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### ABSTRACT

In the world today, communication is often instant and public. It is therefore important for individuals to be able to recognize and express their emotions. Alexithymia is a clinical condition in which individuals lack this emotional awareness. Individuals with alexithymia may therefore have difficulties with interpersonal communication. These issues may be compounded by possible sex differences in alexithymia. Studies have shown that men have higher levels of alexithymia (Levant, Hall, Williams & Hasan, 2009). Moreover, alexithymia functions differently in the brains of men and women. For men, alexithymia is associated with a certain pattern of neurotransmitter activity (Spitzera, Brandla, Roseb & Nauckb, 2005) and with deficiencies in right hemispheric function and inter-hemispheric transfer (Lumley & Sielky, 2000). These associations are not found for women (Lumley & Sielky, 2000; Spitzera et al., 2005). The purpose of this research is to determine if sex differences in alexithymia can be replicated in an online environment.

A total of 216 undergraduates (149 females, 67 males) completed this study. The Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994) is a 20-item self-report questionnaire that contains three subscales: Difficulty Identifying Feelings, Difficulty Describing Feelings, and Externally Oriented Thinking. Participants completed the TAS-20 as part of a larger online study. Men scored higher than women on all three TAS-20 subscales. However, the Externally Oriented Thinking subscale was the only one where the sex differences were statistically significant.

This study demonstrated that men are less likely than women to think about emotions in their daily activities and to use their emotions to help them solve problems. This may be a barrier to effective communication. If men are less able to examine their own emotions, this may prevent them from effectively expressing their motivations and goals. In addition, it is possible that sex differences in alexithymia correspond with difficulty in understanding and recognizing others' emotions. This may further impede communication. Future research should examine the relationship between alexithymia and successful interpersonal communication, and should determine if sex differences in alexithymia contribute to sex differences in communication skills.

### INTRODUCTION

Communication depends strongly on the ability to read and interpret different emotional expressions. It is also critically important for individuals to be able to express their own emotions. Individuals with alexithymia may lack the level of emotional awareness that is necessary for effective communication. Alexithymia literally means "without words for emotion." Alexithymia includes difficulty distinguishing between different emotions, difficulty describing feelings, and difficulty differentiating between physical and emotional sensations (Sifneos, 1972; Kooiman, Spinhoven, & Trijsburg, 2002). The most commonly used assessment of alexithymia is the 20-item Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994). The TAS-20 is a self-report questionnaire that is broken down into three Subscales: Difficulty Describing Feelings, Difficulty Identifying Feelings, and Externally Oriented Thinking.

Meta-analysis of several studies shows that men exhibit higher levels of alexithymia (Levant, Hall, Williams & Hasan, 2009). When assessed by the TAS-20, women score lower than men, especially on distinguishing between feelings and bodily sensations (Pasini, Chiaie, Seripa & Ciani, 1992). Moreover, alexithymia functions differently in the brains of men and women. Research shows that deficiencies in the right hemisphere contribute to alexithymia in men, but not in women (Lumley & Sielky, 2000). Similarly, there is a relationship between TAS-20 scores and inter-hemispheric brain transfer for men, but not for women (Lumley & Sielky, 2000), and between TAS-20 scores and neurotransmitter activities in men, but not in women (Spitzera, Brandla, Roseb & Nauckb, 2005).

Previous research on sex differences has typically used in-person paper-and-pencil versions of alexithymia. The purpose of this research is to determine if sex differences in alexithymia can be replicated in an online environment.

### METHOD

#### Participants

A total of 216 individuals (149 females, 67 males) completed this study for course credit. They ranged in age from 18 to 49 years (mean 22.62, SD 6.23). Participants identified themselves as follows: Caucasian (58.8%), Asian (15.3%), Black (10.2%), Hispanic (8.8%), Native American (0.5%), and other (6.5%).

#### Measures

*Toronto Alexithymia Scale* (TAS-20; Bagby, Parker, & Taylor, 1994) is a 20-item self-report questionnaire using a five-point Likert-type scale ranging from 1= strongly disagree to 5= strongly agree. The TAS-20 has three subscales: Difficulty Identifying Feelings (five items), Difficulties Describing Feelings (seven items), and Externally-Oriented Thinking (eight items). Difficulty Identifying Feelings is used to measure difficulty distinguishing between feelings and physical sensations. Difficulties Describing Feelings is used to measure the difficulty describing their emotions in words. Externally-Oriented Thinking is used to measure the tendency of individuals to focus their attention on external stimuli instead of internal thoughts and feelings.

## Procedures

Participants individually completed the TAS-20 as a part of a larger study. Participants were recruited online through the psychology department subject pool. The study consisted of two parts, each approximately 90 minutes.

## Data Analysis

In order to determine if there are any sex differences on the scores of the online version of the TAS-20, we used three independent samples t-tests. The grouping variable was sex and the dependent variables were the scores on the three subscales.

## RESULTS

Males scored higher on all three subscales of the TAS-20. However, the Externally Oriented Thinking subscale was the only one that had statistically significant differences (see Table 1).

**Table 1**

*Means (and Standard Deviations) for Men and Women on the Toronto Alexithymia Scale*

Subscale	Men	Women	t-test
Difficulty Identifying Feelings	2.15 (0.72)	2.11 (0.73)	t(214) = 0.429, <i>p</i> = .669
Difficulty Describing Feelings	2.47 (0.89)	2.44 (0.86)	t(214) = 0.258, <i>p</i> = .797
Externally-Oriented Thinking	2.42 (0.51)	2.26 (0.47)	t(214) = 2.285, <i>p</i> = .023

## DISCUSSION

The purpose of this study was to examine sex differences in alexithymia using the Toronto Alexithymia Scale (TAS-20) in an online environment. Previous studies have found that men score higher than women, especially on Difficulty Identifying Feelings subscale (Pasini, Chiaie, Seripa & Ciani, 1992). Using online form of the TAS-20, we found that men scored higher on all three subscales. However, Externally Oriented Thinking was the only subscale where the difference was statistically significant. This study reinforced the previous conclusion that men have higher levels of alexithymia than women.

This study demonstrated that men are less likely than women to think about emotions in their daily activities and to use their emotions to help them solve problems. This may be a barrier to effective communication. If men are unable to examine their own emotions, this may prevent them from effectively expressing their thoughts and feelings. In addition, it is possible that sex differences in alexithymia correspond to difficulty in understanding and recognizing others' emotions. This may further impede communication. Future research should examine the relationship between alexithymia and successful interpersonal communication, and should determine if sex differences in alexithymia contribute to sex differences in communication skills.

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