Understanding the Nature of Emotional Awareness: Separating Precision from Descriptiveness

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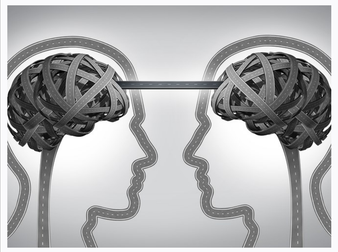
Abstract

Emotional awareness can be divided into multiple subcomponents: emotional precision, granularity, complexity, perspective taking, verbosity, and breadth. The purpose of this research was to determine if all these subcomponents measure a single construct: overall emotional awareness. As part of a larger study, 341 undergraduates completed the Levels of Emotional Awareness Scale (LEAS; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990). This test consists of 20 open-ended items, each containing an emotionally evocative scenario involving the self and another person. Respondents indicate how they and the other person would feel. Using the LEAS, we calculated these six components. We also calculated overall emotional awareness in three different ways. Two factors were extracted: Emotional Precision (loading precision and the three overall measures of emotional awareness) and Emotional Descriptiveness (loading the remaining variables). Females obtained higher scores on both factors. Future research should determine if these two factors have differential relationships with clinical disorders.



Introduction

Emotional awareness is defined as a cognitive skill that enables an individual to recognize and describe emotions in themselves and in others (Lane & Schwartz, 1987). Examination of the scoring rules (Barchard et al., 2017; Lane, Quinlan, Schwartz, Walker, Zeitlin, 1990) for the most commonly used measure of emotional awareness (the Levels of Emotional Awareness Scale; LEAS; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990) reveals that at least six constructs that contribute to emotional awareness: precision, granularity, complexity, perspective taking, verbosity, and breadth. Emotional Precision is the use of more specific emotion words rather than vague ones, for example describing oneself as being overjoyed rather than simply good (Barchard et al., 2017). Emotional granularity is the ability to distinguish between different emotions (Barchard et al., 2017). An example would be if an individual said they would feel lonely after a long time friend moved away but devastated after a huge fight with a significant other. Emotional complexity is the tendency to use multiple emotional words to describe a single emotional response (Barchard et al., 2017), for example, describing oneself as feeling both scared and guilty. Perspective taking is the ability to realize that other people may feel differently than you (Barchard et al., 2017). An example of this would be someone describing themselves as feeling happy that their sports team won, but knowing that their friend would feel sad because they support the other team. Emotional verbosity is the tendency to talk about emotions at length, when asked about them (Barchard et al., 2017). Finally, emotional breadth is the number of different ways a person can describe an emotion, for example, describing how they feel emotionally (hopeless) and physically (cold), and describing what they would think ("this will never work") and what they would do (cry). The LEAS can be used to measure all six of these subcomponents as well as overall emotional awareness.

The purpose of our research is to determine if these six subcomponents measure a single construct (overall emotional awareness) or multiple constructs. We hypothesize that these subcomponents of emotional awareness do in fact measure multiple constructs.

Method

Participants

A total of 341 (143 males, 198 females) undergraduate students completed this study in return for course credit. Participants ranged from 18-50 years (M 19.86, SD 3.32). Twenty-nine participants identified as African American, 39 identified as Asian, 199 identified as Caucasian, 42 identified as Hispanic, 19 identified as Pacific Islander, 2 identified as Native American, and 11 identified as other.

Measures

Levels of Emotional Awareness Scale. The Levels of Emotional Awareness Scale (LEAS; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990) contains 20 open-ended items. Each item is a short scenario that involves two people: the self and another person. Each item is designed to elicit one of four emotions: anger, fear, happiness, or sadness. For each item, participants described how they would feel (this is called the self response) and how the other person would feel (the other response). The test is divided into two forms: form A and form B.

Subcomponents of emotional awareness. When scoring LEAS responses, each word receives a word score that varies from 0 to 3

Cognitions (e.g., think) and non-emotion words are given a score of 0. Physical sensations (e.g., cold) are given a score of 1. Nonspecific emotion words that also have non-emotional meanings (e.g., good), personality traits (e.g., generous), and actions related to emotions (e.g., cry) are given a score of 2. Distinct emotion words (e.g., sad) are given a score of 3. In this study, emotion precision was calculated for each item as the maximum word score for all words in the self-response. Complexity was calculated for each item as the number of unique emotion words in the self-response . Perspective taking was calculated for each item as the number of unique emotion words that occurred in the other response that did not occur in the self-response. Verbosity was calculated for each item as the number of words used in both the self and other responses. Breadth is was calculated for each item as the number of different categories (e.g., physical sensations, emotion words) used to describe emotions in the self-response. Total scores for precision, complexity, perspective taking, verbosity, and breadth were calculated for Form A and Form B by summing the item scores within each form. Finally, granularity was calculated as the number of unique emotion words for the self-response across all items within each form.

Table 1
First Principal Component

Variable	Pattern Matrix Coefficient
Complexity Form B	**.91**
Complexity Form A	**.90**
Granularity Form B	**.90**
Granularity Form A	**.89**
3345 Score Form A	**.90**
3345 Score Form B	**.89**
Perspective Form A	**.83**
Perspective Form B	**.81**
Length Verbosity Form B	**.83**
Length Verbosity Form A	**.82**
334 Score Form A	**.81**
334 Score Form B	**.80**
Hand Score Form A	**.74**
Hand Score Form B	**.73**
Precision Form A	**.68**
Precision Form B	**.66**
Breadth Form A	**.35**
Breadth Form B	.26

Note. Salient pattern matrix coefficients are in boldface.

Overall Emotional Awareness. The LEAS can be scored by hand to measure overall emotional awareness. There are three steps to LEAS hand scoring (Barchard et al., 2010). In the first step, each word in a response is given a score from 0 to 3, as described above. In the second step, the self and other scores are calculated. If two different Level 3 words are attributed to the self, the self-score is 4. If not, the self-score is the maximum word score in the self-response. In the third step, the item score is calculated. If the self and other scores are both 4 and the words are different, the item score is 5. If not, the item score is the maximum value of the self and other scores. The total score is calculated as the sum of the item scores across all items within each form.

Program for Open Ended Scoring (POES; Barchard & Leaf, 2010; Barchard, Bajgar, Leaf, & Lane, 2010) can also be used to measures overall emotional awareness. POES requires two input files: the participants' typed response file and a wordlist file that describes the scores for words and phrases. POES compares the response file with the wordlist to create a valuables list, which lists the wordlist entries that appear in the response, along with their scores. This valuables list is then scored by different methods. The 334 method gives higher scores to responses that consist of several different emotion words and phrases than to responses that consist of identical words and phrases. Specifically, the 334 score is equal to the highest word -score in the valuables list, unless there are two or more level 3 entries in the valuables list, in which case the 334 score is 4. The 3345 method separates self and other responses, making it the most similar to LEAS hand scoring. Specifically, it calculates 334 scores for the self and other responses separately. The 3345 score is equal to the highest of the self and other scores, unless both of those scores are 4, in which case the 3345 score is 5. In this study, we calculated 334 and 3345 scores for Form A and Form B separately.

Procedures

The LEAS was administered as part of a larger study. Participants completed all measures over the Internet. The measures were divided into two testing sessions, which took approximately 90 minutes each.

Table 2
Factor Analysis

	Factor		
Item	1	2	h^2
Precision Form B	**.97**	-.26	.68
Precision Form A	**.84**	-.11	.60
334 Score Form B	**.92**	-.05	.78
334 Score Form A	**.86**	.02	.76
3345 Score Form B	**.78**	.19	.84
3345 Score Form A	**.70**	**.30**	.84
Hand Score Form A	**.75**	.05	.62
Hand Score Form B	**.75**	.05	.61
Length Verbosity Form A	-.03	**.95**	.87
Length Verbosity Form B	-.01	**.94**	.86
Granularity Form B	**.31**	**.69**	.85
Granularity Form A	.22	**.77**	.85
Complexity Form B	**.39**	**.62**	.85
Complexity Form A	.29	**.71**	.85
Perspective Form A	.26	**.67**	.73
Perspective Form B	.29	**.62**	.69
Breadth Form B	**-.35**	**.65**	.25
Breadth Form A	-.06	**.45**	.17
Factor Intercorrelations	1	2	
Factor 1	1.00	.65	
Factor 2	.65	1.00	

Note. h^2= communality. Salient factor pattern matrix coefficients are in boldface. Factor 1 = Emotional Precision. Factor 2 = Emotional Descriptiveness.

Results

To see if all variables are related to the same general construct, we extracted the first principal component. Emotional breadth for Form B was the only variable with a non-salient loading (see Table 1).

We conducted a principal components analysis with multiple factors. The first step was to determine the number of factors. To determine the number and nature of factors we used factors according to theory, the Scree test, the Kaiser-Guttman rule (Cliff, 1988), parallel analysis (Cota, Longman, Holden, & Rekken, 1993), and the Minimum Average Partial test (MAP test; Velicer, 1976). We theorized that there would be more than one factor. The scree test suggested two factors. The Kaiser-Guttman rule (Cliff, 1988) suggested three factors. Parallel analysis (Cota, Longman, Holden, & Rekken, 1993) suggested two factors, and the MAP (Velicer, 1976) test suggested two factors. Because the Kaiser-Guttman Rule tends to overestimate the number of factors (Cliff, 1988), we concluded that the maximum possible number of factors was three. Due to the scree test, parallel analysis, and the MAP test, we concluded that there are two factors.

To determine the optimal rotation, we examined several different rotations and selected the one that came closest to the ideal of simple structure, using the criteria of number of complex variables, hyperplanar count, and extent of correlation among the factors. We selected the Promax rotation with Kappa 3 because it had the smallest number of complex variables and a high number of hyperplanar loadings. See Table 2.

Factor 1, which we named Emotional Precision, had large positive coefficients for hand scores, 334 scores, 3345 scores, and emotion precision. This suggests that the three measures of overall emotional awareness – hand scores, 334 scores, and 3345 scores – are influenced by emotional precision more than the other subcomponents we measured Factor 2, which we labelled Emotional Descriptiveness, had positive salient coefficients for the remaining five constructs: emotional complexity, granularity, perspective taking, verbosity, and breadth. These variables measured the variety and number of emotional words in an individual's response to an emotional scenario.

Table 3
Means (and Standard Deviations) for Men and Women on Each Factor

Factor	Men	Women	t-test
1	-.26 (1.02)	.18 (.95)	$t(339) = 4.10$, $p < .001$
2	-.28 (1.03)	.20 (.93)	$t(339) = 4.53$, $p < .001$

Note. Factor 1 = Emotional Precision. Factor 2 = Emotional Descriptiveness.

We calculated factor scores using the regression method and compared men and women on these factor scores. Females obtained significantly higher scores than males on both Emotional Precision and Emotional Descriptiveness. Our results suggest that females typically are more emotionally aware than males. See Table 3.

Discussion

The purpose of our research was to determine if the six subcomponents of emotional awareness measure a single construct (overall emotional awareness) or multiple constructs. Our results show these subcomponents do in fact measure multiple factors: emotional precision, which measures the specificity of the words used to describe emotions, and Emotional Descriptiveness, which measures the number and variety of emotion words used. Females scored significantly higher on both factors. Because overall emotional awareness is related to clinical disorders (Barchard et al., 2010), future research should determine if these two factors have differential relationships with clinical disorders.

Correction to Miles et al. (2018)

In the poster and handout, "Understanding the nature of emotional awareness: Separating precision from descriptiveness" by Leeanna Miles, Sahara Gabales, Joanne Angosta, and Kimberly A. Barchard (*American Association of Behavioral and Social Sciences conference,* February 2018 Las Vegas NV), the Introduction, Measures, and References sections omitted citations regarding the six subcomponents of emotional awareness.

In the Introduction, the first paragraph should read

> Emotional awareness is defined as a cognitive skill that enables an individual to recognize and describe emotions in themselves and in others (Lane & Schwartz, 1987). Examination of the scoring rules (Barchard et al., 2017; Lane, Quinlan, Schwartz, Walker, Zeitlin, 1990) for the most commonly used measure of emotional awareness (the Levels of Emotional Awareness Scale; LEAS; Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990) reveals that several constructs contribute to emotional awareness. Six of these have been identified so far (Barchard & Picker, 2016; Barchard, Contreras, & Picker, 2017): precision, granularity, complexity, perspective taking, verbosity, and breadth. Emotional Precision is the use of more specific emotion words rather than vague ones, for example describing oneself as being overjoyed rather than simply good (Barchard & Picker, 2016; Barchard, Contreras, & Picker, 2017). Emotional granularity is the ability to distinguish between different emotions (Barchard, Picker, & Leaf, 2016; Barchard, Contreras, & Picker, 2017). An example would be if an individual said they would feel lonely after a long time friend moved away but devastated after a huge fight with a significant other. Emotional complexity is the tendency to use multiple emotional words to describe a single emotional response (Barchard, Picker, & Leaf, 2016; Barchard, Contreras, & Picker, 2017), for example, describing oneself as feeling both scared and guilty. Perspective taking is the ability to realize that other people may feel differently than you (Barchard, Picker, & Leaf, 2016; Barchard, Contreras, & Picker, 2017). An example of this would be someone describing themselves as feeling happy that their sports team won, but knowing that their friend would feel sad because they support the other team. Emotional verbosity is the tendency to talk about emotions at length, when asked about them (Barchard, Contreras, & Picker, 2017). Finally, emotional breadth is the number of different ways a person can describe an emotion, for example, describing how they feel emotionally (hopeless) and physically (cold), and describing what they would think ("this will never work") and what they would do (cry). (Note that Barchard and Picker (2017) referred to "breadth" but meant something more akin to granularity.) The LEAS can be used to measure all six of these subcomponents as well as overall emotional awareness.

Similarly, the second paragraph in the Method section should say

> **Subcomponents of emotional awareness.** When scoring LEAS responses, each word receives a word score that varies from 0 to 3. Cognitions (e.g., think) and non-emotion words are given a score of 0. Physical sensations (e.g., cold) are given a score of

1. Nonspecific emotion words that also have non-emotional meanings (e.g., good), personality traits (e.g., generous), and actions related to emotions (e.g., cry) are given a score of 2. Distinct emotion words (e.g., sad) are given a score of 3. In this study, emotion precision was calculated for each item as the maximum word score for all words in the self response (Barchard & Picker, 2016; Barchard, Contreras, & Picker, 2017). Complexity was calculated for each item as the number of unique emotion words in the self response (Barchard, Picker, & Leaf, 2016; Barchard, Contreras, & Picker, 2017). Perspective taking was calculated for each item as the number of unique emotion words that occurred in the other response that did not occur in the self response (Barchard, Picker, & Leaf, 2016; Barchard, Contreras, & Picker, 2017). Verbosity was calculated for each item as the number of words used in both the self and other responses (Barchard, Contreras, & Picker, 2017). Breadth is was calculated for each item as the number of different categories (e.g., physical sensations, emotion words) used to describe emotions in the self response. Total scores for precision, complexity, perspective taking, verbosity, and breadth were calculated for Form A and Form B by summing the item scores within each form. Finally, granularity was calculated as the number of unique emotion words for the self response across all items within each form (Barchard, Picker, & Leaf, 2016; Barchard, Contreras, & Picker, 2017).

The handout has an extensive References section. That References section should include the following:

Barchard, K. A., & Picker, C. J. (2016, Feb). *Women use more precise emotion words.* Poster presented at the American Association of Behavioral and Social Sciences, Las Vegas, NV.

Barchard, K. A., Picker, C. J., & Leaf, D. E. (2016, April). *Women use a greater number and variety of emotion words.* Poster presented at the Western Psychological Association annual convention, Long Beach, CA.