Self-Concept, Social Isolation, and Academic Achievement in College Students with and without Learning Disabilities

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This study examined correlates with academic success for students, both with and without identified learning disabilities. Often students with learning disabilities experience failure in academic settings due to a variety of causes. The investigation was designed to determine possible reasons for failure in a group of students with learning disabilities. Research suggests there is a relationship between student achievement in elementary and secondary school and their self-concept and social isolation behavior. There has yet to be sufficient examination of the relationship between college success and self-concept and social isolation behavior.

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Two standardized assessments were used in this study: (a) the Tennessee Self-Concept Scale: Second Edition and (b) the University of California Los Angeles Loneliness Scale – Version 3 (UCLA-3). College grade point average (GPA) served as a measure of achievement. A sample of 200 college students was garnered through a convenience sample at a large Midwestern university.

A Multivariate Analysis of Co-Variance (MANCOVA) and a multiple regression analysis were used to determine the relationships between self-concept, social isolation, disability status, and achievement. Small interrelationships were obtained and there appears to be a relationship between gender and learning disability status. On both the self-concept and social isolation measures, it appeared women with a learning disability were more affected by a lowered self-concept and higher levels of social isolation than were men with a similar diagnosis.
Introduction

College students with learning disabilities are entering college in ever-increasing numbers (Clausen, 1997). The U.S. Department of Education (1989) estimated that 3% of the students in American colleges and universities have a learning disability (LD), and this figure may be as high as 11% in some institutions (Covington, 1992). However, research on college students with learning disabilities is quite limited. Research by Jarvis and Justice (1992) indicates learning disabled students are considered to be particularly at risk for experiencing lowered self-esteem because they typically have experienced repeated failure within an academic setting. Benchoff, Kroger, and Scalia (1990) suggest that students with learning disabilities share some common traits such as negative attitudes and perceptions, and social isolation. These factors could possibly interfere with the college experience of these students. Vogel and Adelman (1993) indicate that learning disabled students often experience failure in academic settings, specifically within the college milieu, due to a variety of factors, including: lack of knowledge about how to use supportive resources, lowered self-efficacy, and issues with coping with the new challenges. Vogel & Adelman (1993) suggest that college students with learning disabilities may suffer from emotional and psychological problems upon entering college. Many college students with learning disabilities have a fear of “losing face” with peers and professors. This fear may stimulate students with learning disabilities (hereto forward referred to as “LD”) to mask their secret shame and avoid academic situations and avoid subjects in which they have to perform in their weak areas (Lee & Jackson, 1992). As a group, students with LD report poorer self-esteem and lower perceptions of their skills than do students without LD; they also have lower achievement scores (Stage & Milne, 1996). College students with LD also tend to have lower-self-perceptions of their scholastic and cognitive abilities than did their non-disabled peers (Cosden & McNamara, 1997). This is of particular concern given the intense focus of the college experience on academic achievement. Developing a further understanding of the differences between these groups, and the factors related to within-group variation, was a primary focus of this investigation.

Personality and social-emotional development are as important as academic problems when examining the difficulties facing young adults with learning disabilities. Professionals in the field of learning disabilities often report populations with specific learning disabilities demonstrate secondary social-emotional problems (Gilson, 1996). Frail ego structures (Heyman, Swain, Gillman, Handyside & Newman, 1997), poor interpersonal skills (Greenbaum & Graham, 1995), and a negative self-concept (House, 1993) have been documented as characteristic of students with learning disabilities. Compared to normally achieving individuals, individuals with learning disabilities exhibit increased levels of anxiety, withdrawal, depression and low self-esteem (Jarvis & Justice, 1992). Social acceptance (Nurmi & Salema-Aro, 1997) and negative perceptions by significant others (Stage & Milne, 1996) also continue to remain a problem for adults with learning disabilities (Urdan, 1997).

In these competitive economic times it is commonly known that to be successful in the job market more education is a critical. Obtaining a college education represents an important accomplishment for students with learning disabilities, particularly in terms of their ultimate success in the workplace and in the world at large. People with learning disabilities who graduate from college are much more likely to hold professional and managerial positions than those who only graduate from high school (Greenbaum & Graham, 1995). Learning disabled persons in
general are reported to have high unemployment rates of 60-70% in the United States (Sinha, 1999).

Academic performance in college for students with learning disabilities tends to be low as compared to their non-learning disabled counterparts (Strage, 1997). Vogel & Adelman (1993) described the specific support service needs of college students with learning disabilities. One of their research findings is that college students who have an LD are often very isolated and socially stigmatized. As such, it is suggested that college administrators examine ways in which more outreach can be provided to college students who have a learning disability. Previous research indicates that 78% of students with learning disabilities fail out of college in the first two years (Tinto, 1987). However, there is not enough research exploring the reasons for their failure. As the number of college students with learning disabilities continues to rise (Clausen, 1997), it is important that colleges be aware of issues that impact students' ability to succeed in college. Previous research by Ishraelashvilli (1997) examined self-concept in younger students as well as social isolation in relation to academic achievement and success in school; however, these variables have not been examined for their role in the failure of learning disabled college students.

This study examined how self-concept, social isolation and level of achievement may play a role in learning disabled college students' ability to survive and succeed in college. The research attempted to define the relationships among social isolation, self-concept, and achievement.

Objectives & Hypotheses

The variables examined in this study include learning disability status, social isolation, and self-concept. The primary criterion variable was achievement, as measured by college GPA. The researcher hypothesized that students with learning disabilities experience lowered self-concept and a higher degree of social isolation than do college students without learning disabilities.

There are two research questions in this study. The first is what are the differences between college students with learning disabilities and non-learning disabled students on scores including self-concept, social isolation and achievement? This question was analyzed using a MANOVA. The second research question is: what is the relationship between learning disabled and non-learning disabled college students', age, sex, self-concept and social isolation as predictors of student achievement (college GPA)? This question was analyzed using a multiple regression analysis with achievement (college GPA) as the criterion variable. This research design allowed the researcher to examine the relationships and differences between the two groups and to test the variance between each of the selected variables to be studied (self-concept and social isolation), and to examine the analyses for statistically significant findings to substantiate the research questions.
Methods

Participants

The study was conducted at a 2-year, open-access, large metropolitan Midwestern university. There were two groups examined, one with identified learning disabilities and another group with no identified learning disability. Those participants with learning disabilities were gathered by asking for volunteers to complete the protocols at the campus Disability Services Office. The inclusion criterion used to determine subjects’ with learning disabilities was defined as a diagnosed and documented learning disability. There were 111 college students with learning disabilities who were invited to participate in the research, although eleven students declined to participate. The total number of students with learning disabilities who participated in the study was one hundred (n=100).

The participants without identified learning disabilities were gathered from undergraduate psychology courses taken by the general college population. Of the 109 non-Learning Disabled College students, nine participants’ inventories were not included in the sample because they were not sufficiently completed. Therefore there were 100 non-learning disabled participants. The only identified exclusion criterion for this group was that they must not have a diagnosed or identified learning disability.

The study used a convenience population selection procedure in an attempt to insure that the full spectrum of population variability was represented. Volunteer bias is unlikely because participants had no prior knowledge of this study. The investigator had no knowledge of students' previous academic performance. This rendered experimenter bias unlikely.

Participants were 48% female and 52% male. The mean age of those participants with learning disabilities was 26.46 years, ( SD =2.13, range 18-56); for those without learning disabilities, the mean age was 21.78 years ( SD =2.53, range = 18-27). The ethnic composition of all participants in the study was as follows: 65% Caucasian ( n = 130), African American 28% ( n = 56), Asian 3% ( n = 6), Native American .5% ( n = 1), Hispanic .5% ( n = 1), Other 3% ( n = 6). Fifty two percent of the participants were freshmen ( n =105) and 47.5% were sophomores ( n =95). These demographic proportions were similar to the university's overall student profile.

Those participants in the study with learning disabilities ( n =100) were asked to report the specific type of diagnosed learning disability. A breakdown of the types of learning disabilities is as follows: Attention Deficit Disorder (ADD) 28% ( n =28), Comprehensive Disorder 17% ( n =17), Dyslexia 15% ( n =15), Reading Disorder 8% ( n =8), Writing Disorder 7% ( n =7), Attention Deficit Disorder with Hyperactivity (ADHD) 4% ( n =4), Math Disorder 1 % ( n =1), and Other/Unidentified Disorder 21% ( n =21).

Procedure

Assessment tools were completed at the Office of Disability Services on campus. Each participant in the study was asked to complete the following forms and questionnaires in the following order: (a) Informed Consent (including a statement about confidentiality), (b) Demographic Questionnaire, (c) TSCS: 2 nd Edition, and (d) UCLA: Version 3.

A questionnaire was developed to collect demographic information about each subject in the sample. Participants were asked to indicate personal information including: ethnicity, gender,
age, presence or absence of a learning disability, type of learning disability, and several other
demographic variables, including: year of high school graduation, current class status (freshman,
sophomore, etc.), use of Disability Services, and on or off campus housing status. The forms and
questionnaires required approximately 30-40 minutes for each participant to complete. The
investigation occurred over the course of two quarters (winter and spring) during the 1999-2000
academic year.

Instruments

The Tennessee Self-Concept Scale – Second Edition (Western Psychological Services) and the UCLA Loneliness Scale – Version 3 (Russell, 1996) were the two standardized
instruments that were chosen for the study because they are well-established instruments and
have high levels reliability and validity. Both instruments have been researched and have been
normed on groups that are similar to the group measured in this study. The standardized tests
were examined to determine their appropriateness for use with the learning disabled population.
For example, the instruments were checked for relative ease of reading especially for the
learning disabled college students who participated in this study. Both the TSCS: 2 and the
UCLA: Version 3, have extensive research supporting the psychometric properties and have
been subjected to rigorous statistical analyses (e.g., Fitts, 1971; Russell, 1996).

The Tennessee Self-Concept Scale is an 82-item inventory that measures the variables of
self-concept. The participant responds to self-descriptive statements using a 5-point scale with
categories ranging from “Always False” to “Always True”. The test manual reports a reliability
coefficient of .91 and a standard error of measurement of -3.30 for Total scores. These measures
were obtained by using a Kuder-Richardson split-half technique. The test-retest reliabilities
reported in the manual are .82. Validity procedures reported in the TSCS-Manual were of four
kinds: (a) content validity, (b) discrimination between two groups, (c) correlation with other
personality measures, and (d) personality changes under particular conditions. Sample questions
include: I do not feel at ease with other people; I am not the person I would like to be; I am a
decent sort of person; Once in awhile I think of things too bad to talk about. There is a vast body
of literature and research that was conducted using the TSCS, which is described in detail in the
Appendix B of the TSCS manual. It is evident from the large body of research conducted on the
TSCS it is one of the most recognized tools used in the field to evaluate levels of self-concept.

The UCLA Loneliness Scale – Version 3, is a 20-item questionnaire that was developed
to assess subjective feelings of loneliness or social isolation. In terms of the reliability of this
measure the internal consistency (Coefficient alpha ranged from .89 to .94) and test-retest
reliability over a 1-year period ( r =.73). Convergent validity for the scale was indicated by
significant correlations with other measures of loneliness. Construct validity was supported by
significant relationships with measures of the adequacy of the individual's interpersonal
relationship and by correlations between loneliness and measures of health and well-being. As
was found with the previous versions of the UCLA Loneliness Scale (Russell, 1982), strong
correlations were found between loneliness and the measures of self-esteem and depression. The
UCLA Loneliness Scale: Version 3 provides reliable and valid assessment of loneliness across a
variety of populations and data-collection methods. Sample questions include: How often do you
feel that there is no one you can turn to?; How often do you feel a part of a group of friends?;
How often do you feel outgoing and friendly?; How often do you feel left out?.
Achievement

Achievement was measured by college GPA. The college GPA was recorded shortly after the time of inventory administration, and was collected from the student database used by the university. Achievement for the purposes of this study is defined as having a G.P.A. that is of good standing with the college where the student is enrolled based upon an overall GPA of 2.5 on a 4.0 scale.

Results and Analyses

A Multivariate Analysis of Covariance (MANCOVA) for the total sample was used to test if there was a difference between college students with learning disabilities and their non-learning disabled counterparts on scores including self-concept, social isolation, and achievement. A multiple regression analysis was used to determine the relationship between learning disabled and non-learning disabled college students' status, age, sex, self-concept and social isolation as predictors of student achievement.

An independent t-test for equality of means was run on the variables of age as related to status of learning disability. The results indicate that there is a positive correlation between the variables of age and status of learning disabled \[ t (198) =2.03, p < .05\]. Students with a diagnosed learning disability tend to be older, on average, than students without a learning disability.

The MANCOVA (Multivariate Analysis of Covariance) included the age of the participant as a covariate in order to reduce the unexplained variance in the subject sample. The researcher performed a MANCOVA with factors including (a) disability status and (b) gender with three dependent variables, self-concept, social isolation, and achievement. As a first step, the relationship of the covariate to the dependent variables needed to be assessed. The variable of age was controlled for in the study. This analysis indicated that age was significantly related to other variables, self-concept, social isolation, and achievement – college GPA \[ F (3, 193) = 7.939, p < .001\], and, as a result, the age variable provided an excellent covariate to use in eliminating otherwise unexplained variance.

The results of the MANCOVA indicate that there is a significant interaction between learning disability status and gender on the dependent measures (self-concept, isolation, and achievement) at the p < .05 level \( F (3,194) =3.0, p = .026 \). Interesting interaction effects arose in the results. As interactions, these findings were not found on the main effects, but were cell-specific effects. As such, there was no need to further examine the results regarding the main effects because there was no simple answer to the questions of main effects such as “what is the influence of disability condition?” Instead, any statement about the results must combine reference to both primary factors (e.g., “female participants who have been diagnosed as LD are different in this manner from male participants with LD or female participants without LD, etc.”). It was originally theorized that academic achievement would be significantly related to the learning disabled and non-learning disabled college students' self-concept and social isolation. Since there was significance found, the researcher ran follow-up univariate tests on the interaction between LD status and gender to check for interaction effects on specific univariates. There were significant univariate interactions (refer to Figures 1 and 2) between LD status and gender on both social isolation and self-concept scores. Figures 1 and 2 show the appropriate
interaction curves for both of these univariate interactions. Inspection of these figures indicates that males tended to have similar scores on self-concept and social isolation whether they were LD diagnosed or not. Females, on the other hand, tended to have significantly higher self-concept scores if they were non-LD diagnosed and significantly higher social isolation scores if they had been diagnosed with LD.

There were no significant differences between the males with or males without learning disabilities on the variables examined. Females without learning disabilities scores on the variables of self-concept and social isolation were in a similar range of standardized scores as the males examined in this study (both with and without LD’s).

A simultaneous multiple regression equation was run on these data to determine which of these variables (self-concept, social isolation, age, gender, or learning disability status) were most predictive of students' achievement (College GPA). The resulting prediction was supported, that positive self-concept is related to higher levels of achievement, however only a small amount of the overall variability in the criterion is explained by the predictor variables. A multiple correlation analysis produced R = .239 on these variables, which again is significant at the p < .043 level.

A multiple correlation analysis was run to produce the correlation matrix found on Table 1. The correlation matrix again confirms the strong relationships that exist between the following variables: as age increases, social isolation also increases; age (older students) and status of learning disabled are related; age (older students) and higher College GPA are positively correlated; High School GPA and College GPA are positively correlated. A correlation coefficient was run on the variables of social isolation and self-concept for the entire sample. The correlation coefficients indicate that there is an inverse relationship: as self-concept rises, social isolation decreases. Similarly, there is a negative correlation between social isolation and self-concept. [r UCLA X TSCS = -.576, p < .001].

**Discussion**

The MANCOVA indicated that there was a significant interaction between the variables of gender and disability status on both social isolation and self-concept. Thus, it is important to note that the researcher did not find that students with learning disabilities were different in the way that was expected. Instead, unexpected, significant gender effects were discovered. Interpretation of these interactions seems to indicate that women with learning disabilities tend to be higher in social isolation than women who are non-disabled, and these same women demonstrated lower levels of self-concept than their non-disabled counterparts. Men, however, did not indicate these same differences: LD or non-LD, men tended to score very similar to one another on both social isolation and self-concept.

Older students involved in the study were discovered to have higher levels of social isolation. This finding may be explained in a variety of ways. It may be that older students tend to feel socially isolated largely in part due to the fact that they are older and as such “non-traditional.” Thus, they may feel out of place on a college campus, which is historically designed to be in tune with the needs of younger, more traditional students. Each of the two dependent variables (self-concept and social isolation) will be discussed separately. Self-concept in females with learning disabilities will be addressed first, followed by a discussion of social Isolation in females with learning disabilities.
SELF-CONCEPT

Self-Concept in Females with Learning Disabilities

The MANCOVA indicated that there was a significant interaction effect between gender and learning disability status with regard to self-concept such that females with a learning disability had lower levels of self-concept. From this result, it appears that this study has pointed to differences in the level of self-concept between males and females with learning disabilities. The females who have learning disabilities scored lower on overall self-concept than both (a) their male learning disabled counterparts and (b) non-disabled males and females. There are several reasons why these gender differences may have occurred on the self-concept measure. Although a review of the literature indicated that many students suffer from psychological problems upon entering college (Vogel & Adelman, 1993), these psychological problems may be further complicated by the fact that the female has a learning disability diagnosis. Based upon this study's results, females with learning disabilities appear to be much more susceptible to lowered self-concept than their male counterparts. Due to the rigors of entering college, changing living environments, leaving old friends and teachers, and embarking on a new venture, entering college may increase worries about self, concern over performance in academics, pressure to make friends, and concerns about connecting with others.

Social Isolation in Females with Learning Disabilities

On the variable of social isolation, it was interesting to find no significant difference between males with learning disabilities and those without. However, females who were learning disabled were found to be significantly more socially isolated than learning disabled males. Additionally, these women were more socially isolated than non-learning disabled male and female groups.

There are several possible explanations for the heightened degree of loneliness or social isolation which appears to be a unique experience for females with learning disabilities. As previously stated in the discussion, the transition from high school to college is a difficult one for many individuals in that it often involves leaving home, the loss of peer friendships and romantic relationships, and establishing a new set of friends. These experiences often evoke intense, but potentially transient, experiences of loneliness (Coleman & Minnette, 1992). For females with learning disabilities, the feelings of social isolation and loneliness may be unsettling, overwhelming, and lonely. There is evidence in the literature that lonely individuals may display poor social skills such as inappropriate intimate disclosure and poor attention to partners (Coleman & Minnette, 1992). As a consequence, lonely individuals may have difficulty in developing satisfactory peer relations in college. Women are also likely to be more burdened than their male counterparts with other life role responsibilities (i.e. child care, care for aging parents) which prohibit them from becoming involved in the college setting further increasing their sense of isolation and loneliness.

This study has identified a within-group variation between males and females with learning disabilities with females more susceptible to lowered esteem, lonely feelings, and social isolation. Males, even though lonely, may be reluctant to admit social deficits such as loneliness or low self-concept (Cramer & Needle, 1998). Males may attempt to avoid social reproach by not admitting personal distress and vulnerability. According to research by Cramer and Neyedley
(1998), males may be unwilling to admit the social sting of loneliness even to themselves; such a strategy would maintain high levels of reported self-esteem despite counterevidence. Males are more socialized to identify with groups, and as such, self-concept rises with group membership and social isolation decreases (Vogel & Adelman, 1993; Cramer & Neyedley, 1998). This study examined which variable, self-concept, social isolation, age, sex or learning disability status would be most predictive of the criterion variable, students' achievement (college GPA). The multiple regression analysis did not reveal significant differences between the predictor variables on achievement, with the exception of age on achievement (See Table 1).

Additionally the study revealed that age is correlated with achievement (as measured by college GPA). The findings substantiate the fact that maturity is significantly related to achievement. This is evident as the older students in the study had a higher college GPA, a measure of achievement. We may hypothesize that this finding emerges because the older student may be more likely than the younger aged student to use tutorial services to aid their performance at the college level. Older students are much more likely to inquire about services and ask for assistance. As such, their maturity contributes to the fact that they are much more equipped to self-advocate and more comfortable with using the services, than their younger aged counterparts. Additionally, according to Schunk (1989), older college students may realize their limitations as they have learned from their past academic mistakes. As such they may pace themselves at a slower rate, attending part time, and thus are better able to manage their academics and achieve their goals.

Limitations

Some comment is warranted about the selection of the participants for this study. First, since it is not possible to randomly assign learning disability status to subjects, this may have impacted the participant sample in that it was not truly random. One threat that cannot be controlled for is volunteer bias. Volunteer bias may naturally exist in this study's scenario, though this threat was controlled for by administering informed consent and assuring that confidentially would be preserved. Halo effect may have also played a role in the study's outcomes as some participants may have attempted to portray themselves in a different more positive light, simply because of being involved in a study.

Implications and Recommendations

More programming needs to be done at the college level to encourage the social integration of those students who have learning disabilities. Significance emerged and a relationship between gender and learning disability on the variables of social isolation and self-concept was found to exist. Additionally, the older college students with learning disabilities scored high on the variable of social isolation.

This study's findings indicate that females who have identified learning disabilities may need additional support, guidance, and perhaps counseling to assist them with acclimating to college. This support should begin at high school with a guidance counselor initiating discussions with females with learning disabilities to readily join groups and engage in campus activities to help reduce social isolation. Counselors in the high schools who work with these
females should also consider evaluating their self-concept in order to assist those with lowered self-concept to work on creating a positive self-concept before beginning college.

Upon arriving at college, females with learning disabilities may benefit from supportive social groups, either structured or unstructured. This may be a good first step toward nurturing and encouraging the development of supportive friendships and decreasing the reported social isolation. A focus of these groups could be to provide psycho-education on topics such as building self-esteem, teaching self-efficacy, and encouraging self-advocacy for these women with learning disabilities so they might better lead self-directed lives. With this type of support and assistance, the female college student with a learning disability can be connected to and engage in social outlets to decrease the reported level of social isolation and heighten self-concept.

This study has numerous practical implications for high school and college counselors, university administrators, parents and learning disabled students, and strongly indicates that females with learning disabilities need to be more fully prepared for the experience of college. Therefore it is especially important to address self concept and social isolation as potential areas of concern for female college students with learning disabilities.

The gender differences found with regard to the variables of self-concept and social isolation deserve further probing and examination. The differences on the variables of age and social isolation deserve further analysis as well.

This research study has addressed an issue that warrants further thought and interest: students with learning disabilities who attend college. Further inquiry into the topic of students with disabilities will undoubtedly assist college counselors and advisors, parents, and the students themselves with fostering thoughtful understanding of the special challenges that are often encountered on the way to receiving a college education. In this way, it will be possible to enhance growth and increase the preparedness of the student who has a disability and who desires to obtain a degree.
References


Interaction effects of gender and status of learning disability on means of the TSCS:2

Interaction effects of gender and status of learning disability on means of the UCLA:3
Correlation Matrix of Relationships Between Primary Variables in the Study: Age, High School GPA, College GPA, UCLA Loneliness Scale, and Tennessee Self-Concept Scale

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>AGE</th>
<th>HS GPA</th>
<th>COLL GPA</th>
<th>UCLA LON (Social Isolation)</th>
<th>TSCS (Self-Concept)</th>
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<td>AGE</td>
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<td>1.000 (p &lt; .001) (n = 127)</td>
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