McCroskey, 1995).

Whether the confusion between group discussion and meetings is due to a lack of experience or an actual cultural difference has yet to be determined, but might be answered by measuring an adult population. Nishida (1988) included adults in his sample, but he failed to report a dimensional analysis. Future CA research needs to address this point.

As noted in the introduction, the PRCA-24 was conceptualized to measure communication in a wide variety, although not exhaustive, set of situations. These situations are couched into four subdimensions, which serve as the basis for measuring state-like apprehension. Someone who scores high on one or more of the subdimensions (defined as  $\pm 1 SD$  - McCroskey & Richmond, 1995) can be said to be experiencing state-like CA. When someone scores higher for all four subdimensions, that person can be said to be suffering from trait-like apprehension. On this sample of Japanese students, the archetypal four-factor structure of the PRCA-24 did not emerge intact. This fact brings into question the content validity of the PRCA-24 in Japan.

Because all the items from the PRCA-24 appeared in the first dimension on an unrotated factor matrix, there is reason to believe that the instrument is measuring the CA construct. While the PRCA-24 may be gauging trait-like CA simply by measuring levels of fear on 24 questions about communication, state-like apprehension, by definition, must be measured by operationalizing concepts into questions and dimensions which are culturally appropriate. Our data suggest that women are more

apprehensive than men in the public-speaking context, and that both male and female Japanese people are more apprehensive about public speaking than Americans. However, because of the rarity of public speaking in Japan, we question the appropriateness of including the public-speaking dimension at the expense of other communication contexts which may be more culturally appropriate. Because the rotated factor analysis failed to reveal a clear distinction between group discussions and meetings, these two dimensions must also be called into question. In summary, the evidence presented in this study suggests that three of the four contexts being measured by the PRCA-24 may be inappropriate for use in measuring state-like CA in Japan.

### Directions for future research

In a broader context, research on CA must attempt to examine the uniqueness of fear within the Japanese culture, and also determine under which conditions fear is likely to surface. In other words, common communication situations within the Japanese culture need to be categorized, and a CA instrument made to reflect Japanese communication contexts.

### References

- Ayers, J. (1988). Antecedents of communication apprehension: A reaffirmation. *Communication Research Reports*, *5*, 76–83.
- Beatty, M. J. (1987). Communication apprehension as a determinate of avoidance, withdrawal and performance anxiety. *Communication Quarterly*, *37*, 202–217.
- Beatty, M. J., Forst, E. C., & Stewart, R. A. (1986). Communication apprehension and motivation as predictors of public speaking duration. *Communication Education*, *35*, 143–146.
- Frey, L. R., Botan, C. H., Friedman, P. G., & Kreps, G. L. (1991). *Investigating communication: An introduction to research methods*. Englewood Cliffs, NJ: Prentice-Hall.
- Hall, E. T. (1976). *Beyond culture*. Garden City, NY: Doubleday.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related venues*. Beverly Hills, CA: Sage.
- Keaten, J. A., & Kelly, L. A. (1994). Negative thoughts, conditioned anxiety, and skills deficit: Toward a typology of students in the basic public speaking course. Paper presented at the Annual meeting of the Speech Communication Association, New Orleans, LA, USA.
- Keaten, J., Kelly, L. A., Begnal, C., Heller, D., & Walker, A. (1993). Development of an instrument to measure reticence. Paper presented at the Annual meeting of the Speech Communication Association, Miami Beach, FL, USA.
- Klopf, D. W., & Cambra, R. E. (1979). Communication apprehension among college students in America, Australia, Japan, and Korea. *Journal of Psychology*, *102*, 27–31.
- Leary, M. R., & Kowalski, R. M. (1995). *Social anxiety*. New York: Guilford Press.
- Levine, T. R., & McCroskey, J. C. (1990). Measuring trait communication apprehension: a test of rival measurement models of the PRCA-24. *Communication Monographs*, *57*, 62–72.
- McCroskey, J. C. (1970). Measures of communication-bound anxiety. *Speech Monographs*, *37*, 269–277.
- McCroskey, J. C. (1977). Oral communication apprehension: A summary of recent theory and research. *Human Communication Research*, *4*, 78–96.
- McCroskey, J. C. (1982). *An introduction to rhetorical communication* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- McCroskey, J. C. (Ed.) (1984). *Avoiding communication: Shyness, reticence, and communication apprehension* (Vol. 1). Beverly Hills, CA: Sage.
- McCroskey, J. C., & Richmond, V. P. (1980). *The quiet ones: Shyness and communication apprehension*. Scottsdale, AZ: Gorsuch Scarisbrick.
- McCroskey, J. C., Daly, J. A., Richmond, V. P., & Falcione, R. L. (1977). Studies of the relationship between communication apprehension and self-esteem. *Human Communication Research*, *3*, 269–277.
- McCroskey, J. C., Beatty, M. J., Kearney, P., & Plax, T. G. (1985). The content validity of the PRCA-24 as a measure of communication apprehension across communication contexts. *Communication Quarterly*, *33*, 165–173.
- McCroskey, J. C., Gudykunst, W. B., & Nishida, T. (1985). Communication apprehension among Japanese students in native and second language. *Communication Research Reports*, *2*, 11–15.
- Newmark, P. (1988). *A textbook of translation*. New York: Prentice-Hall.
- Nishida, T. (1988). Daigakusei no komyunikeshon funan [Communication apprehension among Japanese college students]. "Kokusaikenkyu"

- Nihon Daigaku* [Nihon University Studies on International Relations], **8**, 171–183.
- Richmond, V. P., & McCroskey, J. C. (1995). *Communication: Apprehension, avoidance, and effectiveness* (4th ed.). Scottsdale, AZ: Gorsuch Scarisbrick.
- Rubin, R. B., Graham, E. E., & Mignerey, J. T. (1990). A longitudinal study of college students' communication competence. *Communication Education*, **39**, 1–14.
- Rubin, R. B., Palmgreen, P., & Sypher, H. E. (1994). *Communication research measures: A sourcebook*. New York: Guilford Press.
- Samovar, L. A., & Porter, R. E. (1995). *Communication between cultures* (2nd edn.). Belmont, CA: Wadsworth.

(Received July 10, 1995; accepted Nov. 6, 1996)

## Appendix: Personal Report of Communication Apprehension (PRCA-24)

*Directions.* This instrument is composed of twenty-four statements concerning feelings about communicating with other people. Please indicate the degree to which each statement applies to you by marking whether you: (1) strongly agree, (2) agree, (3) are undecided, (4) disagree, or (5) strongly disagree. Work quickly; record your first impression.

1. I dislike participating in group discussions.
2. Generally, I am comfortable while participating in group discussions.
3. I am tense and nervous while participating in group discussions.
4. I like to get involved in group discussions.
5. Engaging in group discussions with new people makes me tense and nervous.
6. I am calm and relaxed while participating in group discussions.
7. Generally, I am nervous when I have to participate in a meeting.
8. Usually I am calm and relaxed while participating in a meeting.
9. I am very calm and relaxed when I am called upon to express an opinion at a meeting.
10. I am afraid to express myself at meetings.
11. Communicating at meetings usually makes me uncomfortable.
12. I am very relaxed when answering questions at a meeting.
13. While participating in a conversation with a new acquaintance, I feel very nervous.
14. I have no fear of speaking up in conversations.
15. Ordinarily I am very tense and nervous in conversations.
16. Ordinarily I am very calm and relaxed in conversations.
17. While conversing with a new acquaintance, I feel very relaxed.
18. I'm afraid to speak up in conversations.
19. I have no fear of giving a speech.
20. Certain parts of my body feel very tense and rigid while I am giving a speech.
21. I feel relaxed while giving a speech.
22. My thoughts become confused and jumbled when I am giving a speech.
23. I face the prospect of giving a speech with confidence.
24. While giving a speech, I get so nervous I forget facts I really know.