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Perceived Stigma and Self-Efficacy as Predictors of Performance in College Students with Learning Disabilities/ADHD

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BARRY UNIVERSITY

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Abstract

A learning disability refers to impairments in an individual's capacity to speak, read, write, spell, listen, think, or solve mathematical problems ("Response to Intervention,"2006). Negative connotations attributed to the learning disability label can result in socially prescribed stereotypes and feelings of stigmatization (Schmader & Johns, 2003). Numerous studies have demonstrated that negative self-evaluations regarding the ability to learn can result in decreased levels of academic self-efficacy, which in turn can impact academic performance (Burden, 2008; Baird, et. al., 2009; Lodewyk & Winne, 2005; Klassen, et. al., 2008). The purpose of the present study was to investigate the role of perceived stigma and academic self-efficacy as predictors of academic performance among college students with learning disabilities and/or ADHD. Seventy-four college-aged participants with a diagnosed LD or ADHD completed a perceived stigma scale adapted by the researcher from May and Stone's (2010) LD Stereotype Questionnaire followed by Zimmerman and Kitsantas' (2007) Self-efficacy For Learning Abridged Form (SELF-A). Results indicated that there was no relationship between perceived stigma and academic performance. However, self-efficacy was positively correlated with academic performance. Results also indicated that Caucasian, non-Hispanic students reported the highest levels of academic self-efficacy whereas Hispanic students reported the lowest levels. Furthermore, students with LD alone reported the highest cumulative GPAs, while those with LD and comorbid ADHD reported the lowest. Implications of this study point to the importance of understanding the role of self-efficacy on the academic performance of students with learning disabilities and ADHD. This information can benefit researchers, educators, and

counselors as they strive to understand possible limitations of students with LD/ADHD

and devise strategies to support them both academically and psychologically.

Perceived Stigma and Self-Efficacy as Predictors of Performance in

College Students with Learning Disabilities/ADHD

A learning disability is defined as a disorder in one or more of the fundamental

psychological processes involved in the understanding and/or use of spoken or written

language or mathematical calculations ("Response to Intervention," 2006). Although

learning disabilities are usually diagnosed during childhood, their symptoms and effects

can last a lifetime. For instance, the dropout rate for children or adolescents diagnosed

with learning disorders is reported at nearly 40% (*DSM-IV-TR*, 2000). Furthermore,

adults with learning disorders may have significant difficulties finding and maintaining

employment, as well as hardships with social adjustment (*DSM-IV-TR*, 2000). Bray

(2006) revealed that language and communication problems are a primary source of

social disadvantage experienced by people with learning disabilities causing difficulties

in initiating and maintaining friendships, as well as accessing community, health, or

occupational resources. Western culture depends on language as a means of not only

communication, but independence and choice. The inability to fully understand written

or spoken language has often placed restrictions on people with learning disabilities since

they are not always able to make informed decisions which can ultimately affect their

rights and liberties (Bray, 2006).

Over the past two decades, the number of college students diagnosed with

learning disabilities and/or attention deficit hyperactivity disorders has increased

substantially. As a result, research on learning disabilities has shifted from the primary

and secondary years of schooling to include postsecondary education (May & Stone,

2010). Despite the influx of these students onto college campuses, many of them do not

seek or access the accommodations allowed to them by the Americans with Disabilities

Act (ADA, 1990) due to fear of the negative implications of self-disclosure. These

students are often perceived negatively by professors and peers due to the prevalent

stereotypes of learning disabilities (May & Stone, 2010). Extensive research on

stereotypes and prejudice has demonstrated that negative stereotypes about members of

stigmatized groups are commonly known to the larger society (Devine, 1989) as well as

to those who are victims of these stereotypes (Crocker & Quinn, 2000). As such, the

learning disability label can be potentially stigmatizing for these individuals (MacMaster,

Donovan, & MacIntyre, 2002). Individuals who are stigmatized are believed to have an

attribute that marks them as socially different and are consequently regarded as inferior

(Major & O'Brien, 2005). It has been well documented in the literature that stigma has

an effect on self-esteem, health, and academic achievement (Major & O'Brien, 2005).

Bandura's social cognitive theory has been widely used to explain academic

behavior and performance. The theory endorses the view of human agency in which

individuals act as agents who are actively engaged in their own development and their

experiences are direct results of their actions (Pajares, 2002). Bandura (1986) explained

that "what people think, believe, and feel affects how they behave" (p. 25). That is, self-

efficacy beliefs are the principle thoughts that affect human functioning and, according to

Bandura, make up the foundation of social cognitive theory (Pajares, 2002). Self-

efficacy is defined as the belief in one's capabilities to learn or perform behaviors at

designated levels (Bandura, 1994). For example, students with high levels of self-

efficacy are more likely to challenge themselves academically and to persist at more

demanding tasks; whereas, students with lower levels of self-efficacy believe they cannot

be successful. Research has shown that self-efficacy beliefs are correlated with other self-beliefs, motivation constructs, academic choices, and achievement (Pajares, 1996).

The purpose of the present study was to investigate the role of perceived stigma and academic self-efficacy of college students with learning disabilities and/or ADHD on academic performance. This study proposed to answer the question "does perceived stigma affect the academic self-efficacy of college students with learning disabilities/ADHD?" Specifically, how does the combination of perceived stigma and academic self-efficacy impact academic performance? The literature review that follows focuses on an examination of learning disabilities, the stereotypes and stigma associated with the learning disability label, as well as Bandura's social cognitive theory and the concept of self-efficacy, specifically academic self-efficacy, and its impact on academic performance. First, learning disorders and attention-deficit hyperactivity disorders will be identified and examined including the various types and presenting symptomalogy. Effects of the learning disability label, as well as stereotypes regarding learning disabilities are addressed. Laws which protect the rights of individuals with disabilities such as the IDEA and the ADA are also discussed. Next, stigmatization and perspectives on social stigma are explored. Lastly, Bandura's social cognitive theory is summarized with special consideration given to the role of self-efficacy and its impact on academic performance.

Learning and Attention-Deficit/Hyperactivity Disorders

A learning disability may manifest itself in the inability to adequately speak, read, write, spell, listen, think, or solve mathematical problems ("Response to Intervention,"2006). The *Diagnostic and statistical manual of mental disorders (*4th ed.,

text rev.; *DSM-IV-TR,* American Psychiatric Association, 2000) has identified four types of learning disorders: reading disorder, mathematics disorder, disorder of written expression, and learning disorder not otherwise specified. The primary feature for diagnosing a reading disorder is reading achievement (i.e., reading speed, accuracy, or comprehension) that is substantially below average as compared to grade level norms. Individuals who have a reading disorder, often called "dyslexia," experience difficulty with processing the sounds or symbols of written language, often read at a slower pace, tend to confuse certain words or letters, and as a result, have limited reading comprehension (*DSM-IV-TR*, 2000). The main feature for diagnosing a mathematics disorder is significantly poor mathematical competence which may manifest itself in the inability to understand mathematical operations or concepts, to decode written problems into mathematical symbols, or to properly follow steps to solving problems (*DSM-IV-TR*, 2000). The essential feature for diagnosing a disorder of written expression is limited writing skills, which are evidenced by multiple spelling, grammar, and punctuation errors, as well as inadequate paragraph organization and extremely poor handwriting (*DSM-IV-TR*, 2000). The learning disorder not otherwise specified type is used when diagnosing an individual who does not meet the criteria for any one specific learning disorder but whose academic achievement is significantly below expected levels. This category is often used to diagnose a person who has difficulty in all three areas (reading, writing, and mathematics) or some combination of these (*DSM-IV-TR*, 2000).

Learning disorders are characterized by significantly lower levels (at least two grade levels) of academic functioning and are typically diagnosed when an individual's achievement on standardized tests in reading, mathematics, or written expression is

substantially below expected levels given his/her chronological age, measured

intelligence, and age-appropriate education. The following criteria are necessary for the

diagnosis of a learning disorder: Criterion A, B and C. Substantially below expected

levels is defined as a discrepancy of more than two standard deviations between

achievement and IQ (Criterion A). Learning disorders which significantly interfere with

academic achievement and with activities that require reading, mathematical, or writing

skills meet Criterion B. Criterion C indicates that if there is sensory deficit present, the

difficulties in reading, mathematical, or writing ability must be in excess of those usually

associated with the deficit. Irregular cognitive processes such as deficits in visual

perception, linguistic expression, attention, memory, or a combination of these, often

precede or are linked to learning disorders (*DSM-IV-TR*, 2000). The discrepancy method

was the traditional method used to measure learning disabilities. It has since fallen out of

favor and is now replaced with the Response to Intervention method as indicated in

section 300.307 (a) (1) and section 614 (b) (6) (a) of the Individuals with Disabilities Act

(2006).

The Individuals with Disabilities Education Act (IDEA, 2004) mandates the use

of technically sound instruments to adequately measure an individual's cognitive ability

as necessary for diagnosis. Proper evaluation techniques which consider a "pattern of

strengths and weaknesses in performance, achievement, or both, relative to age, State-

approved grade-level standards or intellectual development" (U.S. Department of

Education Office of Special Education Programs, 2006, p. 2) are also necessary for

diagnosis. All assessments and other evaluation materials must be valid and reliable

without racial, cultural, or gender bias. Furthermore, a single measure or assessment may

not be used as the sole criterion for the diagnosis of a learning disorder ("Response to

Intervention," 2006).

Individual tests of general mental ability are not only used to assess intelligence

but are typically used to diagnose learning disabilities. The Wechsler Adult Intelligence

Scale (WAIS) and the Wechsler Intelligence Scale for Children (WISC) represent the

most widely used and successful measures of intelligence for adults and children

(Murphy & Davidshofer, 2005). The current version, the WAIS-IV, released in 2008,

includes 10 core subtests which compute a full-scale IQ score, and four index scores

which represent the major components of intelligence: verbal comprehension index

(VCI), perceptual reasoning index (PRI), working memory index (WMI), and processing

speed index (PSI) ("Introducing the WAIS-IV," 2008). Because of their reputable

tradition of criterion validity and test quality, the WISC and WAIS are significantly

correlated with models of academic and life success, such as grades, measures of work

performance, and occupational levels (Murphy & Davidshofer, 2005). As such, they are

routinely used to diagnose learning disorders and attention-deficit hyperactivity disorders.

The effects of learning disabilities vary by individual, developmental stage, and

level of support. Not all individuals with learning disabilities are affected in the same

way or to the same extent. There are many variations in the types and severity of

disabilities which might cause individuals to experience different kinds of impediments.

A person's ability to compensate for their learning disability is a major contributing

factor to the experienced effects. Another factor which adds to degrees of difficulty is the

familiarity and complexity of tasks in both occupational and educational settings. The

amount of training and access to assistive technology, support, and services in work or

school settings is also of paramount importance. Lastly, the level of support from family, peers, and colleagues is substantial when considering the effects of dealing with learning disabilities in an individual's life (National Joint Committee on LD, 1992).

Although they are not grouped under the learning disorders category in the *DSM-IV-TR* (2000), attention-deficit/ hyperactivity disorders are frequently comorbid with learning disorders. Attention-deficit/ hyperactivity disorder (ADHD) is defined as a neuro-behavioral disorder with a genetic origin, which is believed to be caused by functional damage involving the frontal–cortical–basal ganglia connection. It is characterized by impaired inhibition and its symptoms include sustained attention disorder and hyperactivity/impulsivity. ADHD is often comorbid with mood disorders, anxiety, disruptive behavior, interpersonal relationship difficulties and academic failure (Brook & Boaz, 2005). The *DSM-IV-TR* (2000) classifies attention-deficit/hyperactivity into two main categories: inattention and hyperactivity-impulsivity with three possible subtypes (attention-deficit/hyperactivity disorder, combined type, attention-deficit/hyperactivity disorder, predominantly inattentive type, and attention-deficit/hyperactivity disorder, predominantly hyperactive-impulsive type).

Common symptoms of inattention are failure to pay close attention to details and/or careless mistakes in schoolwork or other activities. Limited effort is devoted to schoolwork and it is often sloppy and carelessly completed. Individuals with this condition often struggle to sustain attention in activities and find it difficult to complete tasks. They often appear to be in a "world of their own" or as if they are not listening to what is going on around them. They constantly shift from one activity or task to another without fully completing any one of them. Individuals diagnosed with this disorder are

often unable to follow directions and are inefficient at completing assignments, chores, or other tasks. They have trouble organizing their time, tasks, or activities and as a result avoid or have an aversion to activities that require sustained mental effort and self-application. Work habits are disorganized and materials are often scattered, misplaced, or damaged. These individuals are highly distracted by trivial stimuli and constantly stop what they are doing to attend to external distracters such as someone walking into the room, or music playing in the background. They are highly forgetful and frequently miss appointments or fail to bring necessary materials. In social settings, inattention is displayed by frequent shifts in conversation, not listening to others, or not following rules of games or activities (*DSM-IV-TR*, 2000).

Hyperactivity is marked by fidgetiness or squirming and the inability to remain seated or still for a given amount of time. Individuals who are hyperactive often appear to be "on the go" or "driven by a motor" and are usually known to talk excessively. Participation in sedentary activities is very troublesome since they are always moving and appear restless. Degrees of hyperactivity vary with age and developmental level. Toddlers and preschool children display the highest levels of hyperactivity, school-age children engage in similar behaviors but with less intensity and frequency. Adolescents and adults generally report more feelings of restlessness and have trouble with quiet activities (*DSM-IV-TR*, 2000).

Impulsivity is displayed by impatience, inability to delay responses, and difficulty in waiting one's turn. Individuals who have impulsive tendencies usually blurt out answers before questions have been fully asked, fail to listen to directions, and often make comments out of turn. They frequently interrupt or intrude on other people's

conversations or initiate conversations at inappropriate times. They also tend to grab

objects from others and touch things they are not supposed to, sometimes to the point of

creating impediments in social, academic, or occupational settings. Attention and

behavioral manifestations usually appear in different contexts such as school, work,

social settings, or home. Impulsive symptoms usually become more pronounced in

situations that require sustained attention or mental effort (e.g., listening to class lectures,

doing class assignments, reading lengthy texts, or working on repetitive tasks).

Symptoms appear to decrease or subside when the person is receiving positive

reinforcement for appropriate behavior, is under close supervision, is engaged in

interesting activities, or is working on a one-to-one basis (e.g., with a tutor) (*DSM-IV-TR*,

2000).

The following criteria are necessary for the diagnosis of attention-

deficit/hyperactivity disorder. The essential feature of attention-deficit/hyperactivity

disorder is a constant state of inattention and/or hyperactivity-impulsivity that is more

frequently exhibited and more severe than what is observed in individuals with similar

developmental levels (Criterion A). Hyperactive-impulsive or inattentive symptoms

which cause impairment must have been present before the age of seven (Criterion B).

Some type of impairment from the symptoms must be present in at least two settings

(e.g., home, school, work) (Criterion C). There must be evidence of interference with

developmentally appropriate social, academic, or occupational functioning (Criterion D).

The hyperactive or inattentive disturbance does not occur exclusively as part of a

pervasive developmental disorder, schizophrenia, or other psychotic disorder and cannot

be better classified as another mental disorder (e.g., a mood disorder, anxiety disorder, dissociative disorder, or personality disorder) (Criterion E) (*DSM-IV-TR*, 2000).

There are three different subtypes of attention-deficit/hyperactivity disorder. The first subtype is attention-deficit/hyperactivity disorder, combined type, which should be used in diagnosis if an individual displays six (or more) symptoms of inattention and six (or more) symptoms of hyperactivity-impulsivity, which have lasted for a period of at least six months. The second subtype is attention-deficit/hyperactivity disorder, predominantly inattentive type, which should be used when there are six (or more) symptoms of inattention but fewer than six symptoms of hyperactivity-impulsivity lasting at least six months. The last subtype is attention-deficit/hyperactivity disorder, predominantly hyperactive-impulsive type which should be used in diagnosis when an individual displays six (or more) symptoms of hyperactivity-impulsivity but fewer than six symptoms of inattention for a period of at least six months (*DSM-IV-TR*, 2000).

In general, research has been unable to provide a definitive answer as to the causation of learning disorders (Gresham & Vellutino, 2010). Genetic predisposition, prenatal injury, and a variety of other medical and neurological conditions are often associated with the onset of learning disorders. Specific medical conditions (e.g., lead poisoning, fetal alcohol syndrome, and fragile X syndrome) are linked to learning disorders. However, the presence of these conditions does not automatically warrant the development of a learning disorder. In fact, many people with learning disorders report no such medical or genetic history (*DSM-IV-TR*, 2000). The Learning Disabilities Association (LDA, 2006) views specific learning disabilities as neurologically-based. As such, people with learning disabilities should be granted certain rights in order to

adequately function in society. Specifically, accommodations, special education, and academic support must be tailored to the individual's specific cognitive deficits.

The Legal Environment

The Individuals with Disabilities Education Act (IDEA) is a federal law enacted in 1990 designed to protect the rights of people with disabilities by ensuring that they have access to "*free appropriate public education*" (FAPE), regardless of ability. In addition to safeguarding educational rights, IDEA also provides supplementary special education services and accommodations. The eligibility criteria for qualifying for services under IDEA is a diagnosed disability in at least one of the following categories: autism, deafness, hearing impaired, mental retardation, multiple disabilities, orthopedic impairment, serious emotional disturbance, specific learning disabilities, speech or language impairment, traumatic brain injury, visual impairment including blindness, and other health impairments ("The Individuals with Disabilities Education Act").

According to IDEA (2004), a learning disability is a disorder in one or more of the psychological processes involved in understanding or utilizing spoken or written language, which manifests itself in the inability to "listen, think, speak, read, write, spell, or do mathematical calculations" (Learning Disabilities Association of America, 2006). The ability to properly think, speak, read, and write are not solely confined to educational settings, but comprise the foundation of social interaction. If individuals with learning disorders are unable to effectively learn, communicate, or engage with the larger society, they are more likely to be victims of discrimination.

The Americans with Disabilities Act (ADA) of 1990 is another such law targeted at protecting the rights of individuals with disabilities including those with learning

disabilities. It was designed to ensure that individuals with disabilities have access to the same opportunities available to those without disabilities. The guiding principles of the ADA are that people with disabilities are given access to and are accommodated in employment, transportation, public institutions, and in state and local government agencies (National Joint Committee on Learning Disabilities, 1992).

Individuals with learning disabilities may benefit from the following accommodations which are supported by the ADA: auxiliary aids and assistive technology (e.g., spelling devices, calculators, speech-to-text software); a reduction of visual or auditory distractions; quiet and distraction free environments; international symbols, illustrations, or other signage modifications; memory aids or cue cards; training and instruction using alternative materials and methods (e.g., visual, auditory, kinesthetic); clearly defined occupational/educational expectations; clear and direct instructions; organization of tasks into more manageable chunks; demonstration of activities by example; opportunity to practice learned activities; both written and spoken instructions; additional time to complete tasks; and modification of ways to complete tasks (National Joint Committee on Learning Disabilities, 1992).

The ADA (1990) considers specific learning disabilities as a physical and/or mental impairment, where learning is considered a major life activity. In addition to experiencing difficulty in the areas of listening, speaking, reading, writing, spelling, and mathematics, individuals with learning disabilities can also have deficits in memory, reasoning, time management, organization, and social skills. It is evident that the effects of learning disabilities are not solely circumscribed to academic settings, but also have lasting effects on daily living. Research has suggested that the learning disability label

itself can pose as a risk factor increasing the probability that individuals with learning

disabilities undergo more negative experiences in numerous facets of their lives and

"across a diverse set of domains (e.g., peer, family, school, interpersonal)" (McNamara,

Willoughby, Chalmers, & YLC-CURA, 2005, p. 234). The negative connotations that

are attributed to the learning disability label often result in socially prescribed stereotypes

which are discussed next.

Stereotypes and Attitudes toward Individuals with Learning Disabilities and ADHD

A stereotype refers to beliefs about the general characteristics of a group or social

category (Taylor, Peplau, & Sears, 2003). These negative beliefs tend to be widely

known and usually become the basis for excluding or discriminating individuals of a

particular minority group (Major & O'Brien, 2005). During the past thirty years, social

psychological research has centered on the content and impact of stereotypes about a

variety of social groups and the prejudice and discrimination that can occur as a result of

these negative stereotypes (Crocker & Major, 1989; Crocker & Quinn, 2000). One such

social group which has often been victimized by stereotypes and prejudice is the learning

disabilities population. Much of the earlier research on learning disabilities centered on

the academic and psychosocial effects on elementary and secondary school age children.

More recently, the focus has expanded to include issues in postsecondary education and

occupational settings (Field, Sarver, & Shaw, 2003; Houck et al., 1992; Minskoff,

Sautter, Hoffman, & Hawks, 1987; Newman, Wagner, Cameto, & Knokey, 2009; West et

al., 1993 as cited in May & Stone, 2010).

Much of the literature on attitudes regarding learning disabilities confirms the

"overwhelmingly" negative perceptions from members of the dominant group such as

teachers, parents, and peers toward these individuals (Krause, Nixon, Beer, & Beer, 1991) and the common stereotypes attributed to them. These stereotypes include the impression of lower intelligence and limited capability (May & Stone, 2010). May and Stone (2010) explained that the concept of a "metasterotype" alludes to the perceived stereotypes that *others* hold about a target group. In their study, they asked college students with and without learning disabilities to respond to the open-ended "metastereotype" question, "What do you think people in general believe about individuals with learning disabilities?" (May & Stone, 2010, p. 485). The participants' responses to this question yielded six categories of stereotypes: low intelligence, compensation possible, processing deficit, nonspecific insurmountable condition, working the system, and other. The low intelligence stereotype consisted of responses such as "they are stupid and incapable of learning." An example of a response to the compensation possible stereotype is they may be just as smart or smarter but need aid to reach their full potential." The third stereotype, process deficit, included comments such as "they are slower than others." The nonspecific insurmountable condition consisted of responses such as "in general, many people view individuals with disabilities as people who will never be able to overcome their disability." An example of a response to the working the system stereotype is "they don't try, if they tried harder they would overcome their problems" (May & Stone, 2010, p. 488-489). The sixth category, other, was used to document responses to the metastereotype question that did not adequately fit into any of the other categories (May & Stone, 2010).

The results of the May and Stone (2010) study were not only consistent with previous research regarding the range, content, and categories of stereotypes, but

extended past findings to include attitudes regarding individuals with learning disabilities specifically. May and Stone found that the most widely used metastereotype reported by both individuals with learning disabilities and those without related to lower intellectual ability. For instance, 42% of the total sample believed that 'people in general' thought that individuals with learning disabilities were less intelligent than those without learning disabilities. The data revealed that both students with and without learning disabilities generally subscribe to larger society's negative stereotypes regarding low potential for intellectual functioning. Despite the rise in college attendance from students with learning disabilities and the availability of information regarding learning disabilities to the general public, negative stereotypes attributed to these individuals and subsequent prejudice and discrimination are still highly prevalent.

May and Stone (2010) noted that societal perceptions of learning disabilities have a direct effect on the self-disclosure and self-advocacy of students with learning disabilities; specifically, apprehension of prejudicial reactions from peers and other significant people influence their decisions to seek support and accommodations. Defining individuals according to learning ability alone can negatively impact numerous facets of these individuals' lives. In particular, the use of the word "disability" when referring to an individual's mental capacity focuses on the weakness or inferiority of the individual suggesting that there is something inherently wrong with him or her (Bray, 2006). People with learning disabilities have had to manage numerous physical, intellectual, and social barriers in order to appropriately function in society (Bray, 2006). Primarily, they have had to suitably handle other people's attitudes towards them based on generalized misconceptions of learning disabilities. People with varying degrees of

disabilities are disadvantaged by the negative attitudes of the larger society; being a

member of a group with the learning disability label can stigmatize individuals and cause

social exclusion and social disadvantage (Bray, 2006).

      Bray (2006) explained that social disadvantage is the segregation of a particular

group of people from partaking in all aspects of social, educational, and civil activities.

Historically, individuals with learning disabilities have been excluded from mainstream

education. Experimental models of inclusion into mainstream schools began in the 1970s

and 1980s when there was a shift from the institutionalization of children with learning

disabilities (Bray, 2006). Inclusion has been shown to have positive outcomes for

children with learning disabilities, as well as for those who do not. Buyesse and Bailey

(1993) found that children with learning disabilities were shown to have higher social

awareness and experienced a better overall learning experience as compared to students

who were placed into special schools. The exposure of children with learning disabilities

to their non-learning disabled peers not only resulted in friendly interactions between the

two groups, but aided in the development of more positive attitudes towards individuals

with learning disabilities (Soresi & Nota, 2004 as cited in Bray, 2006).

      Bray (2006) also claimed that although belonging to a labeled group can result in

negative self-perception and self-esteem, there is no direct evidence that people with

learning disabilities are aware of being in an out-group or are concerned by the possible

stigma that is attributed to the learning disability label. However, contrary to Bray's

findings, numerous other studies have thoroughly examined how people who are targets

of negative stereotypes understand and interpret their experience as members of socially

disadvantaged groups, how they cope with this experience, and the consequences these

coping strategies have for their self-esteem (Crocker & Major, 1989; Crocker, Major, &

Steele, 1997; Frable, 1989; Jones et al., 1984; Major & Crocker, 1993; Steele, 1992, 1997

as cited in Major et al., 1998). People with learning disabilities have to constantly

struggle with the barriers of social disadvantage which revolve around the general

public's inadequate knowledge of disabilities, their lack of time and/or commitment to

develop total inclusion, and their unwillingness or inability to effectively communicate

with individuals with learning disabilities (Bray, 2006).

The learning disability diagnosis has several advantages and disadvantages (Ho,

2004). On one hand, the diagnosis can finally provide a definitive answer as to why an

individual experiences such hardship with learning and other daily functions.

Additionally, the diagnosis warrants the need for certain accommodations and support

services that an individual would otherwise not have not been able to receive (Ho, 2004),

which could ultimately progress and enhance their educational experience. On the other

hand, the learning disability diagnosis has many negative social, educational, and

political connotations. Considering the historical oppression of disabled people, many

individuals do not want to associate themselves with this unfavorable label in fear of

being perceived or treated as inferior and abnormal. Although the diagnosis can result in

a greater sense of personal awareness for an individual who can learn how to adapt to the

label and advocate for himself or herself, such labels of disability are socially interpreted

as inferior and the individual runs the risk of being considered an outsider compared to

the "normal" population (Ho, 2004).

Major et al., (1998) reported that stigmatized people have a "spoiled identity" in

the eyes of larger society; they "bear a mark" that makes them more susceptible to social

depreciation (p. 34). Discriminatory attitudes towards people with learning disabilities are often held by the very people who should be more knowledgeable, accepting, and accommodating to these conditions. Ho (2004) noted that teachers and school officials consider students with learning disabilities as less competent and inherently inferior to the other students and as a result are placed in less rigorous "special-education" classes that provide lower achievement opportunities. Research has shown that students with learning disabilities are often ignored and perceived as academically, as well as socially inferior by teachers and peers (La Greca & Stone, 1990; Smith & Nagle, 1995). When asked about school experiences, one individual with learning disabilities reported, "the kids made fun of me…I felt bad because of the teasing" (Higgins, Raskind, Goldberg, & Herman, 2002, p. 7). Another individual recounts his negative school experiences when he states, "the teachers would tell [my parents] that I wasn't trying and was a bad student and didn't have enough supervision and discipline at home" (Higgins, et al., 2002, p. 8). Once an individual is branded with the learning disability label, stereotypes and expectations attributed to the label are then permanently imposed. A person's unique abilities, learning styles, circumstances, and goals may be neglected since he or she is not typically regarded as an individual but is instead solely defined by the disability and grouped into an inferior class (Ho, 2004). This occurs because individuals with learning disabilities are often compared to individuals who do not have learning disabilities (La Greca & Stone, 1990; Burden, 2008; Smith & Nagle, 1995; Ryan, Nolan, Keim, & Madsen, 1999; McNamara, et al., 2005; MacMaster et al., 2002; Sabornie, 1994; May & Stone, 2010) and it is only natural given the nature of their disability, that in comparison, they perform at lower levels.

The majority of the literature dedicated to individuals with learning disabilities focuses on comparing them to their non-learning disabled peers in regards to numerous psychosocial factors (McNamara, et al., 2005; Ryan, et al., 1999; Sabornie, 1994). The most common psychosocial factors studied have been: self-concept, self-awareness, independence, academics, goal-setting (Ryan et al., 1999) academic orientation, temperament, well-being, loneliness, parental relationships, victimization, activities, and friendships (McNamara et al., 2005) with many studies overlapping in the consideration of these and other numerous psychosocial factors.

Ryan et al. (1999) specifically addressed the psychosocial adjustment of students with prolonged learning disabilities in their research since they found that this area was seldom studied. In an overview of the studies regarding adjustment factors, Ryan et al. found that the affective, cognitive, and academic abilities of people with learning disabilities are frequently considered in isolation instead of existing interdependently. As such, the authors measured students' self-perceptions, self-awareness, and self-concept in areas such as goal setting, academic success, and independence. Their study revealed that individuals with learning disabilities scored lower on levels of awareness, acceptance, and expression of affective characteristics as compared to their non-learning disabled peers. Moreover, students with learning disabilities scored significantly higher than their non-learning disabled peers in perceiving the need for both academic and personal counseling support. Interestingly enough, both groups of students reported being "somewhat" or "very confident" about achieving success in higher education. The two groups also had similar scores in regards to plans for future academic degrees.

Previous and current research has also revealed that individuals with learning disabilities experience academic, as well as psychosocial difficulties (McNamara et al., 2005). Explicitly, the learning disability label may act as a "risk factor" increasing the possibility of experiencing more negative outcomes in various areas of life such as in, academics, social, and occupational settings. Although learning disabilities often occur concomitantly with attention deficit hyperactivity disorder, very few studies have considered the psychosocial effects of learning disabilities with comorbid ADHD. In their study, McNamara and colleagues (2005) compared adolescents with learning disabilities, adolescents with comorbid learning disabilities/ADHD, and adolescents without learning disabilities, across several domains: academic orientation, temperament, well-being, loneliness, parental relationships, victimization, activities, and friendships. The construct of academic orientation, which refers to grades achieved, school goals, and academic planning was of most relevance to the present study.

Larkin and Ellis (1998 as cited in McNamara et al., 2005) described five academic characteristics of students with learning disabilities: they are generally deficient in the fundamental abilities required to meet higher academic demands, they possess rudimentary skills but are unable to employ them in problem-solving tasks, they experience difficulty in effectively or efficiently applying learning or performance strategies, they lack cursory knowledge and therefore have difficulty in learning new concepts and adapting to higher curriculum, and they often do not access academic support services. As such, students with learning disabilities and those with comorbid ADHD are academically performing at least one year below grade level (McNamara et al., 2005). In fact, McNamara et al.'s (2005) study revealed that all three groups of

students were significantly different from one another in reported grades. For example, adolescents without learning disabilities reported higher grades compared to students with learning disabilities, who in turn reported higher grade levels than those students with learning disabilities and comorbid ADHD (McNamara et al., 2005).

An additional characteristic which can affect academic performance in individuals with learning disabilities is temperament. Upon examining the temperament variable, McNamara et al., (2005) found that adolescents without learning disabilities reported higher levels of persistence when performing tasks or activities as compared to students with learning disabilities and those with comorbid learning disabilities/ADHD. Adolescents with comorbid learning disabilities/ADHD reported more negative temperament characteristics such as approachability, adaptability, mood, persistence, and distractibility, as compared to adolescents with learning disabilities alone and to those without (McNamara et al., 2005). The temperament variable is an important one to consider since it describes many traits that are deemed valuable in educational settings. A deficit in this area can result in difficulties with academic endeavors.

An equally important psychosocial variable considered in McNamara et al.'s (2005) study was well-being. Adolescents without learning disabilities reported higher levels of self-esteem and general life satisfaction than both adolescents with learning disabilities and those with comorbid learning disabilities/ADHD who in turn reported higher depressive symptoms and lower self-esteem. Another interesting finding was that adolescents with comorbid learning disabilities/ADHD reported significantly higher levels of victimization as compared to the other two groups. Victimization refers to an individual being pushed or shoved, sworn at or called names, being teased or ridiculed,

receiving hurtful notes, being excluded from activities, having untrue rumors spread

about oneself, and having other students physically and emotionally harm one

(McNamara et al., 2005). Students with learning disabilities, who frequently reported

higher levels of physical assault, were often threatened, and had their possessions stolen

more often (Sabornie, 1994). These victimization experiences can be a direct effect of

the stigmatization resulting from the learning disabilities label.

In a similar study, Sabornie (1994) examined the social-affective characteristics

of loneliness, self-concept, integration, victimization, participation, and teacher-related

social competence of middle school students identified as either learning disabled or non-

learning disabled. Sabornie specifically addressed these variables in his study because

upon reviewing the literature, he found numerous studies which revealed that students

with learning disabilities experienced problems with social acceptance from their non-

learning disabled peers, as well as secondary personality problems in school settings. He

also found that these students had social integration difficulties and overall dissatisfaction

with their social lives (Gresham, 1982; Sabornie, 1985; Bender, 1987; Sabornie &

Thomas, 1989; White, Schumaker, Warner, Alley, & Deshler, 1980 as cited in Sabornie,

1994). The results from Sabornie's study revealed that students with learning disabilities

experienced more loneliness, felt less integrated in schools, were victimized more often,

and participated in fewer social activities than their non-learning disabled peers.

In an effort to attain a more holistic perspective on the social-affective

characteristics of students, Sabornie (1994) recruited both regular education teachers and

special education teachers to complete a social competence scale on the subjects.

Sabornie found that regular education teachers rated the students with learning

disabilities more negatively with regard to social competence as compared to their non-learning disabled peers. Special education teachers held very different views on the social behavior of students with learning disabilities as compared to regular education teachers. Regular education teachers perceived students with learning disabilities to be more socially deficient and in need of assistance to increase their pro-social functioning (Sabornie, 1994). Similarly, Krause, Nixon, Beer, & Beer (1991) found that teachers perceived students with learning disabilities as "less able to cope with new situations than peers, more angry and hostile…less accepting of responsibility, less socially acceptable to others,…hyperactive, and having more problems" (p. 399). These findings demonstrated that teachers have different expectations of students with learning disabilities and as a result, may have negative attitudes towards them (Ho, 2004; May & Stone, 2010).

Although much of the research has indicated that the self-concept of students with learning disabilities is problematic in relation to perceptions of their school-related functioning (Carroll, Friedrich, & Hund, 1984; Hiebert, Wong, & Hunter, 1982; Jones, 1985; Kistner & Osborne, 1987; Larsen, Parker, & Jorjorian, 1973; Omizo, Amerikaner, & Michael, 1985; Rosenberg & Gaier, 1977 as cited in Sabornie, 1994), Sabornie's (1994) study suggested that the self-concept of students with learning disabilities is not universally negative. Interestingly enough, the one variable where both groups did not significantly differ was that of the self-concept. However, this was an exceptional circumstance, much of the research consistently gives evidence to the fact that individuals with learning disabilities fare worse in all areas of psychosocial and academic adjustment compared to their non-learning disabled peers (Sabornie, 1994).

There has been much debate about the positive and negative consequences resulting from the diagnosis of a learning disability (MacMaster et al., 2002; Sabornie, 1994; Higgins et al., 2002; Ho, 2004; Bray, 2006). The learning disabilities diagnosis can provide an individual with support services and accommodations, but at the same time, it can increase the propensity for lowered self-esteem because of the negative stereotypes attributed to the label. Low self-esteem is often associated with emotional, behavioral, and academic problems in children. Numerous studies have suggested an increased risk of low self-esteem among children with learning disabilities (MacMaster et al., 2002; La Greca & Stone, 1990; Smith & Nagle, 1995; Heyman, 1990).

Opposed to prior research, MacMaster et al. (2002), hypothesized that children with learning disabilities would have an increase in their self-esteem upon the diagnosis. The rationale behind their hypothesis was that children with learning disabilities often feel that something is inherently wrong with them. Therefore, the diagnosis which offers a specific label, a possible etiology, and an explicit description of the particular disability could be a welcomed answer to many individuals. Comparable studies have indicated that students who viewed their learning disability as something specific and manageable instead of permanently limiting, had higher academic and global self-concepts, self-esteem, social interactions, and intellectual and behavioral capacities than students who had a global and stigmatizing view of their learning disability (Heyman, 1990).

MacMaster et. al.'s (2002) study consisted of a group of elementary school children with learning disabilities and a control group of children similar in age and gender who did not have learning disabilities. The children with learning disabilities were recruited for this study because they were candidates for learning disability testing.

These children were included in the sample only if they were in fact diagnosed with a learning disability upon assessment from the school psychologist. The authors administered the Rosenberg Self-Esteem Scale as a pretest and posttest to both groups. Children with learning disabilities were given the pretest approximately two months prior to their assessment and subsequent diagnosis; the control group was given the pretest during the same time. The posttest was given to both groups approximately one month following the diagnosis of the children with learning disabilities. Their hypothesis was supported: children with learning disabilities showed a significant increase in self-esteem Q (2, 60) = 4.09, p < .01, from pretest (M = 51.35, SD = 12.09) to posttest (M = 53.95, SD = 11.64). The control group did not show a significant change in self-esteem scores between the pretest (M = 66.72, SD = 18.20) and the posttest (M = 66.64, SD = 18.43). Although there was a significant increase in the levels of self-esteem of the children with learning disabilities after their official diagnosis, it must be noted that their levels of self-esteem were still substantially lower than those of their non-learning disabled peers.

The results of the MacMaster et al., (2002) study revealed that the children with learning disabilities in their sample showed increased levels of "global self-esteem" after their diagnosis. However, much of the research in this area consistently demonstrates that children with learning disabilities have lower academic self-esteem as compared to those who do not have learning disabilities (La Greca & Stone, 1990; Heyman, 1990). Given the negative effects of adopting a constraining and stigmatizing view of one's learning disability (May & Stone, 2010), it is important to consider the effects of the learning disability diagnosis and label on the individual at various life stages.

Higgins, Raskind, Goldberg, and Herman (2002) attempted to understand and describe the 'life-span experiences' of 41 individuals with learning disabilities in a 20-year longitudinal study. The authors specifically wanted to document the participants' stages of acceptance of their learning disabilities over time and thus conducted this simultaneous qualitative and quantitative study to address questions regarding changes in past and present attitudes, emotions, conceptions, and meanings of the learning disability diagnosis and label. Higgins et al. focused on the concept of the social and emotional 'acceptance' of the disability as a general indicator of psychological and personal adjustment. The various stages of acceptance they proposed were: (a) the period of awareness of 'differentness,' (b) the labeling event, (c) period of gaining an understanding of limitations and of advocating for themselves, (d) compartmentalization of the learning disability, (e) transformation of negative attitudes towards the disability to a positive outlook on life and personal character (Higgins et al., 2002).

The qualitative data was garnered by taped interviews of the participants and then transcribed with some of the participants' responses appearing in the article. Several of the participants' comments were very salient and representative of the feelings and thoughts held by many individuals who have had to deal with learning disabilities their entire lives. Of particular importance is how these individuals felt they were being negatively perceived and judged by society. One participant stated, "it was me versus the normal people. And the normal people is everybody who doesn't have a disability…" (Higgins, 2002, p. 9). Another participant described how he or she felt as a result of the disability: "Your peers call you stupid and retarded. They make fun of you. You don't feel good about who you are. Your self-esteem goes down. You think of yourself as a

stupid child. Because that's what everybody's projecting on to you" (Higgins, 2002, p. 7). This statement encompasses what the majority of the research on learning disabilities has shown: the effects of the learning disability label can have negative ramifications on individuals' self-esteem, emotional, mental, and academic states.

Stigmatization

Stigmatization refers to the negative attitudes, stereotypes, and beliefs held about certain social groups (Crocker & Major, 1989). It has long been recognized that stigma is a social construction; every society and culture devalues and excludes categories of individuals because of particular attributes (Major & Eccleston, 2005). Jones et al., (1984) explained that stigmatized individuals are "marked" by discrediting characteristics that set them apart from the norm. People who are stigmatized bear a "mark" that deems them less than human (Major & Eccleston, 2005). These individuals are often targets of negative stereotypes, devaluation, and dehumanization by members of society (Crocker & Quinn, 2000). Since stigmas are a social construction and as such a product of their environment, they differ considerably on numerous capacities such as severity, concealability, and social disturbance (Jones, Farina, Hastorf, Markus, Miller, & Scott, 1984). Stigmatizing marks may be conspicuous or concealed, manageable or unmanageable, and are associated with physical appearance (e.g., a facial deformity), behavior (e.g., drug abuser), or group affiliation (e.g., African American) (Major & O'Brien, 2005).

Jones and colleagues' (1984) review of the stigma literature revealed six significant dimensions of stigma: concealability/visibility, course-outcome, disruptiveness, aesthetic impact, origin/etiology, and peril/danger. The categorization of

stigma is a fundamental step towards recognizing the effects of the stigmatized status. In order to readily understand the experiences of stigmatized individuals, Quinn (2006) argues that "more must be known about the type of stigma, how it affects the self, and its particular links to the social beliefs that make the mark stigmatizing" (p. 83).

Perhaps the most crucial element taken into consideration when assessing a stigmatizing condition is the visibility of the stigma (Quinn, 2006). Whether a stigmatizing condition is visible or not can have a lasting impact on how an individual will be perceived and subsequently treated. In general, there are two main types of stigma: conspicuous or concealed. A conspicuous stigma is one that is easily identifiable by the general population. These are usually stigmas associated with physical deformities (e.g., a paralyzed individual) or group membership (e.g., women). A concealed stigma is defined as a stigmatized identity that is not directly obvious in a social interaction, such as a history of mental illness or incarceration.

Jones et al. (1984) inferred that individuals with concealable stigmas face less prejudice and fewer negative social interactions than those with conspicuous stigmas. Because individuals with concealable stigmas can "pass" as "regular" people in daily activities (Goffman, 1963 as cited in Quinn, 2006) they are not as prone to becoming victims of prejudice and discrimination as compared to people with conspicuous stigmas. Individuals with concealable stigmas can, however, experience anxiety and insecurity about what other people's reaction will be if their stigmatizing condition is discovered. Unlike people with conspicuous stigmas, around whom others are more inclined to appear sensitive and less discriminatory, people with concealed stigmas are likely to be in

situations where others blatantly express their stereotypes and prejudiced attitudes since they can "pass" as "normal" (Quinn, 2006).

According to certain situations and circumstances, some concealed stigmas have the potential to reveal themselves (Quinn, 2006). For example, a student who has dyslexia will have the stigma of a learning disability revealed when he is made to read aloud in class. Having a concealed versus a conspicuous stigma can give a person the ability to control when and to whom the stigmatizing condition is revealed, but this control comes with the onus of making a difficult decision about the ramifications of the revelation (Quinn, 2006). In reference to the previous example, if the student with dyslexia reveals his learning disability, he could benefit from receiving necessary accommodations to aid in his learning but he can also be stigmatized and negatively stereotyped due to his cognitive deficit. He is then faced with the difficult decision of whether or not to reveal his stigmatizing condition at the expense of possible negative implications. One such negative implication is exclusion.

Exclusion is a common derivative of stigmatization. Major and Eccleston (2005) found that stigmatized individuals are more likely to experience exclusion and rejection than those who are not stigmatized. Since exclusion is primarily based on a devalued social identity as opposed to a personal identity, Major and Eccleston report that stigmatized individuals are excluded more frequently and pervasively by various social groups and from more social realms than individuals who are excluded because of idiosyncratic motives. Upon reviewing the literature on the social difficulties of the learning disabilities population, La Greca and Stone (1990) discovered that individuals with learning disabilities consistently reported to be less accepted and/or more rejected

than their non-learning disabled peers. In their study, La Greca and Stone examined the

"peer ratings of acceptance and dislike, perceptions of self-concept and social acceptance,

and teacher ratings of behavior problems" of students with learning disabilities and their

nondisabled peers who were grouped according to (LA) low average or (AA) average

reading achievement (p. 484). Their findings revealed that students with learning

disabilities were less accepted and less well-liked than students in the (LA) or (AA)

group. Furthermore, students with learning disabilities reported lower levels of self-

worth and social acceptance as compared to the (LA) or (AA) students. The data

demonstrated that students with learning disabilities were approximately one half of a

standard deviation below the population mean on peer acceptance and positive

nominations. Specifically, males with learning disabilities were perceived to be more

neglected (38.4%) than the (LA) males (14.4%) and the (AA) males (10%); females with

learning disabilities also appeared to be more neglected (18.2%) than the (LA) females

(0%) and the (AA) females (10%). These findings support Major and Eccleston's (2005)

contention that the frequent rejection and exclusion that stigmatized individuals face can

ultimately result in negative psychological consequences.

Another important aspect to consider when acknowledging the effects of stigma is

time. Jones et al. (1984) explained that stigmatizing conditions which manifest

themselves more gradually may be more tolerable to an individual, since more time is

allowed to adapt to the stigma than stigmas which occur suddenly. For example, an

individual who has always suffered from problems with mental health would be more

equipped to handle the negative stereotypes and stigma associated with mental health

disorders than an individual who was recently maimed in an accident. When considering

the self-protective strategies employed by stigmatized individuals, Crocker and Major

(1989) also reported that the length of time that has transpired since the acquisition of the

stigma is perhaps more important than the age of onset. Smith and Nagle (1995) found

that individuals recently identified as belonging to a stigmatized group are more

vulnerable to low self-esteem, while increased affiliation with a stigmatized group can

affect an individual's self-esteem coping strategies. Essentially, the longer an individual

has to accept a stigmatizing condition, the better equipped that person will be to handle

the effects of the stigma.

As previously mentioned, members of stigmatized groups are well aware of the

negative stereotypes attributed to them by the larger social culture. Significant people

such as teachers, peers, employers, and coworkers are part of this dominant social culture

and oftentimes can consciously or inadvertently hold negative attitudes towards the

stigmatized group. Members of stigmatized groups who are aware that they are being

negatively evaluated by others, specifically those who are important to them and make up

the dominant group, then internalize those negative attitudes into their self-concept and

could ultimately suffer from low self-esteem (Crocker & Major, 1989).

It has been well documented in the literature that repeated exposure to prejudice

and discrimination can negatively impact the personalities and self-esteem of stigmatized

individuals (Major & Eccleston, 2005). Heyman (1990) examined whether the self-

perception of a learning disability was significantly correlated to a student's academic

self-concept and to their general self-esteem. The findings revealed that self-perception

of a learning disability accounted for 12% of the variability in self-esteem and more than

30% of the variability in academic self-concept (Heyman, 1990). In essence, students'

delimited perception of their learning disability can impact their self-esteem and

academic self-concept. Heyman proposed that students with learning disabilities are

inclined to generalize specific areas of academic difficulty to the more universal

dimensions of self-concept. Because students with learning disabilities consistently deal

with academic disappointments, not only are their academic self-concepts at risk, but so

are their general self-esteem (Heyman, 1990).

The school environment plays a fundamental role in students' development of

academic self-concept and self-esteem; environments which promote acceptance and

success increase self-esteem, while environments which limit or impede development

decrease it (Heyman, 1990). Individuals with learning disabilities are often negatively

judged by the inadequacies in their reading, writing, and other academic abilities. These

abilities which are considered important to larger society, take precedence over other

(nonacademic) characteristics. As a result, people with LD are grouped into the

cognitively deficient category and are stereotyped as such, regardless of their individual

accomplishments (Higgins et al., 2002). Crocker and Quinn (2000) explained that when

negative stereotypes concern abilities, the mere awareness of the stereotypes affects

individuals' performance in the domains where the negative stereotypes apply. Because

of these negative stereotypes and the prejudice and discrimination that accompany them,

people with learning disabilities and/or ADHD may come to expect and internalize the

stigma of intellectual inferiority (e.g., the labels dumb or stupid) and accept unfair

treatment in intellectual and academic settings (Major et al., 1998). Moreover,

individuals stigmatized as intellectually inferior may doubt their abilities which can

significantly impact their self-esteem (Crocker & Quinn, 2000).

In their research on membership in stigmatized groups and self-esteem, Crocker and Major (1989) proposed three processes by which members of stigmatized groups can protect their self-esteem: (a) believing they are negatively evaluated solely because of their particular group membership (b) comparing their circumstances to those of other "ingroup" members, and (c) commending the characteristics in which their group performs well while discrediting the characteristics in which their group performs poorly. An example of the first self-protective process would be, if a white male is interviewing a Hispanic female for a scholarship opportunity but does not grant her the scholarship. She would not know if the reason why she was not chosen was because of personal and/or academic incompetency or if it was because she was discriminated because of her race and gender. If she believes that she did not obtain the scholarship because the interviewer was a racist misogynist, then she would be employing the self-protective mechanism of attributing negative feedback to prejudice against her group. Crocker and Major view this mechanism as an effective way to protect the self since it can be used in reaction to negative circumstances which may or may not derive from prejudice.

Another process for protecting the self-esteem of members of stigmatized groups is to make ingroup comparisons. Crocker and Major (1989) suggest that the ability to affiliate with and compare oneself to a similarly stigmatized other (ingroup) can prevent feelings of inferiority and diminish the consequences of outgroup social comparisons. This process may be helpful for individuals whose stigmatizing conditions are more visible or identifiable but it is not necessarily the case for individuals with learning disabilities. Since a learning disability is a hidden condition, one that cannot be conspicuously detected, it is more difficult for individuals with learning disabilities to

exclusively make ingroup comparisons. Unless individuals are placed in special schools

or programs for learning disabilities, ingroup comparisons are almost impossible. As a

result, students with learning disabilities often make outgroup comparisons to their non-

learning disabled peers and significantly fare worse across academic, social, and

psychosocial spectrums. Researchers found that 80% of students in learning disabilities

resource settings compared themselves to their normally achieving peers instead of their

ingroup peers when completing a self-perception inventory (Smith & Nagle, 1995). The

results of Smith and Nagle's (1995) study revealed that "general class peers were selected

significantly more often for domains reflecting Reading Competence, Mathematics

Competence, Social Acceptance, Athletic Competence, Behavioral Conduct, and Physical

Appearance ($p < .05$)" (p. 368). These outward comparisons to their non-learning

disabled peers can result in more negative self-evaluations for individuals with learning

disabilities (Smith & Nagle, 1995).

Research on the effects of integration and segregation reveal the complexities of

social comparisons and consequent self-perceptions of stigmatized individuals. In a

study on self-perceptions of scholastic competence, Harter (1986 as cited in Crocker &

Major, 1989) found that "mainstreamed" mentally retarded children's perceptions were

equal to those of normal-IQ children, whereas "mainstreamed" learning-disabled students

had lower perceptions of scholastic competence than normal-IQ children. This was

explained by examining the comparison groups: the mentally retarded children reported

comparison to their mentally retarded peers; whereas, children with learning disabilities

reported comparison to normal-IQ children who did not have learning disabilities (Harter,

1986, as cited in Crocker & Major, 1989). A conceptually similar study by Dagnan and

Waring (2004) which measured the perception of stigma, core negative evaluations, and social comparison of people with intellectual disabilities revealed a strong relationship between perceived stigma and negative evaluative beliefs and a relationship between stigma and social comparison. Stigma was found to predict negative evaluative beliefs, which in turn were found to predict social comparison. The findings of this study support the contention that negative self-evaluative beliefs are significantly related to the experience of feeling different: a process that could be described as internalizing the experienced stigma (Dagnan & Waring, 2004).

The third mechanism members of stigmatized groups employ for self-esteem protection from negative feedback or comparison is "selectively devaluing" performance measures on which they personally or as a group fare poorly on, and "selectively valuing" those measures on which they or their group perform well (Crocker & Major, 1989). Crocker and Major (1989) explained that when stigmatized individuals are placed in social contexts which value a particular attribute that they fare poorly on, they could feel vulnerable and as a result avoid situations which remind them of their stigma or oppression. Consistent with this line of reasoning, it is therefore possible to assume that students with learning disabilities tend to avoid or dislike academic settings since they emphasize higher cognitive abilities. These individuals may "selectively devalue" education or academic work because it measures performance in an area in which they experience deficits.

A driving force behind the motivation to achieve depends on the significance a person attributes to a goal, as well as to the success or failure in attaining said goal (Burden, 2008). Therefore, if individuals do not believe that they can perform

competently in a particular domain, they will not be motivated to attempt a goal because

they do not value the domain. For example, if students with learning disabilities believe

that they cannot perform at a high academic level, then, they will not be motivated to

apply to college since they have always struggled in academic settings and therefore may

not value this domain. This results in a negative outcome for the stigmatized individual

because their lack of motivation to achieve in a particular domain, could be

misinterpreted by members of the outgroup as reflecting a lack of ability or interest

(Crocker & Major, 1989). This can explain why many teachers often complain that

students with learning disabilities are lazy or do not try hard enough. What occurs is a

negative cycle of devaluing a particular domain because of poor performance and the

discrimination which results from the lack of motivation to engage in that domain.

Research on stigmatized and non-stigmatized groups reveals a substantial

variance on measures of academic achievement (Major & O'Brien, 2005). There are

many factors which can negatively affect the academic performance of stigmatized

individuals. For example, Major and O'Brien (2005) explain that situational cues have

the potential to increase the likelihood of assessing academic performance situations as a

threat to social identity which in turn may decrease academic performance. Further

evidence for negative academic performance has been provided by studies from

Schmader and Johns (2003) who report that stigma-induced identity threat and fear of

being a victim of stereotypes and prejudice hinder performance through automatic stress

responses such as anxiety and decreased working memory capacity. Stigma-induced

identity threat can also cause individuals to recurrently "disengage" their self-esteem

from intellectual tasks (Crocker et al. 1998; Steele 1992, 1997; as cited in Major &

O'Brien 2005). The results of Heyman's (1990) study suggest that the self-perception of a learning disability may have a negative effect on academic self-concept and self-esteem, which in turn can impact academic achievement. A review of the literature has yielded numerous variables which influence and affect academic performance. One theory that has been fundamental to exploring human thought and behavior especially in academic contexts is social cognitive theory.

Social Cognitive Theory

Early psychological theories were founded on the notion that behavior was automatically influenced and controlled by environmental forces (Bandura, 2001). Humans had little to no direct effect on their own actions and behaviors; they were either driven by uncontrollable impulses or passive bystanders to fate and chance. Nevertheless, Bandura (2001) proposed that human beings function as "agents" intentionally responsible for their own thoughts, behaviors, and actions. Bandura posited that agency exemplifies the natural faculties, belief-systems, and the potential for self-regulation that make up human existence (2001). Bandura's social learning theory, properly renamed social cognitive theory (Pajares, 2002), deviated from other theories of the time which reduced consciousness and cognition to the automatic process of neural activity (2001). He argued against the notion that "thoughts are disembodied or immaterial entities" (Bandura, 2001, p. 4) and contended that to view them this way would only devoid individuals from attaining true subjectivity, self-direction, and reflective self-awareness (Bandura, 2001).

In his article on agentic perspective, Bandura (2001) highlighted the significance of consciousness in human life and asserted that "consciousness is the very substance of

mental life that not only makes life personally manageable but worth living" (p. 3).

Consciousness, the awareness of one's thoughts, emotions, environment, and existence is

an introspective state that is unique to human beings. Without introspective

consciousness, it is almost impossible to explain, let alone predict the complex nature of

human behavior. Bandura (2001) rationalized that the true function of consciousness is

to purposefully process internal, as well as external information in order to choose,

create, control, and evaluate courses of action that influence our lives.

Social cognitive theory emphasizes that consciousness plays a crucial role in

people's capacity to construct reality (Pajares, 2002). For Bandura (2001), the ability to

properly control the nature and quality of one's life is the epitome of human agency. The

author explains that there are four essential features of personal agency which are rooted

in consciousness and address the human condition, these are intentionality, forethought,

self-reactiveness, and self-reflectiveness (Bandura, 2001).

Agency refers to acts that are done intentionally; an intention is an act that will be

performed at some point in the future (Bandura, 2001). Intentions are rooted in action –

specific thoughts, behaviors, and actions are necessary to bring about desired goals.

Considering that humans are active agents of their experiences, intentions represent a

proactive approach to future goals and not a passive expectation of desired outcomes

(Bandura, 2001). For example, high school students who aspire to attend college know

that college acceptance will not be automatically granted; instead they must put in place a

proper plan of action to reach their desired goal. For Bandura (2001), the drive to initiate

actions for specific purposes is a core element of personal agency.

Agency goes beyond intention to the ability to foresee desired outcomes. Forethought refers to the ability to direct action and behavior towards an anticipated future event. These future events actually shape current behavior and serve as motivational tools (Bandura, 2001). In this sense, the future is not an unforeseeable enigma, but an attainable state that can be reached by motivated behaviors and the implementation of actions towards a directed goal. In the example of the high school students who want to attend college, forethought would guide their current behavior to ensure that they could reach their goal of college admission. This could translate to attaining good grades and a strong GPA, participating in extra-curricular activities, and becoming actively involved in community service projects. Forethought enables people to have direction, structure, and a purpose to their lives; the resulting positive outcomes breed further motivation and a perpetual cycle of reorganizing priorities and new goals (Bandura, 2001).

The ability to initiate specific courses of action and to ensure their completion is Bandura's (2001) third principle of human agency, self-reactiveness. It is not enough to have intention and a projected goal, individuals must be clear in their thoughts and behavior in order to execute their desired goal. Self-regulation is a necessity in this process since one's behavior, thoughts, and environmental conditions must be monitored in order to bring action to fruition (Bandura, 2001). With their sights set on college, the high school students must learn to regulate their present behavior to assure their future goal; they have already set a plan in motion, now they must follow through. Bandura (2001) recommends for people to monitor the cognitive and environmental conditions

which influence their behavior, since this is in essence the first step towards consciously affecting it.

Perhaps the most advanced form of human agency is the ability to self-reflect. Self-reflectiveness refers to the metacognitive ability to contemplate upon one's condition and the effectiveness of one's thoughts and actions (Bandura, 2001). Human beings are judgmental by nature. We constantly judge one another's beliefs and actions, the veracity of established truths, and oftentimes most critically, we judge ourselves and our own actions and beliefs. It is through this reflective self-examination that people assess the motivation, value, and purpose of their life quest (Bandura, 2001). This metacognitive ability to self-reflect has a lasting influence on the environmental and personal factors that drive human behavior.

Bandura views human functioning as the dynamic interplay of personal, behavioral, and environmental factors (Pajares, 2002). Social cognitive theory adopts a model of *reciprocal determinism* in which personal factors such as thoughts, emotions, and biological events, along with behavior, and environmental influences, interact with and affect one another (Bandura, 1986; Pajares, 2002). Bandura (1986) explains that the term "reciprocal refers to the mutual action between causal factors [and] the term determinism is used to signify the production of effects by certain factors" (p. 23-24). Bandura (1986) illustrates this model schematically (see figure 1) to represent the interacting influences of the three classes of determinants in *triadic reciprocal* causation.
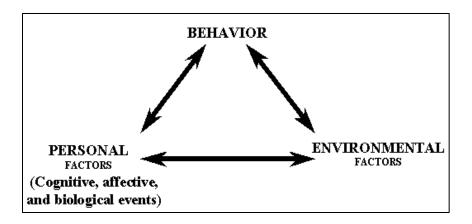
Figure 1. Bandura's (1986) Reciprocal Determinism. Adapted from *Social Foundations of Though and Action: A Social Cognitive Theory* by A. Bandura, 1986, p. 24. Copyright 1986 by Prentice-Hall, Inc.

This triangle of cause and effect is best understood by considering that the manner in which people think and feel, affect their behavior, which in turn affects their environment. Although these three factors are highly interdependent, their comparative influence will vary according to different individuals, activities, and circumstances. Additionally, the three factors do not necessarily operate simultaneously or follow the same direction all of the time (Bandura, 1986). Here is how the reciprocal determinism model can be applied to the example of the high school students: encouraging teachers and a positive learning atmosphere (environmental factors), cause students to feel confident about their academic abilities (personal factors), their overall satisfaction result in higher grades and the motivation to further their academic pursuits (behavior). Although positive experiences and other influencing factors can serve as motivating forces, the true determinant of action is the belief in the ability to produce desired effects, this belief is known as self-efficacy (Bandura, 2001).

Self-Efficacy

Self-efficacy is defined as people's judgments about their capabilities to execute

courses of action that influence aspects of their lives (Bandura, 1986, 1994). Self-

efficacy is embedded in the belief that one has the power to produce effects by one's

actions (Bandura, 2001). Efficacy beliefs are the groundwork of human agency and as

such form the core of social cognitive theory (Pajares, 2002).   Bandura asserts that

"people's level of motivation, affective states, and actions are based more on what they

believe than on what is objectively true" (1997, p. 2). These beliefs are central to

motivation and personal achievement because unless people believe they can successfully

accomplish something, they will not be willing to act or much less persevere when facing

obstacles (Bandura, 2001; Pajares, 2002). Efficacy does not depend on one's skills, but

on the assessment of what one can do with those skills (Bandura, 1986, 1997). These

assessments affect the challenges people choose to undertake, the amount of effort they

devote to a task, how long to persist when confronted with obstacles and failures, and

whether failures are motivating or demoralizing (Bandura, 2001).

Although their basis is on controlled action, self-efficacy beliefs also focus on the

regulation of thought processes, motivation, and affective and physiological states

(Bandura, 1997). Self-efficacy beliefs affect all aspects of people's lives – whether they

think optimistically or pessimistically, if they are self-depreciating or self-praising, their

motivation towards things they enjoy as opposed to things they dislike, their

susceptibility to stress and depression, or their resilience in the face of adversity

(Bandura, 2001; Pajares, 2002). People's beliefs about their self-efficacy significantly

contribute to their self-knowledge. Self-efficacy beliefs are developed from four

principal sources of influence: mastery experience, vicarious experience, social

persuasion, and physiological and affective states (Bandura, 1896, 1994, 1997; Pajares,

2002).

The most influential source of self-efficacy is mastery experience (Bandura, 1896,

1994, 1997; Pajares, 2002). People develop beliefs about their capability to master

something based on personal experience. Individuals will choose to undertake tasks or

activities based on their previous experience with these types of activities and the

judgments they have made in regard to their ability (Pajares, 2002). Frequent successes

raise efficacy beliefs while repeated failures lower them, especially if a firm sense of self-

efficacy has not been established (Bandura, 1896, 1994, 1997; Pajares, 2002). Although

efficacy beliefs increase with numerous successes, if people are accustomed to only easy

successes, they begin to always expect them and can become easily discouraged by

failure (Bandura, 1994, 1997). Difficulties and setbacks can serve as learning

opportunities for individuals to better develop their capabilities. The ability to overcome

obstacles and remain steadfast in the face of adversity generates a resilient sense of self-

efficacy (Bandura, 1994, 1997).

The second way of establishing and maintaining self-efficacy beliefs is through

the vicarious experiences of social models (Bandura, 1986, 1994, 1997; Pajares, 2002).

The effects of modeling are particularly relevant when the observer has little to no

experience with the task or is uncertain about their capability (Bandura, 1986; Pajares,

2002). Witnessing others perform successfully, can increase the self-efficacy of

observers who feel they are as equally capable to master similar feats; they adopt the "if

they can do it, I can do it" mentality which has the potential to influence behavior

(Bandura, 1986, 1994; Pajares, 2002). Conversely, perceiving the failure of a similar other despite concerted efforts, can undermine the observer's self-efficacy beliefs (Bandura, 1986, 1994; Pajares, 2002). An observer's perceived similarity to the model has a more lasting effect on their self-efficacy beliefs. If people do not identify with the model, their perceived self-efficacy will not be as influenced by the model's behavior (Bandura, 1994). People automatically seek out models who reflect characteristics they admire and capabilities they wish to possess (Pajares, 2002). The greater the identification and assumed similarities, the more influential and persuasive are the model's successes and failures (Bandura, 1994).

People's self-efficacy beliefs are also influenced by the social persuasions they receive from others. Social persuasion, also known as verbal persuasion, is used to convince people into believing that they have the capabilities to achieve what they desire (Bandura, 1986, 1994, 1997; Pajares, 2002). People who are persuaded that they have what it takes to succeed, are more likely to exhibit greater efforts and maintain steadfast on tasks, than if they subscribe to self-doubts and focus on personal deficits when confronted with difficulties (Bandura, 1986, 1994, 1997). Because of their influential power, social persuaders must be mindful of the accuracy and the effects of their praises. They must cultivate an individual's beliefs in their abilities; however, they should simultaneously ensure that the desired result is attainable (Bandura, 1997; Pajares, 2002). To raise unrealistic expectations of a person's capabilities not only sets them up for failure, but weakens their self-efficacy beliefs (Bandura, 1986, 1994). It is actually easier to weaken self-efficacy beliefs through negative appraisals than it is to strengthen them through positive reinforcement (Bandura, 1986, 1994, 1997; Pajares, 2002). People who

have been persuaded that they lack certain abilities avoid challenging tasks and easily admit defeat when facing obstacles (Bandura, 1986, 1994, 1997).

People do not solely rely on external influences to judge their capabilities, but direct their attention inward to their physiological and emotional states to learn more about their self-efficacy beliefs (Bandura, 1986, 1994, 1997; Pajares. 2002). Somatic and emotional states such as stress, anxiety, and mood arousal can serve as gauges to the degree of confidence an individual might have towards a particular action (Pajares, 2002). People can interpret stress and tension as signs of vulnerability to inadequate performance. Negative thoughts and fears about their capabilities, affects mood states which in turn lowers self-efficacy beliefs and triggers added stress and tension which may result in the inadequate performance that was feared in the first place (Bandura, 1986, 1994, 1997; Pajares, 2002). The result is a perpetual cycle of fear and negative thoughts which directly affect mood and performance. Treatments that reduce the emotional reactions to subjective threats not only improve self-efficacy beliefs, but improve performance as well (Bandura, 1986, 1997). As such, the fourth way to adjust self-efficacy beliefs is to decrease stress levels, alter negative emotional tendencies, and correct misinterpretations of physical states (Bandura, 1994, 1997). It is evident that self-efficacy beliefs affect all aspects of people's lives and as such is fundamental for understanding human behavior.

The self-efficacy component of Bandura's social cognitive theory has spawned research in a broad range of fields, but has been at the forefront of studies on educational constructs such as goal setting (Locke & Latham, 1990; Wood & Lock, 1987), modeling (Schunk , 1981, 1987), self-regulation (Bandura, 1991; Schunk, 1982b;

Zimmerman & Bandura, 1994; Zimmerman & Martinez-Pons, 1990), teaching and teacher education (Ashton & Webb, 1986; Gibson & Dembo, 1984; Woolfolk & Hoy, 1990; Woolfolk, Rosoff, & Hoy, 1990), and diverse academic performances (Bouffard & Vezau, 1996; Malpass & O'Neil, 1996; Pajares, Shell, and their associates on literacy; Hackett, Pajares, Schunk, and their associates on mathematics; Bandura, 1993, and Zimmerman & Bandura, 1994 across academic domains, as cited in Pajares, 1996). Researchers have prolifically established that self-efficacy beliefs are extremely influential and positively relate to academic choices and achievement and that these beliefs mediate the effects of aptitude, prior experience, mental ability, motivation, and other self-beliefs on future academic achievement (Pajares, 1996; Pajares & Schunk, 2001).

Academic Self-Efficacy

Academic self-efficacy refers to context-specific beliefs about one's ability to successfully accomplish future academic goals (Madaus, Faggella-Luby, & Dukes, 2011). Consistent with Bandura's notion of self-efficacy, students' potential for academic achievement is more in line with the thoughts and beliefs they hold about their ability than with their actual skill level (Baird, Scott, Dearing, & Hamill, 2009). Bandura (1997) asserted that school is the initial venue for the development and subsequent evaluation of cognitive abilities. Students' evaluations of their cognitive abilities in school help mold their overall learning experience. The manner in which they evaluate their academic performance, directly affects their self-beliefs and their environment, which subsequently affects their future performances. Accordingly, students' academic

performance is directly tied to their beliefs about what they can accomplish (Pajares, 2002).

Previous learning experiences, individual characteristics, and social support systems function dynamically to produce positive or negative influences on students' self-efficacy for learning (Schunk & Pajares, 2002). Schunk and Pajares (2002) explain that as students engage in educational activities, they are "affected by personal (e.g., goal setting, information processing) and situational influences (e.g., rewards, teacher feedback)" that inform them how well they are learning and have the potential to impact their self-efficacy (p. 13). Various factors can affect students' self-efficacy beliefs as they progress through school. Caprara et. al. (2008) considered factors such as previous academic achievement and socioeconomic status in their attempt to understand the role that self-efficacy plays on academic performance and the likelihood of remaining in school. Their longitudinal study focused on the outcomes of self-regulatory efficacy on academic development and functioning (Caprara et. al., 2008). Their findings revealed that self-regulated efficacy was directly associated with academic achievement and school retention after controlling for prior academic performance and socioeconomic status (Caprara et. al., 2008). Caprara et. al.'s study was consistent with Zimmerman et. al.'s (1992) contentions that self-regulatory efficacy increases academic objectives, standards of acceptability in the quality of one's work, and the beliefs in one's capability for academic achievement after controlling for instructional level, prior academic performance, and relevant aptitude.

Academic performance is directly associated with students' beliefs regarding their academic capabilities. Research indicates that students who establish goals, employ

metacognitive strategies, and manage their learning environments are more prone to

higher levels of motivation and to experience academic success than those who do not

(Klassen, Krawchuk, Lynch, & Rajani, 2008). Additional studies have shown that

students who feel competent in their learning work more diligently, frequently participate

in class, persevere when handling challenging tasks, and achieve at higher levels as

compared to those who distrust their learning capabilities (Schunk & Pajares, 2002). As

students recognize that they are performing well or are becoming more proficient, their

self-efficacy improves. Students compare their progress to the goals they have set out for

themselves and this perception of progress breeds further motivation to improve

academically and strengthens self-efficacy beliefs (Schunk, 1995 as cited in Schunk &

Pajares, 2002).

Chemers et. al. (2001) conducted a longitudinal study of 1st year university

students to examine the effects of academic self-efficacy and optimism on academic

performance, stress, health, and commitment to remain in school. They found that

academic self-efficacy was significantly and directly related to academic expectations

and performance (Chemers, Hu, & Garcia, 2001). The findings suggest that "highly

efficacious students had higher challenge-threat evaluations (e.g., they perceived

academic work demand to be more of a challenge than a threat), which in turn resulted in

greater academic expectations, which led to better academic performance" (Chemers et.

al., 2001, p. 60). Additionally, higher levels of self-efficacy contributed to lower stress

levels which resulted in less health problems and better adjustment to college life.

Overall, the research is consistent in revealing that students with high levels of academic

self-efficacy exhibit additional effort, perseverance, and inherent interest in their learning and academic performance (Schunk, 1984, 1989).

Zimmerman and colleagues have been at the forefront of investigating the relationships among self-efficacy beliefs, self-regulation for learning, and academic achievement (Pajares & Schunk, 2001). Their research revealed that self-efficacy beliefs directly influence self-regulatory processes such as goal setting, self-monitoring, self-assessment, and metacognitive strategies (Zimmerman, 1989, 1990, 1994; Zimmerman & Bandura, 1994; Zimmerman, Bandura, & Martinez-Pons, 1992; Zimmerman & Martinez-Pons, 1990). In accordance with self-efficacy literature, Zimmerman, Bandura, and Martinez-Pons' (1992) study found a significant causal path between students' perceived efficacy for self-regulated learning and their academic achievements. They discovered that students' perceived self-efficacy for academic achievement predicted their final grades and their personal goals (Zimmerman, Bandura, & Martinez-Pons, 1992). The results of this study provided support for the social cognitive view of academic self-regulation; as predicted, self-efficacy beliefs were closely linked to the students' personal goals and to the attainment of these goals (Zimmerman, Bandura, & Martinez-Pons, 1992). Consistent with prior research, the higher the perceived self-efficacy, the higher the goals the students set out to accomplish (Bandura, 1992; Locke & Latham, 1990). The results of this study revealed that students who were able to self-regulate their learning activities felt more confident about their academic performance and consequently achieved higher grades (Zimmerman, Bandura, & Martinez- Pons, 1992).

In a more recent study, Kitsantas and Zimmerman (2009) investigated self-efficacy beliefs for learning and perceived responsibility by examining the homework

practices and academic grades of college students. Zimmerman (1994, 2006) found that

self-efficacy beliefs about learning and self-regulation of learning processes shape

students' perceptions of personal responsibility for their learning experience. Kitsantas

and Zimmerman based their study on Bandura's (1986) theory of reciprocal determinism:

they posited that students' homework practices (environmental experiences) can

influence their self-efficacy (personal beliefs), which in turn can influence their course

grades (behavioral outcomes). They hypothesized that self-efficacy beliefs are predictive

of perceived responsibility because students who are able to self-regulate their learning

processes are more inclined to accept responsibility for their academic outcomes

(Kitsantas & Zimmerman, 2009). The results revealed that self-efficacy for learning and

perceived responsibility beliefs significantly accounted for the influence of homework

experiences on course grades (Kitsantas & Zimmerman, 2009). Kitsantas and

Zimmerman found that the self-efficacy for learning measure was a better predictor of

college students' academic outcomes than the perceived responsibility measure. This

finding is consistent with the results of many previous empirical studies – self-efficacy is

a successful predictor of academic performance (Pajares, 1996; Pajares, 2002; Pajares &

Schunk, 2001).

        If a strong sense of self-efficacy can positively affect academic performance, then

it is only right to assume that a weak sense of self-efficacy can negatively impact

academic performance. Due to constant struggles with learning processes, students with

learning disabilities tend to have lower levels of academic self-efficacy. In fact, research

indicates that students with learning disabilities display lower levels of self-concept and

self-esteem, higher levels of anxiety, and lower levels of self-efficacy than students

without learning disabilities (Klassen et. al., 2008). Klassen et. al. (2008) investigated

the self-reported levels of procrastination and motivation of undergraduate students with

and without learning disabilities. They found that students with learning disabilities

reported significantly higher levels of procrastination, as well as lower levels of

metacognitive self-regulation, and lower self-efficacy for self-regulation than those

without learning disabilities (Klassen et. al., 2008). Their mixed methods study also

consisted of interviews to students with learning disabilities with the aim of

understanding these students' perspectives on how their learning disabilities influence

their levels of procrastination and motivation (Klassen et. al., 2008). Interview responses

revealed that learning disabilities significantly contributed to procrastination for most

students because of cognitive difficulties such as reading, writing, memory, and general

processing (Klassen et. al., 2008). Metacognitive approaches to learning such as

planning, time management, use of strategy, and extended effort are challenges to

students with learning disabilities and therefore also significantly contributed to higher

levels of procrastination (Klassen et. al., 2008). The authors reported that the majority of

students interviewed understood that higher levels of self-efficacy are related to lower

levels of procrastination and vice versa.

　　　　Research has consistently demonstrated that lower levels of self-efficacy have

negatively impacted the academic performance and overall academic goals of students

with learning disabilities (Madaus, Faggella-Luby, & Dukes, 2011). In a recent study,

Baird et. al. (2009) examined the "cognitive self-regulatory characteristics known to

influence learning motivation and performance" of students with and without learning

disabilities (p. 881). Participants in this study completed measures of academic self-

efficacy, theories of intelligence, academic goal preferences, and awareness of effort

exerted in academic contexts (Baird et. al., 2009). The results suggested that students

with learning disabilities were more likely to exhibit low academic self-efficacy, believed

intelligence is a fixed and unalterable trait, preferred performance outcomes over learning

goals, and interpreted their exertion of effort to mean that they possessed limited levels of

cognitive ability (Baird et. al., 2009). The findings imply that students with learning

disabilities apply maladaptive methods to learning such as avoiding challenges,

demonstrating poor persistence, giving up on tasks, and showing a decline in

performance following failure.

Students who lack fundamental learning skills such as reading, writing, or math

computation, experience difficulties and frustration with the increasing challenges of

higher academic education. These challenges along with the comparison to their better

performing peers often results in lower self-efficacy beliefs (Schunk & Pajares, 2002).

Burden's (2008) review of the learning disabilities literature reveals that these students

were significantly more likely to view themselves in a negative light as compared to their

non-learning disabled peers across all academic domains. Once students are aware of

their academic limitations, they can develop pessimistic thoughts about their abilities

which can consequently result in lower levels of self-efficacy thereby creating further

impediments to their learning (Burden, 2008).

Summary and Rationale

A history of academic challenges and failures (Baird et. al., 2009) along with peer

and teacher rejection (La Greca & Stone, 1990) are commonalties shared by many

students with learning disabilities. It has been well documented in the literature that the

learning disability label has been linked to negative evaluations and stereotypes that are automatically imposed by society (Ho, 2004). The stereotypes inherent to the learning disability label can result in the stigma of intellectual inferiority. The literature on stigma is primarily centered on specific social groups: Blacks, women, unattractive persons, facially deformed individuals, the physically disabled, the obese, mentally retarded individuals, homosexuals and the mentally ill (Crocker & Major, 1989). However, there has been very little research on the effects of stigma on the learning disability population. As such, the present study attempted to examine the relationship between perceived stigma of a learning disability and students' academic performance.

Researchers have consistently shown that self-efficacy is a reliable predictor of academic performance (Schunk & Pajares, 2002; Schunk, 1984, 1989; Zimmerman & Martinez-Pons, 1990). The majority of studies conducted on self-efficacy and academic performance have focused on "neurotypical" students (Pajares, 2002; Schunk & Pajares, 2002; Zimmerman et. al., 1992; Lodewyk & Winne, 2005; Chemers et. al., 2001; Kitsantas & Zimmerman, 2009) and not on those with learning disabilities or ADHD. Therefore, the present study specifically addressed this underrepresented population. It was hypothesized that there will be a positive relationship between academic self-efficacy and academic performance. Academic self-efficacy can have lasting effects on individuals' academic self-concept and performance (Klassen, et. al., 2008). Numerous studies have suggested that negative self-evaluations with regards to learning ability can result in decreased levels of academic self-efficacy (Heyman, 1990; Chemers, et. al., 2001; Burden, 2008; Baird, et. al., 2009; Lodewyk & Winne, 2005; Klassen, et. al., 2008). Furthermore, a weak sense of self-efficacy can produce negative academic

outcomes (Pajares, 2002). Understanding the effects of the learning disability stigma on self-efficacy and academic performance is of paramount importance to researchers, educators, counselors, and the individuals who are in many ways limited by their learning challenges.

Hypotheses

Hypothesis 1: There will be a negative relationship between level of perceived stigma and academic performance.

Hypothesis 2: There will be a positive relationship between academic self-efficacy and academic performance.

Hypothesis 3: Academic self-efficacy will mediate the relationship between perceived stigma and academic performance.

Method

Recruitment

Originally, participants were recruited from the Center for Advanced Learning (CAL) Program and from the Office of Disability Services, two departments that serve students with learning disabilities and/or ADHD at a private university located in the Southeastern region of the United States.   In order to safeguard the identities of students recruited, participants were recruited by the Administrative Assistant of the CAL Program and the Coordinator of the Office of Disability Services who emailed the recruitment letter (see Appendix A) to all registered students in both programs respectively. Because these two programs serve a small number of students, the researcher made an amendment for modification to the university's IRB committee in order to recruit more participants, both within the university and through the following psychology research websites: http://www.socialpsychology.org and

http://psych.hanover.edu/research/exponnet.html. The modification was approved.

Undergraduate students in psychology classes received a recruitment letter from the

department's secretary (Appendix B), a recruitment letter was drafted for the psychology

research websites (Appendix C), and the researcher posted flyers (Appendix D)

throughout the university. The study was posted on the above mentioned websites.

This was an anonymous study, no names or other identifiers were collected on any

of the instruments used. Participants were required to be 18 years of age or older and to

have a diagnosed learning disability and/or ADHD in order to participate in this study.

This was a voluntary study and participants were informed that they could withhold

participation or drop out at any point without any adverse effects.

Procedure

Students from the aforementioned university received the recruitment letter by

email and were instructed to acquire their cumulative GPA prior to completing the

questionnaires. Directions on how to acquire cumulative GPA were provided in the

recruitment email. Participants were asked to click on the link in the email which

directed them to SurveyMonkey.com. Upon entering the Survey Monkey site,

participants read the cover letter (see Appendix E) and then reported their cumulative

GPA. Immediately after reporting their cumulative GPA, participants proceeded to

respond to the survey.

The procedure was similar for those who were recruited from the psychology

research websites, with the exception that they did not receive a recruitment letter,

instead they clicked on the link that took them directly to the Survey Monkey site. The

first page of the survey instructed them to continue with the survey only if they had a

diagnosed learning disability or ADHD, otherwise they could exit. Those participants

who met the learning disabilities/ADHD criteria, continued to the second page where they read the cover letter.

Participants

The sample consisted of 74 participants, 28 of which were men and 30 were women (16 participants chose not to answer this question). Participants ranged in age from 18 to 32 ($M = 21.62$, $SD = 3.00$). The participants were from diverse ethnic backgrounds: Eight African Americans (10.8%), one Asian (1.4%), 23 Caucasian, non - Hispanic (31.1%), 21 Hispanics (28.4%) and four other (5.4%). The sample consisted of nine college freshmen (15.5%), 18 sophomores (31%), 16 juniors (27.6%) and 15 seniors (25.9%). Participants' cumulative GPA ranged from .90 to 4.0 ($M = 2.94$, $SD = .56$). Upon data analysis, participants were classified according to their specific type of learning disability. Three categories emerged: one or more learning disabilities; learning disabilities with comorbid ADHD; and ADHD. Twenty-eight participants (50%) reported one or more learning disabilities, 12 participants (21.4%) reported learning disabilities with comorbid ADHD and 16 participants (28.6%) reported ADHD.

Materials

The Self-Efficacy for Learning (abridged) Form (SELF-A) (see Appendix F) (Zimmerman & Kitsantas, 2007) was used to measure participants' *perceived self-efficacy beliefs* in specific areas of academic learning such as note taking, test-taking, and studying and their conviction about dealing with demanding academic challenges. Items on self-efficacy tests differ from other self-related constructs since they are phrased in terms of what students *can do* instead of what they *will do* or *usually do* in academic contexts (Bandura, 2006 as cited in Zimmerman & Kitsantas, 2007). That is, the SELF-A goes beyond

attempting to measure students' attitudes about their learning proficiency by taking into

account their self-efficacy beliefs (Zimmerman & Kitsantas, 2005). The SELF-A is

comprised of 19 items in which participants were instructed to respond to each item using a

percentage scale ranging from 0 to 100% (in 10 unit increments). Written descriptions are

provided above the following points on the scale: 0% (*definitely cannot do it*), 30%

(*probably cannot do it*), 50% (*maybe*), 70% (*probably can*), 100% (*definitely can do it*).

Higher scores reflect a more positive self-efficacy for learning. Some sample questions that

consider external variables to learning such as mood and motivation are: "When you feel

moody or restless during studying, can you focus your attention well enough to finish your

assigned work? and "When you are feeling depressed about a forthcoming test, can you find

a way to motivate yourself to do well?" Self-efficacy in the areas of note-taking and

studying are assessed by questions such as, "When a lecture is especially boring, can you

motivate yourself to keep good notes?" and "When problems with friends and peers conflict

with schoolwork, can you keep up with your assignments?" The SELF-A scale is highly

reliable and has superior predictive validity (Zimmerman & Kitsantas, 2007). Zimmerman

and Kitsantas (2007) reported that the Cronbach alpha reliability for the SELF-A scale was

.91. In the current study, the Cronbach alpha for the scale was .93.

After completing the SELF-A, participants answered items on the *perceived*

learning disabilities stigma scale (see Appendix G) adapted by the investigator of the

present study from May and Stone (2010). Upon reviewing the literature, the scarcity of

stigma scales addressing the learning disability population was quite evident. Therefore,

May and Stone's questionnaire was adapted for the purpose of this study in order to

measure students' own level of perceived stigmatization as related to their learning

disability. May and Stone's questionnaire contained fixed-choice and open-ended questions intended to assess the core issues of the learning disabilities "metastereotype." In their study, they asked 100 participants to respond to the open-ended question "What do you think *people in general* believe about individuals with learning disabilities?" Their rationale for choosing this open-ended question was to prevent participants from responding to preconceived notions about learning disabilities. May and Stone grouped the participants' responses to this open-ended question into six categories: Low intelligence, compensation possible, processing deficit, nonspecific insurmountable condition, working the system, and other. Then, they explained the general principles that comprise each category and provided 5 examples of the participants' responses for each category (see Appendix H).

For the purpose of the present study, the participants' responses were re-phrased as statements that could be answered using a Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For example, the participant's response in May and Stone's study, "they can be taught the basics, but will never be able to learn as much as someone without a learning disability," was converted into the item "people think that I can be taught the basics, but I will never learn as much as someone without LD/ADHD." Some of the examples from May and Stone's study were written as two-part responses, as such, the investigator rephrased these responses into single item statements. For example, "that they don't comprehend information as well and that they need more time to complete activities or else they get really stressed out," was converted into the following two items, "people think that I do not understand information as well as others and therefore I need more time to complete assignments," and "people think that if I do not have extra time to complete tasks, I will get really stressed out." The present study's adapted "perceived

learning disability stigma scale" is thus comprised of 36 items intended to measure

participants' perceived stigma regarding their learning disability/ADHD. Higher scores

reflect increased levels of perceived stigma. In the current study, the perceived stigma scale

had a Cronbach's α of .90.

Lastly, participants completed a brief demographic questionnaire asking them to

report their gender, age, school class (e.g., freshman), ethnic background, type of learning

disability/ADHD, amount of extra time allowed for exams, how often they request extra

time for exams, and how many hours a week they receive tutorial support (see Appendix I).

Results

Correlations were computed among self-efficacy, perceived stigma, and

cumulative GPA. Hypothesis 1 was not supported; there was no significant relationship

between perceived stigma and cumulative GPA (i.e., academic performance), $r = -.17$, p

$= .067$. As predicted by hypothesis 2, there was a significant positive relationship

between self-efficacy and cumulative GPA, $r = .25$, $p = .042$. The proposed analysis for

hypothesis 3 could not be conducted for the following reason. A variable may function

as a mediator to the extent that it accounts for the relation between the predictor and the

criterion (Baron & Kenny, 1986). In order to test for mediation, the following conditions

need to be met:

(a) variations in levels of the independent variable significantly account for

variations in the presumed mediator (i.e., Path *a*), (b) variations in the mediator

significantly account for variations in the dependent variable (i.e., Path *b*), and (c)

when Paths *a* and *b* are controlled, a previously significant relation between the

independent and dependent variables is no longer significant, with the strongest

demonstrations of mediation occurring when Path *c* is zero. (Baron & Kenny,

1986, p. 1176)

In this study, condition (a) was not fulfilled; variations in the levels of perceived stigma

did not account for variations in self-efficacy. See table 1 for a summary of inter-

correlations, means, and standard deviations for all variables.

Table 1

Mean, Standard Deviations, Intercorrelations and Coefficient Alphas

Variables	*M*	*SD*	1	2	3
1. Self-efficacy [a]	62.24	16.41	(.93)		
2. Stigma [b]	2.66	.56	-.17	(.90)	
3. Cumulative GPA [c]	2.94	.56	.25*	.07	_

Note. Coefficient alphas are presented in parenthesis along the diagonal.
[a]*n = 68.* [b]*n = 61.* [c]*n= 66.*
**p* < .05*

Additional analyses were conducted in order to explore possible relationships

between learning disabilities and/or ADHD and ethnicity. In their study, Dominguez de

Ramirez and Shapiro (2005) highlighted the significant differences in ratings of ADHD

behaviors among various ethnicities. The researchers explained the need to consider

ethnicity as an important variable with this population (Dominguez de Ramirez &

Shapiro, 2005). For this reason, a one-way analysis of variance was conducted to

evaluate the effect that ethnicity has on self-efficacy in this study. The independent

variable, ethnicity, was categorized into three groups: Caucasian, non – Hispanic,

African-American, and Hispanic. The dependent variable was the level of self-reported

academic self-efficacy. The means for the Caucasian, non – Hispanic, African-

American, and Hispanic groups were 69.39 (SD = 18.96), 65.70 (SD = 10.10), and 52.66

(SD = 17.57) respectively. These were significantly different, $F(2, 49) = 5.65$, $p = .006$,

$\eta^2 = .19$. The strength of the relationship assessed by η^2 was strong, with the ethnicity

group accounting for 19% of the variance in self-efficacy.

Post hoc comparisons were carried out with the use of the Scheffé test for the

Caucasian, non-Hispanic versus African-American, Caucasian, non-Hispanic versus

Hispanic, and African-American versus Hispanic groups. There was a significant

difference in the means between the Caucasian, non-Hispanic and Hispanic groups and

between the African-American and Hispanic groups, but no significant differences

between the Caucasian, non-Hispanic and African-American groups. Comparisons were

significant at $p < .05$.

Further analyses were also conducted in order to discover possible relationships

between the different types of learning disabilities and/or ADHD and academic

performance (i.e., cumulative GPA). In his review regarding the personality and

behavioral problems of adolescents with learning disabilities, Bender (1987) discussed

the significance of researching the various LD subtypes and documented how these relate

with school achievement and performance. Following his recommendation, McNamara

and colleagues (2005) conducted a study that compared the various LD and ADHD

subtypes across several domains including academic performance. Aligned with the

trajectory of the literature, a one-way analysis of variance was conducted to evaluate the

effect that the various LD subtypes have on cumulative GPA in this study. The

independent variable, type of disability, was categorized into three groups: learning

disability (LD), learning disability with comorbid attention deficit disorder (LD/ADD), and attention deficit disorder (ADD). The dependent variable was self-reported cumulative GPA. The means for the LD, LD/ADD, and ADD groups were 3.00 ($SD =$ .48), 2.48 ($SD = .65$), and 2.88 ($SD = .46$) respectively. These were significantly different, $F(2, 51) = 4.35$, $p = .018$, $\eta^2 = .15$. The strength of the relationship assessed by η^2 was strong, with the LD subtype accounting for 15% of the variance in cumulative GPA.

Post hoc comparisons were carried out with the use of the Scheffé test for the LD, LD/ADD, and ADD groups. There was a significant difference in the means between the LD and the LD/ADD groups, but no significant differences between the LD and ADD groups or between the LD/ADD and the ADD groups. Comparisons were significant at p < .05.

Discussion

The present study is the first to consider the impact of perceived stigma and academic self-efficacy on academic performance among college students with learning disabilities and/or ADHD. It has been implied that the learning disability label can be potentially stigmatizing (MacMaster, et. al., 2002). As such, it was hypothesized that there would be a negative relationship between perceived stigma of a learning disability and academic performance among college students. However, the results did not support this hypothesis. The second hypothesis, which proposed a positive relationship between self-efficacy and academic performance, was supported. Results from the current study were consistent with previous findings on the established connection between self-

efficacy and academic performance (e.g., Caprara, et. al., 2008; Chemers, et. al., 2001; Pajares, 1996; Pajares & Schunk, 2001; Schunk & Pajares, 2002).

A possible explanation for the lack of relationship between perceived stigma of LD/ADHD and academic performance is that some students may not consider their disability stigmatizing. In the present study, 77% of the participants reported receiving accommodations and/or support services. In order to receive accommodations or support services, students are required to self-disclose their LD/ADHD diagnosis. Many individuals with LD/ADHD understand that their diagnosis warrants the need for certain accommodations and support services that they would otherwise not receive, if they choose not to self-disclose (Ho, 2004). Therefore, the diagnosis which offers an explicit description of the particular disability as well as guarantees certain accommodations may be a welcomed answer to many individuals who have historically struggled in academic settings (MacMaster et al., 2002). As previously indicated, numerous studies have suggested that students who considered their learning disability as something specific and manageable instead of permanently limiting, had higher academic and global self-concepts than students who had a global and stigmatizing view of their learning disability (Heyman, 1990). Thus, participants in this study may not consider their LD/ADHD diagnosis stigmatizing and/or are accustomed to self-disclosing their disability in order to receive the accommodations and support services they are allowed. Since most of the participants in this study reported receiving accommodations, perhaps an area of future research can consider the responses of students who do not receive accommodations/support services or who do not actively self-disclose their LD/ADHD diagnosis.

Consistent with previous research, the present study provided further evidence for the positive relationship between academic self-efficacy and academic performance (e.g., Caprara, et. al., 2008; Chemers, et. al., 2001; Pajares, 1996; Pajares, 2002; Pajares & Schunk, 2001; Schunk & Pajares, 2002; Zimmerman, et. al., 1992). As such, students with LD/ADHD's beliefs about their learning abilities seem to be extremely important since they have the potential to influence academic outcomes. By better understanding the variables that impact academic self-efficacy and academic performance, it may be possible to devise educational programs for students who have LD/ADHD in order to promote and enhance their levels of self-efficacy. Faculty members could be trained on effective teaching methods and guided to serve as facilitators within this specific learning community. One of the main goals should be for educators to create positive and encouraging learning environments for all students in order to promote academic self-efficacy and consequently improve academic performance.

An interesting finding was the impact of ethnicity on the participants' levels of academic self-efficacy. Caucasian, non-Hispanic students reported the highest levels of academic self-efficacy, followed by African Americans, while Hispanic students reported the lowest levels. Dominguez de Ramirez and Shapiro (2005) suggested the consideration of ethnicity as an important variable when studying the LD/ADHD population. The differences between the ethnic groups in the present sample, suggest the possibility of differences in cultural perceptions of academic ability. Another possible interpretation is the amount of importance given to academic endeavors by varying cultures. Future studies should consider external or cultural factors that influence academic self-efficacy beliefs among this population. Another direction for future

research would be to explore possible variables that affect Hispanic students' academic self-efficacy beliefs such as their prior academic success/failure, motivation to continue studies and the level of their parents' education.

In addition, the present study contributes to the body of literature which documents the relationship between the different LD/ADHD subtypes and academic performance (e.g., Bender 1987; McNamara et al., 2005). Students with one or more learning disabilities (LD group) reported the highest cumulative GPA followed by students diagnosed with ADHD. Students with LD and comorbid ADHD reported the lowest cumulative GPAs. It seems that the inability to appropriately read, calculate math problems, or express oneself in writing are all challenging tasks; however, these tasks become increasingly more difficult for individuals who are unable to sustain attention, are overly restless, or who become easily distracted (*DSM-IV-TR*, 2000). If learning with a learning disability is challenging, the levels of difficulty can seem exponential to someone with LD and ADHD. Therefore, support programs that teach time management, organization, and study and test-taking skills could be extremely helpful for students with learning and/or attentional challenges.

One limitation of the present study is the generalizabilty of the results given the small sample size. A total of seventy-four participants responded to the survey, however not all of the participants answered every single question. Moreover, participants were asked to self-disclose their LD/ADHD diagnosis; therefore, those students who decided against self-disclosure were not represented in this sample. Individuals with learning disabilities may avoid self-disclosure because of apprehension of prejudicial reactions (May & Stone 2010) or fear of stigmatization (Major & O'Brien 2005). If non self-

disclosing participants were included in this study, perhaps there would have been a

relationship between stigma and academic performance. Lastly, the present study uses a

correlational design that does not ensure causal effects.

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Appendix A

Dear Student,

Your participation in a research project is requested. This research is specifically intended for students with learning disabilities and/or attention-deficit hyperactivity disorders.

If you decide to participate, you will be asked to complete two questionnaires. The questionnaires are estimated to take no more than 45 minutes to complete.

You will be asked to report your cumulative GPA **BEFORE** you complete the questionnaires. If you are unaware of your cumulative GPA, you can log on to Web Advisor to access it.

Follow the directions below to log on to Web Advisor and check your cumulative GPA:

- Go to http://student.barry.edu.ezproxy.barry.edu
- Click on the Web Advisor link
- Click on the "Log In" tab
- Enter your Username and Password
- Once you are logged in, click on the "Students" tab (top right in blue)
- Under the Academic Profile section, click on "My Unofficial Transcript" then click "Submit"
- Once this page opens, you will find a list of all your completed courses along with your grades Scroll down to the bottom of the page and you will see your cumulative GPA
- Make a note of the cumulative GPA, since you will be asked to provide it in the questionnaire

Your consent to participate in this research is strictly voluntary and any information you provide will be kept anonymous. No names, student ID numbers, or other identifiers will be collected.

If you decide to participate, please click on the link below which will take you to SurveyMonkey.com. There you will find a cover letter which provides further information about the research being conducted.

https://www.surveymonkey.com/s/YCMN3BC

Thank you for your consideration.

Appendix B

Dear Student,

Your participation in a research project is requested. This research is specifically intended for students with **learning disabilities** and/or **attention-deficit hyperactivity disorders**.

If you decide to participate, you will be asked to complete two questionnaires. The questionnaires are estimated to take no more than 20 minutes to complete.

You will be asked to report your cumulative GPA **BEFORE** you complete the questionnaires. If you are unaware of your cumulative GPA, you can log on to Web Advisor to access it.

Follow the directions below to log on to Web Advisor and check your cumulative GPA:

- Go to http://student.barry.edu.ezproxy.barry.edu
- Click on the Web Advisor link
- Click on the "Log In" tab
- Enter your Username and Password
- Once you are logged in, click on the "Students" tab (top right in blue)
- Under the Academic Profile section, click on "My Unofficial Transcript" then click "Submit"
- Once this page opens, you will find a list of all your completed courses along with your grades Scroll down to the bottom of the page and you will see your cumulative GPA
- Make a note of the cumulative GPA, since you will be asked to provide it in the questionnaire

Your consent to participate in this research is strictly voluntary and any information you provide will be kept anonymous. No names, student ID numbers, or other identifiers will be collected.

If you are a student currently enrolled in a psychology course, you may be able to receive **extra credit** points for your participation.

If you decide to participate, please click on the link below which will take you to SurveyMonkey.com. There you will find a cover letter which provides further information about the research being conducted.

https://www.surveymonkey.com/s/YCMN3BC

For questions or concerns contact:

Madalay Fleming	Dr.GuillermoWated	Barbara Cook
mfleming@mail.barry.edu	gwated@mail.barry.edu	bcook@mail.barry.edu
305-899-3316	305-899-3274	305-899-3020

Thank you for your consideration.

Appendix C

Dear Student,

Your participation in a research project is requested. This research is specifically intended for students with **learning disabilities** and/or **attention-deficit hyperactivity disorders**.

If you decide to participate, you will be asked to complete two questionnaires. The questionnaires are estimated to take no more than 20 minutes to complete.

You will be asked to report your cumulative GPA **BEFORE** you complete the questionnaires.

Your consent to participate in this research is strictly voluntary and any information you provide will be kept anonymous. No names, student ID numbers, or other identifiers will be collected.

If you are a student at Barry University currently enrolled in a psychology course, you may be able to receive **extra credit** points for your participation.

If you decide to participate, please click on the link below which will take you to SurveyMonkey.com. There you will find a cover letter which provides further information about the research being conducted.

https://www.surveymonkey.com/s/YCMN3BC

For questions or concerns contact:

Madalay Fleming	Dr.GuillermoWated	Barbara Cook
mfleming@mail.barry.edu	gwated@mail.barry.edu	bcook@mail.barry.edu
305-899-3316	305-899-3274	305-899-3020

Thank you for your consideration.

Appendix D

PARTICIPANTS NEEDED

Research participants are needed to take part in an anonymous* online research study investigating **perceived stigma** and **self-efficacy** among students with **learning disabilities** and **ADHD.**

Requirements: You must be at least 18 years old and have a **diagnosed learning disability** and/or **ADHD**.

Specifics: You will be asked to complete two questionnaires and some demographic information.

Extra credit: If you are a student at Barry University currently enrolled in a psychology course, you may be able to receive extra credit points for your participation.

Duration: Approximately 20 minutes

For questions or concerns contact:

Madalay Fleming	Dr. Guillermo Wated	Barbara Cook
mfleming@mail.barry.edu	gwated@mail.barry.edu	bcook@mail.barry.edu
305-899-3316	305-899-3274	305-899-3020

* When you participate your IP address will automatically be part of the data collected. In order to assure your confidentiality IP addresses will be destroyed.

To participate go to:

https://www.surveymonkey.com/s/YCMN3BC   https://www.surveymonkey.com/s/YCMN3BC   https://www.surveymonkey.com/s/YCMN3BC   https://www.surveymonkey.com/s/YCMN3BC   https://www.surveymonkey.com/s/YCMN3BC   https://www.surveymonkey.com/s/YCMN3BC   https://www.surveymonkey.com/s/YCMN3BC   https://www.surveymonkey.com/s/YCMN3BC   https://www.surveymonkey.com/s/YCMN3BC   https://www.surveymonkey.com/s/YCMN3BC

Appendix E

Barry University
Cover Letter

Dear Research Participant:

Your participation in a research project is requested. The title of the study is Perceived Stigma and Self-Efficacy as Predictors of Performance in College Students with Learning Disabilities/ADHD. The research is being conducted by Madalay Fleming, a student in the Psychology Department at Barry University, and it is seeking information that will be useful in the field of learning disabilities. The aims of the research are to examine stigma and self-efficacy.   In accordance with these aims, the following procedure will be used: two questionnaires follow this letter, one is a Perceived Stigma Scale and the other is called the Self-Efficacy for Learning Form (SELF-A). We anticipate the number of participants to be 100.

If you decide to participate in this research, you will be asked to do the following: Answer the questions on the Perceived Stigma Scale and on the (SELF-A). The questionnaires are estimated to take no more than 45 minutes to complete.

Your consent to be a research participant is strictly voluntary and should you decline to participate or should you choose to drop out at any time during the study, there will be no adverse effects on your grades.

The risks of involvement in this study are minimal. Although unlikely, it is possible that you may experience some emotional discomfort by answering some of the questions. If you experience any great discomfort as a result of the study, you may contact the Center for Counseling and Psychological Services at Barry University by calling 305-899-3950 and speak to a professional counselor. The following procedures will be used to minimize the risks: You can skip any questions you do not want to answer. Although there are no direct benefits to you for participating in this study, your participation will contribute to research in the area of learning disabilities.

As a research participant, information you provide is anonymous, that is, no names or other identifiers will be collected. SurveyMonkey.com allows researchers to suppress the delivery of IP addresses during the downloading of data, and in this study no IP address will be delivered to the researcher. However, SurveyMonkey.com does collect IP addresses for its own purposes. If you have concerns about this you should review the privacy policy of SurveyMonkey.com before you begin.

By completing and submitting this electronic survey you are acknowledging that you are at least 18-years-old, you have a diagnosed learning disability and/or attention deficit hyperactivity disorder, and that you voluntarily agree to participate in the study.

If you have any questions or concerns regarding the study or your participation in the study, you may contact me, Madalay Fleming, by phone at (305) 899-3316 or by email at mfleming@mail.barry.edu, or my supervisor, Dr. Wated, by phone at (305) 899-3274 or by email at gwated@mail.barry.edu. You may also contact the Institutional Review Board point of contact, Barbara Cook, by phone at (305) 899-3020 or by email at bcook@mail.barry.edu.

Thank you for your participation.
Sincerely,
Madalay Fleming

Appendix F

SELF-EFFICACY FOR LEARNING FORM (Abridged) (SELF-A)

Definitely	Probably	Maybe	Probably	Definitely
Cannot Do it	Cannot		Can	Can Do It

0%   10%   20%   30%   40%   50%   60%   70%   80%   90%   100%

Choose a percentage to indicate your answer

_____1. When you miss a class, can you find another student who can explain the lecture notes as clearly as your teacher did? (N)

_____2. When your teacher's lecture is very complex, can you write an effective summary of your original notes before the next class? (N)

_____3. When a lecture is especially boring, can you motivate yourself to keep good notes? (N)

_____4. When you had trouble understanding your instructor's lecture, can you clarify the confusion before the next class meeting by comparing notes with a classmate? (N)

_____5. When you have trouble studying your class notes because they are incomplete or confusing, can you revise and rewrite them clearly after every lecture? (N)

_____6. When you are taking a course covering a huge amount of material, can you condense your notes down to just the essential facts? (N)

_____7. When you are trying to understand a new topic, can you associate new concepts with old ones sufficiently well to remember them? (S)

_____8. When another student asks you to study together for a course in which you are experiencing difficulty, can you be an effective study partner? (S)

_____9. When problems with friends and peers conflict with school work, can you keep up with your assignments? (S)

_____10. When you feel moody or restless during studying, can you focus your attention well enough to finish your assigned work? (S)

_____11. When you find yourself getting increasingly behind in a new course, can you increase your study time sufficiently to catch up? (S)

_____12. When you discover that your homework assignments for the semester are much longer than expected, can you change your other priorities to have enough time for studying? (S)

_____13. When you have trouble recalling an abstract concept, can you think of a good example that will help you remember it on a test? (T)

_____14. When you have to take a test in a school subject you dislike, can you find a way to motivate yourself to earn a good grade? (T)

_____15. When you are feeling depressed about a forthcoming test, can you find a way to motivate yourself to do well? (T)

_____16. When your last test results were poor, can you figure out potential questions before the next test that will improve your score greatly? (T)

_____17. When you are struggling to remember technical details of a concept for a test, can you find a way to associate them together that will ensure recall? (T)

_____18. When you think you did poorly on a test you just finished, can you go back to your notes and locate all the information you had forgotten? (T)

_____19. When you find that you had to "cram" at the last minute for a test, can you begin your test preparation much earlier so you won't need to cram the next time? (T)

S = study item
T = test preparation item
N = note-taking item

Appendix G

Please circle the number that best reflects your honest opinion regarding each of the following statements.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. People think that I can be taught the basics, but I will never learn as much as someone without LD/ADHD.	1	2	3	4	5
2. People think that I am stupid because of my LD/ADHD.	1	2	3	4	5
3. People think that I am dumb because it takes me a longer time to learn things.	1	2	3	4	5
4. People think that the majority of people with LD/ADHD are stupid.	1	2	3	4	5
5. People think that I can be taught skills for living but I cannot learn advanced concepts.	1	2	3	4	5
6. People think it takes me a longer time to learn something.	1	2	3	4	5
7. People think that I do not understand information as well as others and therefore I need more time to complete assignments.	1	2	3	4	5
8. People think that if I do not have extra time to complete tasks, I will get really stressed out.	1	2	3	4	5
*9. People think that I am just as smart or smarter than someone without LD/ADHD.	1	2	3	4	5
10. People think that I need help to reach my full potential because of my mental deficiency.	1	2	3	4	5
11. People think that I need a little extra help or time to do things that others can do normally.	1	2	3	4	5
12. People think that I need to work harder than others.	1	2	3	4	5
13. People think that I will always be slow.	1	2	3	4	5
14. Some people think that everyone has some type of LD/ADHD but it's not always diagnosed.	1	2	3	4	5
15. People think that I cannot achieve high academic success.	1	2	3	4	5
*16. People think that I can learn more if I am taught at my own pace.	1	2	3	4	5
17. People think that I should not be challenged as much as those without LD/ADHD.	1	2	3	4	5
18. People think that the majority of people with LD/ADHD cannot have jobs that require higher cognitive skills.	1	2	3	4	5

Please circle the number that best reflects your honest opinion regarding each of the following statements.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
19. People in general have no hope for people with LD/ADHD.	1	2	3	4	5
*20. People who are not well-informed think that people with LD/ADHD cannot be helped.	1	2	3	4	5
*21. People think that my disability is biologically determined.	1	2	3	4	5
22. People think that my LD/ADHD is something that I cannot overcome.	1	2	3	4	5
23. People feel sorry for me because of my LD/ADHD.	1	2	3	4	5
24. People want little to do with me because of my LD/ADHD.	1	2	3	4	5
*25. People want to help me because of my LD/ADHD.	1	2	3	4	5
26. People in general think that people with LD/ADHD will always have difficulties.	1	2	3	4	5
27. People in general think that people with LD/ADHD are disadvantaged.	1	2	3	4	5
28. People in general think that people with LD/ADHD will never achieve what those without LD/ADHD have the potential to achieve.	1	2	3	4	5
29. People think that I am lying about my LD/ADHD diagnosis in order to get accommodations.	1	2	3	4	5
30. People think that if I tried harder, I would overcome my learning problems.	1	2	3	4	5
31. People think that I ask for special privileges that I do not deserve.	1	2	3	4	5
32. People think that I am a low achiever as compared to those without LD/ADHD.	1	2	3	4	5
33. People think that I am taking "the easy way out" when I ask for accommodations.	1	2	3	4	5
34. People think that some learning disabilities do not really exist.	1	2	3	4	5
*35. People in general are not well informed about LD/ADHD and therefore have many misconceptions about me.	1	2	3	4	5
*36. People in general are ignorant about LD/ADHD and therefore are not sympathetic.	1	2	3	4	5

Appendix H

Metastereotypes Regarding Individuals With Learning Disabilities
May and Stone (2010)

Below are examples of the categorized responses of participants to the question, "What do you think *people in general* believe about individuals with learning disabilities?" Because all responses were typed verbatim, any errors in spelling, grammar, and/or punctuation were present in the original responses.

1. Low Intelligence

The ideas in this category involve the explicit statement that people with learning disabilities (LD) are less intelligent or have less ability/capability to learn. The descriptions in this category often sound more like descriptions of mental retardation than LD (e.g., incapable of achieving
success, achieving independence).

Examples:

• They can be taught the basics, but will never be able to learn as much as someone without a learning disability.
• I think that people consider individuals with learning disabilities stupid by virtue of their disability and unable to learn as much or to be as smart as those who do not have the disability.
• They are dumb because it takes them longer to learn things.
• The majority of people with LD are stupid, have physical problems, or are retarded.
• They can be taught skills for living, however cannot learn concepts.

2. Compensation Possible

In this category, responses indicate more difficulty learning or a learning difference for people with LD and often that learning will be a slower process for them. However, responses should indicate explicitly that when given extra time or other accommodations, the individuals are equally as capable/able as the average individual. There shouldn't be any implication in this category that the person is less intelligent/smart/able—just that it's sometimes harder for the individual with LD to demonstrate his or her intelligence under standard conditions.

Examples:

• It takes them a longer time to learn something.
• That they don't comprehend information as well and that they need more time to complete activities or else they get really stressed out.
• They may be just as smart or smarter but need aid to reach their full potential because of a basic deficiency in mind – slower, etc.
• They need a little extra help or time to do things that others can do normally.
• They need to work harder than others.

3. Processing Deficit

Difficulties with learning or processing (often speed) are articulated without an explicit statement that intelligence is impaired. Less intelligence may be implied but not explicitly stated (as in category 1 responses). Unlike many category 2 responses, there should be no mention of a possibility for equalizing learning or processing deficits with accommodations or some other form of assistance. Unlike category 4 responses, there is a focus on learning or processing difficulties.

Examples:

• I think people believe they will always be slow.
• That they are slower than others. Some people believe everyone has a learning disability only some peoples are diagnosed. That's how I feel.
• That they cannot achieve high academically speaking.
• They can learn more if they are taught at their own pace and not challenged as much as those without a disability.
• That the learning disabled will not do in society with occupations that require cognitive skills.

4. Nonspecific Insurmountable Condition

This category includes responses suggesting that people with LD are deserving of sympathy or pity. There may be a suggestion that nothing can really be done for people with LD because they were born with a lifelong condition. Responses in this category are distinct from those in
category 2 because the focus is not specifically on learning difficulties but rather on a broader, unspecified set of challenges.

Examples:

• I think in general people lose hope for people with learning disabilities. I think people not well-informed would believe that we cannot help people with learning disabilities.
• I think they believe that their disability is biologically determined and something that they can't overcome.
• They feel sorry for them and want little to do with them, or else they want to help.
• People in general think that people with learning disabilities will always have difficulty.
• They are disadvantaged and will never achieve what those without disabilities have the potential to achieve.

5. Working the System

Responses in this category involve the notion that people with LD are individuals who can pay or know someone who will give the diagnosis or are otherwise willing to stoop to duping others so that they can get accommodations that would actually assist anyone who

is willing to work the system. This category can also include the argument that students with LD are truly just lazy and/or need to try harder.

Examples:

• That they're lying.
• They don't try, if they tried harder they would overcome their problems.
• Ask for special privileges, pity, unruly, behind, nuisance, silent.
• That they are lower achievers than everyone else and that some of them are taking the easy way out.
• That some learning disabilities don't really exist.

6. Other

Any response that does not fit in one of the other categories.

Examples:

• That they are all extreme disabilities – not true.
• Only if they are extremely kindhearted or are directly forced into this ideology.
• They can learn more if they are taught at their own pace and not challenged as much as those without a disability.
• I really feel that there is not enough information out there to inform the population about these difficulties. So until this happens we will always go unnoticed.
• People are not sympathetic, mainly because they are ignorant.

Appendix I

Please take a few moments to provide us with your demographic information.
Information gathered in this survey will remain anonymous.

Demographic Information

1. Indicate whether you are ☐ Male ☐ Female

2. What is your age? _____

3. Check the box which reflects your school class.
      ☐ Freshman   ☐ Sophomore
      ☐ Junior   ☐ Senior

4. Check the box which best reflects your ethnic background:
      ☐ Hispanic
      ☐ African American
      ☐ Asian
      ☐ Caucasian, Non-Hispanic
      ☐ Other (please specify): _____

5. Please indicate what type of learning disability you have (check any that apply)
      ☐ Language   ☐ Nonverbal
      ☐ Reading   ☐ Attention (ADHD/ADD)
      ☐ Writing   ☐ Uncertain of Type
      ☐ Math   ☐ Other _____

6. How much extra time are you allowed on your exams because of your learning disability/ADHD?
      ☐ Time and a half
      ☐ Double Time
      ☐ Unlimited Time
      ☐ Don't know

7. How often do you request extra time on your exams?
      ☐ Never
      ☐ Only for exams where I find the subject matter difficult
      ☐ For all exams

8. How many hours a week do you receive tutorial support? (If you do not receive tutorial support, put 0). _____

Thank you for completing this survey.