

A FACTOR ANALYTICAL INVESTIGATION OF THE JAPANESE TRANSLATION OF THE CHEEK-BUSS SHYNESS SCALE IN SUPPORT OF THE THREE-COMPONENT MODEL OF SHYNESS



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What's shyness ?

Shyness is conceptualized as a syndrome of affective, cognitive, and behavioral components characterized by social anxiety and behavioral inhibition resulting from the feeling that others are evaluating you (Buss,1995;Carducci,2000). Theoretical conceptualizations and research (Carducci, 1999; Cheek & Krasnoperova, 1999; Melchior & Cheek, 1990) assert that shyness consists of three components: physiological (affective), cognitive, and behavioral.

Purpose

The purpose of the present study was to replicate and validate the three-component model of shyness as assessed by a Japanese translation of the 20-item Cheek-Buss Shyness Scale (CBSS) (Cheek& Melchior, 1985).

Method

Participants: The participants were 537 Japanese graduate students (230 males, 278 females, 29 unknown) from 4 universities in Japan.

Experiment period: August-December 2015

Materials: The 20-item Cheek-Buss Shyness Scale: CBSS (Cheek& Melchior, 1985). Translation was performed by a British associate professor majoring in communication studies who is a bilingual in English and Japanese. To validate the translation, two Japanese psychologists confirmed the appropriateness of the Japanese representation of the CBSS.

Analyses: Presented in Table 1 are the means and standard deviations calculated for the total scores based on the original version and Japanese translation of the CBSS, along with their corresponding Cronbach alpha values. We then performed a factor analysis using a maximum-likelihood method and oblique rotation with Harris & Kaiser method on the scores for the Japanese translation of the CBSS (see Table 2). The number of factors was determined by reference to the scree-test and Tucker and Lewis's Reliability Coefficient.

Result and Discussion

1) The Japanese translation of the CBSS

As seen in Table 2, the results of a factor analysis of the Japanese translation of the CBSS yielded three oblique factors ($r > 0.62$), but it was infinitesimally a one-factor structure ($\alpha > 0.89$). Such findings support previous factor analytical research suggesting that "a single dimension underlies the construct of shyness" (Jones, Briggs, & Smith, 1986, p. 638) and the three-component model of shyness. In support of the importance of replication research (Maxwell, Lau, & Howard, 2015), this Japanese version of the CBSS demonstrates high construct validity.

Table 1. Fundamental statistical values of Shyness Scale

Scale	N	Mean	SD	Alpha
USA(1985)	326	51.8	13.6	.94
Japan(2015)	537	62.9	13.4	.89
Male	230	60.7	13.5	} $p < .01$
Female	278	64.8	13.1	

Japanese data includes gender blank of 29 students.

2) The structure of three-factor model

The maximum likelihood factor analysis indicated a three-factor solution as appropriate. Tucker and Lewis's reliability coefficient was .93. The variances explained by each factor were 6.07, 0.63 and 0.55. This pattern of results suggests a three-factor solution but a one-factorial model.

3) Factor labels

As seen in Table 2, Factor 1 consisted of 11 items, such as 16,1,13, and 8, which related most to tension and was labeled "Tension of shyness." Factor 2 consisted of four items: 3,10,12, and 14, which related most to self-competence, and was labeled "Competence of shyness." Factor 3 consisted of 2 items: 5 and 6, which related most to helplessness, and was labeled "Disability of shyness." This oblique three-factor solution replicates a three-component model of shyness with a Japanese sample.

Table 2. Factor Analysis of Shyness scale in Japan

Shyness Scale Items	Tension of shyness	Competence of shyness	Disarebility of shyness
1 I feel tense when I'm with people I don't know well.	.716	-.010	.013
2 During conversations with new acquaintances I worry about saying something dumb.	.534	.186	-.063
4 I do not find it difficult to ask other people for information. (R)	.476	.049	-.070
7 I feel relaxed even in unfamiliar social situations. (R)	.302	.192	.193
8 It is hard for me to act natural when I am meeting new people.	.654	-.101	.072
13 I am usually a person who initiates conversations. (R)	.670	-.278	.071
15 Sometimes being introduced to new people makes me physically upset (for example, having an upset stomach, pounding heart, sweaty palms, or heat rash).	.320	.170	-.135
16 I do not find it hard to talk to strangers. (R)	.991	-.171	-.130
17 I worry about how well I will get along with new acquaintances. .	.572	.143	-.017
19 It does not take me long to overcome my shyness in new situations. (R)	.556	.103	-.011
20 I feel inhibited in social situations.	.492	.119	.111
3 I am socially somewhat awkward.	-.139	.709	.160
10 I am confident about my social skills. (R)	-.086	.731	-.016
12 I have trouble looking someone right in the eye.	.129	.413	-.288
14 I often have doubts about whether other people like to be with me.	.145	.395	-.060
5 I am often uncomfortable at parties and other social gatherings.	-.096	.015	.805
6 When in a group of people, I have trouble thinking of the right things to talk about.	.098	.074	.633
9 I feel painfully self-conscious when I'm around strangers.	.273	.159	-.032
11 I feel nervous when speaking to someone in authority. .	.275	.269	-.138
18 I am shy when meeting someone of the opposite sex.	.232	.195	.018