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The effect of educational modules on attitudes towards disabilities

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The Effect of Educational Modules on Attitudes Towards Disabilities

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JAMES MADISON UNIVERSITY

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Abstract

The researchers in this study were interested in the effect of educational modules on student's ratings of appropriateness and fairness of 10 different accommodations offered at the college level. Researchers were also interested in investigating if these modules would affect individual's scores on the Social Distance Scale to evaluate levels of stigma towards mental health. Researchers surveyed 150 college students at a large South Eastern University and found that individuals rated accommodations as higher than neutral in fairness and appropriateness overall, but did not find a difference in students who read the modules and students who did not. Researchers also did not find a significant difference in individual Social Distance Scores when comparing groups who read the educational modules and those who did not. Analysis did reveal differences between specific accommodations that participants rated as more appropriate and fair, and found differences in which Social Distance questions participants were "willing" to engage in with individuals with mental health concerns.

Keywords: Mental Health Stigma, Academic Accommodations, Major Depression Disorder, Anxiety Disorders, Stigma Reduction, College Students

The Effect of Educational Modules on Attitudes towards Disabilities

Mental Health in College

The American College Health Association is an organization that compiles various statistics about our college populations, including mental health statistics. Based on the organization's National College Health Assessment conducted in 2016, 36.7% of college students felt so depressed that it was difficult to function at some point in the last 12 months, and 9.8% of college students considered suicide. Within the same time frame, only 13.9% of students were diagnosed or treated by a professional for depression.

While these numbers for depression are high, rates of Anxiety Disorders are even higher. The same survey reports that 58.4% of students reported feeling overwhelming Anxiety Disorders in the last 12 months. Once again, these statistics from the National College Health Assessment 2016 report a large difference in the prevalence of symptoms being reported and the percentage of students who sought treatment. The National College Health Assessment reports that at the time of their data collection, only 17% of students were diagnosed or treated by a professional for Anxiety Disorders within the last 12 months.

Most college students are living away from home for the first time. While adjusting to this newfound independence, college students have the responsibility of keeping up with course work, finding new friends and peer groups, handling finances, searching for a future spouse or mate, and forming a sense of identity (D'Amico, Mechling, Kemppainen, Ahern, & Lee, 2016). The National Alliance on Mental Illness (NAMI), (2017) estimates that 75% of mental health disorders onset by the age of 24.

Markoulakis and Kirsh (2013) conducted a literature review where they reported that student mental health concerns were related to academic difficulties. Students with mental health concerns reported having trouble with organization, memory, motivation, concentration, stress, and decision making due to their mental illness. Hallucinations, depression, Anxiety Disorders, side effects of medications, and paranoia were included in a list of concerns that were reported to affect attendance, class participation, ability to take notes, exam performance, assignment completion, and group projects (Markoulakis & Kirsh, 2013).

This situation would be a difficult time for anyone to navigate on their own, and many college students are not seeking any help from their college counseling center or the office of disability services. Research shows that one of the main reasons that students are not seeking the help that is available to them is fear of stigma (Downs & Eisenberg, 2012; Eisenberg, Downs, & Zivin, 2009). Researchers have found that when students felt discrimination or stigma regarding their depression from their peer group or their family, they were less likely to seek help from their college counseling center (D'Amico et al., 2016).

Stigma

Eisenberg, Downs, and Golberstein (2012) define stigma as “negative stereotypes and prejudices about people with mental illness, and is a widespread phenomenon with damaging social, psychological, and economic consequences” (p. 1122). Researchers have been interested in determining if stigma exists, and have found evidence that it does. Ben- Porath (2002) reported that college students rated peers as more unstable when the person being rated was described as depressed. Ben-Porath’s (2002) study found that

individuals were rated as even more unstable if the person being rated was described as depressed and seeking help. The finding pertaining to the individual who is depressed and seeking help suggests that not only is their stigma surrounding the depressed individual, but this sample showed even higher levels of stigma towards individuals who were trying to gain control of their mental illness through counseling or other help seeking behavior.

Stigma is something that individuals with mental illness commonly feel. In a qualitative study pertaining to why students with learning disabilities and mental health issues drop out of school, one student was quoted as saying, “I always detested the stares, whispers, and questions from my peers as I was pulled away from classes to take quizzes and tests... I hated to be regarded as the ‘special student’ as I was often ridiculed” (Thompson-Ebanks, 2014, pg. 199). The student quoted above was not alone. Thompson-Ebank’s (2014) study interviewed five different individuals who had left their college after their sophomore year. The students listed various reasons for leaving their institution such as financial concerns, characteristics of their disabilities, medical reasons, and little sense of belonging, but all five students listed feelings of inadequacy as a primary reason for leaving their institution.

One student named Abby was diagnosed with learning disabilities, as well as multiple mental health diagnosis. Abby reported that she felt comfortable disclosing her learning disability, and readily received accommodations for this disability, but that she never disclosed any psychiatric disability to her professors or peers. When discussing why she did this, Abby said, “I guess I felt inferior just with having a learning disability that I feared if others knew about the psychiatric disability, they may feel that I am worthless or incapable of earning a college degree” (Thompson- Ebanks, 2014, pg. 201).

Stigma Reduction

Several studies have focused on how to reduce stigma. These studies have primarily hypothesized that stigma may be reduced through education and contact (Corrigan & Penn, 1999; Eisenberg, Downs, & Golberstein, 2012; Gillespie- Lynch et al, 2015; Ferrari, 2016; Obeid et al, 2015; Reinke, Corrigan, Leonhard, Lundin, & Kubiak, 2004). In terms of contact, several studies have found that contact with individuals with disabilities, or contact with individuals who are seeking treatment decreases stigma towards mental illness and help seeking (Corrigan & Penn, 1999; Eisenberg, Downs, & Golberstein, 2012). Other researchers have found that direct contact may not be necessary. Reinke, Corrigan, Leonhard, Lundin, and Kubiak found that in vivo and videotaped contact were both effective in reducing stigma towards mental illness compared to a no contact control group, although in vivo was slightly more effective (2004).

Several studies have found education effective in increasing knowledge, decreasing misconceptions, and decreasing stigma pertaining specifically to Autism Spectrum Disorders (Gillespie- Lynch et al, 2015; Obeid et al, 2015). Ferrari (2016) reported that education can be more effective if the individual identifies with the person they are reading about, or coming into contact with, instead of just reading about the mental illness in general. In the study conducted by Ferrari, researchers provided participants with vignettes of celebrities disclosing their mental illnesses and found that individuals who read these vignettes saw a larger decrease in stigma at a posttest than individuals who did not read the vignettes.

Accommodations & Attitudes

Some students may not be seeking counseling services, but seeking help in alternative ways. These alternative methods include yoga, exercise, acupuncture, or religion (D'Amico et al., 2016). Another alternative to counseling that can still be of help to students with disabilities or mental health concerns, in the educational setting, is accommodations.

In 1990, The Americans with Disability Act broadened the provision of educational accommodations to college and university students with disabilities originally provided under Section 504 of the Vocational Rehabilitation Act of 1973. This broadening included extending who was covered (e.g., The Vocational Rehabilitation Act applied to all programs that accepted federal funds, while ADA extended protection to programs that receive state or local funding), and the law provided funds to help institutions provide access. Since the ADA was extended to include these populations, the attitudes and actions of three groups have been studied to determine the extent to which the law is implemented successfully: students with disabilities, faculty, and their non-disabled peers.

The most consistent finding in research pertaining to students with disabilities has found that they indeed may fail to seek accommodations (Kurth & Mellard, 2006; Quinlan, Bates, & Angell, 2012) or they wait to seek accommodations until they have already experienced multiple distressing semesters (Lightner, Kipps-Vaughan, Schulte, & Trice, 2012). Among the prominent reasons that students give for not seeking or delaying seeking accommodations are they do not understand that they have a disability (Brickerhoff, 1996); they do not understand their legal rights to accommodations

(Madaus, 2005); and they do not understand the nature of their disability and how accommodations may help them succeed (Hartman- Hall & Haaga, 2002). They also indicate that they worry that their professors will think them intellectually inferior and that their peers will view the accommodations as “cheating” (May & Stone, 2010).

The most extensively studied of the three groups listed are university faculty. Research reports that faculty have positive attitudes towards what are deemed as minor accommodations such as extended time on tests and lecture recording, but that they do not consistently report high levels of action in implementing these accommodations (Lombardi, Murray, & Gerdes, 2011; Murray, Wren & Keys, 2008). Research suggests that faculty support accommodations that require little adjustment to their routines and balk at those that require major adjustment or extensive personal time commitments. Many faculty also have strong reservations about accommodations which involve modifying the curriculum (William & Ceci, 1999). Some studies have found different levels of support for accommodations from faculty from different academic divisions (Nelson, Dodd, & Smith, 1990; Vogel, Leyser, & Wyland, 1999) and between male and female faculty (Rao, 2004) as well as tenure track versus non-tenure track faculty (Brooke, Strehorn, & Silver, 2015). The results of these studies are mixed and the differences have decreased in more recent research (e. g., Dallas & Sprong, 2015).

Faculty are active in providing accommodations for visible disabilities, such as orthopedic and sensory handicaps, while showing reluctance towards less obvious disabilities, such as Attention Deficit Disorder and Learning Disabilities. Unfortunately, mental health diagnosis often fall in this category of less obvious, or at least less visible disabilities. The reason that researchers have found for faculty resistance include lack of

training in the area and concern that non-disabled students will see this as unfair or disapprove. Faculty who have received training in disability awareness and techniques in implementing accommodations have more positive attitudes towards accommodations (Bigaj, Shaw, & McGuire, 1999; Lombardi, Murray, & Dallas, 2013; Milligan, 2010; Murray, Lombardi, & Wren, 2011). This is one reason that we believe more training around mental health may be effective.

Although there is some research regarding attitudes of non-disabled peers, they are the least investigated. The lack of research into this group is surprising since both faculty and students with disabilities justify, in part, their reluctance to give or receive accommodations by suspecting that non-disabled peers harbor harshly negative attitudes towards accommodations. Most research that has been conducted on non-disabled peers involved global measures of attitudes. An exception is the narrowly focused study by Gannon and Maclean (1997) that found both students and academic staff at an Australian university supported extra tutorial assistance, extended deadlines on assignments, provisions of lecture notes, both before and after class, and extra library assistance for a student who was described as emotionally disturbed; both groups strongly supported the statements that the student should be at the university and that they should receive any assistance that gave no academic advantage; but neither group supported altering admissions or pass/ fail criteria, or giving extra time on tests.

More typical studies on non-disabled peers compare their attitudes towards disabilities based on specific characteristics, such as the participant's gender or major field of study. For example, Barr and Bracchitta (2008) found results consistent with stigma reduction research. They found that students who had more contact with

disabilities prior to entering college showed fewer misconceptions about individuals with a disability. Hunt and Hunt (2002) found that rehabilitation majors were more positive towards individuals with disabilities than business majors, but rehabilitation majors were more likely to be women, to be older, and to have had more contact with individuals with disabilities, all of which have also been found to predict more positive attitudes.

Current Study

In the current study, we utilize education about disabilities as an intervention to investigate if students who have received educational modules about mental illness, such as Major Depressive Disorder and Anxiety Disorders, show higher appropriateness and fairness ratings when asked about a list of various educational accommodations.

In pilot studies of this research, we have found that education pertaining to disabilities such as Traumatic Brain Injuries, ADHD, and Major Depressive Disorder have led to higher ratings of accommodations. The current study is an attempt to replicate these findings that educational modules increase student ratings of appropriateness and fairness of a list of specific accommodations acquired at the college level. The well-established Social Distance Scale was used to investigate any decreases in stigma attitudes after students received education pertaining to Major Depressive Disorder and Anxiety Disorders (Bogardus, 1933; Gillespie- Lynch et al, 2015; Obeid et al, 2015; Reinke et al., 2004).

The research questions of the current study are:

1. Do reported attitudes differ for those who read an educational module pertaining to Major Depressive Disorder or Anxiety Disorders versus those in the control group?

2. Is there an interaction effect of reading about both, Major Depressive Disorder and Anxiety Disorders, on Social Distance Scores?
3. Do students rate certain accommodations as more appropriate or fair than others?
4. Do reported Social Distance Scores differ for those who read an educational module pertaining to Major Depressive Disorder or Anxiety Disorders versus those in the control group?
5. Is there an interaction effect of reading about both, Major Depressive Disorder and Anxiety Disorders, on Social Distance Scores?

Method

Participants

One-hundred-fifty students enrolled at a large state university participated in the study. The students were sampled through the university's Participant Pool. The Participant Pool is a database of students who are enrolled in introductory psychology courses and are required to participate in research for course credit. The sample consisted of 123 women and 26 men. The age of participants ranged from 18- 22. There was a large variation of GPAs among the students sampled, with a minimum of 1.74 and a maximum of 4.00 ($M= 3.18$, $SD= .45$). Of the students in the sample, 87 were freshman, 41 were sophomores, 17 were juniors, and four were seniors. Sixteen (11%) students identified themselves as having been diagnosed with a disability. This percentage of students diagnosed with a disability is consistent with a study done comparing faculty attitudes where researchers reported that 11% of the overall college population are student with disabilities (Lombardi, Murray, & Dallas, 2013).

Materials

Participants all completed the same questionnaire, but the participants were separated into four different reading conditions. The conditions of the current study were a control group who read a short module about the Americans with Disabilities Act, a group who read a module about Major Depressive Disorder, a group who read a module about Anxiety Disorders, and a fourth group who read both the Major Depression and Anxiety Disorders modules. Students who read about depression answered five follow up questions pertaining to the module in order to check the amount of attention paid to the module. Students who read about Anxiety Disorders answered four questions pertaining to their module, and students who read both (Major Depression and Anxiety Disorders) answered both sets of questions. Students in all four conditions completed 10 demographic questions, 30 questions pertaining to the appropriateness of accommodations (ratings of 10 different accommodations for Major Depressive Disorder, Anxiety Disorders and a control of ADHD), 30 questions pertaining to the fairness of the same 10 accommodations for the same three disabilities (Major Depressive Disorder, Anxiety Disorders, ADHD), and 18 questions from the Social Distance Scale (six for each of the three disorders). See attached Appendices.

To investigate participant effort while reading the modules, participant's effort and knowledge was assessed after each reading. The effort scale constructed from items taken from Finney, Sundre, Swain, and Williams (2016) effort and importance subscales. Participants responded to six items on a 1 (not true of me at all) to 5 (completely true of me), with a range of 6-30. Finney et al. (2016) found adequate cronbach's alpha across these scales. To assess knowledge, researchers constructed five questions that followed

the depression module and four that followed the anxiety module. The effort and knowledge questions were used to calculate a total effort score and a total knowledge score.

Appropriateness and Fairness Ratings

The 10 accommodations included in the appropriateness and fairness sections included 1) 25% extra time on tests; 2) getting priority on single rooms in a dormitory; 3) unlimited time to take tests in one sitting; 4) being given a student to take notes for him or her without charge; 5) being able to take tests in a quiet, distraction free environment; 6) no penalties imposed for turning in late papers; 7) being waived foreign language or math requirements; 8) being allowed to take tests orally; 9) the ability to register for classes before other students; and 10) being allowed to substitute another activity (e.g., a video or a performance for a term paper or thesis). No further description of the accommodations was presented. The appropriateness of each accommodation was rated on a 7- point likert scale (1= extremely inappropriate to 7= extremely appropriate) with scores ranging from 10 to 70. The fairness of each accommodation was rated on a 7-point scale as well (1= extremely unfair to 7= extremely fair) with the same range as appropriateness scores.

Social Distance Scale

To investigate stigma, we used the Social Distance Scale (Bogardus, 1933; Gillespie- Lynch et al, 2015; Obeid et al, 2015; Reinke et al., 2004). This scale asks the participants about their willingness to engage in six different types of interaction on a 4- point likert scale (1= “definitely willing” to 4= “definitely unwilling”) with scores

ranging from 6 to 24. The questions in the Social Distance Scale ask how willing the participant would be to 1) move next door to; 2) spend an evening with; 3) collaborate on a group project with; 4) befriend; 5) have marry into family; or 6) marry/date an individual with any one of the three given disabilities. This is a scale used as early as 1933 when validated by Bogardus, and is still used today. Recently the scale was adapted to investigate Social Distance Attitudes towards individuals with Autism Spectrum Disorders and saw decreases in social distance scores after education pertaining to these disabilities (Gillespie-Lynch et al., 2015). The internal consistency of the scale used in this study was high for all disabilities. The researchers found a cronbach's alpha of were .90 for ADHD, .91 for depression, and .94 for Anxiety Disorders.

Procedure

The survey for this study was administered electronically. The electronic survey was created on Qualtrics survey software. Since the survey was online, participants took the survey at any time of day in any location of their choice. Data from Qualtrics was then exported and analyzed in SPSS.

Results

Review of Effort and Knowledge Scores

Researchers used six questions that were combined to create a total score to evaluate effort of the participants in the study. Participants mean score on the effort scale was 22.95 with a standard deviation of 3.52. Although this was a low stakes assessment, participants seemed to provide above neutral effort. Effort and scores on the knowledge assessment showed a significant moderate positive correlation pertaining to Depression

knowledge ($r = .435$), a small correlation that did not reach significance with Anxiety knowledge ($r = .205$), and a significant moderate correlation with anxiety and depression knowledge ($r = .437$).

Effort scores were not significantly correlated with any of our dependent variables of interest except total appropriateness ratings for Anxiety Disorders. Effort scores and Anxiety Disorder appropriateness ratings had a significant small negative correlation ($r = -.179$). Although effort scores were correlated with one dependent variable, there was not any significant difference in Anxiety Appropriateness when low effort scores were eliminated, so these individuals were included in the analysis.

In terms of knowledge pertaining to the Major Depression module, participants showed a mean score of 85.6%. In the group reading the Anxiety Disorders module, participants showed a mean score of 69.2%. For the group that read the Major Depression and Anxiety Disorder modules, participants showed a mean score of 79.2%. There were no significant differences in our dependent variables when low knowledge scores were eliminated, so individuals with all knowledge scores were included in analysis.

Main Effect and Interaction of Educational Modules on Appropriateness Ratings

Researchers created a composite appropriateness score for each disability category by finding the mean of each participant's 10 appropriateness ratings of accommodations. The alpha values for the appropriateness ratings of the 10 accommodations was .85 for ADHD, .88 for depression, and .89 for Anxiety Disorders.

A 2 X 2 ANOVA was conducted with appropriateness of accommodations for our three different disabilities as the dependent variable and education about Anxiety

Disorders (no reading/ reading) and Major Depressive Disorder (no reading/ reading) as the independent variables. In terms of the total appropriateness rating of accommodations for Major Depressive Disorder there was no main effect of reading the anxiety module ($M= 39.45, SD= 13.17$), $F(1,118) = .115, p= .735$. There was no main effect of reading the depression module ($M= 40.39, SD= 10.66$), $F(1, 118) = .614, p= .435$. There was no interaction effect found for individuals who read about both, $F(1, 118) = .359, p= .550$, even though individuals in this group did show the highest mean rating of appropriateness of accommodations for depression ($M= 42.39, SD= 10.83$).

In terms of the total appropriateness rating of accommodations for Attention Deficit Disorder there was no main effect of reading the anxiety module ($M= 42.38, SD= 11.35$), $F(1,117) = .282, p=.597$. There was no main effect of reading the depression module ($M= 40.76, SD= 11.10$), $F(1, 117) = .090, p= .764$. There was no interaction effect found for individuals who read about both, $F(1, 117) = .342, p= .560$, even though individuals in this group, once again, showed the highest mean rating of appropriateness of accommodations for depression ($M= 42.93, SD= 10.67$).

In terms of the total appropriateness rating of accommodations for Anxiety Disorders there was no main effect of reading the anxiety module ($M=42.14, SD= 14.09$), $F(1,120) = .108, p=.743$. There was no main effect of reading the depression module ($M= 40.89, SD= 12.86$), $F(1, 120) = .043, p= .836$. There was no interaction effect found for individuals who read about both, $F(1, 120) = .163, p= .687$, although this group rated accommodations for Anxiety Disorders as the most appropriate as well ($M= 42.59, SD= 11.58$). Refer to Table 1 for a display of mean and standard deviations for appropriateness ratings for each reading group.

Table 1. *Means and Standard Deviations for Ratings of Appropriateness for each Reading Group with Mean Ratings Above Neutral in Bold (Scores above 40).*

	Depression appropriateness	ADHD appropriateness	Anxiety appropriateness
Read Control	40.00 (11.96) (13.12)	42.48 (9.77)	42.31
Read Anxiety	39.45 (13.17) (14.09)	42.38 (11.35)	42.14
Read Depression	40.39 (10.66) (12.71)	40.76 (11.10)	40.89
Read Both	42.39 (10.83) (11.58)	42.93 (10.67)	42.59

Main Effect and Interaction of Educational Modules on Fairness Ratings

Researchers created a composite fairness score for each disability category by finding the mean of each participant's 10 fairness ratings of accommodations. The alpha values for the fairness ratings of the 10 accommodations was .85 for ADHD, .91 for depression, and .89 for Anxiety Disorders.

A 2 X 2 ANOVA was conducted with fairness of accommodations for our three different disabilities as the dependent variable and education about Anxiety Disorders (no reading/ reading) and Major Depressive Disorder (no reading/ reading) as the independent variables. In terms of the total fairness rating of accommodations for Major

Depressive Disorder there was no main effect of reading the anxiety module ($M=39.93$, $SD= 13.17$), $F(1,119) = .874$, $p= .352$. There was no main effect of reading the depression module ($M= 38.17$, $SD= 12.60$), $F(1, 119) = .029$, $p= .866$. There was no interaction effect found for individuals who read about both, $F(1, 119) = .011$, $p= .915$, even though individuals in this group did show the highest mean rating of fairness of accommodations for depression ($M= 40.56$, $SD= 11.87$).

In terms of the total fairness rating of accommodations for Attention Deficit Disorder there was no main effect of reading the anxiety module ($M=42.41$, $SD= 11.07$), $F(1,121) = .640$, $p= .425$. There was no main effect of reading the depression module ($M= 39.45$, $SD= 12.23$), $F(1, 121) = .469$, $p= .495$. There was no interaction effect found for individuals who read about both ($M= 40.82$, $SD= 9.68$), $F(1, 121) = .013$, $p= .909$.

In terms of the total fairness rating of accommodations for Anxiety Disorders there was no main effect of reading the anxiety module ($M=42.41$, $SD= 11.99$), $F(1,119) = .233$, $p= .630$. There was no main effect of reading the depression module ($M= 39.93$, $SD= 13.40$), $F(1, 119) = .354$, $p= .553$. There was no interaction effect found for individuals who read about both ($M= 41.27$, $SD= 10.98$), $F(1, 119) = .010$, $p= .921$. Refer to Table 2 for a display of mean and standard deviations for fairness ratings for each reading group.

Table 2. *Means and Standard Deviations for Ratings of Fairness for each Reading Group with Mean Ratings Above Neutral in Bold (Scores above 40).*

	Depression fairness	ADHD fairness	Anxiety
Read Control	38.03 (13.14) (14.44)	40.59 (11.53)	41.53
Read Anxiety	39.93 (13.11) (11.98)	42.41 (11.10)	42.41
Read Depression	38.17 (12.60) (13.40)	39.45 (12.23)	39.93
Read Both	40.56 (11.87) (10.98)	40.82 (9.68)	41.27

Differences in Appropriateness and Fairness Ratings of Specific Accommodations

When comparing the mean ratings of the appropriateness of individual accommodations, without considering reading group, there were five accommodations that were rated above neutral, on average across disability groups. The five accommodations rated above neutral, in terms of appropriateness, were 25% extra time on tests ($M= 5.23$, $SD= 1.16$); getting priority on single rooms in dormitories ($M= 4.46$, $SD= 1.28$); having a note taker at no cost ($M= 4.40$, $SD= 1.36$); taking tests in a quiet, distraction free environment ($M= 5.87$, $SD= 1.09$); and having tests administered orally

($M= 4.27$, $SD= 1.43$). The other five accommodations were consistently rated below a neutral for appropriateness.

When comparing the mean ratings of the fairness of individual accommodations, without considering reading group, across disability groups, the same five accommodations were rated consistently above neutral. The five accommodations rated above neutral, in terms of fairness, were 25% extra time on tests ($M= 5.22$, $SD= 1.36$); getting priority on single rooms in dormitories ($M= 4.22$, $SD= 1.7$); having a note taker at no cost ($M= 4.35$, $SD= 1.52$); taking tests in a quiet, distraction free environment ($M= 5.61$, $SD= 1.22$); and having tests administered orally ($M= 4.31$, $SD= 1.42$). The other five accommodations were consistently rated below a neutral rating for fairness. Refer to Table 3 for the means and standard deviations of all accommodations average appropriateness and fairness ratings.

Table 3. *Means and Standard Deviations for Ratings of Appropriateness and Fairness for Accommodations across all Disabilities.*

	Appropriateness	Fairness
25% extra time on tests	5.23 (1.16)	5.21 (1.36)
Single room priority	4.46 (1.28)	4.22 (1.47)
Unlimited time on tests	3.96 (1.52)	3.87 (1.70)
Free note taker	4.40 (1.36)	4.35 (1.51)
Quiet, Distraction Free Tests	5.87 (1.09)	5.61 (1.22)
No Penalties for Late Assignments	3.20 (1.51)	2.91 (1.55)

Waived Language or Math Req.	2.79 (1.48)	2.68 (1.60)
Orally administered tests	4.27 (1.43)	4.31 (1.41)
Early Registration	3.41 (1.64)	3.27 (1.70)
Substitute Assignments	3.82 (1.63)	3.79 (1.71)

Differences in Appropriateness and Fairness of Specific Accommodations for Each Disability

Researchers investigated differences in appropriateness and fairness ratings of specific accommodations between the three different disabilities. There was no significant difference among disabilities, but there were some interesting findings. The accommodation for priority for single rooms in dormitories was rated above neutral for depression ($M=4.67$, $SD= 2.68$) and for Anxiety Disorders ($M= 4.84$, $SD= 1.65$), but was rated below neutral for ADHD ($M= 3.80$, $SD= 1.71$). The accommodation for unlimited time on tests was rated below neutral for depression ($M= 3.57$, $SD= 1.73$), but was rated above neutral for ADHD ($M= 4.30$, $SD= 1.74$) and Anxiety Disorders ($M= 4.01$, $SD= 1.81$). The accommodation of substituting assignments such as a video project or presentation for a term paper was rated as below neutral appropriateness for depression ($M= 3.70$, $SD= 1.78$) and ADHD ($M= 3.70$, $SD= 1.83$), but was rated as above neutral for Anxiety Disorders ($M= 4.11$, $SD= 1.97$).

In terms of fairness, the only difference for an individual disability from the overall fairness ratings between disabilities was that having unlimited time to finish a test was rated as above neutral in terms of fairness for an individual with ADHD ($M= 4.12$,

$SD= 1.94$), while it was rated as below neutral for individuals with depression ($M= 3.54$, $SD= 1.85$) and Anxiety Disorders ($M= 4.12$, $SD= 1.94$).

Main Effect and Interaction of Educational Modules on Social Distance Scores

Due to the extremely high alpha levels reported in our materials, researchers created a composite Social Distance score for each disability category by finding the mean of each participant's six Social Distance Ratings of accommodations.

A 2 X 2 ANOVA was conducted with total Social Distance scores for our three different disabilities as the dependent variable and education about Anxiety Disorders (no reading/ reading) and Major Depressive Disorder (no reading/ reading) as the independent variables. In terms of the total Social Distance scores for Major Depressive Disorder there was no main effect of reading the anxiety module ($M=12.23$, $SD= 5.06$), $F(1,144) = .113$, $p= .737$. There was no main effect of reading the depression module ($M= 11.44$, $SD= 5.41$), $F(1, 144) = 1.737$, $p= .190$. There was no interaction effect found for individuals who read about both, $F(1, 144) = .831$, $p= .364$, even though individuals in this group did show the lowest mean social distance scores for depression ($M= 10.45$, $SD= 4.20$).

In terms of the total Social Distance scores for Attention Deficit Disorder there was no main effect of reading the anxiety module ($M=10.39$, $SD= 3.19$), $F(1,139) = .620$, $p= .404$. There was no main effect of reading the depression module ($M= 9.60$, $SD= 4.04$), $F(1, 139) = 3.788$, $p= .054$. There was no interaction effect found for individuals who read about both, $F(1, 139) = .106$, $p= .746$, even though individuals in

this group did show the lowest mean social distance scores for ADHD ($M=8.84$, $SD=3.19$).

In terms of the total Social Distance scores for Anxiety Disorders there was no main effect of reading the anxiety module ($M= 11.46$, $SD= 4.98$), $F(1,145) = 1.693$, $p=.195$. There was no main effect of reading the depression module ($M= 11.14$, $SD= 5.88$), $F(1, 145) = 2.817$, $p=.095$. There was no interaction effect found for individuals who read about both, $F(1, 145) = .054$, $p=.817$, even though individuals in this group did show the lowest mean social distance scores for Anxiety Disorders ($M= 9.85$, $SD= 4.03$).

Table 4. Means and Standard Deviations for Social Distance Scores for each Reading Group with Mean Ratings Above Neutral in Bold (Scores below 12).

	Depression Social Distance	ADHD Social Distance	Anxiety Social Distance
Read Control	11.77 (4.72)	10.71 (4.42)	12.36
	(5.52)		
Read Anxiety	12.23 (5.06)	10.39 (4.62)	11.46
	(4.98)		
Read Depression	11.44 (5.41)	9.60 (4.04)	11.14
	(5.88)		
Read Both	10.45 (4.20)	8.84 (3.19)	9.85
	(4.03)		

Differences in Social Distance Scores for Specific Questions

We did find that when we averaged all four reading group scores across all three of the disabilities, the mean for every social distance question was below 2, or on this scale, every question was rated as “definitely willing” to engage, except when we asked people if they would marry/ date an individual with one of our disabilities. The social distance mean score across groups for marrying someone into your family was a 1.997, so if we were to round this number up, this question would also receive an average score of “somewhat willing” rather than “definitely willing”. See Table 5 for the overall Social Distance Means.

Table 5. *Means and Standard Deviations of Social Distance Scores for all Conditions across all Disabilities.*

	Social Distance
Move next door to	1.67 (.84)
Evening socializing	1.62 (.75)
Collaborative project	1.92 (.85)
Make friends with	1.53 (.72)
Marry into family	1.99 (.89)
Marry or date	2.10 (.95)

Difference in specific Social Distance questions between disabilities

Researchers investigated differences in the specific social distance questions between the three disabilities when all three reading group scores were combined. Participants rated themselves as only “somewhat willing” to marry someone with Major Depressive Disorder ($M= 2.13$, $SD= .99$) or Anxiety Disorders ($M= 2.07$, $SD= 1.05$) into their family, while they reported that they were “definitely willing” to marry an individual with ADHD ($M= 1.77$, $SD= .91$) into their family. Individuals also reported that they were only “somewhat willing” to marry or date someone with Major Depressive Disorder ($M= 2.28$, $SD= 1.05$) or Anxiety Disorders ($M= 2.15$, $SD= 1.07$), while they were “definitely willing” to marry an individual with ADHD ($M= 1.87$, $SD= .99$).

When considering between reading group differences, there were some interesting findings. The first difference is seen in the question of willingness to begin a collaborative project with someone with Major Depression. The control group ($M= 1.95$, $SD= .92$) and the group that read both the Anxiety Disorder module and the Major Depression module ($M= 1.82$, $SD= .87$) rated themselves as “definitely willing”, while both of the other groups rated themselves as ‘somewhat willing’.

For the question pertaining to marrying someone into your family who has been diagnosed with Major Depressive Disorder, the only group that rated themselves as “definitely willing” was the group that read both the Anxiety Disorder and the Major Depression modules ($M= 1.90$, $SD= .79$). For the question pertaining to marrying an individual with ADHD, the control condition was the only group that rated themselves as “somewhat willing” ($M= 2.08$, $SD= 1.02$), while all other groups rated themselves as “definitely willing”. For the question pertaining to beginning a collaborative project with

an individual with Anxiety Disorders, the control condition was again the only group to rate themselves as “somewhat willing” ($M= 2.21, SD= .98$) while all of the other groups rated themselves as “definitely willing”. In terms of questions about marrying someone into your family who has been diagnosed with an Anxiety Disorder, the group that read about both Major Depression and Anxiety Disorders is the only group to rate themselves as “definitely willing” ($M= 1.79, SD= .83$) while all others rated themselves as “somewhat willing”. Finally, in terms of marrying an individual with an Anxiety Disorder, our group that read about both Major Depression and Anxiety was the only group to rate themselves as “definitely willing” ($M= 1.87, SD= .95$) while all other groups rated themselves as “somewhat willing”.

Discussion

Is There a Main Effect or Interaction of Educational Modules on Appropriateness and Fairness Ratings of Accommodations?

The first research question of this study was to investigate if individuals who read educational modules pertaining to Major Depressive Disorder and Anxiety Disorders would rate accommodations for these disabilities as more appropriate, as well as fairer, than individuals who simply read about the Americans with Disabilities Act. The current analysis did not find any significant main effects or interactions between groups who read about Major Depressive Disorder, Anxiety Disorders, or the Americans with Disabilities Act. This is contrary to prior research on faculty attitudes that has found that faculty rate accommodations more positively after receiving disability training (Bigaj, Shaw, & McGuire, 1999; Lombardi, Murray, & Dallas, 2013; Milligan, 2010; Murray, Lombardi, & Wren, 2011).

Gillespie-Lynch et al. (2015) found education pertaining to Autism Spectrum Disorders effective in decreasing misconceptions and decreasing stigma, but the results in the current study show no main effects of educational modules. This finding may be explained by the lack of individual identification with the modules that students were required to read. Ferrari (2016) reported that education was most effective when the individual reading the module identified with the person that they were reading about. The modules in the current study did discuss Major Depressive Disorder in college students, but may have been more effective if the individuals reading the module were provided with a relatable individual's story of suffering with the disability rather than a list of symptoms.

The researchers believe that another possible reason that there were not significant main effects could be the control group. In the control group, individuals read about the Americans with Disabilities Act. A more effective intervention may be a reading module about a different topic or no reading module at all. Rather than a lack of effect of education, we may have seen an unintentional effect from our control group that was as effective as our reading groups.

Are There Differences in Ratings of Specific Accommodations?

The second research question of the study was to investigate whether there were differences in the ratings of individual attitudes towards accommodations. The current study revealed that individuals in all reading conditions consistently rated five accommodations as above neutral (>4.0) in terms of appropriateness and fairness, and they consistently rated the other five accommodations as below neutral in appropriateness and fairness. Students rated the accommodations of 25% extra time on tests, priority to

access of single rooms in dormitories, being provided a free note taker, taking tests in a quiet distraction free environment, and having orally administered tests as above neutral ratings in both appropriateness and fairness. Students consistently rated the accommodations of having unlimited time on tests, no penalties for late assignments, waived foreign language or math requirements, early registration for classes, and substitute activities such as a presentation or video project for term papers as below neutral ratings in both appropriateness and fairness.

The researchers believe that there is a commonality between accommodations rated as above neutral. These accommodations rated above neutral seem to be accommodations that have no effect on other students. Students seem to be accepting of accommodations that provide an opportunity for the student of concern to succeed, but do not affect other students in the class. The accommodations rated as above neutral also did not change the curriculum of the course or of graduation requirements. Waiver of foreign language requirements, late assignments and substitution assignments, for example, consistently receive below neutral ratings of appropriateness and fairness. The current research is focused on students rather than faculty, but this finding is similar to Williams and Ceci's (1999) reports that faculty had strong reservations about accommodations that modified their curriculum.

Another suggested reason why some accommodations have higher appropriateness and fairness rating than others is that four of the five accommodations consistently rated as more appropriate and fairer than others are accommodations that are customary for K-12 education. Extra time on tests, quiet testing environments, note takers, and orally administered tests are accommodations that students encounter early in

education. Therefore, individuals have more contact or experience with these accommodations prior to entering college.

The current study did find that students rated particular accommodations as more appropriate than others for specific disabilities. Receiving priority for single rooms was rated as above neutral for Major Depressive Disorder and Anxiety Disorders, but not for ADHD. Researchers believe that students may see reason for an individual with Major Depressive Disorder or Anxiety Disorders, an obvious mental health diagnosis, to have their own room in a dormitory, but do not see why an individual with ADHD, a learning disability, needs a single room. The accommodation of substitution activities was rated as below neutral for individuals with ADHD and Major Depressive Disorder, but rated as above neutral for Anxiety Disorders. This is an interesting finding because the most prevalent Anxiety Disorders disorder in the college setting is phobias of public speaking, and one of the suggested substitution activities was a presentation. The current study also revealed that individuals rated the accommodation of unlimited time on tests as below neutral for individuals with Major Depressive Disorder, but above neutral for individuals with Anxiety Disorders and ADHD. This is possibly explained by the misunderstanding of Major Depressive Disorder rather than the other two groups needing this accommodation more. In pilot studies, accommodations for Major Depressive Disorder have consistently been rated as less appropriate than accommodations for other disabilities.

To help interpret the findings of previous pilot studies, we conducted focus groups of participant pool students and asked them to comment on the results. Six themes emerged:

1. As in most previous research, the invisibility of some disabilities aroused skepticism. This was particularly true for Major Depressive Disorder for which the sentiments of “Major Depressive Disorder is easy to fake” and “everyone gets depressed now and then” were expressed in all three groups. This supported a hypothesis of the researchers that Major Depressive Disorder has changed from a medical term among non- professionals to a term used in everyday life.
2. Many students expressed that some accommodations could “dilute the brand” of the university as one student put it. “Living in a freshman dorm is part of what the experience here is all about. If you don’t want that, you have thousands of other colleges and universities to choose from.”
3. Students felt strongly that graduation requirements should not be negotiable. “They’re not secret” one student put it. “If you’re lousy at math, I know there are places you can get your B.A. without a single math course. It’s the applicant’s responsibility to decide whether he can make it at this university or not. His parents and his high school counselors should help too. But when he comes here and if experiencing problems, it’s not the university’s job to give him a pass. It is its [the university’s] job to give him all the support he needs to get through the job,” Another student said, “There are easy enough math courses here. A D is a passing grade, and maybe they just need to live with it and get on with it.”
4. Two of the three focus groups spent considerable time putting forward the idea that everyone should get to take tests in a quiet environment, not just students with disabilities. There was, however, considerable disagreement about how that

could occur. For example, having rules against students leaving a test situation before time is up, taking most tests on-line, and smaller classes were all proposed.

5. Students were surprised that early registration was a common accommodation and many were concerned about it. “I get it that some students with disabilities may function better in smaller classes, or in classes that meet two or three times a week. But so do I. I don’t think it’s fair that I get bumped out of some advanced courses in my major so that a freshman with ADHD can get in.” Most students felt that this accommodation could come with some restrictions, such as making it only available for general education courses, or requiring it to be approved by an advisor or disability staff member.
6. The issue of accepting late papers without any penalty was the most contentious accommodation in these groups. A vocal group of students asserted that once students enroll in a class they should be able to anticipate dates and deadlines or take fewer or other courses. Other students indicated that they felt that many professors held draconian deadline rules that needed relaxing for all students, while others recognized that some, though not all, students with disabilities have difficulty with time management and that this accommodation should be administered on an individual basis.

The first theme is possibly the most notable for this study. Most mental illness falls under this category of “invisible”, and this theme may explain why individuals are resistant to rating accommodations as appropriate or fair when they go unseen. This invisibility seems to make these disabilities harder to understand.

Is There a Main Effect or Interaction of Educational Modules on Social Distance Scores?

The final research question was to investigate if there would be a significant main effect or interaction of reading educational modules on Social Distance scores. Obeid et al. (2015) found that after participating in an online training, individuals in their study showed more knowledge and less stigma pertaining to Autism Spectrum Disorders. Contrary to their research, our study did not reveal statistically significant main effects of reading educational modules. Obeid et al. (2015) measured knowledge as well as stigma. The current study did have a short quiz after each module, but there were no statistical differences found in stigma between groups who did poorly on these quizzes and groups who performed well. The Obeid et al. (2015) study also conducted a pretest and posttest and investigated change scores rather than investigating differences between separate individuals. This within groups focus on a change score may be a better way to measure stigma reduction than a between groups variable.

The current study did reveal interesting results when looking at the specific Social Distance questions. When Social Distance ratings for each individual question were averaged across reading groups and specific disabilities, individuals in our study rated themselves as willing to engage in every activity (Move next door to, spend an evening socializing with, begin a collaborative project with, make friends with, marry into family) except for marrying or dating the individual with the mental health concern. This is consistent with the findings of Gillespie-Lynch et al. (2015) who also found that individuals rated themselves, on average, as “somewhat willing” to engage with an

individual on every level except the romantic relationship, when studying stigma against individuals with Autism Spectrum Disorders.

More interesting findings were revealed when we considered the differences in specific questions, when accounting for the disability type, and when accounting for the reading groups. In terms of disability type, individuals in our study rated themselves, on average, “somewhat willing” to marry an individual diagnosed with Major Depressive Disorder or Anxiety Disorders, but rated themselves as “willing” to marry an individual diagnosed with ADHD. This difference is an example of the stigma associated with individuals with Major Depressive Disorder and Anxiety Disorders. Individuals were willing to marry an individual with a common learning disability, but not willing to marry the individual with a mental health diagnosis. These differences were not significant, but found to be interesting.

In terms of between reading group differences, the analysis did not reveal significant differences. Although there were not significant differences, one reading group did consistently rate themselves as more willing to engage in these activities with individuals with all three diagnosis. Individuals in our study who read about both Major Depressive Disorder and Anxiety Disorders were the only group that rated themselves as “willing” to engage in every Social Distance question, including marrying or dating the individual with all three of the diagnosis. Our study did not reveal significant differences, but there does seem to be some effect of reading about these diagnoses.

Limitations

This study was not without limitations. This study was specifically interested in investigating stigma in the college setting, so our sample were all college aged students from a South-Eastern University. Our age range was only 18- 22. This University is also primarily female, and gender differences have been revealed in the past, with female faculty rating accommodations more positively than male faculty (Rao, 2004). Our study consisted of 123 women and only 26 men.

Another limitation of the current research is our control group. Rather than a control group who read nothing about mental illness or accommodations, or just read an irrelevant topic, our control group received a reading about The Americans with Disabilities Act. The results of the current study do not show significant differences in a control group and the groups who read educational modules. The researchers believe that rather than the educational modules having no power, the control group may have effected ratings of accommodations and scores on the social distance as well.

The study also did not investigate change scores between pretest and posttests data. This study simply provided an individual with a module and had them take the survey. Other research on this topic has been interested in stigma reduction within groups, rather than between separate individuals.

This was a low- stakes assessment. Participants were college students who did not receive any grade for their work. Participants simply had to fill out the survey and they were granted credit. Although it was low stakes, participants did seem to have above neutral effort with a mean of 3.85 out of 5 for individual questions. This effort is not low, but the effort would most likely be higher if participants were being held more accountable for the readings that they were instructed to do. The current study attempted

to hold participants accountable with the knowledge questions. The participants scored high on the Major Depression questions (85%) and on the questions pertaining to Anxiety Disorders and Major Depression when they had to read both modules (79%), but they performed poorly when reading just the Anxiety Disorder module (69%). This may be due to question wording or difficulty, or possibly due to the low- stakes, participants did not put as much effort into this module. Anxiety has also become very colloquial, possibly even more than depression, so it is possible that participants did not feel the need to read the entire anxiety module due to a belief that they already had an understanding of the knowledge.

Further Research

Hartman- Hall and Haaga reported that individuals with disabilities may fail to seek accommodations due to their lack of understanding of how the accommodations may help (2002). The current researchers suggest that future studies discuss how accommodations help individuals with mental illness, rather than just provide educational modules pertaining to the disabilities. A focus group done during the current study reported that a story of resilience with the help of accommodations or more detail about the accommodation process may be more effective than simply education about the symptoms.

Prior research has used celebrities to educate people about mental illness, or videotaped contact with individuals. Both studies revealed stigma reduction, so it may be important for individuals receiving the education to be able to relate to our put a face to the mental health concerns, rather than just read an educational module (Ferrari, 2016; Leonhard, Lundin, & Kubiak, 2004).

The current researchers are also interested in returning to a control condition that is more irrelevant to disabilities than the reading used in this study. In pilot research, researchers used a passage from *Candide* as the control group.

Conclusions

In the current study, we did not reveal any significant main effects or interactions for educational modules, but there were some interesting differences. For example, the group who read about both Anxiety Disorders and Major Depression showed the highest ratings for seven out of our nine dependent variables of interest. The two that they did not show the highest ratings for were fairness of accommodations for ADHD and fairness of accommodations for Anxiety Disorders. Although significant main effects were not revealed, this group did on average show higher appropriateness ratings for the accommodations, higher fairness ratings for accommodations for Major Depressive Disorder, and less stigma on the Social Distance Scale for all groups.

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Appendix A

Demographic Questions

1. Age _____
2. Sex _____
3. State/ Province of home Residence _____
4. Are you a part time/ full time student?
 - a. Full time
 - b. Part time
 - c. Other _____
5. Are you an international student?
 - a. Yes
 - b. No
6. For most of high school I attended...
 - a. Public School
 - b. Private School
 - c. Home School
 - d. Other, Please Explain _____
7. What is your first major? _____
8. What is your approximate GPA? _____
9. What year in school are you?
 - a. Freshman
 - b. Sophomore
 - c. Junior

d. Senior

10. Have you ever been diagnosed with a disability?

a. Yes

b. No

Appendix B

Control Module

Please read the following carefully and then answer the questions that follow. Thank you for your time and patience.

The Americans with Disabilities Act (ADA) guarantees access to work, education and training, recreation, and commercial services to all individuals, regardless of their disability condition. This law applies to colleges and universities, as well. The term “guarantees access” means that if there are barriers to these programs, they must be removed or accommodated.

Sometimes people misunderstand what this means. Finding an accommodation or removing a barrier is best illustrated by handicapped parking places. On a large campus, if people with neuromuscular disorders had to park half a mile from their classes, it would make a college education impossible. There is nothing essential to a college education about parking half a mile away from classrooms. But providing access to a program does not necessarily mean that the program itself has to be modified. For example, persons with a neuromuscular disorder may be denied admission to the dance major at a university if their disorder does not permit them to do the required, essential components of the major. Whether to modify the admissions standards or the requirements is up to individual institutions and programs: it is not required by the law.

Another example may be warranted. Suppose that a blind student wanted to take a course in general psychology. She could attend lectures and use books-on-tape and study with a study group. What she could not do is take a paper and paper test in a classroom with 99 other students in a 50-minute period. There is nothing essential to the psychology course about that form of testing. So, like getting a handicapped parking space for a student with a neuromuscular disorder, the blind student might get an accommodation that would allow her to take the test using technology that would read the test aloud to her and allow her to type her answers. Because of the technology, it might take longer than 50 minutes.

The remainder of this project is a survey about your attitudes towards people who are covered by ADA. Please take your time and answer honestly and carefully.

Appendix C

Depression Module

Please read carefully the following article about Depression. After you have done so, go to the next page and complete the short quiz. After completing the quiz, please fill out the other items. Most students in our pilot study completed this in less than 30 minutes.

Depression in College Students

Depression affects nearly 20 million Americans in any given one-year period. It is widespread enough that clinical depression will likely directly or indirectly affect everyone: about one in five people will have a diagnosis of depression sometime in their lives, but if you know as few as 20 adults, one of them is now likely to be experiencing a major depression.

So, what is depression? While we may use the word “depressed” to describe our mood, that is not depression. Clinical depression is diagnosed when a person has a depressed mood most of the day and loses interests in normal activities or relationships over an extended period of time. For a psychiatric diagnosis, the mood must persist for at least two weeks. In order to receive assistance at work or at school under the Americans with Disabilities Act, the depressed mood must have persisted for three or more months.

Although depression is the most common mental illnesses, it is one of the most misunderstood. People who have a clinical depression are more than just sad or moody: they have a chemical imbalance that can lead to extreme thoughts and behavior such as:

- * not being able to get to a final exam, even after a full-night’s sleep, because they feel too tired;
- * abruptly terminating a romantic relationship or dropping out of college;
- * losing interest in activities that were once a priority, such as not going to class or church or attending meetings or dropping completely off social media;
- * while complaining of being bored, refusing to do anything with other people;
- * not being able to choose among options, such as which of three excellent summer internships to take;
- * stopping taking care of one’s self—skipping meals; not being clean or well groomed;
- * not paying attention in social situations—either parties or class—because he or she is obsessively thinking about their lousy situation;
- * in its most extreme form, depression can be a major factor in suicide attempts.

In most cases, clinical depression is not caused by one factor. Most people who study depression agree that there are almost always both genetic and environmental reasons a person develops depression.

Diagnosis

Depression is difficult to diagnose since, unlike a physical illness, it cannot be seen and there are no biological tests for its presence. The Diagnostic and Statistical Manual of Mental Disorders, or DSM, is a tool that can be used to aid in the diagnosis. The DSM says that for a person to have a major depressive disorder he or she must have a depressed mood for more than two weeks and that mood has to affect social, occupational, or educational function. The patient also has to have five out of nine specific symptoms present during the same two-week period. These symptoms are:

1. Fatigue or loss of energy.
2. Sad or “flat” mood most of the day.
2. Diminished interest in almost all activities.
3. Significant weight loss or gain when not dieting.
4. Disruption of sleep.
5. Physical agitation.
7. Feelings of worthlessness or excessive or inappropriate guilt.
8. Diminished ability to concentrate or make decisions.
9. Recurrent thoughts of death or recurrent suicidal ideas

Mood changes stemming from a direct physiological effect of a substance such as recreational drugs or medication are specifically ruled out, as the immediate reactions to specific disruptive events, such as the death of a loved one.

Who gets depressed?

Women are more likely to develop depression than men, but men do become depressed. Men are more likely to develop depression as they get older, but women have the same rates of depression from adolescence through old age.

There are signs of depression in children and it is a very large problem among the elderly. While we often think that the prevalence of depression is very high among adolescents, it is actually higher among young adults.

Treatments

Depression can be controlled in some patients by therapy or medication. Unfortunately, many people with the illness do not seek treatment. Some people believe it is not a real illness so there is no need to see a doctor or that depression is a mental weakness that they can fix themselves. While neither of these beliefs is accurate, not seeking treatment contributes to the reason why depression is so prevalent in today’s society.

Psychotherapy for depression takes time to have an effect. While in the media psychotherapy is often seen centered around helping a patient identify the causes of their problems, therapy for depression most often involves looking for solutions to problems and strategies for regulating mood.

Drugs for depression often take time to work and there may even be a period when the patient feels worse. There are three major categories of antidepressant drugs and those are monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants, and the selective serotonin reuptake inhibitors (SSRIs). While SSRIs are becoming the most commonly prescribed medications, all three types have similar clinical effectiveness, although they are effective for different groups of individuals.

Neither drugs nor psychotherapy work for everyone. Some studies suggest that only about 50% of people with depression are substantially helped by therapy or drugs, and “substantially helped” does not mean that the depression is completely eradicated. It

has also been found that therapy and medication together produce no extra benefits. Therefore, we cannot conclude that if someone has depression, going to a psychiatrist and receiving medication or going to a psychologist and undertaking psycho-therapy results in a cure: they will still have many of the symptoms, just at a lower rate.

Depression in college students

While college is an extremely rewarding time, it can be a difficult process. At one time or another most students feel the pressure of school and felt helpless. Major depression is different from this, but it can coexist with these pressures and complicate both the depression and resolving the problems that cause pressure. Untreated depression can continue for a long time, which could seriously impact academic performance. Some students reported feeling so depressed that they cannot get out of bed, which hindered their normal study habits. They have disturbed sleep and therefore they cannot focus when they study or when they make it to a lecture. In 2011, the American College Health Association (ACHA) sent out a nationwide survey of college students in both 2 and 4 year institutions and found that about 30 percent of students reported feeling “so depressed that it was difficult to function” during the previous year. There have been studies found that say depression may lead to an increase in smoking, drinking, or other harmful behaviors.

Universities try to assist students with depression by providing them with accommodations to help overcome their major symptoms. For example, students with persistent insomnia may be allowed to change residence halls to one that is quieter or be allowed to move off campus. Students who are having difficulty paying attention in class may be given access to class outlines, be assigned a classroom peer who will share his or her notes; or be allowed to record lectures. In some cases, students whose energy levels are so low that they cannot keep up with five courses, may be allowed to drop a course, without a grade of W (Withdrawal) appearing on their transcripts. Such accommodations are made 1) only with a credible, competent evaluation by a psychiatrist and 2) to address the specific problems of an individual student.

Quiz:

1. What are the most commonly prescribed medications for depression?
 - a. MAOIs
 - b. SSRIs
 - c. Nitric Oxide
 - d. Tricyclic antidepressants
2. Approximately how many Americans are affected by depression in a one-year period?
 - a. 200,000

- b. 2 million
 - c. 20 million
 - d. 200 million
3. Which of these behaviors that depression triggers were not talked about in the module?
- a. Smoking
 - b. Binge drinking
 - c. Suicide
 - d. Unprotected sex
4. What was the Association mentioned that sent out the survey to college students about depression?
- a. American College Health Association (ACHA)
 - b. Modern Depression Department (MDD)
 - c. United States Mental Health Association (USMHA)
 - d. Department of Studies in Mental Health (DSMH).

Appendix C

Anxiety Module

Please read carefully the following article about. After you have done so, go the the next page and complete the the short quiz. After completing the quiz, please fill out the remaining items. Most students in our pilot study completed this is less than 30 minutes.

Anxiety Disorders

Currently in the United States, anxiety disorders are the most prevalent mental health concern. The National Institute of Mental Health estimates a 12-month prevalence of 18.1% for U.S. adults. This means that within a calendar year, 18.1% of all adults in America, nearly 1 out of every 5, suffer from anxiety that reaches diagnostic criteria of one of the Anxiety Disorders. Of this 18.1%, 22.8% are considered to be severe. These statistics estimate how many people will be affected each year, but in terms of lifetime prevalence, 28.8% of people will experience anxiety that reaches diagnostic criteria at some point in their life time.

We often hear people say that they feel anxious or that they are “on edge” due to a test or some other obligation. So, what separates this “on edge” feeling from the diagnosis of a particular Anxiety Disorder? There are a few answers to this question, but one of the main concerns is the time that the anxious symptoms exist. In terms of Generalized Anxiety Disorder, “Worry must occur more often than not for at least 6 months and is clearly excessive”. So, remember how bad you felt headed into that final? Your palms may have been sweaty, your heart may have been racing. Now, let’s imagine that these symptoms persist, more often than not, for 6 months.

The most common type of anxiety is specific to public speaking. It has been found to be treatable through Cognitive Behavior Therapy. Although it is rare to get an accommodation for a very specific anxiety like public speaking or test-taking, individuals with global anxiety will also exhibit anxiety around these specific issues. Sometimes those with global anxiety are allowed to submit a video of a speech in lieu of a live performance. Individuals with global anxiety may also be particularly fearful of testing situations. They may be allowed extra time to complete tests; in some instances, they may be administered tests orally; and in other be allowed to take a short break during tests. It is not uncommon for those with global anxiety to have difficulty with social interactions, participating in class, and sometimes even going to class. These students may need temporary permission to miss classes without penalties being imposed or they may be allowed to move out of residence hall situations that cause them to exhibit extreme reactions, although it is usually assumed that such accommodations are temporary until therapeutic efforts become effective.

Diagnosis (DSM V)

Generalized Anxiety Disorder:

- A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).

- B. The individual finds it difficult to control the worry.
- C. The anxiety or worry are associated with three (or more) of the following six symptoms (with at least some of the symptoms having been present for more days than not for the past 6 months):
 - a. Note: Only one item is required for children.
 - i. Restlessness or feeling keyed up or on edge.
 - ii. Being easily fatigued.
 - iii. Difficulty concentrating or mind going blank.
 - iv. Irritability.
 - v. Muscle tension.
 - vi. Sleep Disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).
- D. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).
- F. The disturbance is not better explained by another mental disorder (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder, separation from attachment figures in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder).

Who experiences Anxiety Disorder?

According to the National Institute of Mental Health, men are 60% less likely to experience an anxiety disorder over their lifetime than women. In terms of race, Hispanics are 30% less likely, and non-Hispanic blacks are 20% less likely to experience an anxiety disorder in their lifetime than non-Hispanic whites at some point in their lifetime. We also see differences in the ages. Once again looking at lifetime prevalence (or reaching diagnostic criteria for one of the anxiety disorders at some point in your lifetime) we see 30.2% of people age 18-29, 35.1% of people age 30-44, 30.8% of people age 45-59, and 15.3% of people age 60+.

As we see from these statistics, some groups experience anxiety more than others, but anxiety does affect people from all sexes, races, and ages.

Treatment

We can attempt to control anxiety in some people through therapy (psychotherapy, self-help/ support groups, stress management techniques, etc.) and/ or medication. This works for some people, but some people go through life without any treatment. The National Institute of Mental Health reports that only 42.2% of people with anxiety disorders are currently receiving treatment. Of that 42.2%, 33.8% of them are receiving a treatment deemed “minimally adequate”.

The most researched, thus the most proven type of therapy that may help alleviate anxiety is known as cognitive behavioral therapy. This type of therapy aims to teach the client alternate ways of thinking, as well as alternate ways to behave or react to anxiety provoking situations. This type of therapy focuses on first identifying, then challenging maladaptive thoughts that may underlie a person’s anxiety.

Another type of therapy, exposure therapy, believes that the person must confront

their fears that underlie their anxiety by ~~fully~~ fully engaging in whatever it is that is causing the anxiety, rather than avoiding it. The person experiences the anxious event or situation, while simultaneously practicing relaxation techniques. This pairing of a relaxed mind/ body while experiencing the anxiety provoking situation is thought to create this relaxed feeling when the anxious situation is later experienced in real life. Exposure therapy has been proven to be less effective than cognitive therapy when it comes to certain anxiety disorders.

The new wave of psychotherapy also places a lot of focus on mindfulness. In mindfulness based techniques, the client focuses on things like their five senses, or other bodily sensations, that arise while they are anxious. Rather than avoid these feelings, the individual tries to remain present and really experience the symptoms. This may seem counterintuitive, but some believe that by fully experiencing the feelings that accompany an individual's anxiety, the individual may realize that the thoughts they are having are not necessarily true (remember this has to do with anxiety disorders where one of the criteria is that the worry is clearly excessive). Mindfulness can also be used to be fully present as a way of meditation. This practice can be used to simply focus on your environment or fully engaging in an activity such as eating. This intense engagement in the present, in theory, will fill your mind with thoughts of your current experience, rather than anxious worries.

Medications

The most common medications prescribed for individuals with anxiety disorders are anti- anxiety drugs (benzodiazepines), anti-depressants (SSRIs or SNRIs), or beta-blockers. These medications have to be taken as scheduled, and are suggested to be used with psychotherapy.

Antidepressants primary use are to treat depression, but they have been proven to also reduce anxiety in some clients. These drugs take weeks to begin to take effect, so the individual has to take them consistently before feeling any differences.

Anti- anxiety medications strive to reduce anxious symptoms such as panic attacks or extreme, excessive worry. The most prevalent medications prescribed within this class, for most anxiety disorders, are benzodiazepines.

A beta- blocker can also be helpful to alleviate symptoms of anxiety. These drugs specifically are prescribed when some of the primary symptoms are physiological, such as shaking, blushing, or experiencing a rapid heartbeat while experiencing an anxiety provoking situation.

Anxiety in college students

In 2015, the American College Health Association conducted a survey known as the 2015 National College Health Assessment Survey. This data reported that 1 in every 6 college students, or 15.8% had been formally diagnosed with/ had been treated for, an anxiety disorder. The same study proclaimed that 21.9% of students surveyed reported that within the past year, their academic performance had been affected by anxiety. This is even more troublesome when you compare it to the 18.2% who reported having these problems when this survey was conducted in 2008.

Other Anxiety Disorders not discussed:

Generalized anxiety is not the only type of anxiety disorder in the DSM-V. Others include, but are not limited to:

- Specific Phobia

- Panic Disorder
- Agoraphobia
- Social Anxiety Disorder
- Separation Anxiety Disorder
- Unspecified Anxiety Disorder

Quiz:

1. What was name of the center mentioned who sent out the survey?
 - a. Center for Disease Control (CDC),
 - b. Injury Control Center (ICC)
 - c. Disease Control Center (DCC)
 - d. National Institute of Mental Health (NIMH)
2. Which of these types of anxiety disorders was not mentioned in the module?
 - a. Specific phobia
 - b. Social phobia
 - c. OCD
 - d. Generalized Anxiety Disorder
3. What type of therapy was mentioned as being effective for treating Anxiety?
 - a. Cognitive Behavioral Therapy
 - b. Psychoanalysis
 - c. Gestalt Therapy
 - d. None of the above
4. Who experienced higher rates of anxiety?
 - a. Men
 - b. Women

Appendix D

Questionnaire

PART ONE

The following sections contain questions pertaining to students at college with disabilities. Students may receive accommodations in order to promote normal learning conditions. After each definition there will be a list of possible accommodations and a 7-point scale on which you will be asked to rate how appropriate you think the accommodation is for that group of students.

Using the following scale:

7= extremely helpful; most students with this condition should get this benefit

6= very helpful; many students with this condition should get this benefit

5= helpful; many students with this condition should get this benefit

4 = neither helpful or unhelpful, in general; a few students may benefit from it

3 = unhelpful; very few students with this condition should get this benefit

2 = very unhelpful; students with this condition should not get this benefit

1 = extremely unhelpful; students with this condition should not get this benefit.

Students who have **MAJOR DEPRESSION** are characterized by low levels of energy; disturbed sleep which may leave them unfocused and tired; intrusive thoughts; negative mood and feelings of hopelessness; and in extreme cases, thoughts of suicide and attempts at suicide. A number of anti-depression medications exist, but most are not recommended for adolescents and young adults. Students with depression have difficulty with the sustained daily activities necessary to be a good student. They are often inattentive in classes and have difficulty beginning tasks. Depression is a psychiatric diagnosis and persons with depression are protected against discrimination under the Americans with Disabilities act.

Rate how appropriate/helpful do you think the following accommodations would be for a student with Major Depression?

1 2 3 4 5 6 7 1. 25% extra time to take a test.

1 2 3 4 5 6 7 2. Getting priority on single rooms in a dormitory.

1 2 3 4 5 6 7 3. Unlimited time to take tests in one sitting.

1 2 3 4 5 6 7 4. Being given a student to take notes for him or her without charge.

1 2 3 4 5 6 7 5. Being able to take tests in a quiet, distraction-free environment.

1 2 3 4 5 6 7 6. No penalties imposed for turning in papers late.

1 2 3 4 5 6 7 7. Being waived foreign language or math requirements.

1 2 3 4 5 6 7 8. Being allowed to take tests orally.

1 2 3 4 5 6 7 9. The ability to register for classes before other students.

1 2 3 4 5 6 7 10. Being allowed to substitute another activity (e.g., a video or a performance) for a term

paper or a thesis.

Students who have **ATTENTION DEFICIT DISORDER** are unable to focus their attention to the degree most others can. This means they are easily distracted by irrelevant events; often have difficulty with sustained tasks, such as reading or writing; and may have difficulty paying attention to activities, from lectures to ordinary conversations. Stimulant medication may help, but most persons with ADD (or ADHD) eventually develop side effects to the medication. Moreover, medication helps focus attention, but it does not determine what one pays attention to. A student on ADHD medication *may* pay attention to the lecture but just as well might pay attention to the bird in the tree outside the window. ADHD is a psychiatric diagnosis and is made by a physician. Like all psychiatric diagnoses, people with ADHD are protected against discrimination under the American with Disabilities Act.

Rate how appropriate do you think the following accommodations would be for a student with ADHD or ADD?

1 2 3 4 5 6 7 11. 25% extra time to take a test.

1 2 3 4 5 6 7 12. Getting priority on single rooms in a dormitory.

1 2 3 4 5 6 7 13. Unlimited time to take tests in one sitting.

1 2 3 4 5 6 7 14. Being given a student to take notes for him or her without charge.

1 2 3 4 5 6 7 15. Being able to take tests in a quiet, distraction-free environment.

1 2 3 4 5 6 7 17. No penalties imposed for turning in papers late.

1 2 3 4 5 6 7 18. Being waived foreign language or math requirements.

1 2 3 4 5 6 7 19. Being allowed to take tests orally.

1 2 3 4 5 6 7 20. The ability to register for classes before other students.

1 2 3 4 5 6 7 21. Being allowed to substitute another activity (e.g., a video or a performance) for a term

paper or a thesis.

Students who have experienced an **Anxiety Disorder** most commonly experience a phobia of public speaking. It is very treatable through Cognitive Behavior Therapy. Although it is rare to get an accommodation for a very specific anxiety like public speaking or test-taking, individuals with global anxiety will also exhibit anxiety around these specific issues.

Sometimes those with global anxiety are allowed to submit a video of a speech in lieu of a live performance. Individuals with global anxiety may also be particularly fearful of testing situations. They may be allowed extra time to complete tests; in some instances, they may be administered tests orally; and in other be allowed to take a short break during tests. It is not uncommon for those with global anxiety to have difficulty with social interactions, participating in class, and sometimes even going to class. These students may need temporary permission to miss classes without penalties being imposed or they may be allowed to move out of residence hall situations that cause them to exhibit extreme reactions, although it is usually assumed that such accommodations are temporary until therapeutic efforts become effective.

Rate how appropriate do you think the following accommodations would be for students with an Anxiety Disorder?

- 1 2 3 4 5 6 7 22. 25% extra time to take a test.
- 1 2 3 4 5 6 7 23. Getting priority on single rooms in a dormitory.
- 1 2 3 4 5 6 7 24. Unlimited time to take tests in one sitting.
- 1 2 3 4 5 6 7 25. Being given a student to take notes for him or her without charge.
- 1 2 3 4 5 6 7 25. Being able to take tests in a quiet, distraction-free environment.
- 1 2 3 4 5 6 7 26. No penalties imposed for turning in papers late.
- 1 2 3 4 5 6 7 27. Being waived foreign language or math requirements.
- 1 2 3 4 5 6 7 28. Being allowed to take tests orally.
- 1 2 3 4 5 6 7 29. The ability to register for classes before other students.
- 1 2 3 4 5 6 7 30. Being allowed to substitute another activity (e.g., a video or a performance) for a term paper or a thesis.

PART TWO

Now we would like you to think about these same accommodations for the same groups of students. This time, however, rate how FAIR you think it is for these students to receive these accommodations such that 1= not at all fair and 7= completely fair

For students with **MAJOR DEPRESSION:**

- 1 2 3 4 5 6 7 31. 25% extra time to take a test.
- 1 2 3 4 5 6 7 32. Getting priority on single rooms in a dormitory.
- 1 2 3 4 5 6 7 33. Unlimited time to take tests in one sitting.

- 1 2 3 4 5 6 7 34. Being given a student to take notes for him or her without charge.
- 1 2 3 4 5 6 7 35. Being able to take tests in a quiet, distraction-free environment.
- 1 2 3 4 5 6 7 36. No penalties imposed for turning in papers late.
- 1 2 3 4 5 6 7 37. Being waived foreign language or math requirements.
- 1 2 3 4 5 6 7 38. Being allowed to take tests orally.
- 1 2 3 4 5 6 7 39. The ability to register for classes before other students.
- 1 2 3 4 5 6 7 40. Being allowed to substitute another activity (e.g., a video or a performance) for a term
paper or a thesis.

For students with **ADHD**:

- 1 2 3 4 5 6 7 41. 25% extra time to take a test.
- 1 2 3 4 5 6 7 42. Getting priority on single rooms in a dormitory.
- 1 2 3 4 5 6 7 43. Unlimited time to take tests in one sitting.
- 1 2 3 4 5 6 7 44. Being given a student to take notes for him or her without charge.
- 1 2 3 4 5 6 7 45. Being able to take tests in a quiet, distraction-free environment.
- 1 2 3 4 5 6 7 46. No penalties imposed for turning in papers late.
- 1 2 3 4 5 6 7 47. Being waived foreign language or math requirements.
- 1 2 3 4 5 6 7 48. Being allowed to take tests orally.
- 1 2 3 4 5 6 7 49. The ability to register for classes before other students.
- 1 2 3 4 5 6 7 50. Being allowed to substitute another activity (e.g., a video or a performance) for a term
paper or a thesis.

For students with **Anxiety**:

- 1 2 3 4 5 6 7 51. 25% extra time to take a test.
- 1 2 3 4 5 6 7 52. Getting priority on single rooms in a dormitory.
- 1 2 3 4 5 6 7 53. Unlimited time to take tests in one sitting.
- 1 2 3 4 5 6 7 54. Being given a student to take notes for him or her without charge.
- 1 2 3 4 5 6 7 55. Being able to take tests in a quiet, distraction-free environment.
- 1 2 3 4 5 6 7 56. No penalties imposed for turning in papers late.

- 1 2 3 4 5 6 7 57. Being waived foreign language or math requirements.
- 1 2 3 4 5 6 7 58. Being allowed to take tests orally.
- 1 2 3 4 5 6 7 59. The ability to register for classes before other students.
- 1 2 3 4 5 6 7 60. Being allowed to substitute another activity (e.g., a video or a performance) for a term
paper or a thesis.

PART THREE

Now we would like you to think about these same disorders, but we will be asking questions about relationships. This time, however, rate how WILLING you would be to engage in the following with an individual with the disorder in question such that 1= definitely willing 2= somewhat willing 3= somewhat unwilling 4= definitely unwilling.

For students with Major Depression:

Would you be/ would you.....

- 1 2 3 4 67. willing to move next door to someone with depression
- 1 2 3 4 68. spend an evening socializing with someone with depression
- 1 2 3 4 69. willing to start a collaborative project with someone with depression
- 1 2 3 4 70. make friends with someone with depression...
- 1 2 3 4 71. marry into your family someone with depression...
- 1 2 3 4 72. marry or date someone with depression...

For students with ADHD:

Would you be/ would you.....

- 1 2 3 4 73. willing to move next door to someone with ADHD
- 1 2 3 4 74. spend an evening socializing with someone with ADHD
- 1 2 3 4 75. willing to start a collaborative project with someone with ADHD
- 1 2 3 4 76. make friends with someone with ADHD...
- 1 2 3 4 77. marry into your family someone with ADHD...
- 1 2 3 4 78. marry or date someone with ADHD...

For students with Anxiety:

Would you be/ would you.....

- 1 2 3 4 79. willing to move next door to someone with anxiety
- 1 2 3 4 80. spend an evening socializing with someone with anxiety
- 1 2 3 4 81. willing to start a collaborative project with someone with anxiety
- 1 2 3 4 82. make friends with someone with anxiety...
- 1 2 3 4 83. marry into your family someone with anxiety...
- 1 2 3 4 84. marry or date someone with anxiety...