

# **Gender Differences in Nonverbal, Interpersonal Sensitivity Across Three Cultures: Japan, India, and the United States**

Perna Sud

## **Abstract**

The study examined how, and to what extent, gender and cultural differences affect subjects' interpersonal, nonverbal sensitivity. The researcher assessed male and female subjects, from Japan, India and the United States, on measured (The Interpersonal Perception Task-15; IPT-15) interpersonal sensitivity. Factorial analyses of the IPT-15 displayed a highly significant main effect of gender with women outscoring men across cultures. Overall, while American participants on average, scored highest on the IPT-15 followed by Indian participants, with the Japanese participants scoring lowest; the factorial analysis did not yield significant effect of culture on the IPT-15 scores. Implications of these findings are discussed.

## **Gender Differences in Nonverbal, Interpersonal Sensitivity Across Three Cultures: Japan, India, and the United States**

The broad definition of nonverbal communication is “the communication effected by means other than words” (Knapp & Hall, 1997, p.5). Although nonverbal communication mostly refers to the display and judgment of emotions, it also involves the display and judgment of interpersonal orientation (dominance/subordination); attitudes (“She likes me”); and intentions or needs (“He wants attention”) (Knapp & Hall, 2002). According to Judith Hall (1998), *nonverbal*

*sensitivity* pertains to people's ability to figure out the meanings of nondeceptive, nondiscrepant, nonverbal cues expressed in the face, body and vocal channels. This accurate understanding of nonverbal cues from emotional expressions and body language also seems to be a reliable predictor of better social adjustment, mental health, and workplace performance (Elfenbein, 2006; Riggio, 1986; Rosenthal et.al., 1979).

One way to look at nonverbal communication is to view it as a skill or ability. According to Riggio (2006), this "skill approach" focuses on one's capability in receiving (decoding), sending (encoding), and regulation (management) of nonverbal communication. Of these three aspects, nonverbal decoding skills lead to *interpersonal sensitivity* defined by Bernieri (2001) as "the ability to sense, perceive accurately and respond appropriately to one's personal, interpersonal and social environment" (pg. 3). As per Bernieri (2001), interpersonally sensitive people start with sensation and perception and then make perceptual, cognitive and motivational distinctions that enable them to respond appropriately to the environment and so they not only know the effective response but also the appropriate degree of the response. Given that both these skills focus on nonverbal decoding skills (the receptive aspect), the terms "nonverbal sensitivity" and "interpersonal sensitivity" shall be used interchangeably and/or in conjunction with each other through the course of this investigation.

The degree of sensitivity to nonverbal cues varies--some people seem more alert to nonverbal signals and more in tune with what these cues mean. Such individual differences are often conceptualized in terms of between-subject factors and within-subject traits and it follows that some aspects, more than others, will

indicate nonverbal sensitivity. The current study focuses on two between-subject factors: gender and culture.

In presenting ourselves to the outside world, a major component of our identity is our gender—male or female, and there are clear gender differences in nonverbal communication. The prevailing view in nonverbal behavior research (e.g. Hall, 1978, 1979) is that these gender differences are significant and that women show superiority in both aspects of nonverbal communication—emotion recognition (decoding) and emotion portrayal (encoding). Several studies have examined gender differences in people’s ability to accurately decode nonverbal cues.

Hall’s (1978) meta-analytic study was based on 75 studies (ranging from 1923 to 1978) of individuals (children through adults) who were asked to decode nonverbal cues presented by others via photographs, audiotape and or videotape (Hall, 2006). Overall 84 percent of the studies showed women to be significantly better decoders than men however, the effect size--while favoring women--was moderate, indicating that even as these studies consistently and reliably showed women to be better decoders, the differences were not huge, leading to the conclusion that, along with gender, nonverbal decoding ability is related to other personal and interpersonal factors (Hall, 1979). Other important conclusions reached from this pioneering research were that firstly, the gender of the stimulus person (target) does not make a difference in decoding accuracy. Secondly, this female advantage is more or less consistent over cultures and age groups (from third grade up into adulthood) of perceivers (Hall, 1979) and lastly, this greater decoding accuracy for females tends to be more pronounced for visible than vocal cues (Hall, 2006).

Since then, recent studies have continued to bear out women’s superior ability

to interpret the meanings of nonverbal cues in different domains and settings. In terms of self-report measures of decoding ability, these gender differences favoring women were also confirmed in a study by Riggio (1986) wherein female participants scored higher than men on the Emotional Scale (ES scale) of the Social Skills Inventory (SSI; Riggio, 1986). The stereotype is that women are more expressive, warm, fluent and skilled in nonverbal communication than men (Hall, 2006) and this view also seems to coincide with how men and women describe themselves (Fischer and Manstead, 2000). In a meta-analysis, Hall (1984), tried to separate the actual versus stereotypical nonverbal gender differences and found that the stereotypes are largely accurate.

However, since research also suggests that men have an advantage in decoding anger cues and that women's decoding superiority is lower for spontaneous nonverbal cues (Fujita, Harper & Wiens, 1980), there might be other factors, such as culture, that moderate the relationship between gender and nonverbal sensitivity.

According to Matsumoto (2006), culture is "a shared system of socially transmitted behavior that describes, define and guides people's ways of life, communicated from one generation to the next" (pg. 220). In allowing for cultural influences on nonverbal sensitivity, it is important to recognize the universal bases of nonverbal behaviors, and to understand that culture's influence happens above and beyond this universality (Matsumoto, 2006). Several cultural differences have been found in decoding accuracy as assessed by performance tests like the Profile of Nonverbal Sensitivity (PONS; Rosenthal et al., 1979) and the Interpersonal Perception Task (IPT; Archer & Costanzo, 1988).

In a series of studies, the PONS was administered to over two thousand people

from 20 nations (Rosenthal et al., 1979). Americans were most accurate in judging nonverbal cues which suggests that people are most accurate in judging targets from their own cultures (Ambady, LaPlante & Johnson, 2001). In this series of studies, groups similar to American culture (in terms of modernization and widespread use of communications media) and whose experiences were comparable to college-educated American citizens scored higher than groups from less similar cultures (Knapp & Hall, 2002). Finally Rosenthal et al. (1979) also found that cultures whose language was English or most closely resembled English performed better than cultures who spoke a different language.

Another study (Iizuka, Patterson & Matchen, 2002), compared the accuracy and confidence of Japanese and American participants on the Interpersonal Perception Task-15 (IPT-15; Archer & Costanzo, 1993). In the Visual-Only condition of the IPT-15 (where the sound was removed), both sets of subjects had nearly identical scores but American scores increased and Japanese scores decreased in the audiovisual condition of the study (Iizuka et al., 2002). Japanese subjects with moderate proficiency in spoken English were more accurate than those with low English proficiency. On the confidence measure, Americans were more confident of their performance than the Japanese. While the score differences between the two cultural groups are explicable by the American participants' ease with the English language and the comparative language limitations of their Japanese counterparts, Iizuka et al. (2002), attribute the nearly identical scores on the Visual-Only condition to two facts, firstly, the behavior patterns seen on the IPT-15 transcend broad cultural differences between the two countries and secondly, most Japanese people have exposure to American social behavior through television and are familiar with

naturalistic interactions between Americans.

Finally, nonverbal sensitivity is also affected by cultural norms, values and practices (Hecht & Ambady, 1999). According to Hecht and Ambady (1999), individuals from a more hierarchically structured culture consider other factors such as status of the targets (whether the target is a superior, peer or subordinate) while decoding nonverbal cues.

The present study is an attempt to examine gender differences in interpersonal, nonverbal sensitivity by comparing the results across three cultures—Japanese, Indian and American.

It is hypothesized that firstly, women overall, will obtain significantly higher scores on the IPT-15 than men overall. Accordingly, American women will obtain significantly higher IPT-15 scores than American men. Indian women will obtain significantly higher IPT-15 scores than Indian men and Japanese women will obtain significantly higher IPT-15 than Japanese men. Secondly, American participants overall, will perform significantly better than Indian and Japanese participants on the IPT-15, and so accordingly, American females will obtain significantly higher IPT-15 than Indian and Japanese females, and American males will obtain significantly higher average IPT-15 scores than Indian and Japanese males.

## **Methods**

*Participants:* The Indian group comprised of 103 (50 male, 53 female) post-graduate students from Himachal Pradesh University, Shimla, with an age range of 21 to 35 years and a median age of 24. The American group consisted of 101 (43 male, 58 female) undergraduate and graduate students at California State University, Fullerton,

ranging from 20 to 35 years with a median age of 23 for female subjects and 24 for male subjects. The Japanese group comprised of 63 participants (25 male, 38 female) undergraduate students at Miyazaki International College, Japan, ranging in age from 20 to 27 with a median age of 21. The medium of instruction at all three institutions is English.

Measures:

The Interpersonal Perception Task-15 (IPT-15; Archer & Costanzo, 1993). The IPT-15 is an audio-visual test about nonverbal communication and social perception. It has an administration time of about 20 minutes and consists of 15 brief (28 to 122-second) “real-life” scenes. Each scene is paired with a question appearing on the screen before the scene starts. Each question has three possible answers—which help the viewer *decode* something important about people in the scene based on nonverbal and interpersonal cues. A brief blank interval on the DVD/videotape enables the viewers to enter their responses on the answer sheet.

Procedure: Similar procedures were used to collect data from all the participants. Students, who volunteered, participated in groups ranging from 6 to 30 individuals. Volunteers were instructed that they would be participating in a study on nonverbal communication. Instruments assessing general demographic information (age, gender and level of education completed) and nonverbal sensitivity (measured) were then administered. The participants filled out the demographic information forms and then completed the IPT-15 task including watching a DVD which was projected on a screen.

## Results

Preliminary analysis, with reference to descriptive statistics, determined that for the American sample (Table 1), female participants performed better on the IPT-15 (in obtaining higher mean scores on the IPT-15) than their male counterparts. For the Indian sample, the analysis (Table 2) was analogous to the American one with Indian females also getting higher scores on the IPT-15 than Indian males. Similarly Japanese female participants scored higher, on average, than their male counterparts on the IPT-15 (Table 3).

Independent one-tailed t-tests were conducted to examine whether within each culture, American, Indian and Japanese women would obtain significantly higher IPT-15 scores than their respective male counterparts. The t-test results of the American sample ( $t = 3.291$ ,  $df = 99$ ,  $p < .001$ , one-tailed) were highly significant in favor of female participants. For the Indian group ( $t = 2.132$ ,  $df = 101$ ,  $p < .05$ , one-tailed) and Japanese sample ( $t = 2.158$ ,  $df = 61$ ,  $p < .05$ , one-tailed), the results again showed the difference in mean IPT-15 scores between females and males as significant and favoring women.

The factorial analysis of the IPT-15 also displayed a highly significant main effect of gender (Table 4) where women overall scored higher than men ( $p < .001$ ). However, the between-subjects ANOVA (gender X culture) for IPT-15 scores did not show either a significant main effect for culture or a significant interaction effect between culture and gender (as seen in Table 4), thereby indicating that IPT-15 scores may not be a function of culture or be affected by culture and gender interacting with each other.



## **Discussion**

The primary goal of this research was to investigate the salience of the relationship between interpersonal, nonverbal sensitivity and gender (being male or female), across three cultures—American, Japanese and Indian. All participants from all cultures were assessed on their interpersonal, nonverbal sensitivity in terms of their measurable nonverbal decoding skills (as assessed by the IPT-15). Upon different levels of data analysis, some fascinating results emerged that fell in line with our hypotheses and previous research, yet also offered up some interesting connotations.

Gender differences were evident with preliminary data scrutiny using descriptive statistics. As with previous research results, women obtained higher mean scores than men on the IPT-15. Interestingly, based on preliminary analysis and the t-test results, the gender differences (in favor of women) on the IPT-15 were more pronounced among American participants than among the Japanese and the Indian groups.

These gender differences within and across each culture may have cultural implications and explanations. The fact that female participants across the three cultures scored higher than their male counterparts on the skill measure of nonverbal sensitivity indicates that gender is by far the main determinant of differences in the ability to decode nonverbal cues. While these findings are as per our expectations based on gender stereotypes and past research (see Hall, 1978, 1984), and consistent with previous studies (e.g. Rosenthal et al., 1979) which demonstrate that gender differences in nonverbal ability significantly favor women across cultures; there is some differentiation in the extent of the gender gap in nonverbal sensitivity between the three cultures.

The comparatively smaller gender differences on the IPT-15 scores for Indian and Japanese participants may be explained by gender roles and cultural expectations. Research (Rosenthal & DePaulo, 1979) has shown that sex differences in *accommodatingness* (being polite or giving in to perceived wishes of the expressor/target) are more pronounced in countries where women are less liberated (with females being more accommodating and more “polite” than men), consequently in such cultures, gender differences in accuracy of nonverbal cues are smaller (women in these places are not as nonverbally superior to their male counterparts as in other parts of the world). In the present research too, perhaps it is not so much that Indian and Japanese males were more nonverbally sensitive, but rather that Indian and Japanese females under-performed on nonverbal sensitivity measures out of a cultural expectation of politeness.

These cultural variations in terms of gender differences were clarified by factorial analyses to reveal further distinctions. By and large, our data replicated previous findings that gender affects nonverbal sensitivity. In the current study, women overall scored higher than men on IPT-15 which is consistent with our expectations and with original investigations done by the test authors of the IPT-15. Research on the IPT-15 (Costanzo & Archer, 1993) has found that women were significantly more accurate than men on four scene types – status, kinship, intimacy and deception.

In the current research, IPT-15 scores were highly significantly affected by the participant’s gender; this might signal that nonverbal skill measures (such as the IPT-15) are universal and hence more likely to follow standard gender differential patterns.

Contrary to our expectations, there was no significant effect of culture on the IPT-15 scores (Table 4). It had been anticipated that American participants would have an *in-group advantage* (Elfenbein & Ambady, 2002) in decoding nonverbal cues presented in the IPT-15 because the expressors (the actors in the video clips) are from the same cultural group as the American sample. However the absence of significant cultural differences in IPT-15 suggests that, as a skill, nonverbal sensitivity is not a function of culture. This also fits with prior research (Iizuka et al., 2002) where the nearly identical scores of Japanese and American participants on the Visual-Only condition of the IPT-15 were partly attributed to the assumption that the behavior patterns of the IPT-15 scenes transcend broad cultural differences.

This result may be explained by the fact that American media is nearly ubiquitous around the globe. Increasingly, by virtue of the internet, television and movies, most Indians and Japanese (especially English-speaking college students) are familiar with American culture. This outcome also appears to be in keeping with a series of studies (Rosenthal et al., 1979) where groups similar to American culture and whose experiences were akin to college-educated American citizens scored higher on a nonverbal skills measure (PONS; Rosenthal et al., 1979) than those from less similar cultures. Both the non-American groups were moderately fluent in English and given that the language of instruction at all three institutions is English; the linguistic advantage of American participants may have been rather minimal.

In general, while the current study yielded a number of interesting and significant findings, it also had some limitations. The samples consisted of only college students who were from specific regions of their respective countries-- all the American participants were California residents, the Indian participants were from

Himachal Pradesh and the Japanese participants were from around the island of Kyushu. In each of these three cases, the samples might not be representative of the ethnic and regional diversity of each country and so further research is necessary to determine whether the current findings can be generalized to other populations.

Future directions of research include investigating the influence of within-subject traits as well as transient individual factors like emotional states (such as happiness and sadness) on interpersonal sensitivity. As a step further, one could investigate whether and to what extent, psychological disorders (such as anxiety and depression) affect the ability to decode nonverbal cues effectively. Another direction of exploration could be to analyze cultural differences in nonverbal skill by using the IPT-15 as a purely visual, nonverbal measure (with the sound removed) to counter any perceived or actual linguistic advantage that Americans might have in decoding the nonverbal cues.

On the whole, it is evident that since nonverbal decoding ability has sizeable real-world applications, the current research has potentially wide-ranging implications. Professionals all around the world, in a multitude of settings, need to be cognizant of the fact that individual differences such as gender may hinder or help one's nonverbal decoding ability. In the field of psychology, therapists and counselors need to not only successfully interpret their patients' nonverbal cues, but also be aware of the nonverbal signals they themselves send. In the field of law enforcement--where detection of deception is a crucial job requirement—knowing that some people, more than others, will be better decoders of nonverbal cues could be valuable. Most importantly, with ever increasing globalization, the Indians and the Japanese (especially college students) are engaging in closer interaction with the world in

general and the United States in particular. A large part of that interaction involves interpersonal communication with others in varying professional arenas wherein being nonverbally sensitive is paramount to success. This research is crucial because it signals that when it comes to understanding and interpreting unspoken communication, the differences between these once divergent cultures are getting smaller.

In conclusion, the present study has provided clear evidence that, regardless of what part of the world one lives in, there exists an important yet complex relationship between interpersonal, nonverbal sensitivity and these two aspects of our identity. How people interpret everyday interpersonal and nonverbal cues as well as how they judge others' nonverbal behavior varies significantly by their gender and is notably influenced by their culture.

## References

- Ambady, N., LaPlante, D., & Johnson, E. (2001). Thin-slice judgments as a measure of interpersonal sensitivity. In J. A. Hall & F. J. Bernieri (Eds.), *Interpersonal sensitivity: Theory and measurement* (pp. 89–101). Mahwah, NJ: Erlbaum.
- Archer, D., & Costanzo, M. (1988). *The Interpersonal Perception Task (IPT)*. Berkeley: University of California Extension Media Center.
- Bernieri, F. J. (2001). Toward a taxonomy of interpersonal sensitivity. In J. A. Hall, & F. J. Bernieri (Eds.), *Interpersonal sensitivity: Theory and measurement* (pp.3–19). Mahwah, NJ: Erlbaum.
- Costanzo, M. A., & Archer, D. (1993). *The Interpersonal Perception Task-15 (IPT-15)*. Berkeley, CA: University of California Extension Media Center.
- Elfenbein, H. A. (2006). Learning in emotion judgments: Training and the cross cultural understanding of facial expressions. *Journal of Nonverbal Behavior*, 30, 21-36.
- Elfenbein, H. A., & Ambady, N. (2002). On the universality and cultural specificity of emotion recognition: A meta-analysis. *Psychological Bulletin*, 128, 203-235.
- Fischer, A. H. & Manstead, A. S. R. (2000). Gender differences in emotion across cultures. In A.H. Fischer (Ed.), *Emotion and gender: Social psychological perspectives* (pp. 91-97). London: Cambridge University Press.
- Fujita, B.N., Harper, R.G., & Wiens, A.N. (1980). Encoding-decoding of nonverbal emotional messages: Sex differences in spontaneous and enacted expressions. *Journal of Nonverbal Behavior*, 4 (3), 131-145.
- Hall, J. A. (1978). Gender effects in decoding nonverbal cues. *Psychological Bulletin*, 85, 845–857.

- Hall, J. A. (1979). Gender, gender roles, and nonverbal skills. In R. Rosenthal (Ed.), *Skill in nonverbal communication: Individual differences* (pp. 32–67). Cambridge, MA: Oelgeschlager, Gunn, Hain.
- Hall, J. A. (1984). *Nonverbal sex differences: Communication accuracy and expressive styles*. Baltimore: Johns Hopkins University Press.
- Hall, J. A. (1998). How big are nonverbal sex differences? The case of smiling and sensitivity to nonverbal cues. In D. J. Canary & K. Dindia (Eds.) *Sex differences and similarities in communication: Critical essays and empirical investigations of sex and gender in interaction*. (pp. 155 – 177). Mahwah, NJ: Erlbaum.
- Hall, J. A. (2006). Women’s and men’s nonverbal communication: Similarities, differences, stereotypes, and origins. In V. Manusov & Paterson, M.L. (Eds.) *The SAGE handbook of nonverbal communication* (pp. 201- 218). Thousand Oaks, CA: Sage.
- Hecht, M. A., & Ambady, N. (1999). Nonverbal communication and psychology: Past and future. Special issue: Interdisciplinary Connections. *NJ Journal of Communication*, 7, 156-170.
- Iizuka, Y., Patterson, M. L., & Matchen, J. C. (2002). Accuracy and confidence on the Interpersonal Perception Task: A Japanese-American comparison. *Journal of Nonverbal Behavior*, 26, 159–174.
- Knapp, M. L., & Hall, J. A. (1997). *Nonverbal communication in human interaction* (4th ed.) Fort Worth: Harcourt Brace.
- Knapp, M. L., & Hall, J. A. (2002). *Nonverbal communication in human interaction* (5th ed.). Belmont, CA: Wadsworth.

- Matsumoto, D. (2006). Culture and nonverbal behavior. In V. Manusov & Paterson, M.L. (Eds.). *The SAGE handbook of nonverbal communication* (pp. 219-236). Thousand Oaks, CA: Sage.
- Riggio, R. E. (1986). Assessment of Basic Social Skills. *Journal of Personality and Social Psychology*, *51*(3), 649-660.
- Riggio, R. E. (2006). Nonverbal skills and abilities. In V. Manusov & Paterson, M.L. (Eds.). *The SAGE handbook of nonverbal communication* (pp.79-96). Thousand Oaks, CA: Sage.
- Rosenthal, R., & DePaulo, B. M. (1979). Sex differences in accommodation in nonverbal communication. In R.Rosenthal (Ed.), *Skill in nonverbal communication: Individual differences* (pp. 68–103). Cambridge, MA: Oelgeschlager, Gunn, Hain.
- Rosenthal, R., Hall, J. A., DiMatteo, M. R., Rogers, P. L., & Archer, D. (1979). *Sensitivity to nonverbal communication: The PONS test*. Baltimore: Johns Hopkins University Press.
- Sud, P. (In Press). Cross-cultural gender differences in measured and self-reported interpersonal, nonverbal sensitivity in samples from India and the United States. *Journal of Research and Applications in Clinical Psychology*
- Sud, P. (2008). *The relationship between gender, personality and interpersonal, nonverbal sensitivity: A cross-cultural comparison*. Unpublished Ph.D. thesis. Himachal Pradesh University, Shimla.



Table 1.  
Descriptive Statistics for American Participants

Gender		Minimum	Maximum	Mean	Std. Deviation
Male	IPT-15 scores	5	11	8.14	1.46
Female	IPT-15 scores	7	13	9.12	1.50

NOTE : N (male) = 43, N (female) = 58

Table 2.  
Descriptive Statistics for Indian Participants

Gender		Minimum	Maximum	Mean	Std. Deviation
Male	IPT-15 scores	4	13	7.90	1.99
Female	IPT-15 scores	5	12	8.66	1.62

NOTE : N (male) = 50, N (female) = 53

Table 3. Descriptive Statistics for Japanese Participants

Gender		Minimum	Maximum	Mean	Std. Deviation
Male	IPT-15 scores	4	12	7.52	1.71
Female	IPT-15 scores	4	12	8.47	1.72

NOTE : N (male) = 25, N (female) = 38

Table 4.

2 X 2 Between-Subjects ANOVA for IPT-15 Scores

Source	Sum of Squares	df	Mean Square	F
gender	48.40	1	48.40	17.452***
culture	15.52	2	7.76	2.80
gender*culture	.99	2	.49	.178
Error	723.74	261	2.74	
Corrected Total	790.00	266		

NOTE : \*\*\* p < .001