

Exploring Sex Differences on the LEAS Using Modified Instructions
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Abstract

Emotional Awareness can be defined as “the ability of an individual to recognize and describe emotions in the self and others” (Ciarrochi, Caputi, & Mayer, 2003, p.134). Previous research has shown that women obtain higher scores on the most commonly used measure of Emotional Awareness, the Levels of Emotional Awareness Scale (LEAS; Lane, Quinlan, Schwartz, & Walker, 1990). The purpose of this research was to examine these sex differences.

The LEAS asks respondents to describe how they would feel in each of 20 different emotionally evocative situations. In the original instructions, respondents were simply asked to describe how they would feel. Changing the instructions to increase respondents’ motivation increases respondents’ scores (Ciarrochi, Hynes, & Crittenden, 2005). We therefore hypothesized that the sex differences might be caused by low motivation among the men, and that by changing the instructions to increase motivation we might decrease or eliminate the sex differences. A total of 794 participants (512 female, 282 male) were randomly assigned to four groups. Some received the original instructions, but most received instructions telling them they are taking a test of either intelligence, leadership, or social judgment, and that they should be as clear and accurate in their answers as possible.

To determine if instruction type influenced the sex difference, a two-way factorial ANOVA was used. There was a significant main effect for sex, with women obtaining higher average scores than men. There was also a significant main effect for instruction type, with higher scores for the Intelligence instructions. However, there was no significant interaction between sex and instruction type: thus, the different instructions did not influence the size of the sex difference. Like previous research (Ciarrochi et al., 2005), motivational instructions were unable to eliminate the sex difference on the LEAS. This suggests that these differences are not an artifact of the instructions used, and may reflect true differences in the underlying Emotional Awareness of men and women.

Introduction

Emotional Awareness can be defined as “the ability of an individual to recognize and describe emotions in the self and others” (Ciarrochi et al., 2003; p.134). The Levels of Emotional Awareness Scale (LEAS, Lane, Quinlan, Schwartz, & Walker, 1990) is an open-ended test used to measure Emotional Awareness. The test consists of 20 scenarios, and is designed to measure how well a participant recognizes the emotions of themselves and others.

Barrett, Lane, Schwartz, and Sechrest (2000) hypothesized that “women display more complex emotion knowledge than ... men when articulating their own and others’ emotional experience” (p. 1028). This paper included a total of seven different samples, which completed the entire LEAS with the exception of sample 7, which completed ten out of the twenty scenarios. Samples 1, 4, and 6 completed Verbal Intelligence tests to rule any effect of Verbal Intelligence on the LEAS scores. Barrett et al. concluded that even after differences in Verbal Intelligence were controlled, women still scored higher on the LEAS than men, and therefore more emotionally aware than men.

Another study has been conducted to examine possible reasons for the existence of sex differences. Ciarrochi, Hynes, and Crittenden (2005) hypothesized that motivation might

influence sex differences and that if men were motivated they could score as well as unmotivated women on the LEAS. In this study participants experienced two experimental conditions. In the control condition, researchers presented the participants with the original instructions. In the motivation condition, researchers changed the instructions to indicate the importance of the construct being measured, and told the participants that their scores would be compared to those of their peers. The results replicated previous findings, showing that men scored lower than women when the original instructions were used. When the motivation instructions were used, scores increased for both men and women. However, in the motivation condition, women still scored higher than men, and there was no significant decrease in sex differences. This study shows that instructions are a powerful tool that can impact how well people score on the LEAS. However, the instructions used in that study were unable to reduce or eliminate the sex difference. In our current study, we will modify the LEAS instructions in a different way, in the hopes of reducing or eliminating the sex differences.

Method

Participants

A total of 794 UNLV students (512 female, 282 male) participated in this study for course credit. Ages ranged from 18 to 65 with a mean of 20.50 and a standard deviation of 5.07. In terms of ethnicity, 60.9% identified themselves as Caucasian, 11.5% as Asian, 11.0% as Hispanic, 7.7% as African American, 8.1% as other, and less than 1% as Native American. Participants were divided into four separate instruction groups: original instructions, intelligence instructions, leadership instructions, and social judgment instructions.

Procedure

The participants completed the LEAS as a part of a larger study. Participants were administered the LEAS by a trained research assistant. Participants completed the tests in two sessions, each taking approximately an hour and a half.

Measure

The LEAS consists of a series of 20 emotionally evocative scenarios. Each scenario includes two people, the participant (self) and another person (other). The participant is presented with two questions at the end of each scenario, "How would you feel?" and "How would the other person feel?" (Lane et al., 1990, p. 127).

In this study, participants were randomly assigned to one of four groups. The four groups received different instructions on the LEAS. In the original instructions, the participant is told, "Please describe how you would feel in the following situations. The only requirement is that you use the word 'feel' in your answers. You may make your answers as brief or as long as necessary to express how you would feel. In each situation there is another person mentioned. Please indicate how you think that other person would feel as well."

In the intelligence instructions, the participant is told, "This is an intelligence test. Smart people can describe their emotions clearly and accurately. The test consists of 20 situations involving yourself and another person. For each situation, describe what you would feel and what the other person would feel. You may make your answers as brief or as long as necessary to express how you would feel, but because this is an intelligence test, you should be as clear and accurate in your description as you can."

The social judgment instructions state, "This is a test of your social judgment. People with good social judgment understand how people feel and act in different situations. The test consists of 20 situations involving yourself and another person. For each situation, describe what you would feel and what the other person would feel. You may make your answers as brief or as long as necessary to express how you would feel, but because this is a test of social judgment, you should be as clear and accurate in your description as you can."

The leadership instructions state, "This is a leadership test. Leaders are good judges of people, and can make clear and accurate predictions about how people will feel. The test consists of 20 situations involving yourself and another person. For each situation, describe what you

would feel and what the other person would feel. You may make your answers as brief or as long as necessary to express how you would feel, but because this is test of your leadership skills, you should be as clear and accurate in your description as you can.”

In this study, the LEAS was scored by Program for Open-Ended Scoring 1.2.2 (POES; Leaf & Barchard), which is a computer program designed to score open-ended measures. To score the LEAS, POES requires two separate input files. The first file is the participants’ typed responses to the LEAS scenarios and the second file is a Wordlist. This study used LEAS Wordlist 2.01 (Barchard, 2006), which was adapted from the Glossary in the LEAS hand-scoring manual (Lane, 1991). That Glossary specifies the numeric scores for specific words and phrases.

POES scores the LEAS in a similar fashion to hand-scoring. First, it scans the participants’ responses for words and phrases included in the Wordlist. These words and phrases are called Valuables, and are paired with their numeric value in the Wordlist. When found in the participants’ response, both the Valuable and its Value are recorded in the Valuables List for that item. Each item is then scored using four scoring methods: All-Sum, Highest 4, 334, and 3345. In this study, only the 334 method was used.

We selected the 334 method because it is the closest to hand-scoring. In general, the 3345 method is a bit closer to hand scoring than the 334 method. However, because the typed responses did not distinguish between “self” and “other”, we could not compare the scores obtained for self and other, and thus could not use the 3345 method. When the 3345 method cannot be used because we cannot separate self and other responses, the 334 method comes closest to hand scoring. In this method, POES scans the Valuables List for all Valuables with a Value of 3. If all of these Valuables are exactly the same, a score of 3 is given. However, if any two of these are different, a score of 4 is given, because the participant used multiple, distinct emotion words, and has therefore shown a higher level of emotional awareness. If there are no level 3 words, the item score is equal to the Value in the Valuable List.

The POES 334 scoring method does not exactly duplicate hand scoring, because it cannot replicate the subjectivity of hand scoring. “POES does not determine word meaning based upon context, does not consider synonyms, and does not decide whether an emotion is attributed to self or other” (Barchard & Leaf, 2006, p. 7). However, Barchard and Leaf (2006) showed that POES scores correlate highly with hand scores. This high correlation suggests that POES is viable alternative to hand scoring.

Results

To determine if instruction type influenced the sex difference, we conducted a two-way factorial ANOVA (see Table 1). There was a significant main affect for sex ($F(1, 785) = 19.506$, $p < .001$), with women obtaining higher scores overall than men (see Table 2), which replicates previous studies. There was also a significant main affect for the instruction type ($F(3, 785) = 2.724$, $p = .043$). When participants were told to as be clear and accurate as possible scores increased. Finally and most importantly, we did not find a significant interaction between sex and instruction type ($F(3, 785) = .409$, $p = .747$). Changing the instructions on the LEAS did not reduce the sex difference.

Table 1
Two-Way Factorial ANOVA

Source	Degrees of Freedom	Mean Square	F	Significance
Instruction type	3	171.125	2.72	.043
Sex	1	1225.53	19.51	.000
Interaction between sex and Instruction type	3	25.701	.41	.747
Error	785	62.83		

Table 2

Means and Sample Sizes of LEAS Scores by Sex and Instruction Type

Instructions	Male		Female	
	Sample Size	Mean	Sample Size	Mean
Original	78	65.27	136	68.16
Intelligence	63	67.41	122	69.61
Leadership	90	66.14	153	68.01
Social Judgment	51	64.22	100	67.85
Total	282	65.84	511	68.40

Conclusions

The purpose of our research was to examine the sex difference on the Levels of Emotional Awareness Scale (LEAS; Lane et al., 1990). We were hoping that by modifying the instructions we could reduce or eliminate the sex difference. Three new types of instructions were used. We found that these instructions increased LEAS scores for both men and women. As predicted, women scored higher on all versions of the test; suggesting that women are generally more emotionally aware than men. However, different instructions did not reduce sex differences. This suggests that these differences are not an artifact of the instructions used, and may reflect true differences in the underlying Emotional Awareness of men and women.

References

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