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MICROAGGRESSIONS TOWARD INDIVIDUALS WITH LEARNING DISABILITY
WITHIN THE COLLEGE SETTING

By

Cordava Valentina Aranda, B. S.

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Stephen F. Austin State University

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MICROAGGRESSIONS TOWARDS INDIVIDUALS WITH LEARNING
DISABILITIES WITHIN THE COLLEGE SETTING

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Abstract

Learning disability microaggressions refer to the everyday verbal, nonverbal, and environmental slights and mistreatment which convey a derogatory feeling or message to individuals with a learning disability across various settings. Learning disability microaggressions may contribute significantly to the negative aspects of mental health issues often perceived in individuals with learning disabilities. The purpose of this study was to develop a microaggression scale designed to assess microaggressions displayed towards individuals with learning disabilities (LD) within the academic setting. A scale designed to assess LD microaggressions was constructed and modeled after the Racial Microaggression Scale (RMAS). A confirmatory factor analysis was conducted to investigate the structure and varying dimensions of the scale. The internal reliability and convergent validity of the scale were also examined. Results indicated that the Learning Disability Microaggression Scale (LDMS) is a multidimensional tool to assess microaggressions displayed towards individuals with learning disabilities (LD) within the academic setting.

Keywords: LD, microaggression, REMS, RMAS, MEIM-R

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Chapter I

Introduction

Learning disabilities (LD) are neurodevelopmental disorders that inhibit a person's ability in acquiring knowledge-based skills and academic functioning to the level expected of the normative age group ("Specific Learning Disability", 2004). LD affects the brain's ability to process, store, receive, and communicate a variety of information (May & Stone, 2010). According to the National Center for Learning Disabilities (2014) 2.4 million students are diagnosed with LD in a given year. In addition, research suggests that the general public often associates individuals with LD with a lower level of intelligence and ability (Heath, Roberts, & Toste, 2011; Hen & Goroshit, 2012; May & Stone, 2010). In all actuality, LD is not a form of intellectual deficit and individuals with LD are normally of average or above average intelligence (Heath, Roberts, & Toste, 2011; "What are Learning Disabilities", 2012). In addition, individuals with LD that have a higher level of intelligence are often over looked for advanced academic courses because their disability tends to be the main focus for educators within the classroom setting (Baldwin, Omdal, & Pereles, 2015). Furthermore, some culture's view of an individual with LD is associated with lack of discipline and drive to succeed academically (Macdonald, 2010; Tews & Merali, 2008). This inaccurate societal perception of individuals with LD is a serious problem and affects the lives of many people in society today, especially future generations.

Due to overwhelming, potentially negative effects of societal stereotyping of individuals with LD, researchers have begun investigating many aspects associated with LD and the perceptions of LD. In particular, researchers have focused on two primary areas of stigma related to LD, namely academic achievements and negative perceptions of individuals with LD in the academic setting. In addition, racial elements of a persons' perception have been researched to evaluate possibly significant relationships between microaggressions towards individuals with LD (Sue et al., 2011). Microaggressions are everyday verbal, nonverbal, and environmental slights which convey a derogatory feeling or message to a targeted person based solely on the marginalized group in which the given individual is a member (Young, Anderson, & Stewart, 2015). Furthermore, microaggression can be conscious or unconscious (unintentional) offensive comments or actions (Torres & Taknint, 2015). Research suggests there is a positive correlation between race, microaggression, and negative elements of mental health (e.g. depression, stress, anxiety) (Torres & Taknint, 2015; Young, Anderson, & Stewart, 2015). In addition to expanding our current knowledge-base on microaggressions (i.e. race, socioeconomic status), research of LD and characteristics of the individuals displaying microaggressions could allow for a wide variety of possible academic program reforms (e.g. interventions), programs for reconstruction of societal perception of LD, and awareness of the various academic characteristics of person with LD.

Microaggression

Microaggressions towards individuals with LD can have unfavorable implications on individuals' psychological welfare and future. Research examining microaggressions displayed towards individuals with LD in the college setting could provide a better understanding of LD within the academic environment. To adequately explore microaggressions towards individuals with LD, a scale will need to be developed to assess the common elements associated with microaggressions. Currently, there are no microaggression scales to assess LD microaggressions. However, there have been a few scales developed to examine racial and gender microaggressions. The following paragraphs will discuss the elements of a standard microaggression scale and review the development of racial, ethnic, and gender microaggression scales in order to establish a structure and foundation for this study's development of a LD microaggression scale.

Chapter II

Literature Review

Microaggression scales are multidimensional tools to examine perceptions of specific microaggressions displayed towards a given individual or group (Nadal, 2011). Typically, microaggression scales consists of constructs (e.g. scale items) associated with the microaggressions displayed towards the particular population of interest (Nadal, 2011; Lewis & Neville, 2015). In addition, microaggressions scales provide a clear operational definition of the microaggressions that will be measured by the scale. Furthermore, most microaggression scales are conducted using a survey or questionnaire format (Lewis & Neville, 2015; Nadal, 2011; Woodford, Chronody, Kulick, Brennan, & Renn, 2015). The participants of microaggression studies include a wide range of individuals (both engaging in the microaggressions and experiencing microaggressions) varying socioeconomic status, educational background, gender, and age (Lewis & Neville, 2015; Wegner & Wright, 2016; Woodford et al., 2015). The following paragraphs will discuss and review the development of various racial, ethnic, and gender microaggression scales.

Although there are no current microaggression scales designed to measure microaggressions towards individuals with LD, there are a few microaggression scales designed to assess microaggressions experienced by individuals that share a similar aspect of individuals with LD by their mutual membership in a minority group (e.g. LD, race, ethnicity). The purpose of Nadal's (2011) study was to develop and validate the

Racial and Ethnic Microaggression Scale (REMS). The participants in this study were asked to complete a survey consisting of a demographic section, REMS-S (identified various racial microaggression), RALES-B (self-report perception of racism), and REMS-evaluation (three topic specific open-ended questions). In addition, researchers conducted an exploratory component analysis to test the REMS-S. The results of this study suggest that the REMS is a satisfactory measure of racial microaggressions by its adequate reliability of internal consistency and validity through significant correlation relationships with other scales. This study provides a significant contribution to the field of psychology by developing a scale that measures and evaluates the different types of racial microaggression experienced by individuals within society

Researchers have also developed a scale to assess the elements and different categories of racial microaggression. The purpose of Torres-Harding, Andrade, & Romero-Diaz's (2012) article was to develop a form of evaluation to measure racial microaggressions. Researchers designed the Racial Microaggression Scale (RMAS) to evaluate themes of microaggressions within the larger categories of microinvalidations and microinsults. The following are the 10 specific target themes of the RMAS: (1) being treated as though one does not belong, (2) ascription of intelligence, (3) invalidation of racial or cultural issues/problems, (4) assumptions of individuals' assumed criminal status, (5) invalidation of interethnic differences, (6) exoticized, (7) myth of meritocracy, (8) pathologizing cultural values and communication styles, (9) environmental invalidations, and (10) invisibility (e.g. being dismissed). The results of this study suggest

that the RMAS is a valid and reliable scale to evaluate the existence of racial microaggressions in people of different races and ethnicities. This study provides a significant contribution to the field of psychology by developing a tool that assesses the different themes of racial microaggression experienced by individuals of color within society.

In addition, another microaggression scale was developed by Balsam, Molina, Beadnell, Simoni, & Walter (2011) to examine the affects of lesbian, gay, and bisexual individuals (LGBT) subjected to microaggressions that are often associated with both racism and heterosexism. The participants in this study were asked to complete the LGBT People of Color Microaggressions Scale which is an 18-item self-report questionnaire designed to evaluate the exclusive themes of microaggressions experienced by ethnic minorities in LGBT adults. In addition, the scale consists of three subscales (i.e. dating and close relationships racism, racism in LGBT communities, and heterosexism in racial minority communities) structured to perceive possible specific types of microaggressions observed by LGBT adults. The results of this study suggest that there is a significant correlation between high levels of microaggression and LGBT individuals. Furthermore, the results indicate that the LGBT People of Color Microaggressions Scale is an adequate scale to assess microaggressions experienced by LGBT individuals in society. This study provides a significant contribution to the field of psychology by developing a scale that evaluates the different types of microaggressions experienced by LGBT individuals within society.

Similarly, Wegner and Wright's (2016) study examined the effects of discrimination on sexual minorities with the use of a microaggression scale called the Homonegative Microaggression Scale (HMS). The study was conducted using two samples of participants to verify the format of the HMS. In addition, researchers evaluated the criterion-related validity of the HMS by correlating it with a measure designed to identify sexual orientation (e.g. LGBIS). The results of this study suggest that the following four distinct themes were revealed by using the HMS: assumed deviance, second-class citizen, assumption of gay culture, and stereotypical knowledge and behavior. Furthermore, a confirmatory factor analysis was conducted that verified the four specific themes previously revealed by the first group sample. The findings of this study provide researchers with the knowledge and evidence of the validity of the HMS.

Research into college campus climate for students of minority groups (e.g. LGBQ, racial groups, and individuals with disability) are varied but limited when related to microaggressions. The purpose of Woodford, Chonody, Kulick, Brennan, and Kenn's (2015) study was to develop a microaggression scale that measures the prevalence of microaggressions displayed towards LGBQ (i.e. minority sexual orientation) students on a college campus. Researchers developed a measure based on past research that the following microaggressions experienced by LGBQ individuals: (1) microinvalidations, (2) microinsults/assaults, and (3) environmental microaggressions. In addition, the microaggression scale was divided into two subscales: interpersonal LGBQ Microaggressions and Environmental LGBQ Microaggressions. Researchers tested the

validity and reliability of their scale by using two different samples of college students as well as an equation factor analysis and confirmatory factor analysis to determine factorial validity. The results of this study indicate that LGBQ students identify as experiencing depressive symptoms and academic distress. In addition, the microaggression scale subscales reliability varied from good to excellent. This study provides a foundation for the development of a psychometric scale to examine microaggressions experienced by LGBQ individuals, specifically college students.

In addition, the purpose of Lewis and Neville's (2015) study was to construct a measure of microaggressions displayed towards African American women. The Gendered Racial Microaggressions Scale (GRMS) examined the prevalence and psychological stressors of microaggressions experienced by minority women, specifically African American women. The researchers developed questions categorized into four themes (i.e. assumption of beauty and sexual objectification, silenced and marginalized, strong black woman stereotype, and angry black woman stereotype) for their scale based on past research related to discrimination, insults, and physical threatening experiences of women of African American descent. The study used two independent samples of African American women to provide an exploratory factor analysis and confirmatory factor analysis. The findings of this study suggest that the GRMS has the potential to measure the frequency and psychological stressors of microaggressions experienced by African American women. Furthermore, this study has implications for future research in the field of mental health (e.g. clinical practice). The GRMS could provide mental health

professionals with a tool to assess the degree of microaggressions influence on an individual's mental health.

Intersectionality and Microaggressions

In order to better understand the varying aspects of microaggressions and microaggression scales, researchers need to understand the framework that comprises these concepts. Intersectionality has a significant influence on the understanding and analysis of microaggressions being displayed towards individuals of marginalized groups. Intersectionality is defined as connective yet interdependence of the multiple categories (i.e., race, ethnicity, gender, religion, and disability) in which a given individual is a member (Gearity & Metzger, 2017). In other words, intersectionality is the acknowledgement of the differing aspects of an individual that could create an interdependent construct of discrimination. The primary assumption of intersectionality is that individuals will always have overlapping and numerous identities within society (Gearity & Metzger, 2017). To adequately measure microaggressions being displayed towards individuals of a marginalized group, researchers must acknowledge and incorporate intersectionality into the given microaggression scale (Kings, 2017). Intersectionality provides researchers with a more precise representation of the microaggressions being displayed towards individuals of marginalized groups. In addition, the intersectionality method illustrates the interconnectedness of race, ethnicity, and disability and the negative effects these could have on individuals such as experiencing of microaggressions (Kings, 2017). By incorporating the tools of

intersectionality within a microaggression scale, researchers can perceive which categories (i.e., race, gender, or disability) an individual is more likely to experience microaggressions, and thus construct a more adequate scale to assess the given microaggressions.

Negative Psychological States

Microaggressions can have negative effects on an individual's psychological state (Bostwick & Hequembourg, 2014; Torres & Taknint, 2015). The negative psychological effects of microaggressions can range from depression to anxiety (Bostwick & Hequembourg, 2014). The following paragraphs will discuss the aspects of a microaggression scale use in identifying microaggressions in relationship to mental health and negative psychological states associated with microaggressions experienced by individuals of a minority group.

The purpose of Torres & Taknint's (2015) article was to investigate the relationship between ethnic microaggressions and mental health problems. The participants in this study consisted of 113 Latino(a) adults from an urban Midwestern city in the United States. The participants in this study were asked to complete a survey questionnaire that contained elements of the Racial and Ethnic Microaggression Scale (REMS), Multigroup Ethnic Identity Measure Revised (MEIM-R), General Self Efficacy Scale (GSE), PTSD Symptom Scale-Self Report (PSS-SR), and Center for Epidemiologic Studies-Depression Scale (CES-D). The results of this study suggest that ethnic microaggressions are significantly correlated with negative aspects of mental health (i.e.

depression, traumatic stress). This study provides initial evidence and research into the elements of microaggression and its' potential negative effects on a person's emotional and mental health.

In addition, Bostwick & Hequembourg's (2014) article was to explore the impact of microaggressions on bisexual women's mental health and well-being. The participants in this study consisted of a total of 10 women (nine Caucasian and one biracial) divided into two focus groups (5 women in each group, n = 10) from the Chicago region. The focus groups were asked questions that were divided into five categories: stereotyping, support availability, general sexual identity-related experiences, stressors, and public inclusion/exclusion. Furthermore, the focus groups were encouraged to discuss and communicate with other members of their group allowing for an interactive and evolving dialogue that might otherwise not have been observed in a structured one-on-one interview. The results of this study suggest that participants perceived microaggression statements as subtle and unimportant to the microaggressor, however the effects of the microaggressions directed toward the person often left the individual with feelings of frustration and anxiety. This study provides new insights into a person's experiences and perceptions of microaggression and possible relationships between microaggression statements and mental health.

One of the deficiencies in the literature is a study of microaggression towards LD and individuals with LD in the academic setting; furthermore, there is a significant lack of research to discuss the methodology for assessing microaggressions towards

individuals with disability, specifically individuals with LD. People's perception of LD could have possible effects on individuals with LD psychological well-being or future, but without more research we do not know whether these effects will be negative or positive. By researching the characteristics of microaggressions experienced by individuals with LD we can answer the questions of will the effects be negative or positive, what specific characteristics (i.e. race, socioeconomic background) of the individual tend to display greater number of microaggressions, and broaden our understanding of microaggression and LD within the academic setting. In addition, this study is the first step in developing a scale that could provide a better understanding of the microaggressions experienced by individuals with LD. Furthermore, this study will provide a foundation for future and continued development of a microaggression scale. With continued research on people's perception (e.g. microaggression) of LD we can address new topics such as the frequency of microaggressions experienced by individuals with LD. Is there a significant relationship between a person with LD's mental health and the number of microaggressions experienced?

With continued research on LD, microaggression, and microaggression scales to assess the microaggressions towards individuals with LD within the higher education setting, researchers can help to add to the limited knowledge base of microaggression and LD, and perhaps develop and implement more effective academic, environmental, and family dynamic related programs to help reduce microaggressions and the negative psychological effects often associated with microaggression on individual with LD

Purpose

The fundamental reason for this study was to assess and develop a measure of LD microaggressions experienced by individuals with LD by applying an intersectionality (i.e. modifying and relating components of the RMAS to LD microaggressions) framework of past research related to microaggression scales. The major implications of possible negative emotional and psychological well-being associated with microaggressions towards LD stresses the need for the development of a scale to examine the degree of microaggressions experienced by the LD community. Past researchers have reported an increase in the number of individuals with LD in college and the multiple negative consequences (e.g. depression, anxiety, suicidal tendencies) of microaggression that are typically displayed to minority groups (Bostwick & Hequembourg, 2014; May & Stone, 2010; Sue et al., 2011). However, further research is needed to broaden our understanding of microaggressions toward individuals with LD within the college setting.

Extensive research has investigated LD and academic success, however relatively little research has been conducted exploring microaggressions of LD in relation to the frequency of microaggressions experienced by individuals with LD. Failure to consider factors such as the frequency (e.g. number of times) an individuals with LD experiences microaggressions, a reliable microaggression scale, and perceptual aspects of LD in the academic setting could potentially have negative consequences for individuals with LD such as low academic success and motivation, and high symptomology of depression and anxiety.

The goal of this study was to investigate the microaggressions displayed towards individual with LD. By developing a microaggression scale specifically designed to measure microaggression displayed towards individuals with LD and answers the following questions: is the microaggression scale developed a reliable measure to assess microaggressions displayed towards individuals with LD and is the microaggression scale developed a valid measure to assess microaggressions displayed towards individuals with LD? If the measure was reliable and valid the following questions would have been explored: are there microaggressions exhibited towards individuals with LD in the college setting and what is the frequency of the microaggressions exhibited within the college setting?

This study attempted to broaden the current understanding of microaggressions displayed towards individuals with LD and the frequency of the microaggression emitted by individuals with LD by observing and assessing participant's responses to the conditions within the survey. Specifically, this study addressed the following prediction:

1. The microaggression scale will have strong internal reliability and construct validity.
2. There will be high level (e.g. frequency) of microaggressions displayed toward individuals with LD.

The purpose of this study was to assess the reliability and validity of an LD microaggression within the academic setting. The objective of this study was to construct a Learning Disability Microaggression Scale (LDMS) based on the model provided by

the RMAS to assess microaggressions toward individuals with LD. A confirmatory factor analysis was conducted to examine the theme structures of the scale. Convergent validity was assessed by analyzing the relationship between the RMAS and LDMS. It was expected that the RMAS would positively correlate with the LDMS. The research information we obtained from this study only strengthened our understanding of LD microaggressions and contributed a scale that measured microaggressions displayed towards individuals with LD.

Chapter III

Methods

Participants

The population surveyed was college students attending Stephen F. Austin State University. This population consisted of diverse races (i.e. Caucasian (Non-Hispanic) 64.6%, African-American (Non-Hispanic) 11.1%, and Latino or Hispanic 14.1%) and socioeconomic backgrounds. In addition, participants were also recruited from other institutions of higher education in Texas by contacting course instructors and requesting to inform the given institutions students of the research opportunity. Participants were asked if they are 18 or older and must be at least 18 to have participated in this study. Individuals under the age of 18 were not allowed to participate due to the possible inability to obtain parental consent. The sample size of this study consisted of 139 participants. This study surveyed a general population and excluded data gathered from individuals with LD within the sample. Furthermore, the individuals were recruited using convenience sampling and awarded possible course credit for their participation, however any compensation was at the discretion of the professor of the participants' course. The participants were also recruited at various public places around the university's campus and through an online website

Additionally, Participation in this study was completely voluntary and there are no discomforts involved with this study. If a participant decided to be in the study he or she had the right to withdraw at any point in time with no penalty. The order of the

questions was randomly sorted and there were an equal number of questions for each theme. The researcher collected all participant responses using the online database. In addition, participants' names were not used in any of the information gleaned from the study or in any research reports. All IP addresses were deleted and all data was kept on one password protected computer. The participant responses for each condition were calculated and confirmatory factor analyses as well as a Cronbach's Alpha were performed.

After completing the study, participants were given a written debriefing of everything that took place during the experiment and overall premise of the experiment. Furthermore, participants that completed the study received possible course credit for their participation at the discretion of their given professors. In addition, this study was accepted and approved by the Stephen F. Austin State University Institutional Review Board.

Study Design

This confirmatory analytic study explored the reliability and internal consistency of the microaggression scale developed; furthermore, the study examined the frequency of the microaggressions emitted towards individuals with learning disabilities within the academic setting. The confirmatory analysis was conducted on this study's microaggression scale which was adapted from the RMAS to assess LD microaggressions.

Materials

Microaggression Survey

The microaggressions survey was constructed using components designed to investigate the number of microaggression displayed and individual characteristics which was categorized into various predictor variables. More specifically, the questions from the LD microaggression scale were designed and modeled after the questions presented within the RMAS. The data displayed the overall number of microaggressions exhibited by the participant after he or she took the given survey. The demographic section consisted of the characteristics of the individual who participated in the survey. In addition, participants completed both the LD microaggression scale developed for this given study and the RMAS. The degree of correlation between the two microaggression scales established the convergent validity for the LDMS. The internal consistency reliability of the scale was determined using Cronbach's Alpha.

Construct Validity Comparisons

The Racial and Ethnic Microaggression Scale (REMS), Racial Microaggression Scale (RMAS), Homonegative Microaggression Scale (HMS), and LGBT People of Color Microaggression Scale (LGBT-POC)Balsam, Molina, Beadnell, Simoni, & Walter, 2011; Nadal, 2011; Torres-Harding, Andrade, & Romero-Daiz, 2012; Wegner & Wright, 2016) were used as an empirical foundation to form questions that assessed various microaggressions often associated with individuals with LD and to determine construct validity.

Procedure

The sample of the population was recruited by the posting of fliers in various public places around the university's campus and through an online website. The participants were students enrolled at a given university. The study was completed through an online database (i.e. Sona System, Qualtrics). Before beginning the study each participant was presented with a consent form to read and sign before being allowed to participate in the study. Furthermore, participants were presented with a survey and asked to answer the questions presented in the survey to the best of their ability. See Table 1 in the appendix of this paper for the given study's questionnaire sample.

Scale Development

The scale in this study followed an analytical method approach to subjectively identify and measure student perceptions of individuals with LD within the academic setting. The analytical scale evaluated different elements of microaggression towards individuals with LD. The scale categorized LD microaggressions into the following themes: (1) alienation, (2) attribution of intelligence, (3) invalidation of LD problems, (4) assumption of individuals' assumed academic standing, (5) invalidation of inter-special needs differences, and (6) environmental invalidations (Heath, Roberts, & Toste, 2011; Hen & Goroshit, 2012; Macdonald, 2010; May & Stone, 2010; Núñez et al., 2005; Tews & Merali, 2008; Torres-Harding, Andrade & Romero-Diaz's, 2012). Prior to administration of the scale, a minimum of three individuals (graduate students in school psychology) reviewed the questions to identify any questions that may have been

confusing to the reader. Feedback provided was assessed to determine relevance to the improvement or elimination of any errors in question wording. In addition, the themes that could possibly affect the reliability were examined for content to find if they should be removed from the overall microaggression scale. A factor analysis was conducted to assess the themes presented within the scale and to help determine the specific aspects of microaggressions displayed towards individuals with LD. Past research conducted on the microaggressions scales used in the formation of this study's scale suggested that the reliability was sufficient within each of the scales categorical levels (Balsam et al., 2011; Nadal, 2011; Torres-Harding, Andrade, & Romero-Daiz, 2012).

A demographic section was created objectively to evaluate the various characteristics of participants (e.g. gender, age, race) in this given study. In addition, the demographic section was constructed in an open-ended and closed-ended format to allow participants to choose and write the category they preferred to be identified with. The demographic section of the survey was constructed and designed to acquire an adequate representation of the participant and was presented at the end of the questionnaire.

In addition, the scale's categories were constructed using specific target themes from the RMAS (see Table 2) that research suggests are similar to microaggressions displayed toward individuals with LD (Macdonald, 2010; Tews & Merali, 2008; Torres-Harding, Andrade & Romero-Diaz's, 2012). The RMAS questions were modified to represent microaggressions displayed specifically towards individuals with LD. See Table 3 in the appendix of this paper for the given study's questionnaire sample.

Furthermore, microaggression categories of the RMAS that are not applicable to LD microaggressions were removed from this given scale. The following categories of the RMAS were eliminated from LD microaggression scale: criminality and sexuality. The criminality and sexuality themes were replaced with the RMAS initial themes of (a) assumption of individuals' assumed criminal status and (b) invalidation of interethnic differences. In addition, the previously stated themes were modified for the given LD microaggression scale (e.g. assumption of individuals' assumed academic standing and invalidation of inter-special needs differences) to represent microaggressions that research suggest is relevant to individuals with LD (Baldwin, Omdal & Pereles, 2015; Heath, Roberts, & Toste, 2011). The questions that were added to the LD microaggression scale that were not listed in the RMAS were developed using the RMAS definition of a given category to compose a question related to LD microaggressions.

Chapter IV

Results

The purpose of this study was to develop a reliable and valid method of measuring microaggressions experienced by individuals with LD. Prior to subsequent analysis, some participant responses ($N = 40$) were removed because participant did not complete all the items presented. The final sample size consisted of 99 participants (see Table 4) from varying demographic backgrounds.

Factor Confirmation

In order to answer the question: is the microaggression scale developed a reliable measure to assess microaggressions displayed towards individuals with LD, first, a confirmatory factor analysis was conducted to determine the underlying component construct of scale items using SPSS 17.0 (SPSS, Inc., Chicago, IL). In specific, the confirmatory factor analysis was conducted on 99 participants to examine the 31-item, six-factor scale developed from an adaptation to learning disabilities of the Torres-Harding, Andrade, and Diaz's (2012) racial microaggression scale (RMAS). First, an oblique rotation (direct oblimin) was conducted and recorded to determine if the newly created scale is consistent with the RMAS factors. Results showed the presence of at least six factors as indicated by eigenvalues greater than 1.00. The results indicate evidence for a good fit for the 31-item model, $X^2(465) = 1185.905$, $p = .000$; Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = .691. The six-factor solution was found to be

the theoretically consistent when compared with Torres-Harding, Andrade, and Diaz (2012) model for the RMAS.

In addition, the six factors within the LD microaggression scale were analyzed in a confirmatory factor analysis using SPSS method of estimation to determine if the LD modified questions have a good factor fit (see Table 5 and Table 6). The first factor, Alienation, results indicate evidence of a good fit, $X^2(15) = 78.861$, $p = .000$; Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = .633. However, item 4.3 had a low value (i.e., below .4) relative to other items within the given category. After examination, item 4.3 appeared to be less theoretically consistent with the other items within the given factor due to possible irrelevance to the theme thus loaded more strongly on other factors within the scale.

The second factor, Attribution of Intelligence, results indicate evidence of a good fit, $X^2(15) = 122.546$, $p = .000$; Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = .593. In addition, all items had high values (i.e., above .5) relative to other items within the given category. Therefore, the strong relationship indicated between these items within this theme suggests this factor has good theoretical uniformity.

The third factor, Invalidation of LD Problems, results indicate evidence of a good fit, $X^2(6) = 15.039$, $p = .020$; Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = .457. Through the examination of the items indicate that all items had a high value (i.e., above .5) relative to other items within the given category. After examination,

these items appeared to have good theoretical stability with their respective factor items within this given theme.

The fourth factor, Assumption of Individuals' Assumed Academic Standing, results indicate evidence of a good fit, $X^2(6) = 77.875$, $p = .000$; Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = .716. However, item 7.5 had a very low value (i.e., below 2) relative to other items within the given category. After further examination, item 7.5 emerged less theoretically consistent with other factor items due to possible wording and phraseology, yet it should be noted that this item loaded more strongly on other factors within the scale.

The fifth factor, Invalidation of Inter-Special Need Differences, results indicate evidence of a good fit, $X^2(10) = 34.420$, $p = .000$; Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = .649. However, examination of the items indicate that item 9.3 had a very low value (i.e., below 3) relative to other items within the given category. After investigation, item 9.3 emerged to be less theoretically consistent in relation to other factor items. This lack of theoretical consistency could be related to participants' misunderstanding and/or miscomprehension of the item's connotation.

The sixth factor, Environmental Invalidations, results indicate evidence of a poor fit, $X^2(15) = 47.754$, $p = .000$; Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) = .422. However, investigation of items indicate that item 9.6 had a low value (i.e., below 2) relative to other items within the given category. After examination, item 9.6 appeared to lack theoretical consistency with other factor items and did not loaded

more strongly on other factors within the scale. Respectively, the indication of limited application of item 9.6 could be ascribed to the wording or phraseology of the item.

Internal Consistency

Next, internal consistency of the six-factor model was examined using Cronbach's alphas for the entire sample ($n = 99$) excluding the items that demonstrated low eigenvalues in the previous analyses. The Cronbach's alphas were found to be questionable to good: Alienation ($\alpha = .630$); Attribution of Intelligence ($\alpha = .700$); Invalidation of LD Problems ($\alpha = .467$); Assumption of Individual Assumed Academic Standing ($\alpha = .756$); Invalidation of Inter-Special Need Differences ($\alpha = .548$), and Environmental Invalidations ($\alpha = .485$). Next, a Cronbach's alpha was conducted with the entire 32-item scale and was found to be good ($\alpha = .832$). The variability in alpha scores may be explained by the small and varying number of items presented within each of the factors.

Convergent Validity

Additionally, scores were evaluated by individual factors by calculating the total scores of all items in each factor and compared with the total scores of the subscales of the RMAS (Torres-Harding, Andrade, & Diaz, 2012). It was expected that occurrence of items from the LD microaggression scale would correlate positively with items from the RMAS. Pearson correlation coefficients were determined between the LD microaggression scale factors total scores and the subscales total scores of the RMAS. The results indicate that all of the LD microaggression subscales positively correlated

with the six RMAS subscales. Therefore, as hypothesized, microaggressions displayed towards individuals with LD assessed by the LD microaggression scale correlated positively with factors represented in the RMAS.

In order to answer the questions: are microaggressions exhibited towards individuals with LD in the college setting and what is the frequency of the microaggressions exhibited within the college setting, more research and confirmatory factor analyses will need to be conducted to ensure the LDMS is a truly reliable and valid measure of LD microaggressions. However, descriptive statistics were conducted using the items from theme (attribution of intelligence) that displayed the strongest theoretical consistency (see Table 7). The results of the descriptive analysis correspond with current research on LD and intelligence. Although, the LDMS's preliminary results suggest that it's a reliable and valid measure of LD microaggressions it is still in its' early stages of development. Therefore, it would be premature to answer these research questions based on the reliability and validity data obtained from this study.

Chapter V

Discussion

The purpose of this study was to develop a measure of LD microaggressions experienced by individuals with LD. Extensive research suggests that microaggressions displayed towards individuals with LD could have significant negative psychological and academic consequences (i.e., low academic success and depression). The goal of this study was to construct and analyze a scale designed to measure LD microaggressions. This study answered the following research questions: (1) Is the microaggression scale developed a reliable measure to assess microaggressions displayed towards individuals with LD? and (2) Is the microaggression scale developed a valid measure to assess microaggressions displayed towards individuals with LD? In addition, the following paragraphs will discuss this study's findings.

The current study results indicate that the LD microaggression scale is a reliable and valid tool to assess the appearance of microaggressions displayed towards individuals with LD. Themes that fit well with Torres-Harding, Andrade, and Diaz's (2012)'s scale included the (1) alienation, (2) attribution of intelligence, (3) invalidation of LD problems, (4) assumption of individuals' assumed academic standing, (5) invalidation of inter-special needs differences, and (6) environmental invalidations (Heath, Roberts, & Toste, 2011). Furthermore, the results suggest that even though these themes correlate, they are separate. The results did not indicate a general LD microaggression factor, which suggests that each theme should be recorded and analyzed separately. Further analysis of

the data found different chi values across subscales, suggesting that some themes correlated with some subscales more than for others.

The findings for the themes presented on this scale appears to be consistent with research and RMAS scale. The following themes were found to have the most significant factor load: attribution of intelligence, invalidations of LD problems, and environmental invalidations. These findings appear to be consistent with past research on LD, specifically, the misconception of individual's with LD having a low level of intelligence than their normative peers and invalidations of LD problems (Heath, Roberts, & Toste, 2011; Hen & Goroshit, 2012; May & Stone, 2010). However, some item questions had low factor load and appeared to not fit within any of the subscale themes (i.e., "I have noticed only one to two individuals with learning disabilities in my general education class"; "I believe that individuals with a learning disability will have an average to high GPA in the college setting"; "Other people act as if all individuals with learning disabilities are alike"). The low theoretical consistency of the questions that did not fit within the given themes could be a result of participant misinterpretation of the question through wording and phraseology or the questions' lack of relatedness to the given theme. The LD microaggression scale questions were constructed to correspond with the RMAS items, thus the difference in microaggressions assessed could also play role in the theoretical consistency of the questions within this study.

Consequently, the representation and definition of racial microaggressions will have some variance in relation to LD microaggressions. For instance, LD is a

neurological disorder that affects the process in which an individual acquires knowledge and skills (May & Stone, 2010). Over a million students are diagnosed with LD in a given year (“National Center for Learning Disability”, 2014). Furthermore, research suggests that individuals with LD are often associated with lower levels of intelligences even though LD is not a form of intellectual deficit (Heath, Roberts, & Toste, 2011; Hen & Goroshit, 2012; May & Stone, 2010). Individuals with LD are often exposed to negative societal perceptions that are displayed in the form of microaggressions. Microaggressions can be intentional or unintentional slights or derogatory feelings or words/sayings that are targeted towards an individual based specifically on his or her membership or association with a given group (Young, Anderson, & Stewart, 2015). This research study has taken the first step in assessing LD microaggressions and its findings indicate that LDMS is a reliable tool to measure microaggression displayed towards individuals with LD.

Although there are some conceptual differences between racial and LD microaggressions there are also some notable similarities between the two concepts. As previously stated, several factors from the RMAS (e.g., attribution of intelligence and environmental invalidations) correlated positively with the same factors presented within the LDMS. Thus, it could be suggested that individuals with LD could be experiencing similar microaggressions as those displayed towards individuals of varying minority groups, specifically, microaggressions related to the factors of attribution of intelligence and environmental invalidations. This positive correlation is consistent with current

research that suggests individuals from minority groups and individuals with LD are often assumed to be of lower level of intelligence and lower socioeconomic status within society (Baldwin, Omdal, & Pereles, 2015; Heath, Roberts, & Toste, 2011; Torres-Harding, Andrade, & Diaz, 2012). Furthermore, it should be noted that individuals with LD and of a minority group could experience different outcomes than individuals who identify with only one of the categories.

Although this study has empirical relevance, it is not without limitations. A limitation within this study includes the format and delivery of the LD microaggression scale. The delivery of this study's microaggression scale was presented in an online survey format, which could contain several potential sources of bias such as selective memory (remembering or absences of memory of an event at a given point in time), telescoping (incorrect remembering of a situation or event), attribution (relating positive events to oneself and negative events to others), and exaggeration (depicting an experience or event to be more significant than results actually indicate) ("Limitations of Study," 2017). Including, some open-ended questions within the scale might help to reduce the potential bias that arise from survey based questions. In addition, this study had a relatively small sample size ($n = 99$) that could influence the degree of generalization across populations; whereas, a larger sample size ($n = 400$), research suggests would provide adequate representation across varying populations (Torres-Harding, Andrade, & Diaz, 2012). This study had an imbalance of female to male ratio with females comprising 97% of the sample, thus reducing the ability of this sample to be

an adequate representation of the male population. In other words, there could be a variance in the number of microaggressions displayed by males and female that this sample would not be able to appropriately represent. Furthermore, this study's sample was lacking in diversity in multiple areas such as age, education level, geographic region, and socioeconomic status. Another limitation of this study was the exclusion of data received from individuals with LD who participated in the study. Moreover, this study surveyed a general population and did not include individuals with LD within the given study's sample. Also, this was a cross-sectional study which could suggest this study's findings are not a true representation of the population over time.

Therefore, future studies on different aspects of LD should aim to conduct longitudinal studies which include larger and more diverse samples, specifically focusing on elements of microaggression towards individuals with LD. Additionally, future studies should evaluate the LDMS across settings to examine how microaggressions are perceived in academic settings compared to work settings. Furthermore, future studies should attempt to refine wording and structuring of the questionnaire to reduce the possible biases listed in the paragraph above, thus allowing for greater reliability in the study. Future research should acquire data from individuals with LD using the LD microaggression scale developed from this study. With the incorporation of individuals with LD and others outside of the collegiate setting future studies' sample size would allow for a more accurate representation of the population. Additionally, we could

conduct a more thorough longitudinal design to assess the overall characteristics of microaggressions displayed towards individuals with LD.

In summary, this study was a preliminary assessment of a LD microaggression scale that could measure microaggressions displayed towards individuals with LD. This tool holds the potential to provide extensive knowledge and information of LD microaggressions from those that are exhibiting the microaggressions. The LDMS, with continued research and analysis, has the potential to be very useful in a variety of settings, specifically clinical and mental health practices. For instance, the LDMS could be used as a screener for individuals with LD who might be experiencing depressive and anxious symptoms. This tool could help practitioners understand possible reasons (i.e., microaggressions) behind an individual with LD's depressive and anxious symptomatology. It is hoped that this model will facilitate future research in the investigation of microaggressions displayed towards individuals with LD. The current study indicates that the LD microaggression is a reliable and valid method of assessing microaggressions within the college setting. In addition, it is understood that this study's findings should be used to increase interest and advancement of future research in the area of LD microaggressions. To conclude, future research should further examine the reliability and validity of this scale with individuals with LD to evaluate and/or strengthen the themes presented within the LD microaggression scale.

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Appendix A

Table 1

LD Microaggression Scale Sample Categories and Questions for Study (N = 32)

Category 1: Alienation
1. I have avoided sitting next to a classmate with a learning disability
2. I have avoided being partnered for a class assignment with a classmate with a learning disability
3. I assume individuals with a learning disability were in special education.
4. I have noticed only one to two individuals with learning disabilities in my general education class.
5. I have observed individuals with a learning disability often sitting by his or her self.
6. I have observed others avoiding being partnered for a class assignment with a classmate with a learning disability.
Category 2: Attribution of Intelligence
1. I believe individuals with a learning disability have a lower level of intelligence
2. I believe I have a higher level of intelligence than an individual with a learning disability
3. I have observed others focused only on the negative aspects of an individual with a learning disability.
4. I observed others hinting that they believe individuals with learning disabilities are of lower intelligence.
5. I believe individuals with learning disabilities are of above average intelligence.
6. I believe individuals with learning disabilities are of average intelligence.
Category 3: Invalidation of LD Problems
1. I believe that individuals with a learning disability should not receive accommodations or modifications
2. I believe that individuals with a learning disability could achieve at the same level as their normative peers if they would just try harder
3. I have heard other people assume that individuals with a learning disability are only successful because of affirmative action, not because they earned their accomplishments.
4. I have observed individuals hinting that individuals with learning disabilities should work hard to prove that they are not like other individuals with learning disabilities.
Category 4: Assumption of Individuals' Assumed Academic Standing
1. I assume individuals with a learning disability to be of lower academic standing
2. I assume individuals with a learning disability would not attend college

3. I believe individuals with a learning disability will have a lower GPA in college than individuals without a learning disability.
4. I believe that individuals with a learning disability will have an average to high GPA in the college setting.
Category 5: Invalidation of Inter-Special need Differences
1. I assumed individuals with a learning disability would have other disabilities as well
2. I assumed individuals with a learning disability have the same difficulties with no variance between learning disabilities
3. Other people act as if all individuals with learning disabilities are alike.
4. I assumed that individuals with learning disabilities will have similar difficulties as other individuals with disabilities (e.g. physical and emotional disabilities)
5. I treat individuals with learning disabilities the same as I would a person with a physical disability.
Category 6: Environmental Invalidations
1. I have observed individuals with learning disabilities portrayed positively in school.
2. I have observed individuals with learning disabilities as college professors.
3. I view individuals with learning disabilities as second-class citizens because of their disability.
4. I believe that individuals with learning disabilities receive poorer treatment in school and the workplace because of their disability.
5. Others believe that individuals with learning disabilities would succeed academically if they would simply work harder.
6. I fully understand all the components of learning disabilities, even though I do not have a learning disability.

Table 2
Comparison of Confirmatory Factor Analysis Loading for Revised 32-Item Racial Microaggressions Scale

Category 1: Environmental Invalidations
7. Other people act as if they can fully understand my racial identity, even though they are not of my racial background.
8. Other people act as if all of the people of my race are alike.

9. Others suggest that people of my racial background get unfair benefits.
10. Others assume that people of my background would succeed in a life if they simple worked harder.
11. I am treated as a second class citizen because of my race.
12. I receive poorer treatment in restaurants and stores because of my race.
Category 2: Foreigner/Not Belonging
7. Because of my race, other people assume that I am a foreigner.
8. Because of my race, people suggest that I am not a “true” American.
9. Other people often ask me where I am from, suggesting that I don’t belong.
Category 3: Sexualization
5. People suggest that I am “exotic” in a sexual way because of my race.
6. Other people view me in an overly sexual way because of my race.
7. Other people hold sexual stereotypes about me because of my racial background.
Category 4: Lower-Achieving/Undesirable Culture
5. Other people assume that I am successful because of affirmative action, not because I earned my accomplishments.
6. Others assume that people of my background would succeed in a life if they simple worked harder.
7. Others hint that I should work hard to prove that I am not like other people of my race.
8. Others suggest that my racial heritage is dysfunctional and undesirable.
9. Others focus only on the negative aspects of my racial background.
10. Others prefer that I assimilate to the White culture and downplay my racial background.
11. I am mistaken for being a service worker or lower-status worker simply because of my race.
12. Sometimes I am the only person of my racial background in my class or workplace.
13. I notice that there are few people of my racial background on the TV, books, and magazines.
Category 5: Criminality
6. Other people treat me like a criminal because of my race.
7. People act like they are scared of me because of my race.
8. Others assume that I will behave aggressively because of my race.
9. I am singled out by police or security people because of my race.

Category 6: Invisibility
7. Sometimes I feel as if people look past me or don't see me as a real person because of my race.
8. I feel invisible because of my race.
9. I am ignored in school or work environments because of my racial background.
10. My contributions are dismissed or devalued because of my racial background.
11. When I interact with authority figures, they are usually of a different racial background.
12. I notice that there are few role models in my racial background in my chosen career.
13. Where I work or go to school, I see few people of my racial background.

(Torres-Harding, Andrade, & Romero Diaz, 2011).

Table 3

RMAS and LD Microaggression Questions explained for Study

RMAS	LDMS
Environmental Invalidations	
Other people act if they can fully understand my racial identity, even though they are not of my racial background.	I fully understand the all the components of learning disabilities, even though I do not have a learning disability.
Others assume that people of my background would succeed in a life if they simple worked harder.	Others believe that individuals with learning disabilities would succeed academically if they would simple work harder.
I receive poorer treatment in restaurants and stores because of my race.	I believe that individuals with learning disabilities receive poorer treatment in school and the workplace because of their disability.
I am treated as a second class citizen because of my race.	I view individuals with learning disabilities as second-class citizens because of their disability.

Note: based on the RMAS section of environmental invalidations and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Tews & Merali, 2008)	I have observed individuals with learning disabilities as college professors.
Note: based on the RMAS section of environmental invalidations and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Tews & Merali, 2008)	I have observed individuals with learning disabilities portrayed positively in school.
Alienation	
Other people often ask me where I am from, suggesting that I don't belong.	I assume individuals with learning disability are in special education.
Note: based on the RMAS section of alienation and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Tews & Merali, 2008; Macdonald, 2010)	I have avoided seating next to a classmate with a learning disability
Note: based on the RMAS section of alienation and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Tews & Merali, 2008; Macdonald, 2010)	I have avoided being partnered for a class assignment with a classmate with a learning disability
Sometimes I am the only person of my racial background in my class or workplace.	I have noticed only one to two individuals with learning disabilities in my general education class.
Note: based on the RMAS section of alienation and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Tews & Merali, 2008; Macdonald, 2010)	I have observed individuals with learning disability often sitting by his or her self.
Others suggest that my racial heritage is dysfunctional and undesirable.	I have observed others avoiding being partnered for a class assignment with a classmate with a learning disability.
Attribution of Intelligence	

<p>Note: questions for this section were constructed based on the RMAS section of attribution of intelligence and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Hen & Goroshit, 2012; May & Stone, 2010)</p> <p>In addition, these questions were designed using questions from the Teacher Rating Scale constructed to assess perception of students' competence within the academic setting (e.g. "How well does this child do in school?", "How hard does this child try in school?"), as well as, self-reports from students with LD (Grolnick & Ryan, 1990).</p>	<p>I believe individuals with a learning disability have a lower level of intelligence</p>
	<p>I believe I have a higher level of intelligence than an individual with a learning disability</p>
	<p>I have observed others focus only on the negative aspects of an individual with a learning disability.</p>
	<p>I observed others hint that they believe individuals with learning disabilities are of lower intelligence.</p>
	<p>I believe individuals with learning disabilities are of above average intelligence.</p>
	<p>I believe individuals with learning disabilities are of average intelligence.</p>
<p>Invalidation of LD Problems</p>	
<p>Others assume that people of my background would succeed in a life if they simple worked harder.</p>	<p>I believe that individuals with a learning disability could achieve at the same level as their normative peers if they would just try harder</p>

Others hint that I should work hard to prove that I am not like other people of my race.	I have observed individuals hint that individuals with learning disabilities should work hard to prove that they are not like other individuals with learning disabilities.
Other people assume that I am successful because of affirmative action, not because I earned my accomplishments.	I have heard other people assume that individuals with learning disability are only successful because of affirmative action, not because they earned their accomplishments.
Others suggest that people of my racial background get unfair benefits.	I believe that individuals with a learning disability should not be receive accommodations or modifications
Assumption of Individuals' Assumed Academic Standing	
I am mistaken for being a service worker or lower-status worker simply because of my race.	I assume individuals with a learning disability to be of lower academic standing I assume individuals with a learning disability would not attended college
Note: based on the RMAS section of myth of meritocracy and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Hen & Goroshit, 2012; May & Stone, 2010) In addition, the questions composed for this scale used questions from individuals' with LD self-reports of presumed academic status and Teacher Rating Scale (e.g. "How well does this child do in school?", "How hard does this child try in school?")(Grolnick & Ryan, 1990).	I believe individuals with a learning disability will have a lower GPA in college then individuals without a learning disability.

Note: based on the RMAS section of myth of meritocracy and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Hen & Goroshit, 2012; May & Stone, 2010)	I believe that individuals with a learning disability will have an average to high GPA in the college setting.
Invalidation of Inter-Special need Differences	
Other people act as if all of the people of my race are alike.	Other people act as if all individuals with learning disabilities are alike.
Note: based on the RMAS section of invalidation of interethnic differences and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Heath, Roberts, & Toste, 2011; Hen & Goroshit, 2012)	I assumed individuals with a learning disability have the same difficulties with no variance between learning disabilities
Note: based on the RMAS section of invalidation of interethnic differences and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Heath, Roberts, & Toste, 2011; Hen & Goroshit, 2012)	I assumed individuals with a learning disability would have other disabilities as well
Note: based on the RMAS section of invalidation of interethnic differences and research on LD microaggressions (Torres-Harding, Andrade & Romero-Diaz's, 2012; Heath, Roberts, & Toste, 2011; Hen & Goroshit, 2012)	I assumed that individuals with learning disabilities will have similar difficulties as other

Appendix B

Results Table

Table 4

<u>Characteristic</u>	<u>Percentage</u>
Age	
18	12.1%
19	29.3%
20	35%
Gender	
Male	2%
Female	98%
Other	0%
Average Family Income	
\$30,000 to \$39,000	14.1%
\$100,000 to \$149,000	14.1%
\$150,000 or more	17.2%
Race	
African-American (Non-Hispanic)	11.1%
Caucasian (Non-Hispanic)	64.6%
Latino or Hispanic	14.1%

Demographic characteristics (n = 99)

Table 5

Confirmatory Factor Analysis Loadings for the 31-Item LD Microaggression Scale (n = 99)

Item	ALI	ATT	INV	ACA	INT	ENV
I have avoided sitting next to a classmate with a learning disability	.625					
I have avoided being partnered for a class assignment with a classmate with a learning disability	.508					
I assume individuals with learning disability are in special education.	.381					
I have noticed only one to two individuals with learning disabilities in my general education class.	.329					
I have observed individuals with learning disability often sitting by his or her self.	.733					
I have observed others avoiding being partnered for a class assignment with a classmate with a learning disability.	.710					
I believe individuals with a learning disability have a lower level of intelligence		.749				
I believe I have a higher level of intelligence than an individual with a learning disability		.699				
I have observed others focus only on the negative aspects of an individual with a learning disability.		.852				
I observed others hint that they believe individuals with learning disabilities are of lower intelligence.		.789				
I believe individuals with learning disabilities are of above average intelligence.		.570				
I believe individuals with learning disabilities are of average intelligence.		.882				
I believe that individuals with a learning disability should not be receive accommodations or modifications			.504			
I believe that individuals with a learning disability could achieve at the same level as their normative peers if they would just try harder			.508			

I have heard other people assume that individuals with learning disability are only successful because of affirmative action, not because they earned their accomplishments.	.755	
I have observed individuals hint that individuals with learning disabilities should work hard to prove that they are not like other individuals with learning disabilities.	.710	
I assume individuals with a learning disability to be of lower academic standing		.652
I assume individuals with a learning disability would not attend college		.685
I believe individuals with a learning disability will have a lower GPA in college than individuals without a learning disability.		.625
I believe that individuals with a learning disability will have an average to high GPA in the college setting.		.171
I assumed individuals with a learning disability would have other disabilities as well		.649
I assumed individuals with a learning disability have the same difficulties with no variance between learning disabilities		.431
Other people act as if all individuals with learning disabilities are alike.		.233
I assumed that individuals with learning disabilities will have similar difficulties as other individuals with disabilities (e.g. physical and emotional disabilities)		.548
I treat individuals with learning disabilities the same as I would a person with a physical disability.		.903
I have observed individuals with learning disabilities portrayed positively in school.		.782
I have observed individuals with learning disabilities as college professors.		.552

I view individuals with learning disabilities as second-class citizens because of their disability.	.860
I believe that individuals with learning disabilities receive poorer treatment in school and the workplace because of their disability.	.644
Others believe that individuals with learning disabilities would succeed academically if they would simple work harder.	.699
I fully understand the all the components of learning disabilities, even though I do not have a learning disability.	.482

Note. ALI = Alienation factor, ATT = Attribution of Intelligence factor, INV = Invalidation of LD Problems factor, ACA = Assumption of Individuals' Assumed Academic Standing factor, INT = Invalidation of Inter-Special need Differences factor, ENV = Environmental Invalidations factor.

Table 6

Principal Component Analysis Loadings and Commonalities (N = 99)

Item	Component							
	1	2	3	4	5	6	7	8
Category 1: Alienation								
I have avoided sitting next to a classmate with a learning disability	.891	.122	-.155	.153	-.073	-.043	-.266	.075
I have avoided being partnered for a class assignment with a classmate with a learning disability	.714	.423	-.419	.109	.335	.068	-.030	-.030
I assume individuals with learning disability are in special education.	.485	-.231	-.007	.114	.513	.570	.016	-.065

I have noticed only one to two individuals with learning disabilities in my general education class.	.258	-.019	.093	.758	-.212	.273	-.449	-.168
I have observed individuals with learning disability often sitting by his or her self.	.721	.099	.429	-.462	-.198	.133	.026	.011
I have observed others avoiding being partnered for a class assignment with a classmate with a learning disability.	.760	-.258	-.029	-.382	-.360	.053	.032	-.230
Category 2: Attribution of Intelligence								
I believe individuals with a learning disability have a lower level of intelligence	.526	.654	-.265	.192	.292	.041	.261	.173
I believe I have a higher level of intelligence than an individual with a learning disability	.436	.497	-.472	.057	.493	.117	.116	-.084
I have observed others focus only on the negative aspects of an individual with a learning disability.	.821	.424	.234	-.115	-.239	-.015	-.111	.069
I observed others hint that they believe individuals with learning disabilities are of lower intelligence.	.744	.225	.415	-.165	-.260	-.201	.285	-.077
I believe individuals with learning disabilities are of above average intelligence.	-.368	-.600	.269	.439	-.244	-.003	.117	.399
I believe individuals with learning disabilities are of average intelligence.	.531	.010	.710	.160	.298	.249	.097	-.012
Category 3: Invalidation of LD Problems								

I believe that individuals with a learning disability should not be receive accommodations or modifications	-.276	.635	.313	.132	-.487	.165	.214	.163
I believe that individuals with a learning disability could achieve at the same level as their normative peers if they would just try harder	.100	.165	.514	-.662	.360	-.047	.347	-.085
I have heard other people assume that individuals with learning disability are only successful because of affirmative action, not because they earned their accomplishments.	.515	-.143	-.382	-.434	-.290	-.270	-.301	.355
I have observed individuals hint that individuals with learning disabilities should work hard to prove that they are not like other individuals with learning disabilities.	.602	.191	.203	-.203	-.454	-.450	.188	-.185
Category 4: Assumption of Invalidation Assumed Academic Standing								
I assume individuals with a learning disability to be of lower academic standing	.863	.256	-.266	.215	.157	-.101	-.058	.157
I assume individuals with a learning disability would not attended college	-.001	.795	.060	.257	-.107	.044	.414	.290
I believe individuals with a learning disability will have a lower GPA in college then individuals without a learning disability.	-.183	.871	.006	.154	-.172	.150	.251	-.243

I believe that individuals with a learning disability will have an average to high GPA in the college setting.	.308	-.529	.244	.254	-.097	.494	.279	.253
Category 5: Invalidation of Inter-Special need Differences								
I assumed individuals with a learning disability would have other disabilities as well	.188	.490	.616	-.001	.385	-.154	-.350	-.113
I assumed individuals with a learning disability have the same difficulties with no variance between learning disabilities	.149	-.359	-.019	.421	.432	-.564	.380	-.093
Other people act as if all individuals with learning disabilities are alike.	.825	-.328	-.268	-.202	-.121	-.112	.157	.176
I assumed that individuals with learning disabilities will have similar difficulties as other individuals with disabilities (e.g. physical and emotional disabilities)	-.457	-.157	.584	.003	.529	-.147	.099	.253
I treat individuals with learning disabilities the same as I would a person with a physical disability.	.327	-.313	-.171	.757	-.073	-.151	.193	-.249
Category 6: Environmental Invalidations								
I have observed individuals with learning disabilities portrayed positively in school.	.638	-.718	.177	-.090	.144	-.020	.083	-.063
I have observed individuals with learning disabilities as college professors.	.011	-.450	-.392	-.487	-.138	.428	.309	-.179

I view individuals with learning disabilities as second-class citizens because of their disability.	-.364	.221	-.648	-.273	.446	-.134	.082	.101
I believe that individuals with learning disabilities receive poorer treatment in school and the workplace because of their disability.	.670	-.177	.451	-.030	.423	-.018	-.333	.132
Others believe that individuals with learning disabilities would succeed academically if they would simply work harder.	.740	-.448	-.386	.184	-.064	.058	.191	.130
I fully understand all the components of learning disabilities, even though I do not have a learning disability.	-.004	-.938	.092	.043	.109	-.154	.154	-.138

Table 7

Comparison of participant responses to items relating to attribution of intelligence

Items	Percentage response (%)							
	Gender		Average Family Income			Race		
Attribution of Intelligence	Male	Female	\$30,000 to \$39,000	\$100,000 to \$149,00	\$150,000 or more	African-American (Non-Hispanic)	Caucasian (Non-Hispanic)	Latino or Hispanic
Q5.2 "I believe individuals with a learning disability have a lower level of intelligence"	50.0%	59.8%	64.3%	50.0%	23.5%	54.5%	60.9%	71.4%

Q5.3 “I believe I have a higher level of intelligence than an individual with a learning disability.”	100.0%	60.0%	64.3%	50.0%	58.8%	63.6%	59.4%	85.7%
Q5.4 “I have observed others focus only on the negative aspects of an individual with a learning disability.”	50.0%	35.1%	7.1%	14.3%	2.9%	18.2%	10.9%	14.3%
Q4.1 “I believe individuals with learning disabilities are of above average intelligence.”	0.0%	26.8%	7.1%	7.1%	17.6%	9.1%	15.6%	28.6%
Q6.1 “I observed others hint that they believe individuals with learning disabilities are of lower intelligence.”	50.0%	36.1%	7.1%	7.1%	17.6%	18.2%	14.1%	

