A doctoral research study was conducted to assess general self-efficacy for college students with and without disabilities. A component of this research was to evaluate for gender differences in general self-efficacy scores. This paper discusses self-efficacy, its implications for women with and without disabilities attending post-secondary institutions and the link between self-regulated learning self-efficacy and academic success. Research findings indicate there is no conclusive evidence that women college students with disabilities have a lower self-efficacy or that having a disability affects an individual's self-efficacy positively or negatively. (Contains 34 references.) (Author)
Self-Efficacy Gender Difference in College Students with Disabilities

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Abstract

A doctoral research study was conducted to assess general self-efficacy for college students with and without disabilities. A component of this research was to evaluate for gender differences in general self-efficacy scores. This paper discusses self-efficacy, its implications for women with and without disabilities attending post-secondary institutions and the link between self-regulated learning self-efficacy and academic success. Research findings indicate there is no conclusive evidence that women college students with disabilities have a lower self-efficacy or that having a disability affects an individual’s self-efficacy positively or negatively.
Self-Efficacy Gender Difference in College Students with Disabilities

In the 1998 survey conducted by the HEATH Resource Center, 9% of all freshmen in post-secondary institutions have disabilities as compared to the 1978 survey results which indicated 2.6% of all freshmen have disabilities (Henderson, 1999). College students with disabilities are an increasing population in post-secondary institutions. There is a concern by educators and post-secondary institutions that individuals with disabilities do not graduate at rates comparable to their nondisabled peers (Henderson, 1999; Horn, Berktold & Bobbit, 1999). College students with disabilities need to be aware that although they are similar to individuals without disabilities in ego development, self-actualization, motivation, maturity, locus of control and self-concept; they continue to persist and graduate from post-secondary institutions at a lower percentage than college students without disabilities (Henderson, 1999; Kriegsman & Hershenson, 1987). Are college students with disabilities different from their non-disabled peers in their level of general self-efficacy and are there gender differences in self-efficacy within this group of college students?

Bandura (1997) defines self-efficacy as, "...people's belief in their capacity to exercise control over their own functioning and over environmental demands" (p.368). Self-efficacy is not the ability to complete a task but a belief in that ability (Bandura, 1997). The concept of self-efficacy is associated with human agency and success at task performance (Bandura, 1997). A positive sense of self-efficacy is linked to effective functioning. Individuals with a high degree of self-efficacy can successfully complete tasks (Bandura, 1997).

Research has linked academic motivation, persistence and success to efficacy beliefs (Bandura, 1993; Zimmerman & Bandura, 1994). Self-efficacy may contribute to success in post-secondary education by influencing goal-setting, career decision-making and academic
self-efficacy (Bandura, 1993; Betz & Hackett, 1981; Locke & Latham, 1990; Zimmerman & Bandura, 1994).

There will be no benefits for college students with disabilities in pursuing post-secondary education unless they meet with academic success (Horn et al., 1999). A question concerning educators is the lack of success in retention and graduation of college students with disabilities as compared to college students without disabilities (Henderson, 1999). There is “...no evidence that college students with disabilities are functioning at different levels than their nondisabled peers” (Benshoff, Fried & Roberto, 1990, p.49). This study provided information on the reliability and validity of the Multidimensional Scale of Perceived Self-efficacy (Bandura, 1989) and the level of self-efficacy in college students with disabilities and gender differences in self-efficacy.

**Self-Efficacy and Gender**

Several researchers (Beyer, 1994; Pajares, 1996; Phillips & Zimmerman, 1990) have noted gender differences in perceived self-efficacy. In studies of career choice, women have a lower self-efficacy than men do, especially in non-traditional career choices (Betz & Hackett, 1981; Fitzgerald & Crites, 1980). Betz and Hackett (1981) found that girls do as well academically as boys but have lower perceived self-efficacy. This finding has been confirmed (Garcia, Lissi, Egan-Dowdy, Davila, Matula & Harris, 1995; Pajares, 2002). One study showed that women have lower self-efficacy individually but have greater collective efficacy (Mayo & Christenfeld, 1999).

There is evidence (Betz & Hackett, 1981; Fitzgerald & Crites, 1980; Pajares, 2002) that there is a reversal in girl’s math self-efficacy throughout their primary and secondary education. In elementary school, math self-efficacy is equal in both sexes and ability is consistent. In middle
school and high school, math self-efficacy decreases in girls and remains the same or increases in boys while ability remains the same for both sexes.

Pajares (2002) indicates that this difference can be attributed to several factors but most likely to the fact that during adolescent development, boys are overconfident and girls are modest. This explanation may be oversimplified. Other factors that can contribute to a decrease in math self-efficacy can be an inherent gender bias in the assessments and the responses maybe based on gender stereotypical beliefs, which reflect the vicarious experiences girls, are exposed to through the media and their peers (Eccles, 1989; Pajares, 2002). A decrease in girl’s self-efficacy can be attributed to stereotypical behavior modeled by adults, the gender expectation of parents, the validation of stereotypical gender behavior by peers and the media portrayal of women as less than competent (Bandura, 1997; Eccles, 1989; Betz & Hackett, 1981; Phillips & Zimmerman, 1990). “The more strongly girls adopt the stereotypic feminine gender-role identity, the more they underestimate their capabilities” (Bandura, 1997, p.430).

Self-efficacy is very important in the process of women’s adolescent identity development (Lopez, Watkins, Manus & Hunton-Shoup, 1992). Academic performance is one type of self-efficacy beliefs that creates concern during adolescence, but girls are also concerned about social efficacy, which creates a greater risk for depression (Bandura, Barbanelli, Caprapra & Pastorelli, 1996). This greater risk for depression in women continues into adulthood (Nolen-Hoeksema, 1990; Bandura et al., 1996). Depression affects mood and further decrease self-efficacy. This creates a cycle of depressed mood affecting efficacy and poor self-efficacy exacerbating depression (Nolen-Hoeksema, 1990). If individual self-efficacy can be increased, the individual will use more appropriate coping skills, which can alleviate the consequences of stress and depression.
Bussey and Bandura (1999) indicated that social cognitive theory can explain the development of gender linked behavior. A large percentage of our gender linked behavior is modeled by significant others and reinforced by social mores and cultural influences. For example, in our culture, occupational pursuits have a gender attribute and people tend to disregard ability when making career choices. Gender linked behavior is effected by social mores, cultural practices, mass media portrayal of gender behavior and significant others which include family, teachers and peers (Bandura, 1997; Bussey & Bandura, 1999; Pajares, 2002). Stereotypical gender linked behavior can decrease self-efficacy and influence academic success and career choice.

The stronger people’s belief in their efficacy, the more career options they consider possible, the greater the interest they show in them, the better they prepare themselves educationally for different occupational careers and the greater their staying power in their chosen pursuits (Bandura, 1997, p.161).

With more women in the work force, many are managing multiple roles (Stickel & Bonnett, 1991). Women with a stronger sense of self-efficacy are better able to manage these multiple roles. A stronger sense of self-efficacy allows women to experience greater self-control and increase their well being (Ozer, 1995; Stickel & Bonnett, 1991).

“Women often have low performance expectations for themselves but expect other women to succeed” (Mayo & Christenfeld, 1999, p.93). Whether this is due to fulfilling stereotypical expectations or “defensive pessimism” is inconclusive (Mayo & Christenfeld, 1999, p.103). This idea of a strong collective efficacy but poor individual efficacy is not common in men (Mayo & Christenfeld, 1999).

Methodology

The purpose of this study was twofold. One purpose was to norm the MSPSE (Bandura, 1989) for use with individuals with disabilities. The other purpose was to answer several
questions including whether there is a self-efficacy gender difference in college students with disabilities.

Multidimensional Scale of Perceived Self-Efficacy

Self-efficacy scales are not normed for individuals with disabilities, so test administration must be modified, validity must be questioned and test interpretation must be viewed with caution (Geisinger & Carlson, 1995). Bandura (1989) developed a scale to assess perceived self-efficacy. The Multidimensional Scales of Perceived Self-Efficacy (MSPSE) is a 57 item self-report inventory designed to assess the general self-efficacy of an individual (Bandura, 1989; Bandura, et al., 1996; Miller, Coombs, & Fuqua, 1999; Williams, 1996). It includes nine subscales with items using Likert-type responses. This scale was designed to measure the various aspects of self-efficacy including academic self-efficacy. This assessment proved to have a high reliability and construct validity (Bryant, 1998; Miller, 2000; Miller et al., 1999; Williams & Coombs, 1996).

Research Design

This study was an assessment of a construct, self-efficacy. It provided an assessment of the reliability and validity of this instrument for college students with and without disabilities and a comparison study of self-efficacy. The difference between the two groups in this study was the label of documented disability. Since no treatment was given and was not part of the research problem, there was no traditional independent variable. However, for the purposes of this study, a designation of a documented disability was the independent variable. The dependent variables for the research problem were the set of scores from the MSPSE (Bandura, 1989).

This study involved the collection of data from the MSPSE (Bandura, 1989) and a demographic questionnaire for college students with and without disabilities. A comparison
study of the scores on the MSPSE (Bandura, 1989) between college students with and without documented disabilities was conducted. Scale scores were compared for gender and other indicators for the two groups of subjects and the various comparison studies were evaluated for significance.

Selection of Subjects

The sample was made up of college students from a small public university, so the results cannot be generalized beyond a post-secondary setting with similar demographics. The participants were not randomly selected from the student population at large because of the independent variable of documented disability.

Volunteers for this study were selected from several classes and through contact with the Office of Disability Services. The students were asked to voluntarily answer the demographic questionnaire and the MSPSE (Bandura, 1989). A signed consent form for subjects was required to participate in the study. The administration of the MSPSE (Bandura, 1989) was available to the individuals with disabilities in a format that would provide them equal access (ADA, 1990).

The study distributed 236 assessments and 137 were returned. Of the 137 respondents, 69 of the respondents identified themselves as not having a disability and 68 of the respondents identified themselves as having a disability. The majority of the respondents were female. Of the 137 respondents, 67.9% were female and 32.1% were male. Of the 93 respondents who were female, 28.4% indicated they had a disability and 39.4% indicated they did not have a disability.

The analysis showed that the MSPSE (Bandura, 1989) could be used to assess self-efficacy with this sample population. The reliability ($\alpha = .89$) and the construct validity (principal axis factor analysis predicted a nine factor solution) for this sample are similar to previous research ($\alpha = .92$; principal axis factor analysis predicted a nine factor solution) and
provided the researcher with enough information to continue with the comparison study (Bryant, 1997; Miller et al., 1999; Williams & Coombs, 1996).

**Research Question**

To respond to the question, **Will gender influence the level of general self-efficacy of college students with documented disabilities**, a $t$-test for independent samples was done between MSPSE (Bandura, 1989) total score means of college students with documented disabilities based on gender. A Levene’s test for equality of variance was used to test the advisability of using a $t$-test for independent samples and an equality of variance was assumed (Brace, Kemp & Sneglar, 2000). The means, standard deviation and standard error mean of the MSPSE (Bandura, 1989) were determined for each group within the sample. The results are summarized in Table 1. The $t$ for the comparison of the group means was 0.47 with a significance of $p > .05$. This analysis did not find any statistically significant difference between the MSPSE (Bandura, 1989) total mean scores based on gender for the sample of college students with disabilities. This analysis fails to reject the null hypothesis, "there is no significant differential effect on self-efficacy scores for gender for college students with documented disabilities". Although this study fails to reject the null hypothesis, it does provide information that helps to answer the research questions.

**Discussion**

This study compared self-efficacy levels between males and female college students with disabilities to see if gender impacts on general self-efficacy. A $t$-test for independent samples was done between the MSPSE (Bandura, 1989) mean scores of male and female college students with disabilities. No significant difference was found. This result was not expected.

Previous research indicted a difference in self-efficacy levels between male and females
Mayo & Christenfeld (1999) believe that women tend to have a form of defensive pessimism whereby they set lower expectations and try to avoid failure. Ancis and Phillips (1996) states, "...women's experience of inequities in the college environment may be significantly associated with negative self estimates of their academic abilities" (p.138).

Interestingly, the HEATH report reviewed several national surveys of college students with disabilities and found more women than men felt they would complete their bachelor's degree and ranked themselves higher on self-esteem measures than men (Henderson, 1999). The stereotypical perception of women with disabilities is that they are dependent and passive but women with disabilities are more optimistic than men with disabilities (Martinez & Sewell, 2000). This study supports the information in the HEATH report and the research of Martinez and Sewell (2000). The female sample of this study is made up of women who have been successful in an academic setting and have a strong sense of self-efficacy.

Although this study did not find a gender difference in self-efficacy or between students with and without disabilities, self-efficacy remains in important component in the evaluation of academic achievements. Evaluating individual college student's self-efficacy levels in terms of academic skills may help institutions to enhance retention programs and help college students persist in their educational endeavors.

Faculty and administration at post-secondary institutions remain concerned about retention and graduation rates in college students with disabilities. Exploring constructs that enhance academic success for women and college students with disabilities are an important part of the work of educators. "Effective retention calls for sustained effort on the part of all institutional members to give each and every student serious and honest attention on a daily
Although, this study does not show that self-efficacy is a construct that is different between genders or college students with and without disabilities, a general training to increase self-efficacy can be provided to college students if the institution decides that low general self-efficacy is a concern. Tinto (1993) recommends, "...institutions should assess the needs of each and every individual and treat those needs on a person-by-person basis" because "...effective retention policies are highly individual in character" (p. 191).

Providing overall training in self-efficacy to college students with disabilities will not be productive if that training is not needed and the money can be used for other learning skill workshops. College students with disabilities need to know their options when offered self-efficacy training by their institutions or professionals. Self-efficacy training for college students with disabilities needs to include study strategies that provide accommodations, problem-solving skills that can be adapted to their personal situations, assertiveness training and enhancement of self-advocacy skills.

Self-efficacy can be increased. Increasing general self-efficacy can improve women's academic self-efficacy and provide women with improved career self-efficacy (Bandura, 1997). Educators need to provide young girls and women with positive role models and exposure to vicarious experiences that provide a greater sense of freedom from gender stereotyping (Bussey & Bandura, 1999). Educators can promote stronger self-efficacy in others by reducing exposure to gender stereotyping in the media, refusing to label individuals by their ability or lack of ability, encouraging an atmosphere of cooperation and goal motivation as opposed to competition in the classroom, giving women positive messages regarding their ability and possibilities, encouraging successful women in diverse career paths to model career self-efficacy
for others, encouraging persistence in academic challenges and supporting teachers who have strong self-efficacy to reduce their stereotypical gender expectations and responses (Pajares, 2002).
REFERENCES


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