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Alexithymia in College-Aged Students

by

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Abstract

This epidemiological study focused on prevalence of the personality trait, alexithymia–

the inability to recognize and describe one's own emotions–among college-aged students.

Levels of normative alexithymia (measured by the NMAS), clinical alexithymia

(measured by the TAS), as well as attitudes towards help seeking behavior (measured by

the ATSPPH) were assessed. A total of 547 participants were collected from over 48

colleges and universities, primarily in Western New York. Results indicated that 89.5%

of college students displayed moderate to high levels of normative alexithymia and

48.7% displayed moderate to high levels of clinical alexithymia. Additionally, there were

no significant differences between the scores of men and women on either alexithymia

measure. Significant findings indicated that there was a positive relationship between

clinical alexithymia scores and attitudes toward help-seeking. These results call into

question previous literature, which states that there is no correlation between alexithymia

and help-seeking behavior (Berger et al., 2005). The results of this study show a shift in

culture as well as a need for more research regarding and focus on alexithymia.

Alexithymia in College-Aged Students

Mental disorders in the United States are not a rare occurrence. In 2013, the National Institute of Mental Health estimated that 26.2% of Americans 18 years or older had a diagnosable mental disorder and about 6% suffered from a serious mental illness. While this 26.2% may seem high, the number of Americans who actually receive treatment for their mental disorder is only about half, which is extremely low (SAMHSA, 2015). Health insurance not covering the cost of treatment and perceived stigma both contribute largely to help-seeking behavior (Vogel, Wester, & Larson, 2007), but what if the reason for not seeking help is not that simple? What if these people simply are not able to explain or understand what they are feeling?

Alexithymia

When Peter Sifneos was working with patients with psychosomatic diseases, he observed that some of them mentioned having symptoms of anxiety or depression. When he specifically asked them to describe the symptoms, however, they could not explain what they were feeling. They spoke of the physical sensations they felt but not the actual emotions. For example, anxiety was described as nervousness, agitation, restlessness, irritability and tension. Depression, on the other hand, was described as guilt and insomnia. They also expressed having a void and feelings of emptiness, boredom, and pain. Behaviorally, all of the patients tended to have poor relationships with others and a history of unhealthy family connections. Consequently, he described their personalities as *primitive* because they were isolated with no sensitivity to emotions and were easily frustrated (Sifneos, 1967).

In 1973, after observing more patients with the same symptoms, Sifneos officially coined the term *alexithymia*. This personality trait is defined as having trouble identifying emotions, not being able to distinguish between emotions and bodily sensations, and difficulty describing one's emotions to others. The personality trait is present in both non-clinical and clinical samples of individuals (Levant et al., 2006). Translated from Greek origins, alexithymia literally means "without words for emotions" (Levant, Allen, & Lien, 2014, p. 324).

Alexithymia is associated with impaired verbal and nonverbal recognition of emotions. When comparing groups with high levels of alexithymia versus low levels, researchers found that the higher level group had lower verbal intelligence scores and were less accurate in their recognition of emotions. This is particularly true for the emotions of anger and fear, which had the lowest accuracy scores (Montebarocci, Surcinelli, Rozzi, & Baldaro, 2011).

It is important to note that while alexithymia is associated with this diminished recognition of emotions, individuals with alexithymia do have and feel emotions; they just cannot describe or understand them. Patients working with Sifneos who identified as having alexithymia displayed emotions, but upon questioning them, they seemed to have little information about their own feelings and were unable to link their emotions with memories (Taylor, Bagby, & Parker, 1997).

The Toronto Alexithymia Scale (TAS) is given to measure alexithymia at a significant or clinical level. It measures one's ability to identify and distinguish between feelings and bodily sensations, difficulty describing feelings, and externally-oriented thinking (Montebarocci et al., 2011). It is important to use this scale to assess more

extreme levels of alexithymia because clinical alexithymia in men is linked with

substance abuse and a greater risk for mental disorders (Levant et al., 2006).

Not surprisingly, alexithymia has been shown to be more common among men

than women (Levant, Hall, Williams, and Hasan, 2009). As part of the Fatherhood

project, where his mission was to help men become more comfortable with identifying

and expressing their emotions to become better fathers, Levant observed alexithymia in

nonclinical male participants (Gresko, 2015; Levant et al., 2014). After observation, he

offered the *normative male alexithymia hypothesis* to explain the restricted identification

and recognition of emotions that is influenced by traditional male ideology (Levant et al.,

2014). Specifically, he indicated that all young men are taught not to express their

emotions, but the severity of such lessons results in a range of levels associated with this

condition. From mild to traumatic alexithymia, each level is associated with how young

boys are taught to treat their emotions. Mild alexithymia occurs when boys are taught that

emotion makes them vulnerable and is, therefore, not appropriate. They are simply

instructed that emotions should not be expressed, but there is no punishment at this level.

The next level, severe alexithymia, is when boys are taught not to be emotional and are

punished when they are. The last level is traumatic alexithymia where boys are severely

and/or repeatedly punished for showing emotion and are therefore taught not to express

emotion. Punishment at this level is different from the severe level because it is much

harsher and more frequently occurring (Levant et al., 2014).

Levels of normative alexithymia can be measured through the Normative Male

Alexithymia Scale (NMAS). While the NMAS was designed to measure male

alexithymia, the scale is generally used today to measure milder forms of alexithymia.

This can be seen in previous research as well as the NMAS's similarity to the TAS' questions (Levant et al., 2006).

Alexithymia may be a reason that individuals, especially men, do not seek treatment (Levant et al., 2009). There is little research stating that there is a direct correlation between this personality trait and men's help-seeking behavior, but because therapy primarily focuses on the exploration of emotions, men who have this trait may have a more difficult time engaging in therapeutic tasks. This may lead them to perceive treatment as being less helpful and develop negative attitudes toward it (Cusack, Deane, Wilson, & Ciarrochi, 2006). In contrast, Berger, Levant, McMillan, Kelleher, and Sellers (2005) claim that there is no correlation between alexithymia and men's help-seeking behavior. These researchers state that gender role conflict and traditional masculine ideology play a more significant role in negative attitudes towards help-seeking. Consequently, additional research is needed to determine whether help-seeking behavior is impacted by characteristics of alexithymia.

Furthermore, with the exception of a few examples, concrete, empirically-based techniques to help people who have alexithymia are lacking. There is very little research on how therapists can help their clients who show signs of this trait. However, an effective technique found to help individuals cope with this trait is psychotherapy. For example, to help his patients overcome alexithymia, Levant (1992) helped them expand their vocabulary with regard to vulnerable emotions that they had been taught to suppress. More recent research suggests that helping individuals with alexithymia construct words to describe difficult situations, understand feelings of the situation, and then, learn how to respond emotionally have been effective in improving their ability to

deal with problems (Vanheule, Verhaeghe, & Desmet, 2011). In turn, this may result in more effective treatment of related mental illnesses or other difficulties since the clients will be able to more effectively talk about and describe what they are feeling.

Gender and Emotions

Because the normative male alexithymia hypothesis is focused on the socialization process that all men go through involving their emotions (Levant et al., 2006), it is not surprising that alexithymia is more commonly detected in men (Levant et al., 2009). Researchers believe that men have a more difficult time communicating their feelings than women. It is debated, however, whether men and women differ in their ability to identify feelings, a common indication of alexithymia. Perusse, Boucher, and Mylene (2012) report no difference while Levant, Hall, Williams, and Hasan (2009) indicate that men have a much more difficult time identifying feelings than women.

Identification of feelings is likely to be impacted by the emotional socialization of young boys by their parents and peers (Feder, Levant, & Dean, 2010; Levant et al., 2006) and is sometimes referred to as the *boy code:* the rules and expectations for boys that come about due to gender stereotypes (Pollack, 1998). These spoken or unspoken rules seem to be heavily influenced by paternal figures. Fathers teach their children about sex-roles much more than mothers do, and they start these lessons at early ages. For example, when engaging in gender-stereotyped play, boys receive much more approval from their fathers than from their mothers. When playing with feminine toys, the young boys' mothers do not mind while their fathers and peers show disapproval (Langlois & Downs, 1980). Boys block themselves from feeling vulnerable emotions because they are made to feel ashamed for having these emotions by their parents and peers (Feder et al., 2010).

Consequently, boys learn to be less expressive and more controlling of emotions as they develop. By the ages of four to six years, young boys learn to hide their responses to emotion (Buck, 1977).

Given the emotional development of most boys, it is not surprising that men often find it difficult to find words to describe their emotions. Instead, men tend to try to logically think about what they are feeling. They view vulnerable emotions (i.e., sadness or fear) as meant only for women and, therefore, translate these emotions into aggression (Levant et al., 2006), which is encouraged. Thus, aggression can become boys' only outlet for expressing their emotions (Feder et al., 2010).

Help-Seeking Behavior

Research has shown that the contrast between the roles and responsibilities of men and women, as well as their biological differences, contribute to the variances in mental health problems they suffer from and whether they actively seek help or not. Specifically, men are more likely than women to seek care at a later point after the onset of their symptoms. They might even delay until the symptoms become extremely severe (World Health Organization, 2002).

Traditional ideas of the man's role in society, concern over expressing affection toward other men, and concern about expressing emotions in general are all reasons why men have more negative attitudes about seeking professional psychological help (Good, Dell, & Mintz, 1989). Age also seems to play a role in attitudes toward help-seeking behavior. The older men are, the more positive attitudes they have towards seeking professional psychological help (Berger et al., 2005). The need for success, power, and

competition, however, are not factors as to why men do not seek help. Specifically, Good et al. (1989) found no correlation between these factors and help-seeking behaviors.

Researchers suggest that men might be more likely to seek psychological help if it is more thinking-focused than feeling-focused (Berger et al., 2005). Because men associate feelings with being feminine, using cognitive-oriented, rather than emotion-oriented, counseling techniques could cause men to be more open and have positive attitudes towards therapy (Wisch, Mahalik, Hayes, & Nutt, 1995). Additionally, cognitive approaches focus more on problem solving skills than other approaches, and this is preferable to men, especially those who have high gender role conflict (Wisch et al., 1995).

Besides gender, there are other factors that play a role in attitudes toward help-seeking behavior. Depending on a person's diagnosis, there are different reported rates of treatment use. According to the National Institute of Mental Health (NIMH, 2015), 56.4% of individuals diagnosed with a mood disorder (i.e., depressive and bipolar disorders) are receiving treatment. For anxiety disorders, the numbers are even less with only 42.2% receiving treatment. Thirty-nine percent of individuals with a personality disorder are receiving treatment, but these rates vary based upon the type of personality disorder. For example, 42.4% of individuals with borderline personality disorder are seeking treatment. For post-traumatic stress disorder, 57.4% of individuals diagnosed with this disorder seek treatment. Lastly, 33.8% individuals with anorexia nervosa, 43.6% of individuals with binge eating disorder, and 43.2% of individuals with bulimia nervosa are seeking treatment. Obsessive-compulsive disorder, dissociative disorder, attention

deficit hyperactivity disorder, and autism spectrum disorder treatment rates are not reported (NIMH, 2015).

Among college students specifically, only 40.4% of individuals seek treatment (NIMH, 2008). Students report that lack of time, privacy concerns, lack of emotional openness, and financial constraints are all barriers to seeking treatment (Hunt & Eisenberg, 2010). Stigma has also been reported as a key factor in why students may have more negative attitudes toward seeking help (Eisenberg, Downs, Goberstein, & Zivin, 2009).

Present Study

Because alexithymia may be a reason for negative attitudes towards help-seeking, it is important to provide more research on alexithymia. Doing so may help improve treatment for individuals who are seeking counseling and also have this trait. Additionally, it may help us understand whether people with this trait may be more or less likely to seek counseling. The first necessary step, which was addressed in this study, was to determine the prevalence of alexithymia in college-aged students and the relationship between alexithymia and attitudes towards help-seeking. Only one previous study using a United States population and the TAS reported prevalence rates of clinical alexithymia (13.4% high alexithymia and 18.4% moderate alexithymia; Lane et al.,1996). While there is a plethora of research that states that normative alexithymia is more common in men, there have not been any exact prevalence rates reported (Levant et al., 2006). However, in this study, it was hypothesized that alexithymia, at both the normative and clinical levels, would be prevalent among college students. Additionally, when comparing genders, it was hypothesized that there would be a larger number of

men than women at both levels, which is based on previous research findings, as well as the nature of the trait.

The relationship between alexithymia and help-seeking behavior was varied in the literature; so, further assessment was warranted. The current study assessed attitudes, not behaviors, but attitudes are an indication of whether or not an individual will perform that behavior (Fazio & Williams, 1986). The researchers predicted that a higher alexithymia score would result in negative attitudes towards help-seeking since therapy is generally focused on emotions and people with higher levels of this trait have a difficulty identifying and describing their emotions. Once this datum is obtained, researchers and clinicians can begin to focus on how best to treat individuals who seek counseling and also have the personality trait, alexithymia.

Method

Participants

Data were collected for the present study from 619 college-aged students. The total sample size was reduced to 547 due to exclusion of participants who: quit the survey in the middle of completing demographics, completed the survey twice (their first set of responses or most complete set of responses were kept), were not between the ages of 18-24 years old, did not identify as men or women, or only completed half of the Normative Male Alexithymia Scale (NMAS) and did not complete any of the other two scales. The 547 participants (ages 18-24, M= 19.77, SD= 1.544) were from colleges and universities in the United States, most located in the Western New York region. Of those colleges, 42.9% of participants were currently enrolled at Alfred University and based on the Carnegie Classification system (2015), the majority of students were enrolled in medium

program master's colleges and universities (47.1%) (see Table 1). Out of the total sample,

171 participants identified as men and 376 as women. Seventy nine and a half percent

identified as white, 7.3% as black or African American, 6% as Hispanic or Latino, 3.7%

as Asian/ Pacific Islander, 2% as bi-racial, 1.1% as Native American, and .4% as other.

Class year of participants was indicated as follows: 32.3% were in their first year, 20.7%

in their second year, 24.8% in their third year, 17.8% in their fourth year, 2.0% in their

fifth+ year of undergraduate coursework, and 2.4% were graduate students. Using the

New York State Department of Education college major classification system (2010),

psychology was the most popular major (30.2%) among our sample; 11.5% of students

reported a double major (see Table 2). Seven and a half percent of students reported

being diagnosed with a mental illness in the last 12 months and 24.2% reported being

diagnosed in their lifetime for a total of 31.7% answering yes to having a diagnosis.

Participants also answered *no* (66.6%) or *unsure* (1.7%) to the question regarding

diagnosis. The highest prevalence rates were for a diagnosis was an anxiety disorder

(22.9%) or depression (18.5%) (see Table 3). Participants who endorsed other reported

Mood Disorder not-otherwise-specified, oppositional defiant disorder, self-harm,

trichotillomania, and Turrets syndrome.

Participants were recruited through a variety of methods. Beginning in April,

2016, there were sign-up sheets available for Introduction to Psychology students

(20.9%) and an e-mail was sent through Alfred University Residence Life to all of the

students living on campus requesting participation (18.6%). Additionally, nearby schools

(i.e., Elmira College (11.5%), Houghton College (2.9%), Niagara University (19.8%),

Syracuse University (2.3%), and University of Rochester (2.7%)) were asked to send the

survey to their students. The survey link was also shared on social media (i.e., Twitter

and Facebook; 15%) as well as posted on the Psi Chi National Honor Society website

(1.5%) and on a national Social Psychology database (.4%). The remaining 6.8% of

participants heard about this study from various sources, such as friends, teachers, or

directly form the researcher.

Measures

      Toronto Alexithymia Scale (TAS). The TAS (Bagby et al., 1994; see Appendix

A) is a 20-item inventory used to assess clinical alexithymia by measuring 3 factors:

difficulty identifying feelings, difficulty describing feelings, and externally-oriented

thinking. It uses a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly

agree*) and scoring for 5 of the questions is reversed. This results in a total score and is

interpreted as follows: higher scores indicate higher levels of alexithymia and lower

scores indicate lower levels of alexithymia. Scoring at or above 61 means the participant

has high alexithymia (i.e., *alexithymia*), and a score at or below 51 means low

alexithymia (i.e., *nonalexithymia*). The TAS has good consistency and reliability

($\propto= .86, r = .77$; Bagby, Ayearst, Morariu, Watters, & Taylor, 2013).

      Normative Male Alexithymia Scale (NMAS). The NMAS (Levant et al., 2006;

see Appendix B) is a 14-item self-report measure that uses a 7-point Likert scale to assess

normative male alexithymia, also known as a milder form of alexithymia. The scale

ranges from 1 (*strongly disagree)* to 7 (*strongly agree)*. It was initially developed for

assessing men, but was also also be used on women in this study for comparison. The

NMAS has been used on women several times in the past (Levant et al., 2006). To obtain

the total score, seven items must be reversed. The sum of the responses is then divided by

20 for the mean item score, or total score. Higher scores on the NMAS indicate higher levels of normative male alexithymia and lower scores indicate lower levels of normative male alexithymia. The NMAS has shown good internal consistency ($\propto = .92$) and good test-restest reliability ($r = .91$; Levant et al., 2006).

Attitudes Toward Seeking Professional Psychological Help (ATSPPH). The ATSPPH (Fischer & Turner, 1970; see Appendix C) is a 29 item self-report measure in a Likert scale format that is used to assess help-seeking attitudes. The 4 point Likert scale ranges from 0 (*disagreement*) to 3 (*agreement*). High scores indicate positive attitudes toward seeking help and low scores indicate negative attitudes toward seeking help. The ATSPPH has good internal consistency ($\propto = .82 - .84$) as well as good test-retest reliability ($r = .80$; Elhai, Schweinle, & Anderson, 2008).

Procedure

This study was approved by the Alfred University Human Subjects Review Board and was funded through Psi Chi. Data were collected online using Survey Monkey from April 2016 to December 2016. Upon opening the study link, the study was described and then participating college students indicated if they consented to participate or not (see Appendix D). They were informed that if they chose to leave at any time, they would still receive compensation. After consenting to participate, college-age students answered basic demographic questions and were asked if they had ever been diagnosed with a mental illness (see Appendix E). Specification of particular diagnoses was asked if the respondents reported the presence of a mental illness. Participants were then asked to complete three self-report measures. The NMAS was given first, then the TAS, and lastly, the ATSPPH. Surveys were always given in the same order. After completion of

all three surveys, a debriefing statement was presented and listed the purpose of the

study, where someone could go to seek help, and how to contact the researcher if there

were any questions or concerns (see Appendix F).

Upon completing the survey, participants were asked if they would like to receive

a $1.00 gift card to Amazon as compensation for completing the survey. Psychology

students from particular institutions were offered either class credit or the gift card.

Regardless of whether they received class credit or the gift card, all participants were also

asked if they wanted to be entered in a contest that awarded a $5.00 Amazon gift card.

Results

One of the purposes of this study was to find the prevalence of both normative

and clinical alexithymia in college-aged students. As predicted, results indicated that

alexithymia is prevalent among college-age students; 27.2% of the participants in this

study had high alexithymia and 21.5% had moderate alexithymia, as measured by the

TAS. Additionally, 20.2% had high levels of normative alexithymia and 69.3% had

moderate levels of normative alexithymia, as measured by the NMAS (see Table 4).

Assessment of both alexithymia measures and their relationships to gender

yielded similar results. It was hypothesized that men would have higher rates of both

types of alexithymia than women. Using cross tabulation, I found that 27.8% of men and

26.8% of women scored in the high alexithymia category; 24.9% of men and 20.0% of

women were in the moderate alexithymia category. Likewise, 18.1% of men and 21.2%

of women fell in the high normative alexithymia group. Moderate levels of normative

alexithymia were more prevalent than any other category, but with little gender variation

(73.5% men; 67.4% women). A chi-square test showed that neither normative

alexithymia ($\chi^2(2) = 2.135$, $p=.344$) nor clinical alexithymia ($\chi^2(2) = 2.063$, $p=.356$) showed a significant gender difference. Together, these results contrast the hypothesis and previous research, which states that alexithymia is most prevalent among men (see Table 5).

The last hypothesis focused on the relationship between alexithymia scores and attitudes toward help-seeking behavior. It was hypothesized that the higher the scores on the TAS and NMAS, the more negative the attitudes toward help-seeking behavior would be. Higher NMAS total scores were not significantly associated with negative attitudes towards help seeking ($\beta = -.296$, $p=.227$), while higher TAS scores significantly indicated more positive attitudes towards help seeking ($\beta= .424$, $p=.000$).

Additional analyses using a multiple regression were done with mental health diagnoses to see if there were any significant connections between the diagnoses and attitudes towards help-seeking (see Table 6). The only diagnosis that reached statistical significance was a depression ($\beta=-.160$, $p<.05$), which was significantly associated with negative attitudes.

Discussion

The current study measured the prevalence of both clinical and normative alexithymia among college-aged students. Results from the present analyses show that the highest prevalence rates are in the low clinical alexithymia and the moderate normative alexithymia categories. This means that many college students do have difficulty, though usually at a mild level, identifying and describing their emotions. These results were expected even though previous literature had reported differently. Prevalence rates were much higher than previously reported rates for clinical alexithymia. A

previous study using the TAS reported 13.4% of the population had high alexithymia and 18.4% had moderate alexithymia (Lane et al.,1996). This study reports rates of 27.2% for high alexithymia and 21.5% moderate alexithymia. While previous research does not provide prevalence rates for normative alexithymia, rates were highest for the moderate normative alexithymia level (69.3%). One possible explanation for this could be due to the fact that people do not verbally communicate as much as they used to anymore. With the introduction of technology and texting, students most often communicate with others through use of their phones. In fact, technology-based communication is dominant among millennials (Botterill, Bredin, & Dun, 2015). As a result, there appears to be a cultural shift where discussion about sensitive topics, such as our emotions, occurs through technology rather than in face-to-face conversations (Dolev-Choen & Barak, 2013; Green et al., 2005).

In addition to looking at overall prevalence in college students, the current study aimed to also look at prevalence based on gender. The analyses showed that there were no significant differences between the scores on both the clinical and normative tests for men and women. This leads the researchers to question the hypothesis created in the 1970s stating that alexithymia is more common in men than women, and may even be normative in men (Levant et al., 2009). Social norms and roles have changed since the 1970s, and we are breaking what has been known for so long as *normal* gender roles. In the 1970s, roles were just beginning to change though there was growing support for gender equality and a less restrictive view of gender roles. Men were still expected to be dominant, attend college, and make money for their families, while it was the woman's job to care for the children and the home (i.e., cook and clean before their husband came

home) (Brooks & Bolzendahl, 2004). Today, however, women are embarking on more professional roles than in the past and joining men in the workforce at relatively similar rates (United States Census Bureau, 2015). In fact, it is now the norm for women to get a job and contribute to the family's finances which can be seen by the increase in their rate of participation in the workforce (Anonymous, 2017). As women are becoming more professional, they are also being taught to be less emotional. Women are told to *act like men do*, meaning that they need to be stoic and unemotional with things involving their work (Wajcam, 2013). In a way, women are being socialized in the same way that men are, but it is unclear at what age this is happening, whether it is when they are young or in high school and college. Young boys are often instructed by caregivers early in childhood to hide their vulnerable emotions (Feder et al., 2010; Levant et al., 2006), and it appears as though women are given the same messages later in life. If they want to be taken seriously, they are told to not cry or express any sad emotions. With women and men both taking on the professional role, women are also being taught to hide their vulnerable emotions (Perrone et al., 2009).

The current study also sought to look at the connection between alexithymia and attitudes toward help-seeking behavior. Results indicated that higher scores on the Normative Male Alexithymia Scale were associated with more negative attitudes towards seeking professional psychological help. This finding was not statistically significant, which supports Berger et al.'s (2005) claim that there is no connection between alexithymia and help-seeking behavior. This finding proposes that individuals who have a milder form of alexithymia (i.e., less difficulty in identifying and describing their own emotions) have more negative attitudes towards seeking help. The opposite was found

with the Toronto Alexithymia Scale scores; higher levels of clinical alexithymia were associated with more positive attitudes towards seeking professional psychological help, which supports Levant et al.'s claim (2009). This finding was significant and leads us to believe that people with this trait may not be able to communicate their emotions well, but they understand that this is a difficulty that can be fixed through counseling. It is possible that individuals with characteristics of alexithymia are aware that something is wrong and although they cannot describe it, they recognize that seeking a therapist's support could be helpful.

Overall, the present findings do not reveal whether there is a direct relationship between alexithymia and attitudes toward help-seeking. It is possible that there may be other factors not measured in this study that have contributed to these results. For example, students on most college campuses have access to free mental health care, which may give them more positive attitudes towards seeking help. While stigma is still evident on a college campus, slowly decreasing rates of stigma may also play a role in students' attitudes towards seeking help. Previous research has found that if there is less judgment and disgrace surrounding seeking help, especially within people's own perceptions, individuals would develop more positive attitudes towards it (Eisenberg, Downs, Golberstein, Zivin, 2009). Also, about 32% of the students in the current sample were psychology majors, which may also play a role in positive attitudes, due to the increase increased knowledge of mental health services. Additionally, because attitudes do not necessarily mean that they will seek help, it is unclear whether individuals with higher levels of clinical and normative alexithymia will actually seek help if they need it.

While the current findings cannot answer that question, further research including these variables may be able to.

Additional analyses were done to look into the association between college students' diagnosis of mental illness and help-seeking attitudes. The present study found that individuals who have been diagnosed with depression have more negative attitudes towards seeking help. This is supported by previous research, which states that participants diagnosed with depression are not likely to seek help, due to concerns about disclosing their feelings to informal sources as well as professionals (Barney, Griffiths, Christensen, & Jorm, 2009). This may also contribute to why only a little over 50% of people with a mood disorders seek treatment (NIMH, 2015). There were no other significant results for associations between diagnoses and attitudes towards help-seeking.

One limitation to this study is that the measures were provided in an online survey format. Students could have accidentally taken the survey twice, not knowing that it was the same survey. Another limitation was that students who were above age 25 were not used in the analyses. College campuses include students of this age as well; so, to get a more accurate sample, these participants would need to be included. The researchers decided to exclude these participants from the analyses because they did not have their exact ages; they were categorized as *25 or older;* so, the data for this age group would have been less precise. Additionally, the survey was mostly comprised of students at colleges and universities in Western New York. A better representation of students in the United States would need to include more schools in other states and regions. Lastly, the diagnosis question could have been misinterpreted. Although participants were asked to only endorse the diagnoses that had been made by a mental health professional, some

participants may have endorsed diagnoses that they thought they had or that had been self-diagnosed.

Future research could look into the connection between alexithymia and help-seeking behavior, not just attitudes. Someone may have positive attitudes toward seeking help but may not necessarily seek help. The current study was limited to only attitudes; so, an accurate representation of college students' help-seeking behavior was not depicted. This distinction is important for answering the question of whether individuals with alexithymia are more or less likely to seek help. Alexithymia and gender roles could also be studied to see if there is as strong a correlation as previous research states (Fischer & Good, 1997). Since the current research shows no significant connection between gender and alexithymia rates, looking at alexithymia and gender roles may show whether or not gender roles are changing, as is hypothesized. The association between technology and alexithymia should also be researched. The platform people feel most comfortable talking about their feelings on could lead to results that show whether individuals are primarily using their smartphones or other technology to communicate about their emotions rather than face-to-face. This would likely be related to symptoms of alexithymia. Lastly, different age groups and alexithymia should be considered. Would the same results be found in younger teenagers or children? By looking at this, research may be able to pinpoint whether, and if so, when there is a shift in women and their emotional expression. Since the current results show that there is not a significant gender difference in levels of alexithymia, but previous research says that only boys are socialized to hide their vulnerable emotions, it is important to find when women are being taught this (Feder et al., 2010).

Overall, there needs to be more research done on alexithymia, especially since it has been shown to be prevalent in college-aged students. Students need to learn how to identify and communicate their emotions especially since hiding vulnerable emotions can lead to negative effects (Feder et al., 2010).

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Table 1

Carnegie Classification of Colleges and Universities Attended by Participants

Classification	*n*	%
Associate's Colleges: High Transfer – High Nontraditional	3	.5
Associate's Colleges: High Transfer – Mixed Traditional/Nontraditional	1	.2
Baccalaureate Colleges: Arts & Sciences Focus	95	17.4
Baccalaureate Colleges: Diverse Fields	1	.2
Baccalaureate/Associate's Colleges: Mixed Baccalaureate/Associate's	11	2
Special Focus Four-Year: Engineering Schools	2	.4
Master's Colleges & Universities: Small Programs	2	.4
Master's Colleges & Universities: Medium Programs	257	47.1
Master's Colleges & Universities: Larger Programs	110	20.1
Doctoral Universities: Moderate Research Activity	7	1.3
Doctoral Universities: Higher Research Activity	4	.7
Doctoral Universities: Highest Research Activity	47	8.6
International College or University	5	.9
Other	1	.2

Table 2

Academic Majors of Participants Based on the NYS Education Department Classification

Major	n	%
Undeclared	28	5.2
English	9	1.7
Fine Arts	4	.7
Foreign Language	4	.7
Philosophy	1	.2
Natural Sciences	60	11.2
Mathematics	3	.6
Computer Science	4	.7
Social Sciences	27	5.0
Psychology	162	30.2
Criminal Justice	16	3.0
Communications	8	1.5
Business	30	5.6
Computer Applications	1	.2
Education and Teaching Methods	13	2.4
Music	2	.4
Performing and Related Art	6	1.1
Specialized Professional Courses	77	14.4
Engineering	54	10.1

Studio Art	21	3.9
Technology and Technical Fields	1	.2
Television and Radio Production	1	.2
Office Technologies and Practice	1	.2
Liberal Arts and Sciences	3	.6

Table 3

Prevalence of Mental Illness Diagnosis Among Sample

Diagnosis	*n*	%
ADHD	40	7.3
Anxiety Disorder	125	22.9
Autism Spectrum Disorder	6	1.1
Bipolar Disorder	8	1.5
Borderline Personality Disorder	5	.9
Depression	101	18.5
Dissociative Disorder	2	.4
Eating Disorder	19	3.5
Obsessive Compulsive Disorder	10	1.8
Post-Traumatic Stress Disorder	15	2.7
Schizophrenia	0	0
Prefer not to Disclose	1	.2
Other Disorder	5	.9

Table 4

Prevalence of Alexithymia in College-Aged Students

Level of alexithymia	Clinical N = 534		Normative N = 534	
	n	%	*n*	%
Low	274	51.3	56	10.5
Moderate	115	21.5	370	69.3
High	145	27.2	108	20.2

Note. Clinical = Toronto Alexithymia Scale; Normative = Normative Alexithymia Scale

Table 5

Prevalence of Alexithymia in College-Aged Students across Genders

	Clinical						Normative					
	Low		Moderate		High		Low		Moderate		High	
Gender	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Men	80	43.7	42	24.9	47	27.8	14	8.4	122	73.5	30	18.1
Women	194	53.2	73	20	98	26.8	42	11.4	248	67.4	78	21.2

Note. Clinical = Toronto Alexithymia Scale; Normative = Normative Alexithymia Scale

Table 6

Multiple Regression Analyses Connecting Diagnoses with Attitudes Towards Help-

Seeking Behavior

	β	*p*
Mental Illness Diagnosis	.046	.649
ADHD	-.009	.871
Anxiety Disorder	-.058	.501
Autism Spectrum Disorder	.063	.257
Bipolar Disorder	-.031	.535
Borderline Personality Disorder	.084	.074
Depression	-.160	.021
Dissociative Disorder	-.014	.777
Eating Disorder	-.009	.852
Obsessive Compulsive Disorder	-.048	.350
Post-Traumatic Stress Disorder	.042	.414
Prefer Not to Disclose	-.045	.394
Other Disorder	.015	.752

Appendix A

Toronto Alexithymia Scale (TAS-20)

Using the scale provided as a guide, indicate how much you agree or disagree with each of the following statements by circling the corresponding number. Give only one answer for each statement.

Circle 1 if you STRONGLY DISAGREE
Circle 2 if you MODERATELY DISAGREE
Circle 3 if you NEITHER DISAGREE NOR AGREE
Circle 4 if you MODERATELY AGREE
Circle 5 if you STRONGLY AGREE

1. I am often confused about what emotion I am feeling.

2. It is difficult for me to find the right 1 words for my feelings.

3. I have physical sensations that even doctors don't understand.

4. I am able to describe my feelings easily.

5. I prefer to analyze problems rather than just describe them.

6. When I am upset, I don't know if I am sad, frightened, or angry.

7. I am often puzzled by sensations in my body.

8. I prefer to just let things happen rather than to understand why they turned out

   that way.

9. I have feelings that I can't quite identify.

10. Being in touch with emotions is essential.

11. I find it hard to describe how I feel about people.

12. People tell me to describe my feelings more.

13. I don't know what's going on inside me.

14. I often don't know why I am angry.

15. I prefer talking to people about their daily activities rather than their feelings.

16. I prefer to watch "light" entertainment shows rather than psychological dramas

17. It is difficult for me to reveal my innermost feelings, even to close friends.

18. I can feel close to someone, even in moments of silence.

19. I find examination of my feelings useful in solving personal problems.

20. Looking for hidden meanings in movies or plays distracts from their enjoyment.

Appendix B

Normative Male Alexithymia Scale (NMAS) – 20 Item Version

DIRECTIONS: Please use the scale below to indicate the extent to which you personally agree or disagree with each statement. There are no right or wrong responses.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral or Undecided	Slightly Agree	Agree	Strongly Agree

1. If I am upset or worried I don't like to show it for fear that I will be seen as weak.
       1   2   3   4   5   6   7

2. I feel comfortable expressing my affection to family members and friends.
       1   2   3   4   5   6   7

3. It does not usually occur to me to deal with my stress by talking about what is bothering me.
       1   2   3   4   5   6   7

4. I find it is very hard to cry.
       1   2   3   4   5   6   7

5. When asked, I can easily give an account of what I am feeling.
       1   2   3   4   5   6   7

6. I have no trouble putting my feelings into words and discussing them with others.
       1   2   3   4   5   6   7

7. When someone close to me hurts my feelings, I am able to tell them that I am hurt.
       1   2   3   4   5   6   7

8. I enjoy discussing my innermost feelings with my romantic partner, spouse, or best friend.
       1   2   3   4   5   6   7

9. It is difficult for me to reveal my innermost feelings, even to close friends.
       1   2   3   4   5   6   7

10. If someone asks how I am feeling, I typically say what I am <u>not</u> feeling (e.g., "not too bad").
        1   2   3   4   5   6   7

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral or Undecided	Slightly Agree	Agree	Strongly Agree

11. I don't see much value in talking about feelings.
    1   2   3   4   5   6   7

12. I have difficulty telling others that I care about them.
    1   2   3   4   5   6   7

13. I have difficulty expressing my emotional needs to my romantic partner, spouse, or best friend.
    1   2   3   4   5   6   7

14. I have difficulty expressing my innermost feelings.
    1   2   3   4   5   6   7

15. Talking about my feelings during sexual relations is difficult for me.
    1   2   3   4   5   6   7

16. I do not like to show my emotions to other people.
    1   2   3   4   5   6   7

17. It is too risky to express my emotions to other people.
    1   2   3   4   5   6   7

18. I am comfortable telling someone that I am afraid of something.
    1   2   3   4   5   6   7

19. I like my feelings.
    1   2   3   4   5   6   7

20. I don't like to talk with others about my feelings.
    1   2   3   4   5   6   7

Appendix C

Attitudes Towards Seeking Professional Psychological Help Scale (ATSPPH)

Directions: Read each statement carefully and indicate your agreement or disagreement, using the scale below. Please express your frank opinion in responding to each statement, answering as you honestly feel or believe.

0 = Disagreement   1= Probable disagreement   2= Probable agreement   3= Agreement

_____1. Although there are clinics for people with mental troubles, I would not have

much faith in them.

_____2. If a good friend asked my advice about a mental health problem, I might

recommend that he see a psychiatrist.

_____3. I would feel uneasy going to a psychiatrist because of what some people might

think.

_____4. A person with strong character can get over mental conflicts by himself, and

would have little need of a psychiatrist.

_____5. There are a few times when I have felt completely lost and would have

welcomed professional advice for a personal or emotional problem.

_____6. Considering the time and expense involved in psychotherapy, it would have

doubtful value for a person like me.

_____7. I would willingly confide intimate matters to an appropriate person if I thought

it might help me or a member of my family.

_____8. I would rather live with certain mental conflicts than go through the ordeal of

getting psychiatric treatment.

_____9. Emotional difficulties, like many things, tend to work out by themselves.

_____10.There are certain problems that should not be discussed outside one's immediate

family.

_____11.A person with a serious emotional disturbance would probably feel most secure

in a good mental hospital.

_____12.If I believed I was having a mental breakdown, my first inclination would be to

get professional attention.

_____13.Keeping one's mind on a job is a good solution for avoiding personal worries and concerns.

_____14.Having been a psychiatric patient is a blot on a person's life.

_____15.I would rather be advised by a close friend than by a psychologist, even for an emotional problem.

_____16.A person with an emotional problem is not likely to solve it alone; he or she *is* likely to solve it with professional help.

_____17.I resent a person- professionally trained or not- who wants to know about my personal difficulties.

_____18.I would want to get psychiatric attention if I was worried or upset for a long period of time.

_____19.The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.

_____20.Having been mentally ill carries with it a burden of shame.

_____21.There are experiences in my life I would not discuss with anyone.

_____22.It is probably best not to know *everything* about oneself.

_____23.If I were experiencing a serious emotional crisis at any point in my life, I would be confident that I could find relief in psychotherapy.

_____24.There is something admirable in the attitude of a person willing to cope with his conflicts and fears *without* resorting to professional help.

_____25.At some future time I might want to have psychological counseling.

_____26.A person should work out his own problems; getting psychological counseling would be a last resort.

_____27.Had I received treatment in a mental hospital, I would not feel that it had to be "covered up."

_____28.If I thought I needed psychiatric help, I would get it no matter who knew about it.

_____29.It is difficult to talk about personal affairs with highly educated people such as doctors, teachers, and clergymen.

Appendix D

Consent Form

You are invited to participate in a study assessing the personality trait, alexithymia, in college-aged students. We hope to identify the prevalence of alexithymia on college campuses and whether there is a difference based on gender. We also hope to determine whether the presence of alexithymia is linked to attitudes toward seeking psychological help. You were selected as a possible participant in this study because you are 18 years of age or older and are enrolled in an institution for higher education. We ask that you read this form before agreeing to be in this study.

This study will be conducted by Catarina Carosa, Alfred University, Alfred, NY 14802 under the supervision of Psychology Instructor, Amy Button, MA/CAS.

Background Information
The current study will investigate the prevalence of the personality trait, alexithymia, and whether it is connected to attitudes toward seeking psychological help.

Procedures
If you agree to participate in this study, we ask that you fill out the following questionnaires in full and be forthright in your answers. On the pages that follow, you will find a demographics questionnaire, alexithymia surveys, and an assessment of your attitudes toward seeking psychological help. Completion of this study is estimated to take approximately 20 to 30 minutes.

Risks and Benefits of Being in the Study
It is possible that you may feel discomfort while answering some of the questions about a mental health diagnosis. If you are not comfortable sharing this information, you may choose not to disclose your diagnosis without any penalty. You are free to discontinue your participation at any time during the study simply by exiting the survey. In the event that this survey causes distress, the researcher suggests that you consult with your College or University's Health Center (Alfred University's Wellness Center: 607-871-2300; St. Bonaventure University's Center for Student Wellness: 716-375-2310; Houghton College's Student Health Center: 585-567-9483; Alfred State College's Health and Wellness Center: 607-587-4200). If you cannot contact them or do not attend any of the universities listed above, you can contact the 24-hour Crisis Call Center at 775-784-8090, text "ANSWER" to 839863, or visit another mental health service provider in your immediate vicinity.

Participation in this study may provide you with some additional knowledge about research related to psychology and your participation will hopefully add to this knowledge base. We cannot guarantee that you will receive any additional benefits from this study.

If you choose to participate, you will have the opportunity to receive a $1.00 Amazon gift card. To receive this compensation, you must provide your name and e-mail address, which will never be associated with your responses to the questions asked in this study. Alfred University Introduction to Psychology Students may choose to receive 2 credits toward their experiential component course credit instead of the $1.00. Receiving compensation will be optional.

Confidentiality
The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a participant. Research records will be kept in a locked file; only the researcher will have access to the records. Records will be kept for at least one year after completion of the study, after which records may be destroyed at the discretion of the researcher.

Voluntary Nature of the Study
Your decision whether or not to participate will not affect your current or future relations with your college or university. If you decide to participate, you are free to withdraw at any time without penalty.

Contacts and Questions
The researcher conducting this study is Catarina Carosa. If you have questions about your participation in this study that you would like to ask before participating, please exit this survey and contact the researcher electronically at clc9@alfred.edu. The supervisor of this project is Amy Button. If you have any questions about the study, please contact her electronically at button@alfred.edu. If you have any questions now, or later, related to the integrity of the research, (the rights of research subjects or research related injuries, where applicable), you are encouraged to contact Dr. Steve Byrne, Chair of the Alfred University Human Subjects Research Committee, at 607-871-2212 or electronically at HSRC@alfred.edu.

Statement of Consent
I have read the above information. I consent to participate in the study.

_____   _____
Signature   Date

_____
Printed Name

Appendix E

Demographic Survey

1. Gender
   a. Masculine
   b. Feminine
   c. Other, please specify: _____

2. Age
   a. 18 years old
   b. 19 years old
   c. 20 years old
   d. 21 years old
   e. 22 years old
   f. 23 years old
   g. 24 years old
   h. 25 or older

3. Ethnicity
   a. White
   b. Hispanic or Latino
   c. Black or African American
   d. Native American
   e. Asian/Pacific Islander
   f. Other, please specify: _____

4. College or University
   a. Alfred University
   b. Alfred State College
   c. Houghton College
   d. St. Bonaventure University
   e. Syracuse University
   f. Other, please specify: _____

5. Year in College:
   a. First Year
   b. Second Year
   c. Third Year
   d. Fourth Year
   e. Fifth+ Year (Undergraduate)
   f. Graduate Student

6. Major: _____

7. Have you ever been diagnosed with a mental illness?

a. Yes, in the last 12 months
b. Yes, in my lifetime
c. No **(skip to question 9)**
d. Unsure

8. If yes, which have you been diagnosed with by a mental health professional? (check all the apply)
a. ADHD
b. Anxiety
c. Autism
d. Bipolar Disorder
e. Borderline Personality Disorder
f. Depression
g. Dissociative Disorder
h. Eating Disorder
i. Obsessive-compulsive Disorder
j. Posttraumatic Stress Disorder
k. Schizophrenia
l. Other, please specify: _____
m. Prefer not to disclose diagnosis

9. How did you hear about this survey?
a. Social Media
b. Alfred University e-mail
c. Alfred State College e-mail
d. St. Bonaventure University e-mail
e. Houghton College e-mail
f. Monroe Community College e-mail
g. Syracuse University e-mail
h. Niagara University e-mail
i. Alfred University Experiential Credit
j. Other, please specify: _____

Appendix F

Debriefing Form
For the Study Entitled:
"Alexithymia in College-Aged Students"

Dear Participant;

During this study, you were asked to complete a demographic questionnaire, two surveys about alexithymia, and an attitudes toward seeking professional psychological help scale. You were told that the purpose of this study was to investigate the prevalence of the personality trait alexithymia and whether it is connected to attitudes toward seeking psychological help. This was the actual purpose of this study.

You are reminded that your original consent document included the following information: Your decision whether or not to participate will not after you current of future relations with your university. If you decided to participate you were free to withdraw at any time without penalty. If you have any concerns about your participation of the data you provided in light of this disclosure, please discuss this with us. We will be happy to provide you any information we can to help you answer questions you have about this study.

If you have any questions about your participation in the study, please contact me, Catarina Carosa, at clc9@alfred.edu or my faculty advisor, Amy Button, at button@alfred.edu.

If you have questions about your rights as a research participant, you may contact the Alfred University's Human Subjects Committee at hsrc@alfred.edu,

If you have experienced distress as a result of your participation in this study, please contact one of these mental health providers or another near you:
- Alfred University's Wellness Center: 607-871-2300
- St. Bonaventure University's Center for Student Wellness: 716-375-2310
- Houghton College's Student Health Center: 585-567-9483
- Alfred State College's Health and Wellness Center: 607-587-4200
- 24-hour Crisis Call Center at 775-784-8090 or text "ANSWER" to 839863

(Please remember that any cost in seeking medical assistance is at your own expense.)

By completing this study, you are entitled to a $1.00 Amazon gift card if you so choose. Students in an Alfred University Introduction to Psychology course are entitled to either the gift card or 2 credits toward the Experimental Component of your Psychology 101 course. A list of participants will be provided to your instructor, but you may keep this document as proof of participation, as well.

Please again accept our appreciation for your participation in this study. 3