

STEREOTYPES OF DECEPTIVE BEHAVIORS: A CROSS-CULTURAL STUDY BETWEEN CHINA AND JAPAN

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We replicated and confirmed the results of the deception beliefs research conducted by The Global Deception Research Team (GDRT; 2006). We compared the deception stereotype and the perceiver cues of deception detection of people in the Chinese and Japanese cultures. Our results show that stereotypes of deceptive behaviors exist in both cultures with cross-cultural consistency. However, we also found that the deception stereotype was significantly different in these two cultures and was also different according to gender. Our findings support and validate the GDRT's findings with a deeper and more detailed analysis.

Keywords: deception, stereotypes of deceptive behaviors, cross-cultural comparison, Japan, China.

A polygraph measures and records physiological indices such as blood pressure, pulse, respiration, and skin conductivity while the participant answers a series of questions (Rosenfeld, 1995). This method of measurement has been applied to areas such as legal investigations and trials, homeland defense and security, and personnel recruitment and selection (Ford, 2006). However, because of the great variety of polygraph devices and the difficulty of operating them, many researchers have criticized their application and consider their results to be suspect (Masip, 2006). One possible reason that the use of polygraphs as a

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measure remains controversial is that identifying deception cues is problematic (Drob, 2004). Therefore, deception detection via polygraph is still in the exploratory stage.

In daily life, people use a variety of cues to perceive deception (Masip & Garrido, 2000; Masip, Garrido, & Herrero, 2001); however, most people overestimate their ability to do so. In fact, the behavioral cues of deception are limited. For example, it has been reported that people believe that liars increase their frequency of body movement, gaze aversion, blinking, smiling, restlessness, and stuttering (DePaulo, 2004); however, no findings in any study have yet verified that these behaviors are deception cues (Burgoon, Buller, & Woodall, 1994; DePaulo, Stone, & Lassiter, 1985; Vrij, 2000). Ekman (1985) argued that emotional displays such as blushing, flushed cheeks, sweating, blinking, pupil dilation, and tears do not accurately indicate deception. Thus, using these cues may not improve the accuracy of deception detection. They can, however, strengthen stereotyped beliefs about liars, which might affect interpersonal interactions. When identifying deception, many professionals (such as police officers and judges) are influenced by these stereotypes (Stromwall, Granhag, & Hartwig, 2004). Furthermore, interpreting these behavioral cues is described as a practical method of deception detection in some law enforcement handbooks, including that of Interpol (Inbau, Reid, Buckley, & Jayne, 2001; Meissner & Kassin, 2002).

In 2006, researchers from 63 countries formed the Global Deception Research Team (GDRT) to conduct a cross-cultural study of beliefs about liars. These researchers developed the Beliefs About Deception Questionnaire, an instrument that contains 10 questions on beliefs regarding deceptive behavior. The results showed that the most frequently held belief about deception is that liars use less eye contact than usual (i.e., liars avert their gaze), which indicates that a stereotype of deception is similar across cultural backgrounds (GDRT, 2006).

However, the GDRT study had flaws in its control sample. For example, 40 participants (20 male and 20 female) were recruited in each of the 63 countries. This method has two problems. First, a sample size of 20 does not meet the minimum sample size of 30. Sample size might affect the probability of true data randomization, which makes these results unreliable. Therefore, to confirm the validity of the GDRT study, the sample size must be expanded. Second, although the ratio of men to women within each country's sample was considered in the GDRT study, other population characteristics, such as age and occupation, were not controlled. Therefore, it is necessary to verify these results while controlling for more population demographics.

In this study, we sought to repeat and verify the results from the GDRT study in China and Japan. We increased the sample size in China and Japan and controlled for population and demographic variables. In addition, we explored whether or

not there was a significant difference according to gender in the stereotype of liars.

Method

Participants

Participants were 400 students at eight universities in Beijing and Tokyo (200 Chinese students, 100 male and 100 female, mean age = 19.4 years; 200 Japanese students, 100 male and 100 female, mean age = 20.3 years). The average age across all participants was 20.2 years, and none were married.

Procedure

We translated the Beliefs about Deception Questionnaire developed by the GDRT (2006) into Chinese and Japanese and called it the Stereotypes of Deceptive Behaviors Survey. The survey was composed of 10 three-choice statements. We distributed the survey forms to students, who were selected at random, at universities in Beijing and Tokyo. All the participants completed the survey in 15 minutes, and the forms were collected by the study collaborators on site. We excluded forms that contained three or more unanswered items, and got more students to complete the survey to maintain our sample size. We paid participants 20 Yuan (approx. US\$3.14) each within one week after they submitted their survey forms.

Results

Analysis of Stereotypes of Deceptive Behavior

The internal consistency coefficient (Cronbach's α) of the 10 items was $\alpha = .71$ across all participants; $\alpha = .72$ for Japanese participants, $\alpha = .73$ for Chinese participants. These results indicate that the reliability of the survey was acceptable; therefore, correlational research could be conducted. An χ^2 test showed that the distribution of the participants' responses was not homogeneous for all 10 items. The detailed results are shown in Table 1.

We first analyzed the 10 behavioral stereotypes of liars without considering participant nationality. The three predominant stereotypes of deceptive behavior were, in descending order: that liars reduce eye contact with other people (58.0%, $p < .05$); that liars make more hand gestures (57.5%, $p < .05$); and that liars increase self-touching/scratching (53.6%, $p < .05$).

In the GDRT the cultural differences among the 63 countries sampled were not addressed because the nationality description was insufficient. In the second stage of our analysis, we examined the results from the Chinese participants

Table 1. χ^2 Test of Stereotypes of Deceptive Behavior

Questions	χ^2	Calm or nervousness of liars	Seriousness of liars	Consistency of stories	Length of stories	Length of pauses	Stuttering	Position shifts	Eye contact	Self-touch	Hand gestures
Both countries	χ^2	62.35**	49.34**	54.31**	60.04**	43.75**	57.40**	75.04**	123.94**	76.12**	112.45**
In Chinese	χ^2	41.23**	34.57**	41.08**	84.01**	35.47**	60.04**	61.69**	72.19**	34.84**	76.63**
In Japanese	χ^2	22.87**	20.77**	17.29**	7.93**	11.56**	14.29**	28.21**	55.84**	43.03**	43.48**

Note. ** $p < .01$.

and found that the three predominant stereotypes of deceptive behavior were, in descending order: that liars increase hand gestures (62.1%); that liars tell longer stories (61.1%); and that liars shift their posture more (59.1%). The stereotype of avoiding eye contact was the fourth most commonly named stereotype (58.1%).

Next, we performed a χ^2 test on the results from responses to the 10 items by the Japanese participants. The three predominant stereotypes of deceptive behaviors were, in descending order: that liars avoid eye contact (58.0%); that liars tend to touch/scratch themselves more (54.5%); and that liars increase the frequency of hand gestures (53.0%).

Cultural and Gender Differences in Stereotypes of Deceptive Behavior

When we analyzed cultural and gender differences in liar stereotypes the results showed that there were significant differences between Chinese and Japanese participants on items 2 ($\chi^2 = 8.175, p < .05$), 4 ($\chi^2 = 32.355, p < .01$), 6 ($\chi^2 = 16.569, p < .01$), 7 ($\chi^2 = 15.109, p < .01$), 8 ($\chi^2 = 7.545, p < .05$), and 10 ($\chi^2 = 8.176, p < .05$). There was also a significant difference between men and women on items 6 ($\chi^2 = 6.925, p < .05$) and 8 ($\chi^2 = 7.666, p < .05$). For item 8 (eye contact when lying) the distribution was significantly different for the Chinese and Japanese participants. Further examination of these results was necessary to determine what cultural differences were reflected in this differential distribution.

Cross-cultural Analysis on Stereotypes of Deceptive Behavior after Controlling for Gender

Both gender and culture affected cues of stereotypes; therefore, we examined these variables further.

There were significant differences between Chinese and Japanese men on items 3 ($\chi^2 = 8.032, p < .05$), 6 ($\chi^2 = 11.564, p < .01$), 8 ($\chi^2 = 6.349, p < .01$), and 10 ($\chi^2 = 7.026, p < .01$). There were significant differences between Chinese and Japanese participants of both genders on items 4 (males: $\chi^2 = 7.317, p < .05$; females: $\chi^2 = 29.343, p < .01$) and 7 (males: $\chi^2 = 6.351, p < .05$; females: $\chi^2 = 8.858, p < .05$). There was also a significant difference between Chinese and Japanese women on item 9 ($\chi^2 = 7.809, p < .05$). These differences are listed below.

Stories are consistent/inconsistent/neither (item 3). Most Chinese and Japanese men responded that liars like to tell consistent stories. In addition, Chinese men were more likely than Japanese men to agree with this description. More Japanese than Chinese men responded that stories of liars were neither more consistent nor more inconsistent.

Stories are longer/shorter/neither (item 4). Chinese women endorsed that liars provide longer descriptions. However, Japanese women responded that liars provide shorter descriptions. More Japanese than Chinese women responded that liars' stories were neither shorter nor longer.

Stutter more/less/neither (item 6). Compared to Chinese men, Japanese men were more likely to respond that liars were neither more nor less likely to stutter. However, Chinese men were more likely to answer that liars stutter more than truth tellers.

Shift posture more/less/neither (item 7). Chinese and Japanese men and women all responded that people shift their posture more when lying. However, compared to Chinese men, there were more Japanese men who responded that liars did not move either more or less than truth tellers.

Eye contact more/less/neither (item 8). Both Chinese and Japanese men responded that eye contact is less frequent in liars. However, compared to Chinese men, there were more Japanese men who did not think that there was either less or more eye contact when people were lying.

Self-touch more/less/neither (item 9). Both Chinese and Japanese women agreed that self-touching/scratching increases when lying. However, compared to Chinese women, there were more Japanese women who thought that liars do not touch themselves either more or less than people telling the truth.

Hand gestures more/less/neither (item 10). Both Chinese and Japanese men responded that hand gestures increase when lying. However, compared to Chinese men, there were more Japanese men who did not think that liars gestured with their hands either more or less.

Discussion

The main purpose in this study was to replicate and verify the results of the GDRT (2006) study with Chinese and Japanese participants via a deeper analysis.

First, we verified the results of the GDRT (2006) study: according to our results there was a significant tendency to stereotype the 10 deceptive behaviors, with the most frequently reported stereotype being gaze aversion. This stereotype was also the most frequently reported in GDRT study.

When we analyzed the Chinese and Japanese participant groups separately we found that the participants reported these 10 stereotypes of deceptive behaviors regardless of culture. However, the rank order of stereotypes differed. In the Japanese sample, the rank order agreed with the ranking in the GDRT (2006) study, although the Japanese sample did not associate eye contact frequency with lying as strongly as did the GDRT sample. However, self-touch and hand gestures were ranked second and third, respectively, which was different from the ranking in the GDRT study. In the Chinese sample, the most frequently reported stereotypes of deceptive behaviors were, in descending order, frequent hand gestures, long story descriptions and frequent posture shifting. The eye contact stereotype was ranked fourth, which differed from the ranking in the GDRT study. Therefore, it will be necessary to conduct a study with a larger sample in China

and Japan to confirm these results. In addition, although there was cross-cultural consistency between the two cultures on the stereotype of averting the gaze when lying, the responses to the three choices showed a different distribution pattern for Chinese and Japanese participants.

In the current study, we considered the impact of gender and culture on the stereotypes of deceptive behaviors. After controlling for gender, we found significant differences between the Chinese and Japanese samples in response to some of the items.

Future studies could be focused on samples in other countries, to address the limitation of generalizability of these results, coming from only two countries, China and Japan. In summary, however, we found that the impacts of gender and culture were significant when evaluating stereotypes of deceptive behaviors within Chinese and Japanese populations.

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