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# Changing peer's attitudes towards accommodations for disabled students

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# Changing Peer's Attitudes Towards Accommodations for Disabled Students

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An Honors Program Project Presented to  
the Faculty of the  
College of Health and Behavioral Studies  
James Madison University

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By Dylan Gene Kitley

May 2016

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Accepted by the faculty of the Department of Psychology, James Madison University, in partial fulfillment of the requirements for the Honors Program.

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PUBLIC PRESENTATION

This work is accepted for presentation, in part or in full, at Psychology Symposium on April 25<sup>th</sup> 2016.

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### **Acknowledgements**

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## Overview

Previous research on attitudes towards accommodations given to university students with disabilities has examined three groups: Faculty, disabled students, and their non-disabled peers. In general, faculty members have positive attitudes about implementing accommodations as long as they do not drastically change the curriculum. Both disabled and non-disabled students had similar positive attitudes for external disabilities such as visual impairment, cerebral palsy, and brain injury but less positive attitudes towards non-physical disabilities like depression. The purpose of this study was to see if an online educational intervention could change attitudes towards accommodations of disabilities. Participants ( $N = 122$ ) were divided into four groups: one read a brief educational module on depression, one read a module on Traumatic Brain Injury, one read both the depression and TBI modules, and one read a control. They were then asked to rate the helpfulness of 10 accommodations for students with disabilities on a scale of 1 to 7, 1 being extremely unhelpful and 7 being extremely helpful. They were then asked to rate the fairness of those accommodations on the same scale. There were three disabilities rated: TBI, Attention Deficit Hyperactivity Disorder, and depression. Results showed that there was a significant, positive main effect for fairness among those who read about depression. ( $F[1,121] = 4.10, p = 0.045, \eta^2 = .03$ ). This result shows that even with a modest intervention, attitudes towards accommodations can be changed. All other hypotheses failed to reach significance; however, some possible reasons for this could be the small sample size, the short length of the intervention, and high endorsements of accommodations for students with TBI.

### **Changing Peer's Attitudes Towards Accommodations for Disabled Students**

The Americans with Disabilities Act (ADA) was created in 1990 in order to protect individuals with disabilities from discrimination in housing, the work place, and in educational and training opportunities (Merrell, Ervin, & Peacock, 2012). One of the provisions of this act was to provide educational accommodations to college and university students with disabilities. The Individuals with Disabilities Education Act (IDEA) is often confused in this regard with the ADA but it provides different services and only provides them through high school. IDEA provides educational and physical accommodations as a right for all students with a disability, while ADA provides accommodations to individuals with disabilities to gain access to programs they can otherwise successfully complete. For example, a middle school student with an intellectual disability has the right to be exposed to American history at his level of understanding: the curriculum must be modified. No such modifications are mandated by ADA: only access must be provided. So, for example, a student with a traumatic brain injury who needs more time to complete a test or wheelchair accessible dormitory facilities must be provided those accommodations in a program for which he/she is qualified for.

From the beginning of the implementation of regulations regarding accommodations, concern was voiced about the successful implementation of ADA due to negative campus attitudes toward providing accommodations (e.g., Aksamit, Leuenberger, & Morris, 1987; Burgstahler, 1994). Attitudes towards accommodations given to university students with disabilities have been studied since that time in three groups; faculty, students with disabilities, and peers without disabilities (Merrell, Ervin, & Peacock, 2012). Below is a summary of those studies.

*Faculty Attitudes and Implementation*

Faculty member's approval of accommodations has been mixed according to most research. Research has found that faculty have had positive attitudes towards accepting minor accommodations such as extending test-taking time (Lombardi, Murray, & Gerdes, 2011), spending more time helping students with a disability, and having positive perceptions of those students (Murray, Wren, & Keys, 2008). Faculty members are less likely however to approve accommodations that would change the curriculum (Williams & Ceci, 1999). In a study by Cook, Rumrill, and Tankersley (2009) faculty were found to have generally positive attitudes towards giving accommodations; however, they would not allow accommodations that lowered the standards of their course or entailed too much effort on their part. Accommodations such as allowing extra credit only to a specific group, overlooking grammar errors, permitting course substitutions, or allowing students to turn in tape recorded assignments were met with negative views.

There is also research that says factors such as age, experience, and academic discipline can affect attitudes in faculty members (Vogel et al, 1999). Nelson et al. (1999) also found differences among three academic divisions: Education, Business, and Arts and Science. Faculty from the College of Education responded more positively for accommodations towards students with a learning disability than Business and Arts and Science. Non-tenure faculty reported higher levels of positive attitudes towards providing accommodations than their tenured coworkers (Bourke, Strehorn, & Silver 2000). There is also research that indicates that female faculty had a more positive attitude than the male faculty towards people with disabilities (Rao, 2004). Buchanan, Chalres, Rigler, Hart (2010) found that age had a significant effect on if faculty would allow accommodations for ADHD. They found that older faculty thought that people who had

ADHD needed special accommodations. These older faculty also were more likely not to attribute ADHD symptoms to lack of discipline, lack of motivation, or “bad” character.

In a study conducted by Hindes and Mather (2007) 83 professors at a Canadian university completed a 16-item online survey of their attitudes toward inclusion and accommodations. Attitudes were expressed on a high-positive 7-point Likert type scale. Five general classifications of disability (sensory, speech and language, motor, attention, and psychiatric) were included. For each disability one question asked for a rating of whether individuals with the disability “should be included in general classes;” one asked about the university providing assistance, such as providing note-takers, writing aides, extra time on tests; while the third question asked about professors providing assistance, such as allowing oral tests or providing lecture notes. The examples of specific accommodations were different for each of the disability classifications. On average, professors rated inclusion in classes more positively ( $M = 5.8$ ) than the university providing services ( $M = 5.5$ ) and much more positively than professors providing accommodations ( $M = 4.4$ ). Similarly, there were differences in the ratings for disability type, with motor disabilities receiving the most favorable ratings ( $M = 5.8$ ), followed by language ( $M = 5.4$ ), sensory ( $M = 5.4$ ), attention ( $M = 4.8$ ) and psychiatric ( $M = 4.7$ ). A factor analysis found a three factor solution: Factor 1 consisted of inclusion and university assistance questions for sensory, language, and motor disabilities; Factor II consisted of the inclusion and university assistance items for attention and psychiatric disabilities; while Factor III consisted of the professor assistance items. Further analysis found that female professors were significantly higher in their endorsements of Factor II, while Education faculty held the most positive attitudes toward professor accommodation ( $M = 5.5$ ,  $SD = 1.5$ ), followed by Health Sciences ( $M = 4.2$ ,  $SD = 1.7$ ), and Fine Arts ( $M = 3.5$ ,  $SD = 1.8$ ). The sixteenth item asked about who should pay for



these extra services, and faculty reported that it should be split between the student and the government.

An interesting idea arose when examining how graduate students felt about students with disabilities. While graduate teaching assistants have qualities of both faculty and fellow students, they have more authority than regular students. These assistants however may be more approachable in some cases than a full time professor. McCallister, Wilson, and Baker (2014) looked at how graduate students seeking either their masters or doctorate felt about their students with disabilities. Participants were asked about their attitudes on the Attitudes towards Disabled Persons Scale (ATDP). Researchers found that female graduate students had higher ATDP scores than male counterparts. A higher score on the ATDP scales reflect that the participant is more likely to show positive attitudes and perceive disabled and non-disabled students equally. They also found that those participants who had reported having personal experiences with disabled individuals, such as a friend or student had much higher ATDP scores. The participants in their responses also requested a need for more knowledge on how to work with different disabilities. This raises the interesting possibility that maybe just the experience of being around a disabled member of society can drastically impact how someone feels about disabilities and accommodations for those who need them.

### *Students with Disabilities*

Students that are diagnosed with some type of disability often times find the school setting to be different for them. Accommodations are supposed to provide help for these students so they can grow and learn like their non-disabled peers. A very common finding when researching students with disabilities is that most of the time they do not even know accommodations for them exist. Chew, Jensen, and Rosen (2009) found that only half of the

students they surveyed reported receiving adequate accommodations and only half of that group reported using these accommodations. The most common reason these students reported not using the accommodations was that they were not aware they existed or that they wanted to do things like their peers. Some other reasons students do not use their proper accommodations is that they might not understand their legal rights or how these accommodations will help them (Hartman- Hall & Haaga, 2002).

Some students seek services just only at a time of academic need. Lightner, Kipps-Vaughan, Schulte, and Trice (2012) interviewed students with a learning disability about when they went to obtain their accommodations from disability services. Thirty-four out of the 42 interviewed students reported that they first sought out services provided by their university as a response to an academic crisis. The crises included: failing a test, being on academic probation, having a midterm GPA that was failing, failing a critical test for their major, not being able to pledge a sorority because of a low GPA, or having a low GPA for their major. Students who did not seek out accommodations reported that they waited because they either had a limited knowledge of the services they could be provided, they felt that their freshmen year was going well, or that they wanted to create an identity for themselves that was free of disabilities. These students were also more likely to not seek out services when they were in high school transiting into college.

Students with disabilities and students without disabilities do seem to agree on certain things when it comes to accommodations. Upton, Harper, and Wadsworth (2005) surveyed students with and without disabilities to assess what disabilities were most deserving of accommodations. They found that both students who identified as having a disability and as not having a disability rated visual impairment, cerebral palsy, brain injury and hearing impairment

as the top four disabilities most deserving of an accommodation. Disabled and non-disabled peers also agreed on the idea that students who suffer from more serious limitations deserve accommodations more frequently than those with less obvious limitations.

Because the number of students with disabilities pursuing higher education is rising, being able to self-identify with a disability is becoming more common and acceptable. Baker, Boland, and Nowik (2012) surveyed faculty, non-disabled students, and students with disabilities about how they felt the college classroom climate was and how their attitudes towards accommodations. They found that teachers find the classroom to be more welcoming and supportive than the students do. Students often have a different perspective because they hear the side chatter and attitudes that a teacher might miss. Fifty-three students responded as having a disability and of these participants almost three-quarters (74.5%) said they do not self-identify with having a disability to their peers. Over half of these participants said that they do not self-identify as being disabled with their professors as well. As expected some of the reasons for this self-disclosure was feeling that they do not want to be labeled, did not think the accommodations would help, or thought asking for accommodations would create a hostile environment. What is interesting is that when asked about how they feel they were treated, participants responded that their peers treat them equally. Over half of the students also responded saying they meet their needs in the classroom once their accommodations were met and that their campus experience was positive. If the treatment from their peers and classroom setting is so beneficial, it should be easy for disabled students to get the accommodations they deserve but it still troubles many students to ask for these accommodations.

*Non-Disabled Peers*

Students without disabilities have not been research extensively, which is unusual because it is their disapproval that both the teacher and disabled student fear. We have been able to find only four published studies that examine the attitudes of students on their disabled peers.

Hindes and Mather (2007) also gave their survey described above to 687 undergraduates at the same Canadian university. As with faculty, giving assistance to students with sensory, motor, and language disabilities was viewed more positively than for those with attention and psychiatric disabilities. Unlike faculty, the factor analysis produced a two-factor solution: Factor I included items that dealt with providing university or professorial accommodations, while Factor II dealt with whether the disability should be included in general education. For both factors, women had higher ratings than men. Those who knew someone with a disability (29%) rated university provided or professorial accommodations (Factor 1) lower than those who did not know someone with a disability, while those who knew someone with a disability endorsed inclusion at a higher rate. Those with more years of university study were more favorable toward inclusion than those with fewer years, but years of high education did not affect endorsement of accommodations.

Chew, Jensen, and Rosen (2009) also found that when surveying non-disabled peers, that more negative than positive adjectives were endorsed when describing individuals with Attention Deficit Hyperactivity Disorder. The article did not explicitly mention what words corresponded with a negative adjective or a positive one. Zambo, Zambo, and Sidlik (2013) studied attitudes towards peers with ADHD however looked at how preservice teachers, education majors still completing their undergraduate degree, felt. They found that the majority of them knew someone who had the disorder, which helped their understanding of some of the possible symptoms.

What these preservice teachers lacked was an understanding for the disability. They responded to open ended questions about changing the environment rather than the individuals students' learning that the researcher hypothesized would lead to possible negative beliefs about students dealing with ADHD. These beliefs might even then turn into incorrect outlooks on the students' ability to learn.

Garcia, Paetzold, and Colella (2005) found that personality might be linked to judgment of appropriateness of accommodations. They found that agreeableness and openness to experience were personality dimensions that might lead to greater acceptance of accommodations.

Unpublished research by Trice and Greer (2015) at James Madison University indicates that students at the university have mixed attitudes towards accommodations for people with disabilities. These authors followed the general perspective of Hines and Mather (2007), except that they examined five specific disabilities (depression, learning disabilities, ADHD, autism spectrum disorder, and traumatic brain injury) rather than clusters of disabilities. They also examined only disabilities that would be considered psychological in nature, and did not include motor or sensory disabilities. They asked for ratings of specific accommodations rather than clusters of accommodations based on whether they are provided administratively by the university or the individual faculty member; and asked for ratings of each accommodation for each disability, not just providing exemplars that varied by disability classification.

For each disability, students were asked to rate on a 7-point, high-positive scale 10 different accommodations that included 25% extra time on tests, unlimited time on tests, waiver of the foreign language requirement, ability to substitute a speech or performance for a term paper; exemption from university dormitory requirements; provision of a note-taker; no penalties

for late papers, taking tests in quiet rooms, early registration and oral tests. When a total of the 10 accommodation ratings were used TBI and autism spectrum disorder were found have high positive attitudes, learning disabilities and ADHD were neutral, and depression was found to have the lowest endorsement towards accommodations. There also was a significant difference across accommodations. Twenty-five percent extra time on tests and taking tests in a quiet room were rated highest across all disabilities with waiving graduation requirements, late papers without penalty, and early registration being the lowest rating.

### *Educational Training*

Although it is a long road until accommodations for disabilities are accepted everywhere, some progress has been made. The number of students with disabilities is growing each year so education about these students is a must. It is known that faculty and employers who have very little knowledge about students with disabilities are less likely to find accommodations appropriate and implement them. Without this informed knowledge there is also evidence that some members may develop a negative attitude or create barriers for these individuals (Gitlow, 2001). Kornblau and Dudley (1996) found that when creating an atmosphere of understanding and respect for individual differences, people are more likely to disclose that they have a disability and seek the proper treatment they need. With one of the main issues with students who experience disabilities being not seeking accommodations maybe the environment needs to be altered.

Some type of education about accommodations seems to be a possible solution. College faculty reported that they were willing to implement strategies that were close to their existing teaching styles in order to accommodate students with a learning disability (Bigaj, Shaw, & McGuire 1999). Milligan (2010) found that when faculty was exposed to an educational

intervention that they were more willing to make academic accommodations as well as willing to change their teaching practices to accommodate for students with disabilities. While the intervention they used was hours long with speakers and in-group discussion, it still should hold true that some education on why accommodations are necessary might change the negative perception.

### *Online Education*

Education in general can be very informative however sometimes the platform to which it is displayed in makes a real difference. While scanning the Internet for humorous videos or taking informal Facebook surveys is indeed some of the more popular online functions, online education is very different. Online education might have the negative stigma as being distracting or not as informative as traditional learning, this is often not the case. Allen and Seamon (2010) surveyed more than 2,500 colleges and universities and found that a majority of them reported that online learning was critical to their long-term strategy of education. This idea of a blended style of education is nothing new; in fact, in 2002, the president of Pennsylvania State University said that the convergence between online and residential instruction was the single greatest trend in higher education today (Young, 2002). The benefits of online education can be extremely valuable. A blended online learning approach can give students easier access to knowledge, better social interaction, easier revisions, and have cost effectiveness (Osguthrope & Graham, 2003). The real concern lies with how faculty presents the information during online education and if there is a balance between innovation and production (Graham, 2006). Graham's recommended to overcome this barrier is to make online education easily accessible to people of all socio-economic spectrums, culturally adaptable, and have easy instructions. With that being

said, online education is being used and is an effective approach to new ways of working, studying, and problem solving (Harasim, 1996).

Pollock (2009) looked specifically at changing attitudes about disabled students through online education. A group of faculty was given online training and education on adaptive teaching strategies, general information about disabilities, and accommodations that might be helpful. He found that this online training led to a slight improvement in scores on a disability knowledge questionnaire and the Attitudes Toward Disabled Persons (ATDP).

### *The Present Study*

According to Trice and Greer (2015), accommodations for TBI had a very positive rating, ADHD was neutral, and depression was not very positive. I chose these three variables to study in the present study to see if attitudes could be affected by a brief educational intervention. One of the main reasons I am choosing online education, besides effectiveness and easy accessibility is because it has been found to be promote greater partnerships; that is other universities and employers can easily replicate the information (Appana, 2008).

Trice and Greer (2015) had asked for feelings of “appropriateness”, here I split appropriateness into two categories of helpfulness and fairness. This was done to resolve the ambiguity expressed by the focus groups on what “appropriateness” of an accommodation really means.

### *Hypothesis*

#### *Primary Hypotheses*

1. Reading about depression and TBI will significantly raise ratings of helpfulness/appropriateness and fairness for those disabilities, respectively.



*Secondary Hypotheses*

2. Reading about two disabilities will have a greater effect than just reading about one.

*Generalization Hypotheses*

3. A generalization effect will spread to disabilities not read about.

## Method

### *Participants*

Participants ( $N = 122$ ) were undergraduate students from James Madison University. Participants were split into four groups; one who read the control module ( $N = 32$ ), one who read the depression module ( $N = 24$ ), one who read the TBI module ( $N = 33$ ), and who read both the depression and TBI module ( $N = 33$ ). The participants were selected from the psychology department participant pool.

### *Materials*

Educational modules were created in order to promote awareness of students with disabilities. One module was created about Traumatic Brain Injury (TBI) and another was about Major Depression. The modules consist of an overview of the disability, how it is diagnosed, and how specifically it could affect the life of a college student. Research was done from multiple sources to ensure accuracy in the work. A third passage was created as a distractor for the control group. This passage was taken from the 18<sup>th</sup> century novel *Candide* by Voltaire. Following either module(s) or passage, a quiz was prepared for participants to take. The questions were designed to be challenging if the participant did not read thoroughly but fairly easy if he or she did. There were a total of five questions on each quiz. There was no set time limit for the study; however it was budgeted to take 15 to 30 minutes. The disabilities modules, control reading, and quizzes can be found in Appendix A.

### *Questionnaire*

Participants rated the helpfulness of accommodations for students with disabilities on a scale of 1 to 7, 1 being extremely unhelpful and 7 being extremely helpful. There were three disabilities chosen to ask questions about and they were as followed: Major Depression,

Attention Deficit Disorder and Traumatic Brain Injury. For all disabilities a short definition was provided to give participants some idea of what the disability was like. Following these set of questions, participants rated how fair they thought each accommodation was. The scale for these questions was the same and the same three disabilities were used.

Participants were then asked demographic questions pertaining to prior education, gender, current major if any, GPA, year of study, and if he/she had every been diagnosed with a disability. The full survey can be found in Appendix B.

### *ADHD*

Attention Deficit Hyperactivity Disorder was asked about in the questionnaire but was not given an educational module. The reason for including this disability was to use it as a control condition looking for possible generalization.

### *Design*

We used a 2 (read depression module or did not read depression module) x 2 (read TBI module or did not read TBI module) between subjects factorial design to analyze the data. There will be six dependent variables: helpfulness of depression, helpfulness of ADHD, helpfulness of TBI, fairness of depression, fairness of ADHD, fairness of TBI. The individual ratings for each dependent variable were added together to get a group mean. The reason for this type of analysis is because we wanted to see if there was a stronger effect on attitude change if participants read about two different disabilities. That is we wanted to see if the group who read both modules on depression and TBI were more influenced by both readings that the control group, or the groups reading just one module. A table has been provided to more clearly show the design of the study (Table 1).

Table 1. Design scheme of the 2x2 ANOVA ran.

Disability	TBI		
Depression	Did they read about this disability	<b>YES</b>	<b>NO</b>
	<b>YES</b>	Group 1- YES, YES so they read about both	Group 2- YES, NO so they just read depression alone
	<b>NO</b>	Group 3- NO, YES so they read TBI alone.	Group 4- NO, NO so they read neither (they read the control)

## Results

Quizzes were given to participants after the module was read to ensure effective and thorough reading. The depression group had a mean quiz score of 78%, the TBI group with a score of 91%, the *Candide* group scored an 87%, and the group who read both depression and TBI scored an 88%. These scores suggested us that participants read the module and their data could be used.

### *Primary Hypotheses*

In order to test the effects of the readings on the perceived helpfulness of accommodations for people with depression, we submitted an average of the 10 accommodations ratings to a 2 x 2 analysis of variance. Neither the main effect for Depression ( $F[1,121] = 0.05, p = .83$ ) nor the main effect for TBI readings ( $F[1,121] = 0.29, p = .59$ ) proved significant, nor was there a significant interaction,  $F(1,121) = 1.04, p = .31$ .

In testing the fairness of accommodations for students with depression, using the average of the 10 ratings of accommodation fairness, there was a significant main effect for depression ( $F[1,121] = 4.10, p = 0.045, \eta\text{-squared} = .03$ ). However, the main effect for TBI ( $F[1,121] = 0.19, p = .67$ ) and the interaction between the two ( $F[1,121] = 0.06, p = .81$ ) was not found to be significant. A Cronbach's alpha was found to be significant at 0.9.

No significant main effect on ratings of helpfulness of accommodations for TBI was found for reading about depression ( $F[1,121] = 0.77, p = .38$ ) nor was there a main effect on ratings TBI ( $F[1,121] = 0.48, p = .49$ ) for accommodations. The interaction was also not found to be significant ( $F[1,121] = 1.11, p = .29$ ).

The 10 items that dealt with the fairness of accommodations for students with TBI failed to produce a significant main effect for Depression ( $F[1,121] = 3.38, p = .07$ ) or for TBI

( $F[1,121] = 1.98, p = .16$ ). There was also no significant interaction between the two ( $F[1,121] = 0.54, p = .46$ ). Values for the group means and standard deviations for all comparisons are included in Table 2.

Table 2. Group means and standard deviations of scale questionnaire items.

	Read Control	Read Depression	Read TBI	Read both Depression and TBI
Helpfulness of Depression	3.98 (1.74)	4.16 (1.80)	4.33 (1.74)	4.03 (1.61)
Helpfulness of ADHD	4.62 (1.68)	4.53 (1.04)	4.42 (1.70)	4.29 (1.72)
Helpfulness of TBI	5.06 (1.51)	5.45 (1.54)	5.13 (1.74)	5.05 (1.50)
Fairness of Depression	3.71 (1.89)	4.23 (1.91)	3.67 (1.78)	4.10 (1.73)
Fairness of ADHD	4.14 (1.71)	4.41 (1.97)	3.81 (1.79)	4.26 (1.82)
Fairness of TBI	4.80 (1.59)	5.33 (1.59)	4.67 (1.68)	4.89 (1.62)

This information is also presented in column form in order have a better visual representation of the data (Figure 1, Figure 2).

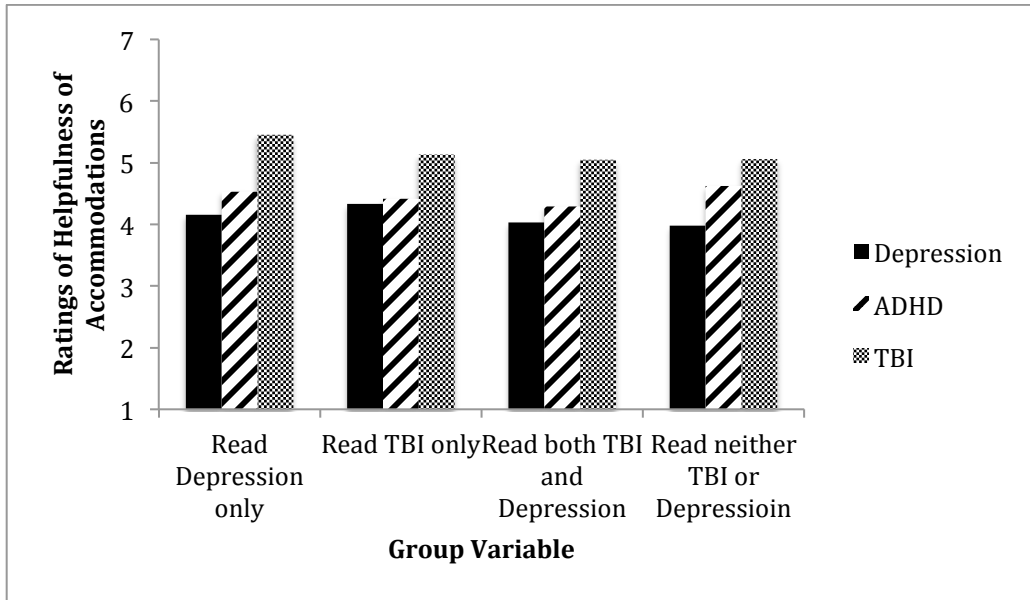


Figure 1. Group mean ratings of helpfulness of accommodations on a 7 point scale.

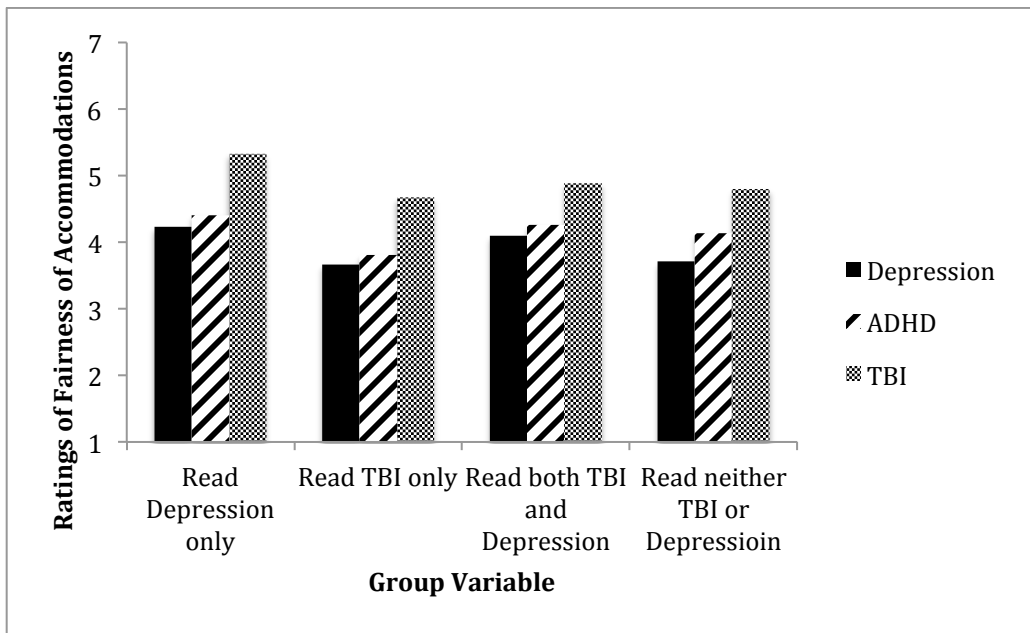


Figure 2. Group mean ratings of fairness of accommodations on the same 7 point scale.

*Secondary Hypotheses*

If reading about two disabilities were to produce a larger effect than reading about one disability, then there should be significant interactions. None of the interactions was significant.

*Generalization Hypotheses*

There was no significant main effect for reading about depression ( $F[1,121] = 0.25, p = .62$ ) or TBI ( $F[1,121] = 0.98, p = .32$ ) on the 10 items dealing with how appropriate accommodations were for students with ADHD. The interaction was also not significant ( $F[1,121] = 0.01, p = .93$ ).

When comparing the items dealing with fairness of accommodations for students with ADHD, neither the main effect for Depression ( $F[1,121] = 2.40, p = .12$ ) nor the main effect for TBI readings ( $F[1,121] = 1.07, p = .30$ ) proved significant. The interaction also proved not to be significant,  $F(1,121) = 0.16, p = .69$ . Table 3 provides a summary of the inferential statistical tests.



Table 3. P-values for main effect size of depression and TBI along with interaction values. Statically significant values to the p-value of 0.05 are indicated with a \*. Results answering primary hypotheses are noted with a **P**, results answering secondary hypotheses are noted with a **S**, and results answering the generalization hypotheses are noted with a **G**.

	Depression main effect	TBI main effect	Interaction
Appropriateness of Depression	$p = .83$ <b>P</b>	$p = .59$ <b>G</b>	$p = .31$ <b>S</b>
Appropriateness of ADHD	$p = .62$ <b>G</b>	$p = .32$ <b>G</b>	$p = .93$ <b>S</b>
Appropriateness of TBI	$p = .38$ <b>G</b>	$p = .49$ <b>P</b>	$p = .29$ <b>S</b>
Fairness of Depression	$p = .045^*$ <b>P</b>	$p = .67$ <b>G</b>	$p = .81$ <b>S</b>
Fairness of ADHD	$p = .12$ <b>G</b>	$p = .30$ <b>G</b>	$p = .69$ <b>S</b>
Fairness of TBI	$p = .07$ <b>G</b>	$p = .16$ <b>P</b>	$p = .46$ <b>S</b>

## Discussion

The one significant main effect was found in the group who read the depression module in terms of how they felt about the fairness of accommodations towards students with depression. This result tells us that a brief module can produce positive changes in attitudes. This is a critical finding because depression had very low ratings for accommodations both in Trice and Greer (2015) and among the students here who did not read about depression: the two groups who did not receive any information about depression both had mean ratings under 4.00.

Since depression is an internal issue, there can be misconceptions about how serious it actually is. People may think that those who are depressed can just “snap-out” of it or that everyone gets depressed and for that reason should be treated just like everyone else. While depression may be a common feeling in people, there is a difference between that and having a major depression disorder. Recent findings show that students are more likely to accept accommodations if the disability is more obvious (Upton, Harper, & Wadsworth, 2005). Therefore, a less obvious disability like depression might not be favorably viewed. What the results show, however, is that with a little bit of knowledge on how depression really affects people, attitudes can change. The module focused on how depression can drastically change a college student's life and seeing how all of our participants were of the college age maybe hit home.

The two groups who did read the module on depression had ratings over 4.00 meaning they were positive. This shows that normally students might have negative views on depression but could possibly change with some form of education. Even though a jump from a high 3 rating to a low 4 rating is indicative of a small effect, if you think about it from going from a negative point of view to a positive it is definitely worth noting.

Although there was only one main effect found to be significant, the group means did sometimes increase as the intervention was added. The group mean in the appropriateness of depression category, while not significant, did increase once some form of education was present. Those who received the intervention were more favorable in their attitudes towards appropriateness of accommodations for depression than those who read the control reading. That is an important finding because it means that with only a little bit of background knowledge, attitudes towards the appropriateness of an accommodation can change somewhat even if it is by a small factor.

When looking at the results from the attitudes towards TBI, something that stands out is how high the scores in all conditions were. While there was no statistically significant main effect for reading about TBI, most of the mean scores were in the high 4 to 5 range. This potentially could mean that although reading about TBI did not influence the participant's attitudes, their attitudes might have already been too positive to change. There very well could have been a near ceiling effect for TBI since it is usually thought of as an extreme external disability. Prior research also indicated that when students were surveyed about which disability they would be most likely to accommodate for, brain injury was at the top (Upton, Harper, & Wadsworth, 2005). Since the attitude was already fairly high, maybe it was unlikely that intervention changed anyone's mind because they already catered to the idea of its severity. This parallels the research of Trice and Greer (2015) in which TBI had the highest endorsements.

#### *Post Hoc Analysis*

GPA was found to have a small, positive correlation with total attitude score ( $r = .21$ ),  $p = .02$ ). Total attitude score can be defined as the sum of all the ratings for items dealing with attitudes towards disabilities. While there are many possible reasons for why this could have

occurred, one could deal with class attendance. GPA has a strong correlation with class attendance in college students (Crede, Roch, & Kieszczynka 2010). Perhaps the students who reported having a higher GPA attended more classes than those with a lower GPA. This could tell us that those students are more likely to have had class with students who have disabilities and could see why accommodations would be both more helpful and fair. They are exposed to more classroom techniques that work for them but might be hard for a disabled peer to fully utilize. Prior research by McCallister, Wilson, and Baker (2014) indicated that graduate students who personally knew or worked with students with disabilities had much more positive attitude on accommodations than those who have no personal connection. This idea behind students with higher GPAs being positively correlated with total attitude score could potentially support that result.

Another possibility for the positive correlation could be that people with high GPAs are not as threatened by giving someone else a bit of an advantage. Those students could be already into their academic routine and feel as if an advantage for someone else would not be detrimental to their success. Looking at the other spectrum of students, maybe lower GPA students are not as concerned with their grades or the grades of their peers meaning they too would be tolerant towards accommodating disabled students.

No analysis was run for major because the majority of the participants were freshmen and sophomores (89.9%). Since it is common for freshmen and sophomores to change their major we felt that major did not tell us enough information at this state to run a correlational analysis. Neither year of study nor identity of having a disability or not was significantly correlated with total attitude score ( $r = .04, p = .64$  and  $r = .03, p = .73$  respectively).

*Limitations of the study*

There was no main effect for helpfulness of depression, helpfulness of TBI and helpfulness of TBI, which says that 3 out of our 4 primary hypotheses could not be proven true. There a few reasons that this might have happened and one could have been our sample size. Since there was only 122 participants and around 30 per each group there might not have been enough participation to really get an effect. Probably the most important limitation to the study was that there was only a modest intervention. The participants were only sampled from one university and were mainly just freshmen and sophomores. This gave us a very specific set of participant that maybe is not the most accurate representation of a sample. The intervention was a short 4 to 5 page module that broadly spoke about a topic. This module was not enough to make participants experts on these disabilities by any means. This information could have not been enough to change participant's attitudes in all cases. It should also be noted that TBI is usually thought of as a very extreme disability but it should be stressed that something like a concussion can be considered a brain injury. Participants might have be mislead to believe after reading the module, that all brain injuries are similar to the one pictured in the module (Phineas Gage).

There was no evidence to support my secondary hypothesis. The results showed that reading about two modules did not have a greater effect than reading about one. The interaction values we found ranged from .31 all the way to .93 (table 3). There also was no evidence that a generalization effect occurred. Again, the reason I am predicting that this happened was because the intervention was modest and the sample size was relatively small.

My intervention took place through the James Madison University psychology participant pool so participants could take it online at their leisure. Something that should be noted as a

possible limitation is that the students did not get perfect scores. While the averages were fairly high, there were still students who maybe did not read the module as carefully as I intended. Participants read the module and took the quiz in their own environment not in a lab where I was watching over them as. Results may have differed if I could see them taking the quiz and reading the module carefully.

#### *Future directions*

Since the study had some successful results I think it would benefit readers to replicate the study. There are a few areas that should be changed if the study was to be replicated. . First, the sample size should be increased because results could potentially change drastically if more than 30 participants were in each group since the effect size was small. Another way I think the study could improve would be to increase the length of the intervention. We designed this intervention to be short so that way participants would not get bored with the reading and just skip to the end, which would contaminate our results. Participants seemed to read the module fairly carefully as shown by their quiz scores (78% depression, 91% TBI, 87% control, and 88% both depression and TBI) so maybe a lengthier intervention would produce more attitude changes. Another change could come from the disabilities included in the intervention. We chose one who had an initial negative rating (depression), one with an initial positive rating (TBI), and one in between (ADHD). Since in our TBI category there might have been a near ceiling effect, it might be beneficial to include disabilities that all have low to medium ratings. This way results would show that it was the educational intervention that really changed the attitudes towards implementing the disabilities rather than some preconceived thoughts that the participants might have.

## Appendix A:

**Major Depression**

If I were to ask you what disease affects nearly 20 million Americans in any given one-year period, what would be your answer? Would you guess it to be heart disease, diabetes, or even cancer? How do you react if I told you that it was clinical depression? The fact of the matter is that clinical depression is something that probably will directly or indirectly affect your life one day. So what is clinical depression exactly then? The short answer to this question as defined by webmd, is that clinical depression or major depression is when a person has a depressed mood most of the day and loses interests in normal activities or relationships. That might seem like a very vague definition, however what to take away from this is how major depression differs from just being sad or emotional. Although depression is one of the most common mental illnesses, it is one of the most complicated. People suffering from clinical depression are more than just sad or moody people. These people are suffering from a chemical imbalance that can lead to extreme thoughts such as suicide. The cause of clinical depression is still up in the air because there is not just one determining factor. Most people who study depression will agree that there is a genetic aspect to it, but also a factor of the person's environment.



While this cartoon is comedic, it accurately describes how some people view depression. Depression is a serious condition that someone cannot just “snap out of”.

## Diagnoses

Depression is tough to diagnose since, unlike a physical illness, it cannot be seen. The Diagnostic and Statistical Manual of Mental Disorders, or DSM, is a tool that can be used to aid in the diagnosis of someone. The DSM lists certain symptoms that a person must have in order to be diagnosed as a major depressant. For a person to have a major depressive disorder (MDD) you must have a depressed mood for more than two weeks and that mood has to affect your 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 listed in the appendix . An important thing to remember when diagnosing a person with an MDD is to look at are their mood changes stemming from a direct physiological effect of a substance such as recreational drugs or medication. If that is the case, then the patient does not have a MDD and should be treated accordingly. With that being said, clearly having major depression is more than just sad thoughts. Everyone has days where they do not feel themselves and are depressed, however that does not mean you are a major depressant. One of the biggest stigmas with depression is that it is just gloomy feelings that can be turned off. It is a serious mental disorder that can be controlled in some patients with full time treatment. Unfortunately, one of the more common issues with depression is that people suffering from the illness will not seek out 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 are extremely accurate, they still contribute to the reason why depression is so prevalent in today's society.

Medicating depression can be very tough because often times these drugs might make you feel worse before you feel better. The reason for this might be that the drugs take a few



weeks before they come into their full effect and simply not all drugs work for everyone.

Sometimes a mixture of drugs and therapy are the right fit but every case is unique. 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.

### **Depression in college students**

Clinical depression is a disorder that can affect both men and women at any age making it very tricky to prepare for. While women are much more likely to develop depression, men can become depressed just as easy. There are signs of depression in children as well as the elderly population. A main area of focus for depression is in college students. College is an extremely rewarding time but can be a difficult process to adapt to. I am sure at one time or another we have all felt the pressure of school and felt helpless. Major depression is different from this because these feelings might not go away. Untreated depression can continue for a long time, which could seriously impact academic performance. Some students reported feeling so depressed that they could not get out of bed, which hindered their normal study habits. 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” at least once in the past year. College life is often stressful enough but when you add to that being functionally depressed, it is easy to see the struggles it could cause. There has been studies found that say depression may lead to an increase in smoking, drinking, or other harmful behaviors. Depression can also be a major factor that leads to suicide. In that same survey by the ACHA, more than 6 percent of college students

have reported having serious thoughts about committing suicide and 1 percent has even attempted it. While those numbers may seem low, they are human lives so no number is really too low to consider.

Questions:

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 was 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).
5. How many of the specific symptoms listed in Appendix A does a person have to have over a 2 week period?
  - a. 1
  - b. 3
  - c. 5
  - d. 11

Appendix of symptoms:

1. Depressed mood most of the day as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful).
2. Diminished interest in all, or almost all, activities.
3. Significant weight loss when not dieting or weight gain or decrease or increase in appetite.
4. Insomnia or hypersomnia (excess sleeping).
5. Psychomotor agitation or retardation.
6. Fatigue or loss of energy.
7. Feelings of worthlessness or excessive or inappropriate guilt.
8. Diminished ability to think or concentrate, or indecisiveness, (either by subjective account or as observed by others).
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

## Traumatic Brain Injury

The human brain is extremely complex, consisting of an estimated 100,000,000,000 cells, which are interconnected with one another. Your brain is what gives you your personality, allows you to solve problems, and is the relay station for almost all of your bodily processes. An injury to your brain interrupts all those interconnections and thereby is extremely detrimental to everyday life.

A *traumatic brain injury* (TBI) is caused by sudden trauma to the head by an object hitting a person's head, a person's head hitting a solid surface (such as the ground), or an object piercing the skull and damaging brain tissue. The United States Centers for Disease Control and Prevention (CDC) reports that there are around 1.5 million people in the U.S. that suffer a TBI every year. While there are different levels of severity in TBI (mild, moderate, and severe), they are all dangerous. According to the Mayo Clinic, the most common causes of TBI among college students are sports injuries, automobile accidents, falls and violence. In addition, a large number of college students who are veterans of the Iraq and Afghanistan Wars received TBI through percussive injuries. TBI can have a variety of symptoms ranging from a mild headache to serious internal bleeding. One of the sadder facts about TBI is that little can be done about the

initial trauma; most of the work is just trying to prevent any further injury. TBI usually requires surgery to remove and destroyed brain tissue that might be harming the patient.

Figure 1. The skull of Phineas Gage who suffered from an extreme TBI in an explosion.



### Diagnosis

Because TBI can affect speech, movement, hearing, vision, memory, personality, and learning, diagnosis is complex. Depending on the individual, diagnosis

may focus on mobility issues; self-care; vocational adjustment; or education. Moreover, while many individuals will improve over time, some will not, and some will develop new symptoms at a later date. For example, research now connects TBI sustained in childhood and adolescence with early-onset Alzheimer's disease. Because of the developmental nature of the consequences of TBI, diagnosis may change as the patient does in order to adjust to new situations (education to work, for example).

According to a survey from the CDC, in the U.S. more than 5.3 million people live with disabilities that were caused by TBI. This number, however, only includes those admitted to the hospital, and so does not include those who were treated in emergency rooms and released, those treated by physicians, and those who received no treatment.

Psychologists and psychiatrists are primarily interested in the memory, personality, and learning consequences of TBI. Most often the diagnostic category they follow is "neurocognitive disorder". What this really means is that the person has impaired thinking. A person can be diagnosed with either mild or major neurocognitive disorder. If a person's cognitive deficits interfere with everyday activities and there is significant cognitive decline, then that person would be qualified for a major neurocognitive disorder. A mild neurocognitive disorder does not impair general everyday functioning and the impairments are either stable or improving. An interesting parallel might exist between major depression and TBI. There are studies that show that TBI can lead to depression.

### **TBI in College Students**

While people of all ages can suffer from a TBI, adolescents and young adults between the ages of 15 and 19 are the most likely. One factor for this risk is inexperienced and reckless driving. A second reason that young people are affected by TBI is sports. While sports have

many beneficial aspects, they can lead to concussion, particularly skiing, football, baseball, and skateboarding. Unfortunately some concussions that result from sports go without treatment, which can lead to serious impairments later in life.

While most college students are beyond the age of highest risk, they may still be dealing with the consequences of earlier TBI. College students continue to have accidents while driving, skiing, and even sledding. Some surveys of college students indicate that as many as 1 in 4 students has a history of head injury or concussion.

Traumatic brain injury, if serious enough, can lead to long-term behavioral, physical, emotional, and cognitive consequences (2006). Some symptoms that would make the life of college students more difficult include: dizziness, sleep disturbance, and low-grade seizures. Other symptoms interfere directly with being a student. For example, some students with TBI suffer from severe, chronic fatigue. These students require several hours more sleep than other students and they have low levels of energy throughout the day. Fatigue of this degree often means that a student cannot be full-time. Without full-time status, they cannot live in dormitories or have access to a meal plan, even though these services would be supportive of their disability. Another huge asset that part time students lack is they cannot receive financial aid. Others students with TBI have a variety of memory problems, from taking far more time to learn new material to quicker loss of learned material to amnesia for what they had learned in school for many months prior to their injury. Amnesia would mean repeating coursework while other memory problems mean not only the need for far more time to prepare for exams than the typical student; difficulty remembering specific material quickly on a test; and the need to review material constantly that is expected to be remembered from test to test or from course to course in a curriculum. Some students with disabilities might learn in five hours what you learn in one.

Students with TBI also face social difficulties. Some has impaired speech. Others require just a few seconds more time to understand spoken language, so their conversation seems slow and atypical. Many students with TBI report changes in personality, some becoming shier, while some become more volatile. The use of alcohol after a TBI is strongly discouraged because of the risk of further damage and seizures. Some surveys of college students with TBI have found that the social consequence of TBI is the most common mentioned.

Questions:

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. Traumatic Brain Injury Center (TBIC)
2. Which of these potential causes of TBI was not mentioned in the module?
  - a. Object hitting a person's head
  - b. Person's head hitting a solid surface
  - c. Damage from an internal source
  - d. An object piercing the skull
3. Psychologist and Psychiatrist classify TBI in the DSM as
  - a. Personality disorder
  - b. Neurocognitive disorder
  - c. Motor disorder
  - d. Language defeating disorder
4. Who was the patient that suffered from an extreme degree of TBI?
  - a. Rosa Bloom
  - b. Phineas Gage
  - c. Wilson Tainer
  - d. Jacob Hillshire
5. Which other illness was mentioned that TBI might have a parallel to?
  - a. Eating Disorders
  - b. Anxiety Disorders
  - c. Depression
  - d. Panic Disorder

**Candide Chapter 1—How Candide Was Brought Up in a Magnificent Castle, and How He  
was Expelled Thence**

In a castle of Westphalia, belonging to the Baron of Thunder-ten-Tronckh, lived a youth, whom nature had endowed with the most gentle manners. His countenance was a true picture of his soul. He combined a true judgment with simplicity of spirit, which was the reason, I apprehend, of his being called Candide. The old servants of the family suspected him to have been the son of the Baron's sister, by a good, honest gentleman of the neighborhood, whom that young lady would never marry because he had been able to prove only seventy-one quarterings, the rest of his genealogical tree having been lost through the injuries of time.

The Baron was one of the most powerful lords in Westphalia, for his castle had not only a gate, but windows. His great hall, even, was hung with tapestry. All the dogs of his farm-yards formed a pack of hounds at need; his grooms were his huntsmen; and the curate of the village was his grand almoner. They called him "My Lord," and laughed at all his stories.

The Baron's lady weighed about three hundred and fifty pounds, and was therefore a person of great consideration, and she did the honours of the house with a dignity that commanded still greater respect. Her daughter Cunegonde was seventeen years of age, fresh-coloured, comely, plump, and desirable. The Baron's son seemed to be in every respect worthy of his father. The Preceptor Pangloss was the oracle of the family, and little Candide heard his lessons with all the good faith of his age and character.

Pangloss was professor of metaphysico-theologico-cosmolo-nigology. He proved admirably that there is no effect without a cause, and that, in this best of all possible worlds, the Baron's castle was the most magnificent of castles, and his lady the best of all possible Baronesses.



“It is demonstrable,” said he, “that things cannot be otherwise than as they are; for all being created for an end, all is necessarily for the best end. Observe, that the nose has been formed to bear spectacles—thus we have spectacles. Legs are visibly designed for stockings—and we have stockings. Stones were made to be hewn, and to construct castles—therefore my lord has a magnificent castle; for the greatest baron in the province ought to be the best lodged. Pigs were made to be eaten—therefore we eat pork all the year round. Consequently they who assert that all is well have said a foolish thing, they should have said all is for the best.”

Candide listened attentively and believed innocently; for he thought Miss Cunegonde extremely beautiful, though he never had the courage to tell her so. He concluded that after the happiness of being born of Baron of Thunder-ten-Tronckh, the second degree of happiness was to be Miss Cunegonde, the third that of seeing her every day, and the fourth that of hearing Master Pangloss, the greatest philosopher of the whole province, and consequently of the whole world.

One day Cunegonde, while walking near the castle, in a little wood which they called a park, saw between the bushes, Dr. Pangloss giving a lesson in experimental natural philosophy to her mother's chamber-maid, a little brown wench, very pretty and very docile. As Miss Cunegonde had a great disposition for the sciences, she breathlessly observed the repeated experiments of which she was a witness; she clearly perceived the force of the Doctor's reasons, the effects, and the causes; she turned back greatly flurried, quite pensive, and filled with the desire to be learned; dreaming that she might well be a *sufficient reason* for young Candide, and he for her.

She met Candide on reaching the castle and blushed; Candide blushed also; she wished him good morrow in a faltering tone, and Candide spoke to her without knowing what he said.

The next day after dinner, as they went from table, Cunegonde and Candide found themselves behind a screen; Cunegonde let fall her handkerchief, Candide picked it up, she took him innocently by the hand, the youth as innocently kissed the young lady's hand with particular vivacity, sensibility, and grace; their lips met, their eyes sparkled, their knees trembled, their hands strayed. Baron Thunder-ten-Tronckh passed near the screen and beholding this cause and effect chased Candide from the castle with great kicks on the backside; Cunegonde fainted away; she was boxed on the ears by the Baroness, as soon as she came to herself; and all was consternation in this most magnificent and most agreeable of all possible castles.

Quiz:

\_\_1. Who is the title character in the chapter?

- a. Baron
- b. Candide
- c. Voltaire
- d. Charles

\_\_2. True or False. The reason the main character gets kicked out of the castle was because he kissed the Baron's daughter.

\_\_3. True or False. Dr. Pangloss was the town drunk.

\_\_4. This part of the story takes place in

- a. London
- b. Paris
- c. Westphalia
- d. Manchester

\_\_5. Fill in the blank with the correct answer. The Baron in this story is known as the Baron of \_\_\_\_\_

- a. Chamberfield
- b. Parkside
- c. Cunegonde
- d. Thunder-ten-Tronckh

## Appendix B:

**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 7. 25% extra time to take a test.

1 2 3 4 5 6 7 8. Getting priority on single rooms in a dormitory.

1 2 3 4 5 6 7 9. Unlimited time to take tests in one sitting.

1 2 3 4 5 6 7 10. Being given a student to take notes for him or her without charge.

1 2 3 4 5 6 7 11. Being able to take tests in a quiet, distraction-free environment.

1 2 3 4 5 6 7 12. No penalties imposed for turning in papers late.

1 2 3 4 5 6 7 13. Being waived foreign language or math requirements.

1 2 3 4 5 6 7 14. Being allowed to take tests orally.

1 2 3 4 5 6 7 15. The ability to register for classes before other students.

1 2 3 4 5 6 7 16. 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 17. 25% extra time to take a test.

1 2 3 4 5 6 7 18. Getting priority on single rooms in a dormitory.

1 2 3 4 5 6 7 19. Unlimited time to take tests in one sitting.

1 2 3 4 5 6 7 20. Being given a student to take notes for him or her without charge.

1 2 3 4 5 6 7 21. Being able to take tests in a quiet, distraction-free environment.

1 2 3 4 5 6 7 22. No penalties imposed for turning in papers late.

1 2 3 4 5 6 7 23. Being waived foreign language or math requirements.

1 2 3 4 5 6 7 24. Being allowed to take tests orally.

1 2 3 4 5 6 7 25. The ability to register for classes before other students.

1 2 3 4 5 6 7 26. Being allowed to substitute another activity (e.g., a video or a performance) for a term paper or a thesis.

Students who have experienced a **TRAUMATIC BRAIN INJURY (TBI)** will frequently have difficulty with concentration and memory. While in some cases these problems will get better over time, in many others the improvement will cease before full recovery. Students who have had one TBI are more likely to have other TBIs. Their “normal” emotional responses before the injury may change post-injury, become more unpredictable. In some cases, there may be a discernable loss in intellectual ability. They will need extensive periods of uninterrupted sleep. Much of the recent interest in college students with TBI comes from the large number of veterans of the Iraq and Afghanistan War who have had substantial brain injury, but there is also concern from automobile accidents, skiing and football injuries. Students with TBIs are now specifically covered by the Americans with Disability Act.

Rate how appropriate do you think the following accommodations would be for students with Traumatic Brain Injury?

- 1 2 3 4 5 6 7 27. 25% extra time to take a test.
- 1 2 3 4 5 6 7 28. Getting priority on single rooms in a dormitory.
- 1 2 3 4 5 6 7 29. Unlimited time to take tests in one sitting.
- 1 2 3 4 5 6 7 30. Being given a student to take notes for him or her without charge.
- 1 2 3 4 5 6 7 31. Being able to take tests in a quiet, distraction-free environment.
- 1 2 3 4 5 6 7 32. No penalties imposed for turning in papers late.
- 1 2 3 4 5 6 7 33. Being waived foreign language or math requirements.
- 1 2 3 4 5 6 7 34. Being allowed to take tests orally.
- 1 2 3 4 5 6 7 35. The ability to register for classes before other students.
- 1 2 3 4 5 6 7 36. 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 37. 25% extra time to take a test.
- 1 2 3 4 5 6 7 38. Getting priority on single rooms in a dormitory.
- 1 2 3 4 5 6 7 39. Unlimited time to take tests in one sitting.
- 1 2 3 4 5 6 7 40. Being given a student to take notes for him or her without charge.
- 1 2 3 4 5 6 7 41. Being able to take tests in a quiet, distraction-free environment.
- 1 2 3 4 5 6 7 42. No penalties imposed for turning in papers late.
- 1 2 3 4 5 6 7 43. Being waived foreign language or math requirements.
- 1 2 3 4 5 6 7 44. Being allowed to take tests orally.
- 1 2 3 4 5 6 7 45. The ability to register for classes before other students.
- 1 2 3 4 5 6 7 46. 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 47. 25% extra time to take a test.
- 1 2 3 4 5 6 7 48. Getting priority on single rooms in a dormitory.
- 1 2 3 4 5 6 7 49. Unlimited time to take tests in one sitting.
- 1 2 3 4 5 6 7 50. Being given a student to take notes for him or her without charge.
- 1 2 3 4 5 6 7 51. Being able to take tests in a quiet, distraction-free environment.
- 1 2 3 4 5 6 7 52. No penalties imposed for turning in papers late.
- 1 2 3 4 5 6 7 53. Being waived foreign language or math requirements.
- 1 2 3 4 5 6 7 54. Being allowed to take tests orally.
- 1 2 3 4 5 6 7 55. The ability to register for classes before other students.

1 2 3 4 5 6 7 56. Being allowed to substitute another activity (e.g., a video or a performance) for a term paper or a thesis.

For students with **TBI**:

1 2 3 4 5 6 7 57. 25% extra time to take a test.

1 2 3 4 5 6 7 58. Getting priority on single rooms in a dormitory.

1 2 3 4 5 6 7 59. Unlimited time to take tests in one sitting.

1 2 3 4 5 6 7 60. Being given a student to take notes for him or her without charge.

1 2 3 4 5 6 7 61. Being able to take tests in a quiet, distraction-free environment.

1 2 3 4 5 6 7 62. No penalties imposed for turning in papers late.

1 2 3 4 5 6 7 63. Being waived foreign language or math requirements.

1 2 3 4 5 6 7 64. Being allowed to take tests orally.

1 2 3 4 5 6 7 65. The ability to register for classes before other students.

1 2 3 4 5 6 7 66. Being allowed to substitute another activity (e.g., a video or a performance) for a term paper or a thesis.

1. Your sex: \_\_\_ male \_\_\_ female

2. For most of middle/high school I

\_\_\_ attended public school

\_\_\_ attended private school

\_\_\_ was home schooled

\_\_\_ other (please explain) \_\_\_\_\_

3. My (first) major is \_\_\_\_\_

4. My approximate GPA is \_\_\_\_\_

5. I am a \_\_\_\_\_ freshmen \_\_\_\_\_ sophomore \_\_\_\_\_ junior \_\_\_\_\_ senior

6. I (\_\_\_ have been \_\_\_ have NOT been) diagnosed with a disability.

Thank you for your time and patience. Your answers are extremely helpful.

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