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Precious Denise Elmore Williams

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**DIFFERENCES IN THE VOCATIONAL REHABILITATION PROCESS  
BETWEEN AFRICAN AMERICANS AND EUROPEAN AMERICANS  
WITH SPECIFIC LEARNING DISABILITIES ON ACCEPTANCE, SERVICES AND  
REASONS FOR CLOSURE**

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**by**

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## Dedication

I dedicate this dissertation to my father and my mother. Thank you so much for all the sacrifices that you have made for me. I could not have come this far without you. I love you.

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**Differences in the Vocational Rehabilitation Process between African Americans  
and European Americans with Specific Learning Disabilities on Acceptance, Services, and  
Reason for Closure**

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The purpose of this study was to investigate the relationship between consumer race and vocational rehabilitation acceptance, services, and reason for closure through the state/federal vocational rehabilitation system for individuals with specific learning disabilities. The consumers who participated in the study were individuals who applied for services during the 2006 fiscal year with specific learning disabilities (SLD). The study included two different stratified samples of 400 African Americans with SLD and 400 European Americans with SLD. Several variables were held constant in this study. These variables included: (a) gender, (b) age at application, (c) level of education at application, (d) primary source of support at application, participation in special education (as evidenced by an individualized education program), and (e) presence of a significant disability.

Related to acceptance, results from the logistic regression indicated that the presence of a significant disability was positively correlated with acceptance for services in both samples. That

is individuals with a significant disability were more likely to be accepted for services than were individuals without a significant disability. There were no statistically significant differences found between African Americans with SLD and European Americans with SLD in Sample A. Conversely, statistically significant differences were found in Sample B. In Sample B African Americans with SLD were less likely than European Americans with SLD to be accepted for services. In addition, under the category of educational level at application, individuals with a special education certificate of completion/diploma in attendance were less likely to be accepted for services than other educational categories.

Related to services, in Sample A, African Americans with SLD were less likely to receive college training than European Americans with SLD. In Sample B, African Americans with SLD were more likely to receive job readiness and transportation services. On-the-job training was provided more frequently for European Americans with SLD than African Americans with SLD.

Related to reasons for closure, the chi-square was not significant in Sample A. However in Sample B statistically significant findings were revealed. African Americans with SLD were found more likely to be closed as 'unable to locate or contact' and 'failure to cooperate'. In addition, Sample African Americans with SLD were more likely to be closed 'other reasons'. By contrast, European Americans with SLD were found to be closed due to either refusal of services or further services and to achieve an employment outcome. Limitations of the study and implications for future research and practice were also discussed.

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## CHAPTER 1

### INTRODUCTION

Historically, African Americans have been underrepresented or disadvantaged in many aspects of our society: employment, income, education, living conditions, and health status (Bolton & Cooper, 1980). Specifically, African Americans have the highest overall estimated disability rate. In comparison to other groups, these disadvantages are compounded by disability. The disability rate for African Americans of working age (ages 16 - 64) was 26.4 % compared to 16.8% for European Americans of the same age with disabilities (US Census, 2000). Furthermore, the Census 2000 report indicated that people of working age were less likely to be employed if they had a disability. European Americans had the lowest poverty rate, 8.1%, in 1999 while African Americans had a poverty rate of 24.9 %. Fewer African Americans completed high school; 27.7% compared to 19.6 % of the total population (US Census, 2000). In addition, the US Census data indicated that African Americans were more likely to have a disability than any other racial group (along with American Indians). Also, African Americans had a greater proportion of severe disability than any other group (US Census, 2000). Smart and Smart (2001) found 5 reasons for increased rates of disabilities among CLD populations: (a) low income and poverty, (b) employment in physically dangerous jobs, (c) lack of insurance coverage, (d) low educational attainment, and (e) faulty testing and assessment. Given the significantly higher rate of disabilities among African Americans, there is a disproportionately higher need for disability services, specifically vocational rehabilitation services (Smart & Smart, 1997; Staten, 1998).

According to Atkins and Wright (1980) awareness of the importance of providing services to African Americans with disabilities in the vocational rehabilitation system is well

established in our society. As early as 1938, for example, Wilkerson and Penn investigated the participation of African Americans in the vocational rehabilitation process. They found that African Americans represented only 24.4% of 3,028 cases closed. Atkins and Wright (1980) examined the effectiveness of vocational rehabilitation services by comparing African American cases with European American cases. Results of their study indicated that African Americans were 5.5% less likely to be accepted for vocational rehabilitation services than their European American counterparts. In addition, African Americans were treated inequitably in other areas of the vocational rehabilitation process. Even when African Americans were found eligible for services, they were less likely to be rehabilitated. Differences were also apparent in patterns of services among African Americans and European Americans; African Americans received less costly vocational rehabilitation services than European Americans; African Americans received less weekly earnings at closure than European Americans (Atkins & Wright, 1980). Regardless of the reasons for and prevalence of disabilities of African Americans and the need for vocational rehabilitation services, researchers report that African Americans are underrepresented in all phases of the vocational rehabilitation system and persistently receive inequitable vocational rehabilitation treatment, including acceptance, service delivery, and outcomes (Atkins & Wright, 1980; Feist-Price. 1995).

Many other researchers have shared Atkins and Wrights findings (Dziekan & Okocha, 1993; Feist-Price, 1995; Wilson, 2000). Dziekan and Okocha (1993) examined the access and acceptance rates of CLD populations and majority individuals with disabilities in a Midwestern state vocational rehabilitation system. They found that European Americans were accepted at a higher rate, 60%, while CLD populations were accepted at a rate of less than 50%.

Feist-Price (1995) examined successful rehabilitation and premature termination of vocational rehabilitation services provided for African Americans compared to European Americans in a southeastern state. She found that African Americans were less likely to be accepted for rehabilitation services than European Americans; African Americans were underrepresented as applicants and consumers when compared to their disability prevalence rate; African Americans with disabilities were successfully rehabilitated less often than their European American counterparts, and they obtained lower paid positions when they were employed (1995).

However, many researchers have conducted studies that contradict the earlier findings indicating that African Americans are less likely to be accepted for vocational rehabilitation services (Wheaton, 1995; Peterson, 1996; Wilson, 2002). In 1992, amendments to the Rehabilitation Act of 1973 were made. Section 21 is referred to as the Rehabilitation Cultural Diversity Initiative (RCDI), which acknowledged the inequities of individuals with disabilities from culturally and linguistically diverse (CLD) backgrounds in the vocation rehabilitation system. Section 21 of the Act states that:

Patterns of inequitable treatment have been documented in all major junctures of the vocational rehabilitation process. As compared to white Americans, a larger percentage of African-American applicants to the vocational rehabilitation system is denied acceptance. Of applicants accepted for service, a larger percentage of African-American cases are closed without being rehabilitated. CLD populations are provided less training than their white counterparts. Consistently, less money is spent on CLD populations than on their white counterparts. Section 21 (a)(3).

A major focus of Section 21 was to bring more attention to and bring more individuals with disabilities from underrepresented groups into the vocational rehabilitation system to ensure that they received equitable treatment in the system and acknowledge the issue (Middleton, Rollins, Sanderson, Leung, Harley, Ebener, et al., 2000). It is important to understand the acceptance, service delivery, and outcomes for African Americans seeking vocational rehabilitation services. To better understand these variables, the researcher provides an overview of the nature of the vocational rehabilitation system and African Americans perceptions of and participation in the system.

#### *Vocational Rehabilitation as a Microcosm of Society*

The vocational rehabilitation system may appear to some African Americans as a microcosm of the larger society because the attitudes and beliefs of the system can be viewed as inequitable, similar to society (Wilson, 2002; Wilson, 2004). Historically, African Americans have been victim of oppression and different types of racism. African Americans have been denied rights and freedoms that European Americans inside and outside of the vocational rehabilitation system have benefited from (Olney & Kennedy, 2002). The vocational rehabilitation system has a role in perpetuating, or accentuating, existing racial disparities in employment for adults with disabilities (Olney & Kennedy, 2002).

The purpose of the vocational rehabilitation system is to empower individuals with disabilities to achieve employment consistent with their strengths, resources, priorities, concerns, abilities, and capabilities (Dowdy, 1996). The foundation of the vocational rehabilitation is its goal of equalizing individuals with disabilities by providing opportunities for productive living (Atkins & Wright, 1980).

Currently, a review of the literature shows a less than admirable history of state and federal rehabilitation services for African Americans and other CLD populations with disabilities (Dixon & Wright, 1996, p. 140). Wright (1988) suggested that vocational rehabilitation service delivery to CLD populations with disabilities revealed that: (a) African Americans were underrepresented in the vocational rehabilitation system, (b) were less likely to fare well, compared to European Americans in vocational rehabilitation outcomes, (c) were less likely to access vocational rehabilitation service delivery compared to European Americans and, (d) were less likely to receive equitable vocational rehabilitation service delivery compared to European Americans.

#### *Purpose of the Study*

The purpose of this study is to compare African Americans and European American consumers with a specific learning disability (SLD) and vocational rehabilitation acceptance, services and reasons for closure on a national level. The control variables include: (a) gender, (b) age, (c) level of education attained at application, (d) participation in special education as evidenced by individualized education plan, (e) primary source of support at application, (f) primary disability, (g) and presence of a significant disability. The reasons for closure include: (a) achieved employment outcome, (b) unable to locate or contact, (c) disability too significant to benefit from vocational rehabilitation services, (d) refused services or further services, (e) death, (f) individual in institution, (g) transferred to another agency, (h) failure to cooperate, (i) no disabling condition, (j) no impediment to employment, (k) transportation not feasible or available, (l) does not require vocational rehabilitation services, (m) extended services not available, (n) all other reasons, and (o) extended employment. Services include: (a) assessment, (b) diagnosis and treatment, (c) vocational rehabilitation counseling and guidance, (d) college

training, (e) occupational training, (f) on-the-job training, (g) basic academic remedial or literacy training, (h) job readiness training, (i) disability related augmentative skills training, (j) miscellaneous training, (k) job search assistance, (l) job placement assistance, (m) on-the-job supports, (n) transportation, (o) maintenance, (p)rehabilitation technology, (q) reader, (r) interpreter, (s) personal attendant, (t) technical assistance, (u) information and referral, and (v)other services.

### *Significance of the Study*

Despite the Civil Rights Movement, which recognized the inequities of individuals of from culturally and diverse backgrounds, disability rights legislation, and the Rehabilitation Cultural Diversity Initiative (RCDI), which acknowledged the inequities of individuals with disabilities from CLD backgrounds in the vocation rehabilitation process, CLD populations and individuals with disabilities continue to be discriminated against (Wilson, 1997).

The majority of the rehabilitation counseling literature suggests that, compared to European Americans, CLD populations with disabilities have a disproportionately higher rate of rejection for rehabilitation services and when accepted, are provided less effective services, with poorer rehabilitation outcomes being the result (Foundations of Vocational Rehabilitation, 1995, p. 151-152). This differential treatment of African Americans compared to European Americans has been well documented in the vocational rehabilitation literature (Atkins & Wright, 1980; Brown, 1997; Capella, 2002; Dziekan & Okacha, 1993; Feist-Price, 1995; Herbert & Martinez, 1992; Moore, 2001; Moore, Feist-Price, & Alston, 2002; Patterson, Allen, & Crawford, 2000; Rosenthal, Ferrin, Wilson, & Frain, 2005; Ware, 2005; Wilkerson & Penn, 1938; Wilson, 2000; Wilson, 2002; Wilson, 2004; Wilson & Alston, 2001; Wilson, Jackson, & Doughty, 1999).

Currently, there are few studies that focus on acceptance, reasons for closure, and service delivery for African Americans and European Americans with specific learning disabilities. The current study is unique because it includes national data from the latest RSA database; in addition, past studies (Wilson, 2004; Moore, Feist-Price, & Alston, 2002; and Moore, 2001) controlled a limited range of disabilities, while the present study builds upon past vocational rehabilitation acceptance research by including learning disabilities, and a combination of variables that have not been previously controlled. The investigation of vocational rehabilitation acceptance rates, service rates, and reasons for closure for African Americans and European Americans with specific learning disabilities is significant because it has the potential to:

1. Assist current and prospective vocational rehabilitation counselors to strengthen their awareness and understanding of the vocational rehabilitation process for African Americans and European American consumers.
2. Provide guidelines for the Rehabilitation Services Administration and state agencies to review current practices and identify training needs.
3. Present a better understanding of service needs for African Americans and European American consumers.
4. Enhance the understanding of how cultural identity can influence the vocational rehabilitation process.

### *Research Questions*

The following questions guided the study:

1. How do the acceptance rates of African Americans compare with those of European Americans with specific learning disabilities when: (a) gender, (b) age, (c) educational level at application, (d) primary source of support at application,

- (e) participation in special education, as evidenced by an individualized education plan, and (f) presence of a significant disability are controlled?
2. How do the reasons for closure for African Americans with specific learning disabilities compare to those of European Americans with specific learning disabilities?
  3. How do service rates for African Americans with specific learning disabilities compare to European American with specific learning disabilities?

#### *Definition of Terms*

*African American/Black.* African American also referred to as “Black” consists of individuals who have origins in any of the black racial groups of Africa (US Census, 2000).

*Applicant.* An applicant refers to any individual applying for vocational rehabilitation services but not yet determined eligible for the Vocational Rehabilitation (VR) program.

*Case Services.* Case services include all the services provided for the consumer over the duration of the current service record. Case services can be paid for with vocational rehabilitation funds or from other sources. There are 22 case services identified in the Rehabilitation Services Administration-911 Case Service Reporting Manual (2006).

1. *Assessment.* Services provided and activities performed to determine eligibility for vocational rehabilitation services.
2. *Diagnosis and Treatment of Impairments.* Diagnosis and treatment of impairments can include any type of physical, vocational, mental, or social services to correct or modify a physical or mental impairment that constitutes a substantial impediment to employment.

3. *Vocational Rehabilitation Counseling and Guidance*. Therapeutic counseling and guidance services that are necessary for an individual to achieve an employment outcome.
4. *College or University Training*. Full-time or part-time academic training beyond high school.
5. *Occupational/Vocational Training*. Occupational, vocational, or job skill training provided by a community college and/or business, vocational/trade or technical school to prepare students for gainful employment in a recognized occupation, not leading to an academic degree or certification (RSA-911 Case Service Reporting Manual, 2005, p. 24).
6. *On-the-job Training*. Training with a specific employer where the individual is paid during training and will remain in the same or similar job upon successful completion.
7. *Basic Academic Remedial or Literacy Training*. Training to remediate basic academic skills.
8. *Job Readiness Training*. Training to prepare an individual for the world of work; appropriate work behaviors, getting to work on time, appropriate dress and grooming, increasing productivity (RSA-911 Case Service Reporting Manual, 2005, p.25).
9. *Disability Related Augmentative Skills Training*. Includes but is not limited to: orientation and mobility; rehabilitation teaching; training in the use of low vision aids; Braille; speech reading; sign language; and cognitive training/retraining (RSA-911 Case Service Reporting Manual, 2005, p.25).

10. *Miscellaneous Training*. Any type of training not identified in one of the other categories.
11. *Job Search Assistance*. Includes a variety of supports to help a consumer in finding an appropriate job (resume writing, interviewing skills, identifying appropriate jobs, and making contacts on behalf of the consumer).
12. *Job Placement Assistance*. Job placement takes place when the consumer receives a referral to a job that results in an interview.
13. *On-the-job Supports*. Supports for an individual while he or she is on the job in order to maintain the job placement.
14. *Transportation Services*. Training on how to use public and private transportation vehicles and systems.
15. *Maintenance*. Monetary support provided for shelter, living, food, and clothing expenses that are in excess of the usual expenses of the individual and that are necessary by the individual's participation in vocational rehabilitation services.
16. *Rehabilitation Technology*. Rehabilitation technology means the systematic application of technologies, engineering methodologies, or scientific principles to meet the needs of and address barriers. Rehabilitation Technology also includes: Rehabilitation Engineering Service, Assistive Technology Devices, and Assistive Technology Services.
  - a. *Rehabilitation Engineering Service*. The systematic application of engineering sciences to design, test evaluate, apply, and distribute technological solutions to problems individuals might have in functional areas.

- b. Assistive Technology Devices. Includes any item, piece of equipment, or product system to increase, maintain, or improve the functional capabilities of a consumer.
- c. Assistive Technology Services. Any service that directly assists a consumer with a disability in the selection, acquisition, or use of an assistive technology device (RSA-911 Case Service Reporting Manual, 2005, p.27-28).

17. *Reader Services*. Services for individuals who cannot read print due to blindness or another disability.

18. *Interpreter Services*. Sign language services or oral interpretation services for individuals who are deaf or hard of hearing and tactile interpretation services for individuals who are deaf-blind (RSA-911 Case Service Reporting Manual, 2005, p. 29).

19. *Personal Attendant Services*. Personal services such as, bathing, feeding, dressing, providing mobility and transportation that an attendant performs for an individual.

20. *Technical Assistance Services*. Technical assistance and other consultation services provided to conduct market analyses, to develop business plans, and to provide resources to individuals in support of self-employment, telecommuting, and small business operation outcomes (RSA-911 Case Service Reporting Manual, 2005, p. 29).

21. *Information and Referral Services*. Information and referral services are provided to consumers who need services from other agencies not available through the vocational rehabilitation program.

22. *Other Services.* This category is for all other services that cannot be recorded anywhere else.

*Consumer.* The consumer refers to the individuals determined to be eligible for vocational rehabilitation services.

*Employment outcome.* An employment outcome occurs when a consumer enters or retains full-time or part-time employment in the integrated work setting with or without supports, self employment, state agency-managed Business Enterprise Program, homemaker, and unpaid family worker.

*European American/White.* European American also referred to as “White” consists of individuals from the origins of any of the original peoples of Europe, Middle East, or North Africa (US Census, 2000).

*Individualized education program.* An individualized education program is also referred to as an individualized education plan (IEP). An IEP is mandated by the Individuals with Disabilities Education Act (IDEA). It is a written statement for each child with a disability receiving special education services. The IEP includes the student’s academic and functional goals, as well as the means for measuring his or her progress. The plan is developed by the student’s teachers, parents, and the student (US Department of Education).

*Individualized plan of employment.* An individualized plan of employment (IPE) includes long-term vocational goals, intermediate rehabilitation goals, vocational rehabilitation services and assessment services, as well as service providers (Schaller, Yang, & Chang, 2004).

*Mental impairment.* Mental impairments include (a) Cognitive Impairments (impairments involving learning, thinking, processing information and concentration) (b) Psychosocial

Impairments (interpersonal and behavioral impairments, difficulty coping) and (c) Other Mental Impairments (RSA-911 Case Service Reporting Manual, 2006, p.13).

*Primary disability.* The individual's primary physical or mental impairment that causes or results in a substantial impediment to employment (RSA-911 Case Service Reporting Manual, 2006, p.12).

*Primary source of support at application.* The individual's largest single source of support at the time they applied for vocational rehabilitation services. This study includes the following sources: personal income, family and friends, public support, all other sources.

*Race and Ethnicity.* Race and ethnicity is determined by the Rehabilitation Services Administration through self-identification. In the event that the individual refuses to identify his or her race/ethnicity, the counselor will determine their race/ethnicity (RSA-911 Case Service Reporting Manual, 2006, p.8).

*Reason for closure.* Reason for closure identifies the reason for closing the service record of an individual. The Rehabilitation Services Administration recognizes the following reasons:

1. Achieved employment outcome: an employment outcome occurs when a consumer enters or retains full-time or part-time employment in the integrated work setting; satisfies the vocational outcome of supported employment or; satisfies any other vocational outcome RSA may determine to be appropriate in a manner consistent with the Rehabilitation Act.
2. Unable to locate or contact: when the individual has moved without a forwarding address or is otherwise unavailable or individuals who have left the state and show no intention of continuing in their vocational rehabilitation program.

3. Disability too significant to benefit from vocational rehabilitation services: an individual whose mental or physical disability is so significant that the individual cannot benefit from vocational rehabilitation services in terms of employment.
4. Refused services or further services: individual who chooses not to participate or continue in their vocational rehabilitation program.
5. Death
6. Individual in institution: individual has entered an institution and will be unavailable to participate in a vocational rehabilitation program for an indefinite or considerable amount of time.
7. Transferred to another agency: individual needs services that are more appropriately obtained somewhere else.
8. Failure to cooperate: an individual's actions (or non-actions) make it impossible to begin or continue a vocational rehabilitation program. Includes repeated failures to keep appointments for assessment, counseling, or other services.
9. No disabling condition: applicants who are not eligible for VR services because no physical or mental impairment exists.
10. No impediment to employment: applicants who are not eligible for VR services because their physical or mental impairment does not constitute a substantial impediment to employment.
11. Transportation not feasible or available: individual was unable to accept or maintain employment because suitable transportation was either not feasible or not available.

12. Does not require vocational rehabilitation services: applicants who do not require VR services to prepare for, enter into, engage in, or retain gainful employment consistent with their strengths, resources, priorities, concerns, abilities, capabilities, and informed choice.
13. Extended services not available: individuals who would have benefited from the provision of supported employment services but for whom no source of extended services was available.
14. All other reasons: This code is used for all reasons not covered by Codes 1 to 13 or 14.
15. Extended employment: individuals who received services and were placed in a non-integrated setting for a public or non-profit organization.

*Rehabilitation Services Administration (RSA-911).* Rehabilitation Services

Administration is defined as the Rehabilitation Services Administration's database reporting system consisting of information about each person whose case was closed after receiving vocational rehabilitation services (Beveridge, 2003).

*Significant disability.* An individual with a significant disability is an individual who has a physical or mental impairment that limits one or more functional capacities in terms of employment outcomes; whose vocational rehabilitation can be expected to require multiple vocational rehabilitation services over an extended period of time; who has one or more physical or mental disabilities resulting from amputation, arthritis, autism, blindness, burn injury, cancer, cerebral palsy, cystic fibrosis, deafness, head injury, heart disease, hemiplegia, hemophilia, respiratory or pulmonary dysfunction, mental retardation, mental illness, multiple sclerosis, muscular dystrophy, musculo-skeletal disorders, neurological disorders, spinal cord condition,

sickle cell anemia, specific learning disability, end-stage renal disease, or another disability or combination of disabilities determined on the basis of an assessment for determining eligibility and vocational rehabilitation needs to cause comparable substantial functional limitations (RSA-911 Case Service Reporting Manual, 2006, p. 42).

*Specific learning disability.* A specific learning disability is a disorder in one or more of the central nervous system processes involved in perceiving, understanding, and/or using concepts through verbal (spoken or written) language or nonverbal means. This disorder manifests itself with a deficit in one or more of the following areas: attention, reasoning, processing memory, communication, reading, writing, spelling, calculation, coordination, social competence, and emotional maturity (Rehabilitation Services Administration, 1985).

*Type of closure.* Type of closure is used to indicate when in the vocational rehabilitation process an individual exited the program. Types of closures include:

1. Exited as an applicant
2. Exited during or after a trial work experience/extended evaluation
3. Exited with an employment outcome
4. Exited without an employment outcome, after receiving services
5. Exited without an employment outcome, after a signed IPE, but before receiving services
6. Exited from an order of selection waiting list
7. Exited without an employment outcome, after eligibility, but before an IPE was signed

*Vocational rehabilitation counselor.* Vocational rehabilitation counselors assess individuals' needs, develop programs or plans to meet the identified needs, and provide or arrange for the services (Patterson, Szymanski, and Parker, 2005, p. 4).

## CHAPTER 2

### REVIEW OF RELATED LITERATURE

This chapter will provide literature related to the nature of the vocational rehabilitation system, the VR process, acceptance rates, service delivery, and reasons for closure for African Americans and European Americans. In addition, this chapter will provide a discussion of specific learning disabilities (SLD) and literature related to how individuals with SLD have been served in the vocational rehabilitation system.

#### *The Nature of the Vocational Rehabilitation System*

The first United States federal program for vocational rehabilitation of individuals with disabilities started in 1918 to rehabilitate veterans with disabilities. During this time veterans were compensated for their war-related disabilities by government pensions. The Soldier's Rehabilitation Act for Vocational Education was in charge of developing a program for veterans with disabilities. This act authorized vocational rehabilitation services for all veterans with disabilities as a result of military service that presented an impediment to employment (Rubin & Roessler, 1995). In 1920, the Civilian Vocational Rehabilitation Act, also known as the Smith-Fess Act, began to provide vocational rehabilitation services for civilians with physical disabilities (Parker, Szymanski, & Patterson, 2005). According to Wilkerson and Penn (1938), framers of the Smith-Fess Act were careful to provide safeguards for certain population groups who otherwise might be denied equitable treatment.

That no discrimination shall be made or permitted for or against any person or persons who are entitled to the benefits of this Act, because of membership, or non-membership in any industrial, fraternal, or private organization of any kind under penalty of \$200 for every violation thereof (as cited in Wilkerson & Penn, 1938).

Wilkerson and Penn noted that it was not accidental that the clause did not specifically mention CLD populations. A more recent view explained that:

The vocational rehabilitation system is a product of primarily White American legislators initially for White veterans of World War I. The system has built-in insensitivities to cultural differences. Clients must be reachable by telephone and mail. Clients must respond to letters and phone calls or they will be regarded as noncooperative and their case will be closed. These and similar procedures tend to result in lower acceptance rates of people with diverse backgrounds (R. M. Parker, personal communication, February 23, 2007).

#### *Vocational Rehabilitation Process*

Each state has a vocational rehabilitation program. Individuals come to the vocational rehabilitation from a variety of methods including referrals from high school and other agencies. Anyone can be referred to the program, but unlike special education they are not automatically eligible for the program. According to the 1992 Amendments to the Act, to be eligible for assistance from the vocational rehabilitation system, an individual must:

1. Have a physical or mental impairment that results in a substantial impediment to employment;
2. Be able to benefit from vocational rehabilitation services in terms of employment;
3. Require vocational rehabilitation services to prepare for, enter, engage in, or retain gainful employment [Section 102 (a)(1)].

A vocational rehabilitation counselor determines eligibility after reviewing existing data, or, if necessary, obtains additional assessments to make an eligibility decision. After determining eligibility, the vocational rehabilitation counselor is responsible for implementing the process

through a systematic case management structure (Fabian & MacDonald-Wilson, 2005). The counselor must make an eligibility decision within 60 days after the individual applies for vocational rehabilitation services. The Amendments to the Rehabilitation Act (1992) mandate that individuals be assumed to be able to benefit from vocational rehabilitation services in regards to employment unless the state VR agency can determine by clear evidence, through a period of extended evaluation, that the individual is not capable of benefiting from services (Dowdy, 1996). After eligibility is determined, the vocational rehabilitation counselor, individual, and/or family work collaboratively to create an individualized plan of employment (IPE) (Schaller, Yang, & Chang, 2004). The IPE is a formal plan of action that takes into account the individual's capabilities, limitations, and interests in order to determine an appropriate vocational goal (Kavale & Forness, 1996). According to the 1992 Amendments to the Vocational Rehabilitation Act, minimally an IPE must include:

- (a) a description of the specific employment outcome that is chosen by the eligible individual, consistent with the unique strengths, resources, priorities, concerns, abilities, capabilities, interests, and informed choice of the eligible individual, and, to the maximum extent appropriate, results in employment in an integrated setting;
- (b)(i) a description of the specific vocational rehabilitation services that are-- (i) needed to achieve the employment outcome, including, as appropriate, the provision of assistive technology devices and assistive technology services, and personal assistance services, including training in the management of such services; and (ii) provided in the most integrated setting that is appropriate for the service involved and is consistent with the informed choice of the eligible individual; and (iii) timelines for the achievement of the employment outcome and for the initiation of the services;
- (c) a description of the entity

chosen by the eligible individual or, as appropriate, the individual's representative, that will provide the vocational rehabilitation services, and the methods used to procure such services; (D) a description of criteria to evaluate progress toward achievement of the employment outcome; (E) the terms and conditions of the individualized plan for employment, including, as appropriate, information describing-- (i) the responsibilities of the designated State unit; (ii) the responsibilities of the eligible individual, including--(I) the responsibilities the eligible individual will assume in relation to the employment outcome of the individual; (II) if applicable, the participation of the eligible individual in paying for the costs of the plan; and (III) the responsibility of the eligible individual with regard to applying for and securing comparable benefits as described in section 101(a)(8); and (iii) the responsibilities of other entities as the result of arrangements made pursuant to comparable services or benefits requirements as described in section 101(a)(8); (f) for an eligible individual with the most significant disabilities for whom an employment outcome in a supported employment setting has been determined to be appropriate, information identifying-- (i) the extended services needed by the eligible individual; the source of extended services or, to the extent that the source of the extended services cannot be identified at the time of the development of the individualized plan for employment, a description of the basis for concluding that there is a reasonable expectation that such source will become available; and as determined to be necessary, a statement of projected need for post-employment services.

## *Acceptance*

### *Are African Americans less likely than European Americans to be Accepted for Vocational Rehabilitation Services?*

Atkins and Wright (1980) investigated vocational rehabilitation services outcomes based on race. These researchers used national rehabilitation data for the 1976 fiscal year. The data included all applicants for state vocational rehabilitation services, all individuals accepted by the agency, and successful and unsuccessful consumers for one year. African Americans were less likely to be accepted for vocational rehabilitation services than European Americans. Using the RSA national data, African Americans in 8 out of 10 regions were more likely to have their applications rejected than European Americans.

Questions surfaced around the accuracy of Atkins and Wright's study. Bolton and Cooper reanalyzed the data in the Atkins and Wright study and calculated the overall acceptance rates for African Americans compared to European Americans. They were not convinced that a difference of 5.5% constituted a significant difference in acceptance rates for African Americans. They asked the question, "Does this difference of 5.5% demonstrate unequal treatment for Blacks and Whites in the eligibility decisions?" (Bolton & Cooper, 1980, p. 47). They concluded, "No, not without considering additional information" (Bolton & Cooper, 1980, p. 47). These researchers were not surprised by Atkins and Wrights findings due to the high prevalence of African Americans facing socioeconomic challenges (education, income, qualification differences). Because of these hardships, African Americans are in greater need of rehabilitation services (Atkins & Wright; Bolton & Cooper, 1980; Wilson, 2002).

Herbert and Martinez (1992) found that CLD populations were not as likely to be accepted for vocational rehabilitation services, or to be closed successfully. These researchers

identified five reasons why African Americans are more likely to be rejected for vocational rehabilitation services: (a) counselors may perceive individuals from CLD backgrounds as being more difficult to help because of pre-service vocational disabilities and because of lower levels of education or economic conditions, or both; (b) the values and norms of consumers from CLD backgrounds may not be adequately considered in the assessment and problem identification phases of vocational rehabilitation; (c) as a result of racism, African Americans have experiences, and may still be experiencing, many occasions when counselors are condescending, make insensitive remarks, or show indifferent attitudes that play an important role in how social interaction between the counselor and the consumer evolves; (d) consumers have their own cultural perceptions that have an impact on the consumer-counselor relationship; and (e) African Americans may be rejected because of medical and vocational evaluations and written documentation required for services.

Dziekan and Okocha (1993) concurred with the findings of Wilkerson and Penn (1938), Atkins and Wright (1980), and Herbert and Martinez (1992) findings. These researchers conducted a comparative study, for the 1985 to 1989 fiscal years, on the access and acceptance rates of vocational rehabilitation services for individuals from CLD backgrounds and majority individuals with disabilities. Dziekan and Okocha focused on a Midwestern state vocational rehabilitation agency. A total of 63,774 individuals applied for vocational rehabilitation services. European Americans accounted for 87.1% (n= 55,540), 8.9% were African Americans, 2.5% were Hispanic, 1.1% were Native Americans, and 0.4% Asian Americans. Their findings indicated that CLD populations applied for services at a rate of 12.9% higher than their representation within the state population, but that European Americans were still accepted at a

higher rate than CLD populations. African Americans were least likely to be accepted for services (Dziekan & Okocha, 1993).

On the contrary, Wheaton (1995), Peterson (1996), and Wilson (1999) discovered that the proportions of European Americans and African Americans were not significantly different in regards to acceptance rates. Wheaton (1995) acknowledged that African Americans were less likely to be accepted for vocational rehabilitation services, but these differences were very small and not statistically significant, although Wheaton (1995) found a difference of 5.4% similar to Atkins & Wright's statistical difference of 5.5%.

Peterson (1996) compared group differences based on observed and expected percentages. Results revealed that African Americans and European Americans are both over-represented for vocational rehabilitation services as compared to other CLD populations (Peterson, 1996). Wilson (1999) found that African Americans (21.1%) and European Americans (20.1%) were ineligible or otherwise excluded from vocational rehabilitation services.

Wilson (2000) included education, work history, and source of support at application in his study on acceptance rates of African American and European Americans with disabilities. European Americans were more likely to be accepted for vocational rehabilitation services when the primary source of support at application, education, and work status at application were included as variables (Wilson, 2000). Wilson, Jackson, and Doughty (1999) obtained similar findings when education was controlled for. Wilson (2004) replicated these findings when race, education, type of major disability, severity of disability, and socioeconomic status were controlled variables.

Wilson, Harley, and Alston (2001) replicated Wilson's 1999 study. The results showed that African Americans were less likely to be accepted for vocational rehabilitation services.

These findings challenged earlier results by Wilson (1999), Wheaton (1995), and Peterson (1996) in that no differences were found in vocational rehabilitation services based on race.

Capella (2002) conducted a study to determine whether differences still existed for CLD populations and women in terms of acceptance rates, employer outcomes, and quality of successful closures in the vocational rehabilitation system. This study used multivariate statistics, which allowed the researcher to control for other variables. All logistic regression models were found to be statistically significant. Capella's results indicated that when comparing a European American and an African American who were the same gender and age, had the same education level, and were severely disabled, the odds were in favor of the European American (1.5 times greater) being accepted for vocational rehabilitation services.. Consequently, this research shows that inequities still exist in regard to acceptance rates, service delivery, and outcomes.

Conversely, Wilson, Alston, Harley, and Mitchell (2002) concluded "compared to European Americans, African Americans were 2.12 times more likely to be accepted for vocational rehabilitation, when controlling for gender, education, work status, and primary source of income at application" (p. 138). These findings are obviously contrary to other studies that have found that African Americans are accepted less often than their European American counterparts. These findings suggest that because African Americans are more likely to have more disabilities, it can be reasonable to assume that they are being accepted more than European Americans when controlling for these variables. Wilson et al. (2002) also suggested that their contrasting findings could be attributed to the use of different sampling methods, statistics, hypothesis, racial/ethnic groups, and populations.

Wilson (2002) conducted a study to determine if race was a factor in rehabilitation acceptance rates. The study used the RSA-911 database for fiscal year 1997. Results of the study

indicated similar findings of Wilkerson and Penn (1938), Atkins and Wright (1980), Dziekan and Okocha (1998). Wilson also suggested that discrimination might be a possible reason why African Americans are less likely to be accepted for vocational rehabilitation services.

Most recently, Rosenthal, Wilson, Ferrin, and Frain (2005) conducted a meta-analysis to determine the acceptance rates of African American consumers versus European American consumers regarding vocational rehabilitation services. The meta-analysis consisted of nine years (1984-1998) of RSA-911 data. These researchers included articles that reported data from the RSA-911 database for one or more fiscal years on race and acceptance. The articles also needed to include African Americans or European Americans as the independent variable and acceptance as the dependent variable. Finally, articles had to include statistical tests that could be converted into proportions and odds ratio. Five articles meet the criteria for inclusion, Wilson et al, 2002; Wilson, 2000; Wheaton, 1995; Dziekan et al., 1993; and Feist-Price, 1995. The results of this study revealed statistically significant differences in the vocational rehabilitation acceptance rates for European Americans versus African Americans. European Americans were found to be more likely to be accepted for vocational rehabilitation services than African Americans. Rosenthal et al. (2005) also concluded that it is possible that the initiatives introduced by the 1992 amendments may have had a positive impact on reducing the inequities of acceptance rates between African American consumers and European American consumers.

### *Services*

#### *Are There Disparities in Service Delivery for African Americans Compared to European Americans?*

In 1938 Wilkerson and Penn were the first researchers to investigate the participation of African Americans in the vocational rehabilitation process. Their study looked at vocational

rehabilitation programs in 16 Southern states (including the District of Columbia) and 7 Northern states. In 1937 there were 3,028 cases closed by vocational rehabilitation agencies in 16 Southern states. African Americans made up 24.4% of the population, but only 8.2% returned to employment. African Americans constituted 4.2% of the population in the Northern states and represented 3.1% of the rehabilitation population.

“Training” was given to 75.2% of the European American consumers as compared to 42.3% of the African American consumers in the 16 Southern states. “Training only” was given to 55.7% of European Americans, as compared to 20.6% of the African American consumers. 57.7% of the African Americans and 24.8% of European Americans received services that did not include vocational training. There were three-fourths more European Americans than African Americans receiving services “with training”; and more than twice as many African Americans as European Americans receiving services “without training.”

Prosthetics were included in the services given to 63.7% of African Americans and 25.2% of European Americans. Three times as many African Americans (39.5%) as European Americans (13.6%) received this service. Wilkerson and Penn (1938) raised the question: why are there significantly more amputations among African American consumers than European American consumers? They assumed that African Americans are referred to rehabilitation agencies only when they suffer from a major and overt physical disability.

In the Northern states more than three times as many European American consumers (39.2%) as African American consumers (12.0%) received services, including vocational training. Twice as many African Americans (66.2%) as European Americans (33.7%) were provided with prosthesis as the only rehabilitation services given. It is important to note that African Americans (63.7%) comprised approximately two-thirds of amputations, as compared

with one-fourth of the European Americans (26.0%). On the contrary, consumers classified as “disabled” included twice as many European Americans (46.4%) as compared to African Americans (23.8%).

Wilkerson and Penn (1938) estimated that approximately \$30,125 was spent for the vocational rehabilitation services of African Americans in the Southern states and \$419,125 was spent on European Americans. This represented about 27.4% as much as would seem necessary based on their population. If African Americans received funds based on a proportionate distribution of funds, they would have received \$109,617. In the Northern states \$16,100 was the estimated total cost of services spent, while \$26,586 would have been a proportionate distribution of funds.

Wilkerson and Penn (1938) recommended that: (a) federal laws authorizing funds for civilian vocational rehabilitation be amended to require “a just and equitable” distribution of funds of services to CLD populations; (b) the Federal Office of Education withhold approval of state plans for vocational rehabilitation unless they provide for the equitable distribution of funds and services to African Americans and other CLD populations; (c) African American professional workers be appointed as vocational rehabilitation counselors and supervisors; (d) the Federal Office of Education publish annual reports showing to what extent African Americans and other CLD populations share in the funds and services of the state vocational rehabilitation programs.

Atkins and Wright (1980) also found differences in service delivery among African Americans and European Americans. African Americans were accepted for vocational rehabilitation services less often than European Americans. Specifically, 35.78% of African

Americans who required services were assessed as being eligible for services and 64.22% of African Americans were ineligible.

African Americans received less costly vocational rehabilitation services than European Americans. As the amount of money spent for case services increased, so did the proportionate share for European Americans.

African Americans were less likely to be provided with education or training. In addition, more than double the percentage of European Americans (11.29%) received higher education than African Americans (5.14%).

European Americans had a larger weekly earning than African Americans in the \$100.00 and over categories. European Americans (7.34%) were almost three times more likely than African Americans (2.98%) to earn \$200.00 or more at closure.

Feist-Price (1995) also found that African Americans (90.43%) received less services than European Americans (9.57%), and when African Americans were placed they obtained lower paying jobs than European Americans. The results of Feist-Price's study also indicated that larger proportions of European Americans were provided with physical and mental restoration, hospitalization, convalescent care, college and university assistance, vocational school training, on-the-job training, personal and vocational adjustment training, maintenance services, and transportation.

Brown (1997) found that the total services received for African Americans compared to European Americans were not significantly different. However, a statistically significant relationship existed between African Americans and European Americans in regards to the following services: (a) restoration, (b) college, (c) adjust/train, (d) job placement, (e) transportation, (f) other services and, (g) income maintenance.

Patterson, Allen, Parnell, Crawford, and Beardall (2000) investigated expenditures, closure status, and service delivery. Their findings suggested that there are differences in expenditures and closure status for European Americans and African Americans. The mean expenditures for European Americans (\$2478.60) were greater than for African Americans (\$2095.51). Findings also indicated that more European Americans cases were closed. The rehabilitation rate for European Americans was 60.3%, compared with 54.7% for African Americans.

Ware (2005) used national data from fiscal year 2002 and found that African Americans have fewer days spent on services than other consumers. Also African Americans were three times more likely to be unemployed at closure or employed without supports at closure.

#### *Reason for Closure*

##### *Are There Disparities in Reason for Closure when Comparing African Americans and European Americans?*

When African Americans were found eligible for vocational rehabilitation services, they were less likely to be rehabilitated than European Americans. More African Americans cases (42.25%) than European Americans cases (34.86%) were closed before successful completion of the rehabilitation process after acceptance (Atkins & Wright, 1980). Atkins and Wright (1980) found that vocational rehabilitation counselors closed due to “failure to cooperate” more often for African Americans (12.09%) than European Americans (8.59%). “No vocational handicap” was the reason given for rejecting 7.25 % of African Americans and 4.41 % of European Americans. “No disabling condition” was selected by vocational rehabilitation counselors twice as often for African Americans (6.18%) as for European Americans (3.13%).

According to Feist-Price (1995) African American and European American cases were closed differently in regards to closure of cases by competitive employment. Specifically, 9.79% of African Americans and 90.21% of European Americans were closed in competitive employment. “Inability to locate” was the most frequently selected reason for case closure for African Americans and was higher than the rate for European Americans (31.58% vs. 23.05%). The largest numbers of cases of European Americans were closed for “refusing services” (36.09% vs. 29.12% for African Americans). Closure for “lack of cooperation” was selected more for African Americans than for European Americans (27.38% vs. 25.32%). “Inability to locate,” “refusal of services,” or “failure to cooperate” was selected 84.46% for African Americans and 88.08% for European Americans (Feist-Price, 1995).

When African Americans cases were closed in competitive employment, there were still disparities in weekly earnings at closure. The largest percentage of African Americans (37.97%) had an income of \$151 to \$250 per week. In the highest income category, \$251 or more, European Americans had a proportion of 21.14% while African Americans had a proportion of 10.86%.

Brown (1997) investigated rehabilitation outcome, earnings at closure, hours worked per week at closure, medical insurance coverage, type of occupation at closure, total number services and type of services, using RSA-911 data from the Ohio Rehabilitation Services Commission. Findings suggested that African Americans (35.2%) consumers were closed in the employed status less often than European Americans (46.4%). There was also a statistically significant difference in earnings between African Americans and European Americans and hours worked at closure. The average hours worked at closure for African Americans was 30.80 and the average hourly wage was \$5.77, for European Americans the average hours worked was 30.69 and the

average hourly wage was \$6.41. Race did not play a significant role in the overall performance of rehabilitation outcomes as it related to hours worked per week at closure or insurance coverage at closure. Brown (1997) concluded that African Americans are less likely given an opportunity to utilize their full potential as productive members of the society.

In 1999 Wilson, Jackson, and Doughty investigated reasons for closure after being found ineligible for vocational rehabilitation services among African Americans and European Americans. Their findings indicated that African Americans were most likely to be closed ‘cannot locate’ and ‘failure to cooperate.’ Wilson et al. reported that African Americans being closed as “failure to cooperate” might have exhibited a passive aggressive attempt to communicate distress to the vocational rehabilitation counselor. European Americans were likely to be closed as handicap too severe, no vocational handicap, and other.

In 2002, Moore conducted a study to determine the dimensions of outcome variables that make the greatest contribution to group differences for individuals who are Deaf. The study utilized data from individual client closure reports on the RSA-911 database. African Americans were provided with the most vocational rehabilitation services. European Americans who were Deaf received a higher level of income at closure.

Moore, Alston, Donnell, and Hollis (2003) identified disparities in rehabilitation success rates between European American and African American Social Security Disability Insurance recipients with mild mental retardation. Seventy-three point six percent of European American SSDI consumers with mild mental retardation achieved closure success compared to 57.2% of African Americans SSDI consumers with mild mental retardation. When consumers receiving SSDI benefits are provided with job placement services, they are more likely to achieve closure success when compared to individuals not provided with such services. These researchers also

found that a statistically significant proportion of job placement services were provided to European Americans (49.2%) when compared to African Americans (43.7%).

### *Reasons for Disparities*

*What does the Literature reveal about the Reasons for Existing Disparities in Acceptance, Service Delivery, and Reason for Closure, between African Americans and European Americans?*

The effect of an increase in the number of African Americans in the United States, as well as the factors associated with the socioeconomic conditions faced by African Americans, and the fact that African Americans tend to have a higher incidence of severe disabilities does not make it unusual for African Americans to seek out vocational rehabilitation services. Despite, the prevalence of disability and the other factors previously mentioned, the rate of successful vocational rehabilitation service deliveries to African Americans is lower than that for European Americans with disabilities within the vocational rehabilitation system (Atkins & Wright; Dziekan & Okocha; Smart & Smart, 1997; Feist-Price, 1995).

African Americans must deal with the double whammy of racism and discrimination (Feist-Price, 1995). The challenges of being a member of two disadvantaged groups intensify the effects of the other (Staten, 1998). A greater impact is placed on individuals when ethnic or racial membership and disability are combined (Browdin, Parker, & DeLaGarza, 2003, p. 206; Wilson, Harley, McCormick, Jolivette, & Jackson, 2001).

*Cultural differences.* Atkins & Wright (1980) described African Americans as more difficult to rehabilitate than other consumers because of “severe disability, under education, chronic welfare recipients and otherwise culturally disadvantaged” (p. 45). Thus they believe that these difficult cases require more counselor expertise and early intervention. Although not

described as being more difficult than other consumers to rehabilitate, other researchers agreed that African American consumers have unique needs due to socioeconomic factors that need to be addressed in the vocational rehabilitation system (Atkins & Wright, 1980; Dziekan & Okocha, 1993; Wilson et al, 1999; Wilson, 2000; Wilson et al, 2001; Capella, 2002; Wilson, 2002; Wilson, 2004; Rosenthal et al, 2005).

By contrast, Bolton, and Cooper (1980) disagreed with the conclusion that African Americans should be provided with more extensive vocational rehabilitation assistance to try to level the playing field, as suggested by Atkins and Wright (1980). Bolton and Cooper suggested that all consumers be provided with services based on their individual needs; racial membership should not be considered and an attempt to provide services to African Americans that was not provided for other consumers would be a form of “reverse discrimination” (p.48). Bolton and Cooper agreed that African Americans come to the vocational rehabilitation system with more disadvantages than European Americans, but it is not the job of the vocational rehabilitation system to make up for all the deficits that African Americans face. They suggested that racial membership might not be the issue; perhaps it is associated disadvantages, such as unemployment rate, lower weekly earnings, fewer African Americans completing four years of high school, poverty level, high infant death rate, and shorter life expectancy rate (Bolton & Cooper).

*Education level.* The education at referral for African Americans was at a lower level than the education level of European Americans. 26.77% of African Americans completed grades nine through 11, while 32.54% of European Americans completed 12 years of school. Secondly, twice as many European Americans (12.8%) as African Americans (6.24%) completed

13 or more years of school. Finally, more African Americans (11.52%) had been in a special education program (Atkins & Wright, 1980).

African Americans had a lower level of education than their European American counterparts in the Southern states and the Northern states. In the Southern states, 14.9% of European Americans, as compared to 52.8% of African Americans, did not have more than a sixth grade education; 56.4% of European Americans and 23.0% of African Americans progressed beyond the ninth grade (Wilkerson & Penn, 1938).

Feist-Price (1995) found that African Americans completed 12 years of school less often than European Americans (31.8% vs. 37.38%) and completed 13 years of education or more less often than European Americans (11.98% vs. 13.25%). Also a higher proportion of African Americans (21%) as compared to European Americans (15%) were in special education programs. Vocational rehabilitation counselors tend to view CLD populations as more difficult to rehabilitate because of lower levels of education, which may affect the overall acceptance patterns (Feist-Price, 1995).

*Counselor bias and stereotypes.* Stereotypes as well as counselor bias play a role in the counselor's decision to accept African Americans for vocational rehabilitation services (Dziekan & Okocha, 1993, Ware, 2005). In working with consumers, rehabilitation counselors make a variety of important and difficult decisions, which may involve issues of eligibility, feasibility, counseling strategy, treatment/training, closure, termination, and referral (Strohmer & Leierer, 2000). Stereotypes can influence the counselor's decision whether to grant vocational rehabilitation services or to deny them. The stereotypes that the counselors might hold about African Americans might permit counselors to take a shortcut on processing information and

influence their judgment (Rosenthal & Berven, 1999). These judgments could result in a client being denied services based solely on stereotypes and not factual information.

Rosenthal and Berven (1999) and Rosenthal (2004) conducted two experimental studies to look at the effects of client race on the clinical judgment of European American graduate students in rehabilitation counseling and client race on the clinical judgment of practicing European American vocational rehabilitation counselors. In the first study two groups of European American students were asked to review case materials for clients who were identical, except that one was European American and the other client was African American. The students were asked to rate their judgments regarding the client at two points in time: after minimal initial information was provided and after subsequent information was provided. When the client was African American, the graduate students judged clients to have less potential for education and employment.

In 2004 Rosenthal conducted a web-based study to determine if European American rehabilitation counselors held biases against African American clients. Recruitment information requested that rehabilitation counselors participate in an exercise regarding rehabilitation counselor clinical judgment. The participants were presented with two identical sets of case material, except that in one set the client was portrayed as African American and in the other set the client was portrayed as European American, similar to the Rosenthal and Berven study (1999). The participants rated their perceptions and judgments of the client after reviewing minimal preliminary information and after reviewing subsequent information. The participants had more negative impressions when the client was portrayed as African American. These differences continued even after the presentation of the subsequent client information. The African American client was rated more negatively than the European American client in the

area of general evaluation, psychopathology-conduct, educational potential, and employment potential measures. Because all the case materials that the counselors were presented with were identical with the exception of one being African American and the other European American, the group differences were credited to racial bias (Rosenthal & Berven, 1999 & Rosenthal, 2004).

Similar to findings of Rosenthal and Berven (1999) and Rosenthal (2004), Strohmer and Leierer (2000) gathered that clinical judgment influences decision making in the vocational rehabilitation process. Additionally, they suggested that the critical factor might not just be the observation that one consumer has a particular characteristic, but instead the types of inferences the counselor draws based on that observation. Also, these researchers recommend that counselors be aware of their inferences, assumptions, and stereotypes; they must learn to use relevant base rates, learn to be less confident in the “intuition,” and learn to treat their impressions as working hypotheses that require constant testing and revision (Strohmer & Leierer, 2000).

Vocational rehabilitation counselors are part of all aspects of the vocational rehabilitation process (Dziekan & Okocha, 1993). They make eligibility decisions on a case by case basis. Stereotypes can influence the counselor’s decision on whether to grant vocational rehabilitation services or to deny them. The stereotypes the counselors might hold about African Americans might permit counselors to take a shortcut on processing information and influence their judgment (Rosenthal & Berven, 1999). These judgments could result in a client being denied services based solely on stereotypes and not factual information. Rehabilitation counselors must pay close attention to the notions that (a) racism is prevalent in our society; (b) CLD populations

are not treated equally relative to their majority peers; and (c) rehabilitation counselors can be part of the problem and the solution (Rosenthal, Wilson, Ferrin, & Frain, 2005).

Cultural mistrust also plays a role in the low acceptance rates of African Americans in the vocational rehabilitation system. According to Terrell & Terrell (1981) cultural mistrust refers to African Americans' mistrust of European Americans and traditional American systems. Clients enter the rehabilitation process with a specific set of beliefs, attitudes, values, and goals, which are determined by the client's previous experiences (Atkins, 1988). Counselors need to be aware of the oppression as well as the stereotypical beliefs that are associated with African Americans (Sue & Sue, 2001; Alston & Bell, 1996; Wright, 1988).

Manifestations of cultural mistrust result in (a) low expectations about counseling with European American therapists, (b) negative attitudes about seeking help from clinics staffed mostly by Whites, (c) lower numbers of self-disclosures for White counselors compared to African American counselors, and (d) higher levels of premature termination from therapy with White counselors in comparison to African American counselors (Nickerson, Helms, & Terrell, 1994; Thompson, Worthington, & Atkinson, 1994).

In regards to low expectations for counseling, Watkins and Terrell (1988) found that highly mistrustful African Americans who were assigned to European American counselors expected the counselor to be less accepting, trustworthy, and expert, and expected less in regards to outcome. In another study, Watkins, Terrell, Miller, and Terrell (1989) found that highly mistrustful African Americans expected European American counselors to be less credible, expert, reliable, sincere, and less able to assist them with their problems.

Asbury, Walker, Maholmes, Green, and Belgrave (1994) investigated African Americans' attitudinal and perceptual variables related to employment status. The variables for

this study included: (a) self-esteem; (b) attitude toward disability; (c) attitude toward employment; (d) social support-tangible; (e) social support-emotional; (f) attitude toward seeking and receiving services; (g) perception of service provider; (h) perception of service provider capability; (i) client expectations of rehabilitation process; and (j) client perceptions of rehabilitation process.

Respondents with more positive attitudes toward employment, more positive attitudes toward seeking and receiving services, and higher self-esteem were more likely to be employed or looking for employment rather than unemployed and not looking for employment (Asbury, Walker, Maholmes, et al., 1994). In addition, these researchers noted that the most important and influential variable influencing employment status was attitude toward employment. Findings from Asbury, Walker, Maholmes, et al., (1994) suggest that services must be available and positively perceived as beneficial to be of benefit to African American consumers. The mistrust that African Americans might enter the rehabilitation process with may result in low expectancy for success, which can reduce the likelihood that African Americans will seek rehabilitation services. Vocational rehabilitation services that are offered in a culturally sensitive way that takes into consideration the world-view, values, and lifestyles of African American consumers are likely to be more acceptable to these consumers (Asbury, Walker, Maholmes, et al., 1994).

Level of income can also contribute as a risk factor for negative vocational rehabilitation outcomes for African Americans with disabilities (Feist-Price & Harley, 1996). African Americans were more likely to be living in poverty and more likely to have a family member with a disability (US Census, 2000). In addition, the US Census (2000) found that African Americans had the lowest median income, \$29,400; while European Americans' median income was \$44,687. Given the compounding effect of minority group status, economic disparities, and

disability, it is essential that the unique views of CLD populations be addressed (Atkins & Wright, 1980).

In the weekly earnings at referral category of less than \$100.00, there were more African Americans (13.66%) than European Americans (11.88%). Fewer African Americans (4.08%) than European Americans (6.68%) earned \$100.00 and more. Lastly, European Americans were four times (1.11%) as African Americans (0.03%) to earn \$200.00 and over weekly (Atkins & Wright, 1980). These researchers also found that family and friends provided support for both African Americans and European Americans but more for European Americans (48.62%) than African Americans (43.73%). In addition, twice as many African Americans (20.15%) as European Americans (11.08%) reported receiving public assistance as their primary source of support.

According to Atkins and Wright (1980), it is not clear whether these problems in the vocational rehabilitation system are related to racial membership or associated with disadvantage. These researchers suggest that: (a) difficult cases require early intervention and more intensive and extensive services; (b) the best prepared vocational rehabilitation counselors should be assigned to these difficult cases and familiar with the special needs and circumstances of their consumers; (c) African Americans should have more extensive vocational rehabilitation assistance to level their opportunity in the competitive labor market; (d) African American vocational rehabilitation counselors should be employed to serve predominately African Americans; and (e) current vocational rehabilitation counselors should be given in-service training opportunities to improve professional techniques, knowledge, and attitudes. Because African Americans come to vocational rehabilitation with less financial stability than European

Americans, they may need more services to become successfully rehabilitated (Wilson, Harley, McCormick, Jolivette, & Jackson, 2001).

Additionally, Dziekan and Okocha (1993) suggested that lower acceptance rate for consumers of from CLD backgrounds may be a result of (a) lower proportions of CLD populations applying for services may have actually met agency eligibility requirements; (b) lower proportions of consumers from culturally and diverse backgrounds may have chosen not to follow through with the acceptance process because of their frustration with the steps and delays; and (c) biases in the perceptions of rehabilitation counselors determining eligibility for services may have been a result of inaccurate assessments and underestimations of rehabilitation potential.

### *Specific Learning Disabilities*

#### *Definition of Specific Learning Disabilities*

The difficulty in defining a specific learning disability for the purpose of rehabilitation counseling has been documented in the literature (Szymanski, King, Parker, & Jenkins, 1989). Samuel Kirk (1962) was the pioneer of defining learning disability. According to Kirk:

A learning disability refers to a retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, spelling, writing, or arithmetic resulting from a possible cerebral dysfunction and/or emotional or behavioral disturbance and not from mental retardation, sensory deprivation, or cultural or instructional factors (p. 263).

In 1963 the Association for Children with Learning Disabilities (ACLD) was formed and developed a new definition in 1969. This definition also served as a model for Public Law 94-142. This definition referred to,

children with specific learning disabilities” means those children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Such disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and development aphasia. Such term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps of mental retardation, of emotional disturbance, or of environmental, cultural, or economical disadvantage (U. S. Office of Education, 1977, p. 65083).

This definition was well accepted in the education arena but many other organizations were not happy with the P.L. 94-142 definition. The National Joint Committee on Learning Disabilities (NJCLD) thought that the definition had weaknesses that made unacceptable as definitions that could be used to restrict a field as broad and complex as the field of learning disabilities (Myers & Hammill, 1990). The reasons that the NJCLD believed that the P.L. 94-142 definition was unacceptable was because of the (a) exclusion of adults, (b) reference to the basic psychological processes, (c) inclusion of spelling as a learning disability, (d) inclusion of obsolete terms, and (e) exclusion clause.

Before this time vocational rehabilitation services were extended to individuals with mental or physical disabilities. This practice implied that the generally average intellectual abilities, the lack of physical limitations, and the idea included that an academic disability did not always limit an individuals in terms of employment (Kavale & Forness, 1996). Before 1980, RSA policy viewed learning disabilities as an educational issue that was shown by an individual’s functional deficits in reading, writing, and math (Sanchez, 1984).

In 1980 the Rehabilitation Services Administration put together a taskforce on learning disabilities to investigate how these individuals could be served through the vocational rehabilitation system (Koller, 1994; Sanchez, 1984). Finally, in 1981, the Rehabilitation Services Administration began providing services for individuals with learning disabilities. This was not only a result of the efforts of advocates, consumers, and the task force; by this time the American Psychiatric Association's Diagnostic and Statistical Manual-DSM III (1980) and the World Health Organization's International Classification of Diseases (1980), were published with definitions associated with specific learning disabilities (Biller, 1988). The Task Force proposed a definition in relation to employment and eligibility for services. This definition led to the formulation of the criteria for vocational rehabilitation program services.

Individuals who have a disorder in one or more of the psychological processes involved in understanding, perceiving, or using language, or concepts (spoken or written)—a disorder which may manifest itself in problems related to listening, speaking, reading, writing, spelling, or doing mathematical calculations -- would be eligible to receive vocational rehabilitation services if they satisfy the following criteria:

- a. Their psychological processing disorder is diagnosed by a licensed physician and/or licensed or certified psychologist who is skilled in the diagnosis and treatment of such disorders; and
- b. Their disorder results in a substantial handicap to employment; and
- c. There is a reasonable expectation that vocational rehabilitation services may benefit the individuals in terms of employability.

Individuals who have learning problems which are caused by one or more of the following conditions (visual impairment, hearing impairment, motor handicap, mental

retardation, emotional disturbance) may be eligible for vocational rehabilitation services under other disability categories (As cited in Sanchez, 1984 & Gerber, 1981).

Over the past few years, the RSA has refined its definition of learning disabilities in many ways. The current definition is:

a disorder in one or more of the central nervous system processes involved in perceiving, understanding, and/or using concepts through verbal (spoken or written) language or nonverbal means. This disorder manifests itself with a deficit in one or more of the following areas: attention, reasoning, processing memory, communication, reading, writing, spelling, calculation, coordination, social competence, and emotional trauma (p. 2).

Generally, state vocational rehabilitation agencies require that a diagnosis of a specific learning disability be made by a licensed physician or psychologist specializing in this area (Dowdy, Smith, & Nowell, 1992). The diagnosis criteria in the Diagnostic and Statistical Manual-IV (DSM-IV) are used to make eligibility decisions. However, a diagnosis by a physician or a psychologist does not guarantee that an individual will be accepted for vocational rehabilitation services. In addition, a student that received special education services will not automatically receive vocational rehabilitation services.

#### *Outcomes for Individuals with Specific Learning Disabilities*

In the past, vocational rehabilitation counselors have been careful in determining eligibility for individuals with specific learning disabilities because of their generally average intellectual abilities, their lack of physical limitations, and the notion that an academic disability does not always limit them in terms of employment (Dowdy, 1996).

Dunham, Schrader, and Dunham (2000) investigated the vocational outcomes and psychoeducational functioning of 98 individuals with co-morbid borderline intellectual functioning and specific learning disabilities. It is important to note that the individuals all qualified for and received vocational rehabilitation services as consumers with SLD. Length of time individuals received vocational rehabilitation services and race were associated with unsuccessful closure, with African Americans overrepresented in the unsuccessful closure category. However, this could be accounted for due to the low numbers of African Americans in the study.

Dunham, Holiday, Douget, Koller, Presberry, and Wooderson (1998) conducted a study to look at the vocational rehabilitation outcomes of African Americans with SLD. They investigated 144 African Americans and 2225 European Americans with SLD served during October, 1989 to February, 1996 in the Missouri VR system. Their findings conclude that African Americans were underrepresented in vocational rehabilitation services (6.1%). A significantly higher proportion of individuals whose cases were closed as unsuccessful were provided with college training. Of the 57 participants whose cases were closed as unsuccessful, 43 (75.5%) were closed as refused further services or failure to cooperate. The other cases were closed as unable to locate, institutionalized, or other. No differences were found when comparing the number of services, the number of days in VR, or the percentage with an African American counselor. The data did indicate that African Americans with specific learning disabilities had lower rates of success when compared to the general population; however there was no significant difference when compared to European Americans whose cases were also closed at this time.

In 1996 Dunham, Koller, and McIntosh reported on the cognitive, demographic, educational, and service characteristics of successful and unsuccessful vocational rehabilitation closures of individuals with specific learning disabilities in Missouri. This study included 582 European Americans, 30 African Americans and 1 Hispanic. A significant majority of the consumers were men and did not have a high school diploma. Findings indicate that only 5% of African Americans were served by the vocational rehabilitation system. Findings also indicate that a significant number of individuals with unsuccessful closures had a secondary disability. Individuals with unsuccessful closures were more likely to receive college training and guidance and counseling services, but were still received an unsuccessful closure.

This review examined acceptance rates, service delivery, reason for closure, and discussed literature regarding reasons for existing disparities in these areas for African Americans in the vocational rehabilitation system. Since the first study in 1938 by Wilkerson and Penn, African Americans have been found less likely to be accepted for vocational rehabilitation services than their European American counterparts (Atkins & Wright, 1980; Dziekan, Okacha, 1993; Feist-Price, 1995; Wilson et al, 1999; Wilson, 2000; Wilson et al, 2001; Capella, 2002; Wilson, 2002; Wilson, 2004; Rosenthal et al, 2005). There are some studies that refute this claim (Bolton & Cooper, 1990; Wheaton, 1995; Wilson, et al, 2002; Peterson, 1998) however, the majority of the literature suggests that African Americans are rejected more for vocational rehabilitation services.

When African Americans were accepted for vocational rehabilitation services, they tended to receive less education training. When cases were successfully closed, they were not prepared to compete competitively in the job market because of the lack of the appropriate tools to do so (Atkins & Wright, 1980; Feist-Price, 1995; Wilson, Turner, & Jackson, 2002; Olney &

Kennedy, 2002). Disparities were attributed to cultural differences, education at referral, counselor bias and stereotypes, cultural mistrust, and income level.

Many studies have been conducted to compare the acceptance rates, service delivery, and outcomes of African American consumers to European American consumers concerning vocational rehabilitation services. Results indicate that African Americans are less likely than European Americans to be accepted for vocational rehabilitation services. However, other results indicate that the difference in acceptance rates is not statistically significant. When African Americans were found eligible, inequities in service delivery were still evident. More European Americans were provided with education or training than African Americans. Fewer funds were spent on African Americans than European Americans. In regards to outcomes, African Americans were more likely to be closed 'cannot locate' and 'failure to cooperate.' European Americans were likely to be closed handicap too severe, no vocational handicap, and other. When African Americans cases were closed in competitive employment, there were still disparities in weekly earnings at closure. The literature reveals cultural differences, education at referral, counselor bias and stereotypes, cultural mistrust, and income level as factors associated with the existing disparities in acceptance, service delivery, and outcomes between African Americans and European Americans.

## CHAPTER 3

### METHODOLOGY

The literature suggests that African Americans have a disproportionately higher rate of rejection for vocational rehabilitation services and when accepted, are provided with less effective services, resulting in poorer rehabilitation outcomes (Wilkerson & Penn, 1938; Atkins & Wright, 1980; Capella, 2002; Dziekan & Okocha, 1993; Atkins, 1988; Hebert & Cheatham, 1988; Rosenthal et al, 2005; Wright, 1988). In addition, African Americans tend to be closed for ‘failure to cooperate’ and ‘unable to locate or contact’. The purpose of this study was to investigate the relationship between race and the acceptance rates, service rates, and reason for closure for African Americans with specific learning disabilities and European Americans with specific learning disabilities in the vocational rehabilitation process during fiscal year 2006.

The RSA-911 reporting manual uses a four-digit code that describes the individual’s primary physical or mental impairment that causes or results in a substantial impediment to employment. Thus, the number is reported as a combination of the impairment code as well as the cause/source code (RSA, 2006). The present study included individuals with a code combination consisting of individuals with cognitive impairments and individuals with specific learning disabilities.

While past studies (Wilson, 2004; Moore, Feist-Price, & Alston, 2002; and Moore, 2001) investigated a limited range of disabilities, the present study builds upon past vocational rehabilitation research by including specific learning disabilities. It is evident from existing research that there remains a need to investigate disability and race/ethnicity as these variables relate to outcomes as acceptance, services, and reasons for closure.

The research questions in this study were:

1. How do the acceptance rates of African Americans with specific learning disabilities compare with those of European Americans with specific learning disabilities when: (a) gender, (b) age, (c) educational level at application, (d) primary source of support at application, (e) presence of a significant disability, and (f) participation in special education, as evidenced by an individualized education plan, are controlled?
2. How do the reasons for closure for African Americans with specific learning disabilities compare to those of European Americans with specific learning disabilities?
3. How do service rates for African Americans with specific learning disabilities compare to European American with specific learning disabilities?

#### *Study Design*

The design for this study was correlational. The variables of concern were acceptance, services, and reason for closure. These variables were used as a comparison between African Americans and European Americans with specific learning disabilities.

#### *Participants*

The following sections describe the characteristics, acceptance rate, service rate, and reason for closure for the total population of African American and European Americans with specific learning disabilities. The total population of African Americans and European Americans with specific learning disabilities was 47,767 individuals (European= 34,865 Americans; African Americans=12,902) who applied for vocational rehabilitation services in the United States and its territories during fiscal year 2006 (See Table 1).

The age at application for the total population of African Americans and European Americans with SLD was comprised of 88.9% of African Americans ages 16-32, 90.8% of European Americans ages 16-32; 9.1% of African Americans and 7.4% of European Americans in the 33-48 age range; and 2.1% of African Americans and 1.8% of European Americans in the 49-64 age range.

The level of education at employment was categorized into four groups. The first group received less than a high school diploma. This group was made up of 53.1% of African Americans and 56.0% of European Americans. The second group, individuals who received a special education certification, included 21.1% of African Americans and 13.0% of European Americans. The next group was individuals who earned a high school diploma or an equivalent certificate. This group consisted of 21.3% of African Americans and 23.7% of European Americans. The final group was individuals who had more than a high school degree. This group was made up of 4.6% of African Americans and 7.4% of European Americans.

Personal income was the primary source of support at application for 6.2% of African Americans and 9.0% of European Americans. Family and friends supported 72.9% of African Americans and 80.1% of European Americans, while public support was the primary source of income for 17.1% of African Americans and 8.4% of European Americans. All other sources was the primary source of income for 3.8% of African Americans and 2.5% of European Americans.

Based on self reporting data from the RSA-911 database, participation in special education as evidenced by an individualized education program was documented for 71.6% of African Americans and 72.1% of European Americans. Presence of a significant disability

comprised 86.0% of the total African American population and 87.8% of the European American population.

Table 1  
*Characteristics of Total Participants with SLD*

Characteristic	African Americans		European Americans	
	n	%	n	%
Gender				
Male	7487	58.0	20811	59.7
Female	5415	42.0	14054	40.3
Age				
16-32	11465	88.9	31666	90.8
33-48	1168	9.1	2564	7.4
49-64	269	2.1	635	1.8
Education				
Less than a HS Diploma	6854	53.1	19514	56.0
Special Education Certification	2717	21.1	4521	13.0
HS Graduate or Equivalent Certificate	2742	21.3	8247	23.7
More than a HS Degree	589	4.6	2583	7.4
Primary Source of Support				
Personal Income	797	6.2	3144	9.0
Family & Friends	9410	72.9	27937	72.1
Public Support	2206	17.1	2913	8.4
All Other Sources	489	3.8	871	2.5
IEP				
No	3659	28.4	9730	27.9
Yes	9243	71.6	25135	72.1
Significant Disability				
No	1807	14.0	4249	12.2
Yes	11095	86.0	30616	87.8

*Note.* Column percentages may not sum to 100 due to rounding.

African Americans in the total population were accepted for services at a rate of 90.2% (n=11636) while European Americans in the total population were accepted at a rate of 93.5% (n= 32596).

Table 2

*Acceptance of Total Participants with SLD*

Accepted	African Americans		European Americans	
	n	%	N	%
No	1266	9.8	2269	6.5

Yes	11636	90.2	32596	93.5
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*Description of Services for the Total Participants with Specific Learning Disabilities*

Services received by the total population of African Americans and European Americans with specific learning disabilities are listed in Table 3. The majority of the services had little variance in the percentage of individuals receiving the services regardless of race (See Table 3). Assessment was received by 58.9% of African Americans and 60.4% of European Americans. Diagnosis and treatment was provided to 15.3% of African Americans and 17.1% of European Americans. Vocational rehabilitation counseling and guidance made up 54.9% of the African American population and 56.3% of the European American population. Occupational training services were given to 8.4% of African Americans and 11.1% of European Americans. Job readiness training was made up 13.9% of African Americans and 10.7% of European Americans. Miscellaneous training services were received by 10.9% of African Americans and 10.1% of European Americans. Job search assistance comprised 21.7% of the African American population and 19.8% of the European American population. Job placement assistance services were made up of 26.4% of African Americans and 22.8% of European Americans. African Americans made up 9.6% of on-the-job supports while European Americans made up 10.4%. Maintenance services were given to African Americans at a rate of 7.6% and European Americans at a rate of 14.0%. Information and referral services were provided to 10.1% of African Americans and 13.8% of European Americans. Other services were given to 16.3% of African Americans and 16.9% of European Americans.

Several services were provided to both African Americans and European Americans at or less than 3.5% for each group. These services consisted of on-the-job training, basic academic remedial or literacy training, disability related augmentative skills training, rehabilitation

technology, reader services, interpreter services, personal attendant services, and technical assistance services.

On the other hand, college training was received by 6.7% (n=869) of African Americans and 14.5% (n=5068) of European Americans. In addition, more African Americans were provided with transportation services than their European American counterparts. Transportation was given to 22.1% of African Americans and 14.0% of European Americans.

Table 3  
*Services Provided to Total Participants with SLD*

Service	African Americans		European Americans	
	n	%	n	%
Assessment				
No	5304	41.1	13791	39.6
Yes	7598	58.9	21074	60.4
Diagnosis & Treatment				
No	10931	84.7	28919	82.9
Yes	1971	15.3	5946	17.1
VR Counseling & Guidance				
No	5823	45.1	15227	43.7
Yes	7079	54.9	19638	56.3
College Training				
No	12033	93.3	29797	88.9
Yes	869	6.8	5068	14.5
Occupational Training				
No	11821	91.6	30986	88.9
Yes	1081	8.4	3879	11.1
On-the-job Training				
No	12635	97.9	33759	96.8
Yes	267	2.1	1106	3.2
Basic Academic Remedial/Literacy Training				
No	12633	97.9	33957	97.4
Yes	269	2.1	908	2.6
Job Readiness Training				
No	11108	86.1	31120	89.3
Yes	1794	13.9	3745	10.7
Disability Related Augmentative Skills Training				
No	12721	98.6	34441	98.8
Yes	181	1.4	424	1.2
Miscellaneous Training				
No	11490	89.1	31333	89.9
Yes	1412	10.9	3532	10.1
Job Search Assistance				
No	10107	78.3	27946	80.2
Yes	2795	21.7	6919	19.8

Service	African Americans		European Americans	
	n	%	n	%
Job Placement Assistance				
No	9491	73.6	26926	77.2
Yes	3411	26.4	7939	22.8
On-the-job Supports				
No	11657	90.4	31231	89.6
Yes	1245	9.6	3634	10.4
Transportation				
No	10053	77.9	29976	86.0
Yes	2849	22.1	4889	14.0
Maintenance				
No	11921	92.4	31935	91.6
Yes	981	7.6	2930	8.4
Rehabilitation Technology				
No	12811	99.3	34246	98.2
Yes	91	.7	619	1.8
Reader				
No	12896	100.0	34821	99.9
Yes	6	.0	44	.1
Interpreter				
No	12896	100.0	34856	100.0
Yes	6	.0	9	.0
Personal Attendant				
No	12897	100.0	34827	99.9
Yes	5	.0	38	.1
Technical Assistance				
No	12748	98.8	34487	98.9
Yes	154	1.2	378	1.1
Information & Referral				
No	11597	89.9	30063	86.2
Yes	1305	10.1	4802	13.8
Other Services				
No	10796	83.7	28975	83.1
Yes	2106	16.3	5890	16.9

*Note. Column percentages may not sum to 100 due to rounding.*

*Reason for closure for the total population of individuals with specific learning disabilities*

African Americans achieved an employment outcome of 35.2% and European Americans achieved an employment outcome of 42.3%. African Americans were closed as unable to locate at a rate of 21.4% or contact and 18.0% of European Americans were closed as unable to locate or contact. African Americans refused services or further services at 12.5% and European Americans refused services or further services at 16.8%. African Americans cases were closed as

failure to cooperate more often than European Americans. Failure to cooperate made up 2533 (19.6%) African Americans while 3784 European Americans (10.9%) received this same closure. Other reasons included disability too significant, death, institutionalized, transferred to another agency, no disabling condition, no impediment to employment, transportation not feasible, does not require vocational rehabilitation services, extended services not available, all other reasons, and extended employment. African Americans made up 11.2% of this closure status and European Americans made up 12.0% of this closure status.

Table 4  
*Reasons for Closure for the Total Participants with SLD*

Reasons for Closure	African Americans		European Americans	
	n	%	n	%
Achieved Employment Outcome	4545	35.2	14752	42.3
Unable to Locate or Contact	2765	21.4	6287	18.0
Refused Services or Further Services	1616	12.5	5870	16.8
Failure to Cooperate	2533	19.6	3784	10.9
Other Reasons	1443	11.2	4172	12.0

*Note. Column percentages may not sum to 100 due to rounding.*

### *Statistical Analysis*

To examine whether a statistically significant difference existed in the population, a proportional random sample of African Americans and European Americans was used (Marascuillo, 1971). According to Marascuillo, random sampling is the best way to ensure a good population representation. Thus, all African Americans and European Americans with SLD who applied for services during the 2006 fiscal year had an equal and independent chance of being selected (Ary, Jacobs, & Razavieh, 2002). Two stratified random samples of African Americans (n=400), and European Americans (n=400) were selected from this population. The first sample was ‘Sample A’ and the next was ‘Sample B.’ The researcher did not include the analysis with the total population of African Americans and European Americans with specific

learning disabilities because the large sample size would be likely to cause an abundance of significant findings. This was confirmed when the researcher ran a logistic regression on acceptance for the total population of African Americans and European Americans with specific learning disabilities. As a result all findings were found to be statistically significant. Beyond a certain point (about N=5000), the population size is almost irrelevant and a sample size of 400 is adequate (Gay & Airasian, 2000). Cochran (1977) recommended using the population proportion to determine sample size. Therefore, to estimate the population proportion with a margin of error of .05 at a 95% confidence level, at least 384 cases were needed. A default alpha level of .05 was used in this study. The Statistical Package for the Social Sciences (SPSS) for Windows, version 15.0 was used to select the random sample of African Americans and European Americans.

#### *Data Collection*

Archival data from the Rehabilitation Services Administration during the fiscal year 2006 were used in this study. The Rehabilitation Services Administration was contacted to obtain the state-federal vocational rehabilitation data. After the researcher signed the *RSA Data-Use Agreement Form*, the Rehabilitation Services Administration mailed the 2006 RSA-911 database, along with a hard copy of the manual, to the researcher. There was no charge for this material.

The RSA-911 data include information about each person who was accepted or denied for services, individuals who received services, reasons for closing the service record of an individual, and individuals whose cases were closed successfully. This database contains information from each state including United States territories that also provide vocational rehabilitation services. All the states were included along with United States territories.

The RSA-911 *Reporting Manual for the Case Service Report State-Federal Program for Vocational Rehabilitation* includes general as well as element-by-element instructions on descriptors and definitions for each variable in the manual to minimize inconsistency among states (RSA, 2006). This manual was used as a guide in the present study to assist in identifying and defining variables.

### *Variables*

#### *Control Variables*

To eliminate the influence of variables that may affect vocational rehabilitation acceptance, six variables were controlled. These variables were controlled for the impact on the dependent variables.

*Age at application.* Age at application was a continuous variable and included individual ages 16-64. This age range was included because it is considered the working age (US Census, 2000). This variable was coded continuously.

*Gender.* Gender was a categorical variable with two levels 0 = male; 1 = female.

*Level of Education at Application.* The level of education at application was a continuous variable with 9 categories: (a) no formal education, (b) elementary education, (c) secondary education-no high school diploma, (d) special education certificate, (e) high school graduate or equivalent certificate, (6) post secondary-no degree, (f) associate degree or vocational/technical certificate, (g) bachelors degree, and (h) masters degree or higher. After the frequencies were conducted the groups were collapsed into four levels: 0 = less than a high school degree; 1 = special education certificate, 2 = high school graduate; and 3 = more than a high school diploma.

*Individualized Education Program (IEP).* The Individualized Education Program was a categorical variable with two levels: 0 = did not have one; and 1 = had an IEP. Individualized

Education Program indicates whether the person ever received services under an IEP in accordance with the provisions of the Individuals with Disabilities Education Act (IDEA) (RSA-911 Case Service Reporting Manual, 2006, p.11). According to IDEA, school personnel must create an individualized education program for every student enrolled in a formal special education program (Henley, Ramsey, & Algozzine, 1999, p. 14).

*Primary source of support at application.* The primary source of support at application was a categorical variable with four levels: 0 = personal income, 1 = family and friends, 2 = public support, and 3 = all other sources. According to the Rehabilitation Services Administration manual (2005) Personal income includes earnings, interest, dividends, and rent. Public support includes Social Security Disability Insurance (SSDI), Supplemental Security (SSI) Income, and temporary assistance for needy families (TANF). All other sources include private disability insurance and private charities.

*Significant disability.* Significant disability was a categorical variable with two levels: 0 = no significant disability and 1 = significant disability. An individual with a significant disability is a person:

1. who has a physical or mental impairment that seriously limits one or more functional capacities (such as mobility, communication, self-care, self-direction, interpersonal skills, work tolerance, or work skills) in terms of an employment outcome;
2. whose vocational rehabilitation can be expected to require multiple services over an extended period of time; and
3. who has one or more physical or mental disabilities resulting from amputation, arthritis, autism, blindness, burn injury, cancer, cerebral palsy, cystic fibrosis,

deafness, head injury, heart disease, hemiplegia, hemophilia, respiratory or pulmonary dysfunction, mental retardation, mental illness, multiple sclerosis, muscular dystrophy, musculo-skeletal disorders, neurological disorders (including stroke and epilepsy), spinal cord conditions (including paraplegia and quadriplegia), sickle cell anemia, specific learning disability, end-stage renal disease, or another disability or combination of disabilities determined on the basis of an assessment for determining eligibility and vocational rehabilitation needs to cause comparable substantial functional limitations (RSA-911 Case Service Reporting Manual, 2006, p. 42).

#### *Independent Variables*

*Race.* Race was a categorical variable with two levels: 0= European American and 1=African American. RSA (2006) requires that individuals self identify. It is expected that the information that each individual reports is reflective of that particular individual's race and ethnicity.

#### *Dependent Variables*

*Acceptance for vocational rehabilitation services.* The dependent variables for the first question were acceptance rates (categorical). The response variables will be coded "0" if the individual is not accepted for services and "1" if the individual is accepted for services. Since all the types of closures were labeled 1-7, it was essential to group the categories. Therefore, the dependent variable of acceptance included two levels. Not accepted for services was coded "1" and included exited as an applicant and exited during or after a trial work experience/extended evaluation. Accepted for services included: (a) exited with an employment outcome, (b) exited without an employment outcome, after a signed IPE, but before receiving services, (c) exited

without an employment outcome, after receiving services, (d) exited from an order of selection waiting list, and (e) exited without an employment outcome, after eligibility, but before an IPE was signed.

### *Reasons for Closure*

This categorical variable identified the reasons why vocational rehabilitation counselors closed records in the vocational rehabilitation process. RSA data uses 15 reasons for closure. The Rehabilitation Services Administration-911 Case Service Reporting Manual (2006) identified and defined the following reasons for closure:

0 = achieved employment outcome;

1 = unable to locate or contact: when the individual has moved without a forwarding address or is otherwise unavailable or individuals who have left the state and show no intention of continuing in their vocational rehabilitation program;

2 = disability too significant to benefit from vocational rehabilitation services: an individual whose mental or physical disability is so significant that the individuals cannot benefit from vocational rehabilitation services in terms of employment;

3 = refused services or further services: individual who chooses not to participate or continue in their vocational rehabilitation program;

4 = death;

5 = individual in institution: individual has entered an institution and will be unavailable to participate in a vocational rehabilitation program for an indefinite or considerable amount of time;

6 = transferred to another agency: individual needs services that are more appropriately obtained somewhere else;

- 7 = failure to cooperate: an individual's actions (or non-actions) make it impossible to begin or continue a vocational rehabilitation program. This category includes repeated failures to keep appointments for assessment, counseling, or other services;
- 8 = no disabling condition: applicants who are not eligible for VR services because no physical or mental impairment exists;
- 9 = no impediment to employment: applicants who are not eligible for VR services because their physical or mental impairment does not constitute a substantial impediment to employment;
- 10 = transportation not feasible or available: individual was unable to accept or maintain employment because suitable transportation was either not feasible or not available;
- 11 = does not require vocational rehabilitation services: applicants who do not require VR services to prepare for, enter into, engage in, or retain gainful employment consistent with their strengths, resources, priorities, concerns, abilities, capabilities, and informed choice;
- 12 = extended services not available: individuals who would have benefited from the provision of supported employment services but for whom no source of extended services was available
- 13 = all other reasons: This code is used for all reasons not covered by Codes 1 to 12 or 14; and
- 14 = extended employment: individuals who received services and were placed in a non-integrated setting for a public or non-profit organization.

There was a need to categorize some groups due to their low frequencies. The following reasons were grouped under "other reasons," disability too significant, death, institutionalized,

transferred to another agency, no disabling condition, no impediment to employment, transportation not feasible, does not require vocational rehabilitation services, extended services not available, all other reasons, and extended employment. The following reasons for closure did not need to be grouped and included frequencies that allowed them to remain as single reasons for closure: achieved employment outcome, unable to locate, refused services or further services, and failure to cooperate.

### *Services*

Services were a categorical variable with two levels. Each service was coded in the database as either did not receive (no = coded as 0) or received (yes = coded as 1). Vocational rehabilitation consumers could receive any combination of the 22 services offered by the program. The Rehabilitation Services Administration-911 Case Service Reporting Manual (2005) defined the services as follows.

1. *Assessment.* Services provided and activities performed to determine eligibility for vocational rehabilitation services.
2. *Diagnosis and Treatment of Impairments.* Diagnosis and treatment of impairments can include any type of physical, vocational, mental, or social services to correct or modify a physical or mental impairment that constitutes a substantial impediment to employment.
3. *Vocational Rehabilitation Counseling and Guidance.* Therapeutic counseling and guidance services that are necessary for an individual to achieve an employment outcome.
4. *College or University Training.* Full-time or part-time academic training beyond the high school.

5. *Occupational/Vocational Training.* Occupational, vocational, or job skill training provided by a community college and/or business, vocational/trade or technical school to prepare students for gainful employment in a recognized occupation, not leading to an academic degree or certification (RSA-911 Case Service Reporting Manual, 2005, p. 24).
6. *On-the-job Training.* Training with a specific employer where the individual is paid during training and will remain in the same or similar job upon successful completion.
7. *Basic Academic Remedial or Literacy Training.* Training to remediate basic academic skills.
8. *Job Readiness Training.* Training to prepare an individual for the world of work; appropriate work behaviors, getting to work on time, appropriate dress and grooming, increasing productivity (RSA-911 Case Service Reporting Manual, 2005, p.25).
9. *Disability Related Augmentative Skills Training.* Includes but is not limited to: orientation and mobility; rehabilitation teaching; training in the use of low vision aids; Braille; speech reading; sign language; and cognitive training/retraining (RSA-911 Case Service Reporting Manual, 2005, p.25).
10. *Miscellaneous Training.* Any type of training not identified in one of the other categories.
11. *Job Search Assistance.* Includes a variety of supports to help a consumer in finding an appropriate job (resume writing, interviewing skills, identifying appropriate jobs, and making contacts on behalf of the consumer).

12. *Job Placement Assistance.* Job placement takes place when the consumer receives a referral to a job that results in an interview.
13. *On-the-job Supports.* Supports for an individual while he or she is on the job in order to maintain the job placement.
14. *Transportation Services.* Training on how to use public and private transportation vehicles and systems.
15. *Maintenance.* Monetary support provided for shelter, living, food, and clothing expenses that in excess of the usual expenses of the individual and that are necessary by the individual's participation in vocational rehabilitation services.
16. *Rehabilitation Technology.* Rehabilitation technology means the systematic application of technologies, engineering methodologies, or scientific principles to meet the needs of and address barriers. Rehabilitation Technology also includes: Rehabilitation Engineering Service, Assistive Technology Devices, and Assistive Technology Services.
  - d. *Rehabilitation Engineering Service.* The systematic application of engineering sciences to design, test evaluate, apply, and distribute technological solutions to problems individuals might have in functional areas.
  - e. *Assistive Technology Devices.* Includes any item, piece of equipment, or product system to increase, maintain, or improve the functional capabilities of a consumer.
  - f. *Assistive Technology Services.* Any service that directly assists a consumer with a disability in the selection, acquisition, or use of an assistive

technology device (RSA-911 Case Service Reporting Manual, 2005, p.27-28).

17. *Reader Services.* Services for individuals who cannot read print due to blindness or another disability.
18. *Interpreter Services.* Sign language services or oral interpretation services for individuals who are deaf or hard of hearing and tactile interpretation services for individuals who are deaf-blind (RSA-911 Case Service Reporting Manual, 2005, p. 29).
19. *Personal Attendant Services.* Personal services such as, bathing, feeding, dressing, providing mobility and transportation that an attendant performs for an individual.
20. *Technical Assistance Services.* Technical assistance and other consultation services provided to conduct market analyses, to develop business plans, and to provide resources to individuals in support of self-employment, telecommuting, and small business operation outcomes (RSA-911 Case Service Reporting Manual, 2005, p. 29).
21. *Information and Referral Services.* Information and referral services are provided to consumers who need services from other agencies not available through the vocational rehabilitation program.
22. *Other Services.* This category is for all other services that cannot be recorded anywhere else.

#### *Data Analysis*

Research Question 1 used logistic regression to investigate the relationship between acceptance for vocational rehabilitation services for African Americans and European Americans

with specific learning disabilities. Logistic regression was used because it is the best fitting and reasonable model to describe the relationship between an outcome or dependent variables and a set of independent variables (Hosmer & Lemeshow, 1989). Logistic regression was also used because of the combination of categorical and continuous variables (Tabachnick & Fidell, 1996). Analyses addressing research question 1 controlled for the following variables: (a) gender, (b) age at application, (c) level of education at application, (d) primary source of support at application, (e) evidence of participation in special education, (f) presence of a significant disability, (g) primary cause/source of impairment. A cross validation was also conducted in this logistic regression.

Research Questions 2 and 3 used the chi-square test of homogeneity. This test is used to analyze data that are reported in categories. According to Fraenkel & Wallen, (1996) the chi-square is based on a comparison between expected frequencies and actual obtained frequencies. If the obtained frequencies are similar to the expected frequencies then the groups are not different (p. 220). On the contrary, if there are differences between the expected and obtained frequencies, then there is a significant difference between the groups (Fraenkel & Wallen, 1996).

## CHAPTER 4

### RESULTS

This chapter presents the results of the data analysis. The research questions which guided this study were indicated below.

1. How do the acceptance rates of African Americans with specific learning disabilities compare with those of European Americans with specific learning disabilities when: (a) gender, (b) age, (c) educational level at application, (d) primary source of support at application, (e) presence of a significant disability, and (f) participation in special education, as evidenced by an individualized education plan, are controlled?
2. How do the service rates for African Americans with specific learning disabilities compare to European Americans with specific learning disabilities?
3. How do the reasons for closure for African Americans with specific learning disabilities compare to those of European Americans with specific learning disabilities?

#### *Description of Sample A*

Sample A included a stratified random sample of 400 African Americans and 400 European Americans with specific learning disabilities. As shown in Tables 5 and 6, of the 800 individuals randomly selected for the study, 65.3% were European American males, 55.0% were African Americans males, while 34.8% were European American females, and 45.0% were African American females. The individuals ranged in age from 16-64; however 90.1% of African American and European Americans fell into the 16-32 age brackets. The mean age was 21 years old, and the standard deviation was 8.

Of the consumers sampled, 56.4% had less than a high school diploma. African Americans (20.8%) received a special education certificate at a higher percentage rate than their European American counterparts (12.8%). Slightly more African Americans (23.3%) completed high school or the equivalent certificate in this sample compared to European Americans (20.5%). On the contrary, a higher percentage of European Americans (7.5%) received more than a high school diploma compared to African Americans (2.5%).

Family and friends were the primary source of support for both African Americans (72.8%) and European Americans (81.5%). Public support was utilized by 14.8% of African Americans and 5.3% of European Americans. Personal income, such as earnings, interest, dividends, and rent, made up 8.6% of the total percentage of primary support at income; African Americans (6.8%) and European Americans (10.5%). All other forms of support comprised the smallest percentage of both groups, including disability insurance and private charities. Only 2.8% of European Americans indicated all other sources as their primary source, while 5.8% of African Americans indicated that their primary support was also all other sources. Individuals who received services under an individualized education program (IEP) in accordance with the provisions of the Individuals with Disabilities Education Act (IDEA) were also investigated in the study. Seventy-two point five percent of European Americans had an IEP while 27.5% did not. African Americans made up 69.8% of the population that received an IEP and 30.3% did not receive an IEP.

Eighty percent of African Americans had a significant disability while 90.8% of European Americans had a significant disability. On the other hand, 20.0% of African Americans did not have a significant disability and 9.3% of European Americans did not have a significant disability.

Table 5

*Characteristics of African American Participants with SLD in Sample A*

Characteristic	n	%
Gender		
Male	220	55
Female	180	45
Age		
16-32	354	88.5
33-48	42	10.5
49-64	4	1.0
Education		
Less than a HS Diploma	214	53.5
Special Education Certification	83	20.8
HS Graduate or Equivalent Certification	93	23.3
More than a HS Diploma	10	2.5
Primary Source of Support		
Personal Income	27	6.8
Family & Friends	291	72.8
Public Support	59	14.8
All other Sources	23	5.8
IEP		
No	121	30.3
Yes	279	69.8
Significant Disability		
No	80	20.0
Yes	320	80.0

Note. Column percentages may not sum to 100 due to rounding.

Table 6

*Characteristics of European American Participants with SLD in Sample A*

Characteristic	n	%
Gender		
Male	261	65.3
Female	139	34.8
Age		
16-32	367	91.8
33-48	24	6.0
49-64	9	2.3
Education		
Less than a HS Diploma	237	59.3
Special Education Certification	51	12.8
HS Graduate or Equivalent Certificate	82	20.5
More than a HS Diploma	30	7.5
Primary Source of Support		
Personal Income	42	10.5
Family & Friends	326	81.5
Public Support	21	5.3

Characteristic	n	%
All Other Sources	11	2.8
IEP		
No	110	27.5
Yes	290	72.5
Significant Disability		
No	37	9.3
Yes	363	90.8

Note. Column percentages may not sum to 100 due to rounding.

### *Description of Sample B*

Sample B included a stratified random sample of 400 African Americans and 400 European Americans with specific learning disabilities. As shown in Table 7 and Table 8, African American males make up 55.0% of the African American population and European American males make up 57.5% of the European American population. On the other hand, African American females comprise 45.0% while European American females comprise 42.5% of the sample population.

The majority of individuals in Sample B (91.9%) fell into the 16-32 age range with a mean of age of 21. African Americans represented 90.8% of the 16-32 age range and European Americans 93.0%. Of the 400 consumers randomly sampled, 7.8% of African American and 4.5% of European Americans fell into the 33-48 age range. Of the remaining 400 consumers, 1.5% of African Americans and 2.5% of European Americans fell into the 46-64 age range.

In terms of level of education at application, 51.5% of African Americans and 57.3% of European Americans had less than a high school diploma. Special education certification made up 21.0% of African Americans and 14.0% of European Americans. High school graduates or individuals with an equivalent certificate comprised 24.0% of the African American population and 23.5% of the European American population. For 3.5% of African Americans, the level of education at application was more than a high school diploma and for 5.3% of European Americans, the level of education at application was more than a high school diploma.

Again, as in the first sample, family and friends were the primary source of support for the majority of consumers. Seventy-two point eight percent of African Americans indicated family and friends and 77.5% European Americans. Public support consisted of 17.0% of African Americans and 9.3% of European Americans. Personal income was the source of support for 7.0% of African Americans and 9.5% of European Americans. All other sources made up 3.3% of African Americans and 3.8% of European Americans.

African Americans received special education services under an IEP at a rate of 71.3% and European Americans received special education services under an IEP at a rate of 73.8%. Twenty-eight point eight percent of African Americans did not receive special education services and 26.3% of European Americans did not receive special education services.

A slightly higher percentage of European Americans (87.3%) had a significant disability than African Americans (84.8%). Fifteen point eight three percent of African Americans did not have a significant disability and 12.8% of European Americans did not have a significant disability.

Table 7  
*Characteristics of African American Participants with SLD in Sample B*

Characteristic	n	%
Gender		
Male	220	55.0
Female	180	45.0
Age		
16-32	363	90.8
33-48	31	7.8
49-64	6	1.5
Education		
Less than a HS Diploma	206	51.5
Special Education Certification	84	21.0
HS Graduate or Equivalent Certificate	96	24.0
More than a HS Diploma	14	3.5
Primary Source of Support		
Personal Income	28	7.0
Family & Friends	291	72.8
Public Support	68	17.0
All Other Sources	13	3.3

Characteristic	n	%
IEP		
No	115	28.8
Yes	285	71.3
Significant Disability		
No	61	15.3
Yes	339	84.8

*Note. Column percentages may not sum to 100 due to rounding.*

Table 8  
*Characteristics of European American Participants with SLD in Sample B*

Characteristic	n	%
Gender		
Male	230	57.5
Female	170	42.5
Age		
16-32	372	93.0
33-48	18	4.5
49-64	10	2.5
Education		
Less than a HS Diploma	229	57.3
Special Education Certification	56	14.0
HS Graduate or Equivalent Certificate	94	23.5
More than a HS Diploma	21	5.3
Primary Source of Support		
Personal Income	38	9.5
Family & Friends	310	77.5
Public Support	37	9.3
Other Sources	15	3.8
IEP		
No	105	26.3
Yes	295	73.8
Significant Disability		
No	51	12.8
Yes	349	87.3

*Note. Column percentages may not sum to 100 due to rounding.*

#### *Acceptance Rates for Sample A*

Table 9 indicates acceptance rates for African Americans and European Americans in Sample A. Thirty-five African Americans were not accepted for services while 22 European Americans were not accepted for vocational rehabilitation services. African Americans consisted of 91.3% of the population accepted for services while European Americans made up 94.5%.

Table 9

*Characteristics of Acceptance for African American & European American Participants with SLD in Sample A*

Accepted	African Americans		European Americans	
	N	%	n	%
No	35	8.8	22	5.5
Yes	365	91.3	378	94.5

*Note. Column percentages may not sum to 100 due to rounding.*

*Acceptance Rates for Sample B*

Non Acceptance for African Americans participants represented 12.8% of the sample population, while 6.8% of European Americans were not accepted for services. Of those accepted for services 87.3% were African Americans while 93.3% of European Americans were accepted for services.

Table 10

*Characteristics of Acceptance for African American & European American Participants with SLD in Sample B*

Accepted	African Americans		European Americans	
	n	%	n	%
No	51	12.8	22	6.8
Yes	349	87.3	373	93.3

*Note. Column percentages may not sum to 100 due to rounding.*

*Description of Services for Sample A*

Services received by African Americans are listed in Table 11. The data indicated that assessment (58.0%) was the most common service received, followed closely by vocational rehabilitation counseling and guidance for African Americans (57.0%). College training was only received by 27 or 6.8% of African Americans with specific learning disabilities.

The services received by European Americans with specific learning disabilities are listed under Table 12. European Americans received assessment at a rate of 63.3% followed by vocational counseling and guidance (57.5%).

The findings for college training indicate that more European Americans compared to African Americans received this service. Sixty or 15.0% of European Americans received college training compared to 27 or 6.8% of their African American counterparts.

Job search assistance was provided to 94 African Americans and 79 European Americans; job placement assistance was given to 113 African Americans and 95 European Americans; and on-the-job supports were provided to 46 African Americans and 44 European Americans.

Transportation services were provided to 70 African Americans and 67 European Americans. Information and referrals were given to 42 African Americans and 49 European Americans, while other services were comprised of 63 African Americans and 70 European Americans.

Some of the services were received by the same number of participants in the study. Diagnosis and treatment services were received by 66 African Americans and 66 European Americans. Job readiness training was received by 46 African Americans and 46 European Americans. Neither group received interpreter services.

Several services were received by a small number of African Americans and European Americans. These services included: occupational training, on-the-job training, basic academic remedial or literacy training, disability related augmentative skills training, miscellaneous training, maintenance, rehabilitation technology, reader, personal attendant, and technical assistance.

Table 11  
*Services Provided to African American Participants with SLD in Sample A*

Services	n	%
Assessment		
No	168	42.0
Yes	232	58.0
Diagnosis & Treatment		

Services	n	%
No	334	83.5
Yes	66	16.5
VR Counseling & Guidance		
No	172	43.0
Yes	228	57.0
College Training		
No	373	93.3
Yes	27	6.8
Occupational Training		
No	369	92.3
Yes	31	7.8
On-the-job Training		
No	393	98.3
Yes	7	1.8
Basic Academic Remedial/Literacy Training		
No	394	98.5
Yes	6	1.5
Job Readiness Training		
No	354	88.5
Yes	46	11.5
Disability Related Augmentative Skills Training		
No	396	99.0
Yes	4	1.0
Miscellaneous Training		
No	353	88.3
Yes	47	11.8
Job Search Assistance		
No	306	76.5
Yes	94	23.5
Job Placement Assistance		
No	287	71.8
Yes	113	28.3
On-the-job Supports		
No	354	88.5
Yes	46	11.5
Transportation		
No	330	82.5
Yes	70	17.5
Maintenance		
No	368	92.0
Yes	32	8.0
Rehabilitation Technology		
No	396	99.0
Yes	4	1.0
Reader		
No	400	100.0
Yes	0	.0
Interpreter		

Services	n	%
No	400	100.0
Yes	0	.0
Personal Attendant		
No	400	100.0
Yes	0	.0
Technical Assistance		
No	396	99.0
Yes	4	1.0
Information & Referral		
No	358	89.5
Yes	42	10.5
Other Services		
No	337	84.3
Yes	63	15.8

Note. Column percentages may not sum to 100 due to rounding.

Table 12  
*Services Provided to European American Participants with SLD in Sample A*

Services	n	%
Assessment		
No	147	36.8
Yes	253	63.3
Diagnosis & Treatment		
No	334	83.5
Yes	66	16.5
VR Counseling & Guidance		
No	170	42.5
Yes	230	57.5
College Training		
No	340	85.0
Yes	60	15.0
Occupational Training		
No	361	90.3
Yes	39	9.8
On-the-job Training		
No	391	97.8
Yes	9	2.3
Basic Academic Remedial/Literacy Training		
No	390	97.5
Yes	10	2.5
Job Readiness Training		
No	354	88.5
Yes	46	11.5
Disability Related Augmentative Skills Training		
No	395	98.8
Yes	5	1.3

Services	n	%
Miscellaneous Training		
No	366	91.5
Yes	34	8.5
Job Search Assistance		
No	321	80.3
Yes	79	19.8
Job Placement Assistance		
No	305	76.3
Yes	95	23.8
On-the-job Supports		
No	356	89.0
Yes	44	11.0
Transportation		
No	333	83.3
Yes	67	16.8
Maintenance		
No	361	90.3
Yes	39	9.8
Rehabilitation Technology		
No	391	97.8
Yes	9	2.3
Reader		
No	399	99.8
Yes	1	.3
Interpreter		
No	400	100.0
Yes	0	.0
Personal Attendant		
No	399	99.8
Yes	1	.3
Technical Assistance		
No	393	98.3
Yes	7	1.8
Information & Referral		
No	351	87.8
Yes	49	12.3
Other Services		
No	330	82.5
Yes	70	17.5

*Note. Column percentages may not sum to 100 due to rounding.*

#### *Description of Services for Sample B*

Services received by African Americans are listed in Table 13. The data indicated that assessment (57.5%) was the most common service received, followed closely by vocational

rehabilitation counseling and guidance for African Americans (51.3%). Diagnosis and treatment was comprised of 15.5% of the African Americans population with a specific learning disability.

The services received by European Americans with specific learning disabilities are listed under Table 14. European Americans received assessment at a rate of 60.3% followed by vocational counseling and guidance (55.8%). Diagnosis and treatment made up 14.0% for European Americans.

The findings for college training indicated that more European Americans compared to African Americans received this service. Fifty or 12.5% of European Americans received college training compared to 38 or 9.5% of their African American counterparts.

Job search assistance was provided to 79 African Americans and 82 European Americans; job placement assistance was given to 108 African Americans and 94 European Americans; and on-the-job supports were provided to 46 African Americans and 44 European Americans.

Transportation services were comprised of 104 African Americans and 63 European Americans. Information and referral was given to 44 African Americans and 57 European Americans, while other services were comprised of 68 African Americans and 71 European Americans.

Several services were received by a small number of African Americans and European Americans. These services include: occupational training, on-the-job training, basic academic remedial or literacy training, job readiness training, disability related augmentative skills training, miscellaneous training, on-the-job supports, maintenance, rehabilitation technology, interpreter, personal attendant, and technical assistance. Neither group received reader or personal attendant services.

Table 13

*Services Provided to African American Participants with SLD in Sample B*

Services	n	%
Assessment		
No	170	42.5
Yes	230	57.5
Diagnosis & Treatment		
No	338	84.5
Yes	62	15.5
VR Counseling & Guidance		
No	195	48.8
Yes	205	51.3
College Training		
No	362	90.5
Yes	38	9.5
Occupational Training		
No	365	91.3
Yes	35	8.8
On-the-job Training		
No	396	99.0
Yes	4	1.0
Basic Academic Remedial/Literacy Training		
No	389	97.3
Yes	11	2.8
Job Readiness Training		
No	342	85.5
Yes	58	14.5
Disability Related Augmentative Skills Training		
No	391	97.8
Yes	9	2.3
Miscellaneous Training		
No	356	89.0
Yes	44	11.0
Job Search Assistance		
No	321	80.3
Yes	79	19.8
Job Placement Assistance		
No	292	73.0
Yes	108	27.0
On-the-job Supports		
No	364	91.0
Yes	36	9.0
Transportation		
No	296	74.0
Yes	104	26.0
Maintenance		
No	360	90.0
Yes	40	10.0

Services	n	%
Rehabilitation Technology		
No	396	99.0
Yes	4	1.0
Reader		
No	400	100.0
Yes	0	.0
Interpreter		
No	399	99.8
Yes	1	.3
Personal Attendant		
No	400	100.0
Yes	0	.0
Technical Assistance		
No	396	99.0
Yes	4	1.0
Information & Referral		
No	356	89.0
Yes	44	11.0
Other Services		
No	332	83.0
Yes	68	17.0

*Note.* Column percentages may not sum to 100 due to rounding.

Table 14  
*Services Provided to European American Participants with SLD in Sample B*

Services	n	%
Assessment		
No	159	39.8
Yes	241	60.3
Diagnosis & Treatment		
No	344	86.0
Yes	56	14.0
VR Counseling & Guidance		
No	177	44.3
Yes	223	55.8
College Training		
No	350	87.5
Yes	50	12.5
Occupational Training		
No	354	88.5
Yes	46	11.5
On-the-job Training		
No	387	96.8
Yes	13	3.3
Basic Academic Remedial/Literacy Training		
No	389	97.3
Yes	11	2.8

Services	n	%
Job Readiness Training		
No	370	92.5
Yes	30	7.5
Disability Related Augmentative Skills Training		
No	395	98.8
Yes	5	1.3
Miscellaneous Training		
No	355	88.8
Yes	45	11.3
Job Search Assistance		
No	318	79.5
Yes	82	20.5
Job Placement Assistance		
No	306	76.5
Yes	94	23.5
On-the-job Supports		
No	364	91.0
Yes	36	9.0
Transportation		
No	337	84.3
Yes	63	15.8
Maintenance		
No	374	93.5
Yes	26	6.5
Rehabilitation Technology		
No	393	98.3
Yes	7	1.8
Reader		
No	400	100.0
Yes	0	.0
Interpreter		
No	400	100.0
Yes	0	.0
Personal Attendant		
No	400	100.0
Yes	0	.0
Technical Assistance		
No	396	99.0
Yes	4	1.0
Information & Referral		
No	343	85.8
Yes	57	14.3
Other Services		
No	329	82.3
Yes	71	17.8

*Note. Column percentages may not sum to 100 due to rounding.*

*Description for Reason for Closure for Sample A*

African Americans achieved an employment outcome of 38.0% and European Americans achieved an employment outcome of 44.3%. Twenty percent of African Americans were closed as unable to locate or contact and 19.0% of European Americans were closed as unable to locate or contact. African Americans refused services or further services at a rate of 14.5% and European Americans refused services or further services at a rate of 16.0%. African American cases were closed as failure to cooperate more often than European Americans. Sixty-five African Americans (16.3%) received this closure while only 39 European Americans (9.8%) received this same closure. Other reasons included disability too significant, death, institutionalized, transferred to another agency, no disabling condition, no impediment to employment, transportation not feasible, does not require vocational rehabilitation services, extended services not available, all other reasons, and extended employment. African Americans made up 11.3% of this closure status and European Americans made up 11.0% of this closure status. See Table 15.

Table 15  
*Reason for Closure of Participants with SLD in Sample A*

Reason	African American		European Americans	
	n	%	n	%
Achieved Employment Outcome	152	38.0	177	44.3
Unable to Locate/Contact	80	20.0	76	19.0
Refused Services/Further Services	58	14.5	64	16.0
Failure to Cooperate	65	16.3	39	9.8
Other Reasons	45	11.3	44	11.0

Note. Column percentages may not sum to 100 due to rounding.

*Description of Reason for Closure for Sample B*

African Americans were closed with an employment outcome of 36.0% and European Americans were closed with an employment outcome 42.3%. For 19.3% of African Americans, the reason for closure was unable to locate or contact and 16.8% of European Americans were

closed for the same reason. Services were refused, or further services were refused, by 10.0% of African Americans and 17.3% of European Americans. African Americans were closed as failure to cooperate at a rate of 21.5% and 12.3% of European Americans. Other reasons included 13.3% of African Americans and 11.5% of European Americans.

Table 16  
*Reason for Closure of Participants in Sample B*

Reason	African Americans		European Americans	
	n	%	n	%
Achieved Employment Outcome	144	36.0	169	42.3
Unable to Locate/Contact	77	19.3	67	16.8
Refused Services/ Further Services	40	10.0	69	17.3
Failure to Cooperate	86	21.5	49	12.3
Other Reasons	53	13.3	46	11.5

*Note.* Column percentages may not sum to 100 due to rounding.

### *Research Question 1*

How do the acceptance rates of African Americans with specific learning disabilities compare with those of European Americans with specific learning disabilities when: (a) gender, (b) age, (c) educational level at application, (d) primary source of support at application, (e) presence of a significant disability, and (f) participation in special education, as evidenced by an individualized education plan, are controlled?

This research question was answered using logistic regression. The control variables were entered into block 1: level of education at application, primary source of support at application, presence of participation in special education (as evidenced by an individualized education program), presence of a significant disability, and gender. Age was a continuous variable and race was entered into the second block.

A stepwise backward elimination method was used for the logistic regression. When the backward stepwise method is started, SPSS begins with a model that includes the controls and the predictors (Field, 2005, p. 226). The significance criterion set by the researcher was .05.

Backward elimination is also associated with reduced sources of error in prediction. With backward elimination both variables are in the model, hence, there is less risk of failing to find a relationship when one exists (Menard, 2002, p. 64). The backward method is also preferred over the forward method because it is more likely to exclude the suppressor effects (Field, 2005, p. 227). The control variables were entered into the first block and race was entered into the second block. Race was entered second to determine the effect of race on acceptance for vocational rehabilitation services after controlling for other variables.

*Results of Sample A.* The results of the logistic regression for acceptance are listed in Table 18. Of the variables entered into the regression, presence of a significant disability was the only variable that was achieved at .05. Presence of a significant disability was positively associated with being accepted for vocational rehabilitation services. Individuals with a significant disability were 81.653 (95% CI 34.580 to 192.807) times more likely to be accepted for services than individuals without a significant disability. While the overall rate for individuals who were accepted for services was 99.3%, the rate for individuals who were not accepted was 17.5% (see Table 17), it should be noted that the overall prediction rate was 93.5%.

The Omnibus Tests of Model Coefficients and the model summary, tell us how well the model performed. The -2 log likelihood was 233.350 while the Cox and Snell R Square was .199. The Nagelkerke R Square indicated that 49.6% of the variation in the outcome variable is explained by this logistic model. These tests were all used to compare the models and assess whether the inclusion of additional terms in the model significantly improved the model fit or not (Gaur & Gaur, 2006, p. 126). The Hosmer and Lemeshow goodness-of-fit test shows a chi-square of 4.144. The p-value for this equals .387 from the chi-square distribution with 4 degrees of freedom.

Table 17  
*Classification Table-Sample A*  
*Acceptance for VR Services*

Observed	No	Yes	Percentage Correct
No	10	47	17.5
Yes	5	738	99.3
Overall Percentage			93.5

Table 18  
*Summary of Logistic Regression-Sample A*

Variable	B	S.E.	Wald	Sig.	Exp(B)
Gender(1)	-.656	.345	3.625	.057	.519
Sig_dis2(1)	4.402	.438	100.853	.000	81.653
Constant	.335	.336	.996	.318	1.398

Table 19  
*Variables in the Equation-Sample A*

Variable	95.0% C.I. for EXP(B)	
	Lower	Upper
Gender(1)	.264	1.019
Sig_dis2(1)	34.580	192.807
Race(1)	.686	2.803

*Results of Sample B.* The results of the logistic regression for Sample B are presented in Table 21. Three variables were significant at the .05 significance level in this sample: individuals with a special education certificate, individuals with a significant disability, and African Americans. Under the category of educational level at application, individuals with a special education certificate (educ. (1), was negatively associated with acceptance. Individuals who applied for vocational rehabilitation services with a special education certificate were .431% (95% CI .198 to .939) less likely to be accepted for services. Controlling for the presence of a significant disability, individuals with a significant disability were positively associated (B= 3.482, SE= .306, Wald= 129.362, p=.000, Exp(B) = 32.533) with being accepted for vocational rehabilitation. Conversely, after the entry of race in the second block, African Americans were negatively associated with acceptance (B= -.691, SE= .300, Wald= 5.319, p= .021, Exp(B)=

.501), indicating that African Americans were less likely to be accepted for services than their European American counterparts. While the overall rate for individuals who were accepted for services was 96.5%, the rate for individuals who were not accepted was 48.7% (see Table 20), it should be noted that the overall prediction rate was 91.9%.

The Omnibus Tests of Model Coefficients and the model summary, tell us how well the model performed. The -2 log likelihood was 343.656 while the Cox and Snell R Square was .189. The Nagelkerke R Square indicates that 40% of the variation in the outcome variable is explained by this logistic model.

The Hosmer and Lemehow Test reveal a chi-square value of 2.183, degrees of freedom of 5, and p value of .823.

Table 20  
*Classification Table-Sample B-Acceptance for VR Services*

Observed	No	Yes	Percentage Correct
No	38	40	48.7
Yes	25	697	96.5
Overall Percentage			91.9

Table 21  
*Summary of Logistic Regression-Sample B*

Variable	B	S.E	Wald	Sig.	Exp(B)
Educ(1)	-.842	.397	4.486	.034	.431
Sig_dis2(1)	3.482	.306	129.362	.000	32.533
Race(1)	-.691	.300	5.319	.021	.501
Constant	.501	.275	3.311	.069	1.650

Table 22  
*Variables in the Equation-Sample B*

Variable	95.0% C.I. for EXP(B)	
	Lower	Upper
Step 1a		
Educ		
educ(1)	.198	.939
educ(2)	.458	1.804
educ(3)	.265	19.624
sig_dis2(1)	17.853	59.282
race(1)	.278	.901
Constant		

## *Research Question 2*

How do the service rates for African Americans with specific learning disabilities compare to European Americans with specific learning disabilities?

The relationship between the two categorical variables was estimated using the Pearson's Chi-Square Test. If the significance value was less than .05, the researcher believed that there was a significant relationship between the two variables (Field, 2000, p. 695).

*Sample A.* Of the 22 services offered by the vocational rehabilitation program in Sample A, only 1 service showed a significant relationship to race: college training. The Pearson Chi-Square indicated a value of 14.045, degrees of freedom of 1, and a significance of .000. Thirty-one percent of African Americans received college training while 69.0% of European Americans received college training. To say it another way, there was a significant association between college training and race.

*Sample B.* Of the 22 services in Sample B, on-the-job training, job readiness, and transportation showed significant relationships between African Americans and European Americans. Although, only 17 individuals with learning disabilities received on-the-job training it was still significant. On-the-job training had a Pearson Chi-Square of 4.868, degrees of freedom of 1, and a significance of .027. African Americans received this service 4 times, while European Americans received this service 13 times.

Job readiness training was also significant. The Pearson Chi-Square revealed a value of 10.010, degrees of freedom of 1, and a significance of .002. Fifty-eight African Americans received this service and 30 European Americans received job readiness training. Therefore, African Americans were .48 times more likely to receive job readiness training.

In addition, transportation revealed a relationship between African Americans and European Americans. The Pearson Chi-Square was 12.721 degrees of freedom was 1, and the significance was .000. One-hundred and four African Americans received transportation while 63 European Americans received this service. African Americans were .53 times more likely to receive transportation services.

### *Research Question 3*

How do the reasons for closure for African Americans with specific learning disabilities compare to those of European Americans with specific learning disabilities?

Reason for closure was combined to make up 5 groups. The groups consisted of achieved employment outcome, unable to locate or contact, refused services or further services, failure to cooperate, and other reasons. The other reasons category included disability too significant to benefit from vocational rehabilitation, death, individual in institution, transferred to another agency, no disabling condition, no impediment to employment, transportation not feasible or available, does not require vocational rehabilitation services, extended services not available, and all other reasons. These categories were grouped together due to the same frequencies.

African Americans were more likely to be closed as unable to locate or contact and failure to cooperate in Sample A and Sample B. Also, in both samples, European Americans were more likely to receive refused services or further services and achieve an employment outcome.

## CHAPTER 5

### DISCUSSION

The purpose of this study was to investigate vocational rehabilitation acceptance, reason for closure and services for African Americans and European Americans with specific learning disabilities. This chapter includes: (a) discussion and integration of the study findings with existing research, (b) limitations, and (c) implications for future research and practice.

#### *Discussion and Integration of the Present Results and Past Studies*

This study focused on of African Americans and European Americans with SLD. This investigation controlled for several variables believed to be associated with acceptance, services, and reason for closure. These variables included gender, age at application, level of education at application, primary source of support at application, participation in special education (as evidenced by an individualized education program), and presence of a significant disability.

Two stratified samples of 400 African Americans and 400 European Americans were drawn from the total sample of individuals with specific learning disabilities. The first sample was referred to as *Sample A* and the second sample referred to as *Sample B*. The following section includes a discussion of the major findings for each of the three research questions for each sample and across samples.

#### *Research Question 1*

The findings of this study showed that the presence of a significant disability was a significant variable in both samples. Presence of a significant disability was positively associated with being accepted for vocational rehabilitation services. Individuals with a significant disability were 81.653 (95% CI 34.580 to 192.807) times more likely to be accepted for services than individuals without a significant disability in sample A, and 32.533 times more likely to be

accepted than individuals without a significant disability in Sample B. An individual with a significant disability (formerly known as severe disabilities in other RSA manuals), is defined as an individual: (a) who has a severe physical or mental impairment which seriously limits one or more functional capacities related to employment, (b) whose vocational rehabilitation can be expected to require multiple vocational rehabilitation services over an extended period of time, and (c) who has one or more physical or mental disability or a combination of disabilities based on an assessment for determining eligibility and vocational rehabilitation needs to cause comparable substantial limitation (RSA-911 Manual, 2006).

Keeping in mind, of the total 800 participants (African Americans and European Americans) 683 had a significant disability in Sample A; there were 320 African Americans with a significant disability and 363 European Americans with a significant disability. In Sample B the total number of individuals with a significant disability was 688; 339 African Americans and 349 European Americans. Because many vocational rehabilitation agencies are serving individuals with severe disabilities over people with non-severe disabilities, it is not alarming that so many individuals with significant disabilities were served (Wilson, 2004). However, one would expect there to be more African Americans with significant disabilities served by the vocational rehabilitation program because African Americans are more likely to have a severe disability than their European American counterparts (US Census, 2000).

In Sample B, the present study also found that African Americans were negatively associated with acceptance for vocational rehabilitation services. This finding is consistent with many past studies (Atkins & Wright, 1980; Capella, 2002; Dziekan & Okocha, 1993; Feist-Price, 1995; Herbert & Martinez, 1992; Wheaton, 1995; Wilson, Harley, & Alston, 2001; Wilson, 2002).

This study, unlike other studies, used the stepwise backward elimination method to enter the control variables in block one and then entered race in block 2. Because both variables are already in the model with backward elimination, there is less risk of failing to find a relationship when one exists (Menard, 2002, p. 64). Race was entered in the second block to determine the effect of race on acceptance for vocational rehabilitation services after controlling for other variables.

It was essential to group the 7 categories under ‘types of closures’ make up the acceptance and nonacceptance groups. Not accepted for services included exited as an applicant and exited during or after a trial work experience/extended evaluation. While acceptance for services included: (a) exited with an employment outcome, (b) exited without an employment outcome, after a signed IPE, but before receiving services, (c) exited without an employment outcome, after a signed IPE, but before receiving services, (d) exited from an order of selection waiting list, and (e) exited without an employment outcome after eligibility but before an IPE was signed. Most studies do not specify how they defined acceptance or nonacceptance in their studies. Also, most past studies (Dziekan & Okocha, 1993; Feist-Price, 1995; Herbert & Martinez, 1992; Peterson, 1996; Wheaton, 1995; Wilson, 1999; Wilson, 2000; and Wilson, Harley, & Alston, 2002), and the present study used national data as opposed to state data. Therefore, the present study’s findings for acceptance might be difficult to use as a comparison study for other literature.

This study also found that in Sample B individuals with specific learning disabilities who received a special education certificate were negatively associated with acceptance. This finding has not been documented in past research. The researcher speculates that this finding could be attributed to the overrepresentation of African Americans in special education classrooms. A

higher percentage of African Americans who received a special education certificate may be applying for vocational rehabilitation services due to the large number of African Americans in special education programs.

### *Research Question 2*

The services most likely to be received by African Americans across samples were transportation and job readiness training. European Americans were more likely to receive college training and on-the-job training. Job readiness training was not previously found to be received more by African Americans but transportation was (Atkins & Wright, 1980; Feist-Price, 1995; Wheaton et al, 1996; Brown, 1997; and Moore, 2001). Also confirmed in this study and in the literature (Atkins & Wright, 1980; Feist-Price, 1995; Peterson, 1996, Wilson, Turner, & Jackson, 2002), European Americans were more likely to receive college training. Bias in standardized assessment scores during the vocational rehabilitation process to determine if African Americans might benefit from college training, may also be a reflection of educational injustices and a lack of cultural sensitivity (Wilson et al, 2002). Vocational rehabilitation counselors might also underestimate African American consumers' rehabilitation potential (Dziekan & Okacha, 1993). In Sample A and Sample B, this study found that more African Americans had a high school degree or a GED than their European American counterparts (see Tables 5-8). This finding seems contrary to the finding that more European Americans were provided with college training.

In addition, also found in previous studies (Atkins & Wright, 1980; Feist-Price, 1995, Olney & Kennedy, 2002), European Americans received on-the-job training more often than African Americans. Moore (2001) also found that European Americans are more likely to receive on-the-job training than African Americans. According to Moore (2001b), on-the-job

training qualifies as a highly effective service for assisting consumers to achieve high-quality outcomes. African Americans may not be considered for on-the-job services at the same rate as European Americans because financial resources needed for such services are limited (Moore, 2001). Moore (2001) suggested, when issues of limited resources come up, race/ethnicity have been proven to be major factors in deciding who will be provided with opportunities.

As indicated in this study and previous studies, European Americans and African Americans received different services. The study at hand investigated services received by individuals who were accepted into the program and who were not accepted. Past literature suggests that African Americans were more likely to receive transportation services due to more of a lack of resources than European Americans (Wilson, 1997; Wilson, 1999). Wilson et al, (2002) postulated that African Americans might receive transportation services as a result of stereotypes held by vocational rehabilitation counselors.

### *Research Question 3*

In both samples, African Americans were more likely than European Americans to be closed unable to locate or contact and failure to cooperate. These findings are consistent with past studies (Atkins & Wright, 1980; Danek & Lawrence, 1982; Ross & Biggi, 1996, Wilson, 1999). An individual is closed under failure to cooperate when his/her actions or non-actions make it impossible to continue a vocational rehabilitation program. Failure to cooperate includes repeated failures to keep appointments for assessment, counseling, or other services (RSA, 2006). The labeling of African Americans as ‘failure to cooperate’ could be a result of their frustration with the vocational rehabilitation process. Dziekan and Okacha (1993) speculated that consumers from CLD backgrounds may not have chosen to follow through with the acceptance process because of their frustrations with the steps and delays. ‘Failure to cooperate’ could also

be a passive aggressive attempt by African Americans to communicate distrust in the vocational rehabilitation system and toward the vocational rehabilitation counselor (Wilson et al., 1999).

Because African Americans were provided with transportation services more often than European Americans, it could be possible that this overreliance on public transportation services might explain circumstances as arriving late for appointments or missing appointments, this could be perceived as failure to cooperate.

Individuals with specific learning disabilities are more likely to manifest behaviors, such as arriving late for an appointment, limited eye contact, responding to questions in short, simple sentences, and providing limited background information; thus, an individual who shows this behavior may appear to the vocational rehabilitation counselor to be unmotivated and uncooperative (Dowdy, Smith, & Nowell, 1992).

In both samples, European Americans were more likely to be closed because of refusing vocational rehabilitation services or further services. Past studies also confirm this finding (Atkins & Wright, 1980; Danek & Lawrence, 1982; Ross & Biggi, 1996; Wilson, 1999). European Americans were also more likely to achieve an employment outcome.

### *Limitations*

The Rehabilitation Services Administration's database had many limitations. First the database relied on ex post facto data. This also does not allow any conclusions about causality between the variables being investigated. Thus, the researcher was unable to manipulate the variables because they had already taken place. Second, vocational rehabilitation counselors could have made an error in entering the data into the computer and caused an inaccuracy. Also the race could have been entered inaccurately. If a consumer refuses to identify his/her race, the vocational rehabilitation counselor notifies the respondent that the observer-identification

method will be used and then counselor uses his/her judgment to assess the consumer's race. It was also possible to have different versions of the RSA-911 data for the same year. Therefore, the results may vary if different versions were distributed.

In addition, another possible limitation could have been in the way that acceptance was coded by RSA-911 and the current researcher. Because all closure types were labeled 1-7, it was necessary to group the types together. The methodology was not the same as other studies. The results of this study might have been different if types of closure were grouped differently. It is important to note that many other studies did not indicate how they grouped closure status to make up acceptance and nonacceptance variables.

An issue with internal validity was that other variables that were not controlled for could have influenced the acceptance rate, service delivery, and/or reason for closure. Also a threat to external validity was that the study only looked at one year of data. Perhaps if we looked at several years, we might get different results. This study also was limited to African Americans and European Americans with specific learning disabilities.

Also the sample size and randomization of samples could result in different findings when another sample is drawn. The researcher cannot guarantee that another random sample of 400 African Americans and 400 European Americans with specific learning disabilities will have the same or similar results.

### *Implications*

#### *Implications for Future Research*

This quantitative study has been significant to understanding better the participation and support of individuals with SLD in the vocational rehabilitation process across two racial groups. Future researchers should use qualitative methods in addition to quantitative methods to provide

more information about the vocational rehabilitation process. Consumers' views should be included in investigations of acceptance, services, and reason for closure. The consumers could add a wealth of knowledge to the topic if they were interviewed as part of future investigations. Firsthand knowledge regarding how the individuals interact in the vocational rehabilitation process and their particular experience is crucial to further understanding of this topic.

In addition, vocational rehabilitation counselors' perspectives could also be beneficial in future research. Because the RSA database relies on the counselors to input the information, it would be important to gain an understanding of how counselors are interpreting the different statuses. For example, at what point is an individual considered 'failure to cooperate?' Also, how many attempts are made to contact individuals before they are deemed 'unable to locate?' It would also enhance the literature if future research investigated vocational rehabilitation training programs. It has been documented in the literature that in order to improve acceptance rates, service delivery, and outcomes for African Americans, vocational rehabilitation counselors need to be trained to be more aware of their needs (Atkins & Wright, 1980; Dziekan and Okocha, 1993; Capella, 2002). However, few studies exist on vocational rehabilitation training programs. Future research should also look at the comparison of African Americans students who were in special education classrooms and then applied for vocational rehabilitation services. Such studies should focus on African American and other culturally and linguistically diverse groups' particular experiences with the vocational rehabilitation process. This would especially useful when including Hispanic and Latino individuals with SLD and the vocational rehabilitation counseling process and programming. To date, few if any systematic studies have been conducted to include populations other than African American and European American individuals with disabilities in rehabilitation counseling.

Traditional theories for understanding the vocational rehabilitation process may not be well suited to reveal the complexities of race and disability in the vocational rehabilitation process. One proposed theory would be to critical race theory (CRT). CRT “is a link between form and substance in scholarship which allows scholars the use of voice or naming your reality through parables, chronicles, stories, counterstories, poetry, fiction, and revisionist histories to illustrate the false necessity and irony of much of current civil rights doctrine (Ladson-Billings, 1998, p. 12). CRT provides a broad perspective that includes economic, history, context, group and self interest, feelings, and unconscious (Delgado & Stefancic, 2001). CRT includes an activist dimension and attempts to find a situation and change it. This perspective is ideal for rehabilitation counseling because it provides a critical way to analyze race, racism, and power struggles. For instance, African Americans in both samples completed high school at a higher rate than European Americans but were less likely to receive college training; and African Americans were more likely to be closed ‘failure to cooperate.’ CRT challenges us to look at different perspectives, influences, and historical accounts that might impact these and other findings.

### *Implications for Practice*

Because past studies indicate that it is common for individuals with specific learning disabilities to drop out of high school and have more severe problems over time, it is necessary for special education programs and vocational rehabilitation programs to work together to develop transition programs for these individuals. A comprehensive transition program might also increase the number of students seeking vocational rehabilitation services. In addition, because the special education program and the vocational rehabilitation programs are so different

it is important for professionals to make sure that individuals have a clear understanding of the two programs.

Typically, rehabilitation counselors notify individuals or attempt to locate them by mailing them a letter. If individuals have moved, have trouble reading, or are highly mobile, this method is problematic. Rehabilitation counselors should utilize multiple methods of contacting individuals, such as home visits.

Vocational rehabilitation counselors need to be made aware of what the research indicates about acceptance, services, and reason for closure. Although these topics have been researched for decades, problems continue to persist. If rehabilitation counselors are made aware of the differences perhaps they will be more conscientious when making decisions.

Rehabilitation counselors should also receive specialized training in, not only working with individuals from CLD backgrounds, but also in working with individuals with specific disabilities. The literature suggests that vocational rehabilitation counselors tend to think of a learning disability as primarily an academic disability that does not impact employment (Dowdy, Smith, & Nowell, 1992). This view does not provide vocational rehabilitation counselors with the information that they need to work with individuals with specific learning disabilities. This view of learning disabilities might be consistent with vocational rehabilitation counselors' views of other disabilities.

Issues of inequity in the vocational rehabilitation system have been researched for more than 40 years, yet not much improvement has been made in order to really level out the playing field. Current and prospective vocational rehabilitation counselors should become familiar with research that has been conducted regarding the inequities in the vocational rehabilitation system

so that they are aware of the historical disparities that exist and practices found successful in redressing these disparities.

Overall, the literature suggests that African Americans have a disproportionately higher rate of rejection for vocational rehabilitation services and when accepted, are provided with less effective services, resulting in poorer rehabilitation outcomes (Wilkerson & Penn, 1938; Atkins & Wright, 1980; Capella, 2002; Dziekan & Okocha, 1993; Atkins, 1988; Hebert & Cheatham, 1988; Rosenthal et al, 2005; Wright, 1988). Given the lower rate of vocational rehabilitation acceptance of individuals from CLD backgrounds, it is unlikely that substantial changes will take place for racial and ethnic minority consumers if potential barriers are not systematically removed (Wilson, Harley, McCormick et al., 2001).

APPENDIX A

*Categorical Variables Codings-Sample A*

Variables		Parameter Coding			
		Frequency	(1)	(2)	(3)
Level ed. at app.	Less than a HS Dip.	451	.000	.000	.000
	Spec. Ed. Cert	134	1.000	.000	.000
	HS Dip. Or GED	175	.000	1.000	.000
	More than HS Dip.	40	.000	.000	1.000
Primary source of support at app.	Personal Income	69	.000	.000	.000
	Family & Friends	617	1.000	.000	.00
	Public Support	80	.000	1.00	.000
	All other sources	34	.000	1.000	.000
Race	European American	400	.000		
	African American	400	1.000		
IEP	No	231	.000		
	Yes	569	1.000		
Sign. Dia.	No	117	.000		
	Yes	569	1.000		
Gender	Male	481	.000		
	Female	319	1.000		

APPENDIX B

*Variables in the Equation-Sample A*

	Variable	B	S.E.	Wald	df	Sig.	Exp(B)	
Step 1a	gender(1)	-.679	.359	3.572	1	.059	.507	
	age_app	-.020	.024	.713	1	.399	.980	
	educ			4.105	3	.250		
	educ(1)	-.833	.534	2.434	1	.119	.435	
	educ(2)	-.437	.424	1.062	1	.303	.646	
	educ(3)	-.980	1.153	.723	1	.395	2.665	
	IEP2(1)	.197	.411	.231	1	.631	.821	
	pri_supp			1.006	3	.800		
	pri_supp(1)	-.617	.724	.725	1	.394	.540	
	pri_supp(2)	-.856	.948	.816	1	.366	.425	
	pri_supp(3)	-.292	.921	.101	1	.751	.747	
	sig_dis2(1)	4.481	.454	97.542	1	.000	88.325	
	Constant	1.872	1.061	3.588	1	.078	6.499	
	Step 2a	gender(1)	-.688	.353	3.588	1	.058	.513
age_app		-.012	.021	.320	1	.571	.988	
educ				4.238	3	.237		
educ(1)		-.801	.531	2.279	1	.131	.449	
educ(2)		-.463	.418	1.229	1	.268	.629	
educ(3)		1.051	1.152	.832	1	.362	2.860	
IEP2(1)		-.228	.408	.313	1	.576	.796	
sig_dis2(1)		4.435	.444	99.857	1	.000	84.313	
Constant1.		.149	.628	3.352	1	.067	3.156	
Step 3a		gender(1)	-.685	.351	3.795	1	.051	.504
		age_app	-.009	.020	.199	1	.656	.991
		educ			4.858	3	.182	
		educ(1)	-.880	.511	2.964	1	.085	.415
		educ(2)	-.423	.411	1.061	1	.303	.655
	educ(3)	1.133	1.145	.980	1	.322	3.106	
	sig_dis2(1)	4.417	.443	99.4851		.000	82.827	
	Constant	.953	.516	3.414	1	.065	2.592	
Step 4a	gender(1)	-.669	.349	3.668	1	.055	.512	
	educ			5.048	3	.168		
	educ(1)	-.899	.508	3.130	1	.077	.407	
	educ(2)	-.469	.398	1.393	1	.238	.625	
	educ(3)	1.057	1.126	.881	1	.348	2.877	
	sig_dis2(1)	4.429	.442	100.285	1	.000	83.835	
	Constant	.762	.286	7.109	1	.008	2.143	
Step 5a	gender(1)	-.649	.344	3.566	1	.059	.523	
	sig_dis2(1)	4.326	.428	102.384	1	.000	75.669	
	Constant	.554	.236	5.507	1	.019	1.740	

APPENDIX C

*Variables in the Equation-Sample A*

		95.0% C.I. for EXP(B)	
	Variable	Lower	Upper
Step 1a	gender(1)	.251	1.025
	age_app	.936	1.027
	educ		
	educ(1)	.153	1.238
	educ(2)	.282	1.483
	educ(3)	.278	25.541
	IEP2(1)	.367	1.836
	pri_supp		
	pri_supp(1)	.130	2.232
	pri_supp(2)	.066	2.723
	pri_supp(3)	.123	4.543
	sig_dis2(1)	36.298	214.925
	Constant		
Step 2a	gender(1)	.257	1.023
	age_app	.949	1.029
	educ		
	educ(1)	.159	1.270
	educ(2)	.278	1.427
	educ(3)	.299	27.371
	IEP2(1)	.358	1.771
	sig_dis2(1)	35.331	201.203
	Constant		
Step 3a	gender(1)	.253	1.004
	age_app	.953	1.031
	educ		
	educ(1)	.152	1.130
	educ(2)	.293	1.465
	educ(3)	.329	29.282
	sig_dis2(1)	34.773	197.287
	Constant		
Step 4a	gender(1)	.259	1.016
	educ		
	educ(1)	.150	1.102
	educ(2)	.287	1.364
	educ(3)	.317	26.145
	sig_dis2(1)	35.235	199.468
Step 5a	gender(1)	.266	1.025
	sig_dis2(1)	32.732	174.933
	Constant		

APPENDIX D

*Categorical Variables Codings-Sample B*

Variables		Frequency	Parameter Coding		
			(1)	(2)	(3)
Level Ed. at App.	Less than HS Dip/GED	435	.000	.000	.000
	Spec.Ed	140	1.000	.000	.000
	Primary	190	.000	1.000	.000
	More than HS diploma	35	.000	.000	1.000
Primary Source of Support at App.	Personal income	66	.000	1.000	.000
	Family & Friends	601	1.000	.000	.000
	Public Sources	105	.000	1.000	.000
	All other sources	28	.000	.000	1.000
Race	European American	400	.000		
	African American	400	1.000		
IEP	No	220	.000		
	Yes	580	1.000		
Sign dis.	No	112	.000		
	Yes	688	1.000		
Gender	Male	450	.000		
	Female	350	1.000		

APPENDIX E

*Variables in the Equation-Sample B*

	Variable	B	S.E.	Wald	df	Sig.	Exp(B)	
Step 1a	Gender (1)	.048	.291	.027	1	.869	1.049	
	age_app	-.015	.023	.436	1	.509	.985	
	Educ			6.084	3	.108		
	educ(1)	-.877	.400	4.806	1	.028	.416	
	educ(2)	-.298	.389	.587	1	.444	.742	
	educ(3)	-.959	1.127	.723	1	.395	2.608	
	IEP2 (1)	-.425	.385	1.216	1	.270	.654	
	pri_supp			1.342	3	.719		
	pri_supp(1)	.038	.527	.005	1	.942	1.039	
	pri_supp(2)	-.423	.649	.424	1	.515	.655	
	pri_supp(3)	-.592	.950	.388	1	.534	.553	
	sig_dis2(1)	3.598	.318	128.163	1	.000	36.507	
	Constant	.755	.817	.854	1	.355	2.128	
	Step 2a	age_app	-.015	.023	.422	1	.516	.985
educ				6.091	3	.107		
educ(1)		-.879	.400	4.818	1	.028	.415	
educ(2)		-.298	.389	.587	1	.444	.742	
educ(3)		.955	1.127	.718	1	.397	2.600	
IEP2(1)		-.424	.385	1.215	1	.270	.654	
pri_supp				1.325	3	.723		
pri_supp(1)		.039	.526	.006	1	.940	1.040	
pri_supp (2)		-.418	.647	.418	1	.518	.658	
pri_supp(3)		-.584	.950	.378	1	.539	.558	
sig_dis2(1)		3.597	.318	128.2351	1	.000	36.496	
Constant		.769	.8813	.895	1	.344	2.158	
Step 3a		age_app-educ	.024	.021	1.229	1	.268	.977
		educ			6.128	3	.106	
	educ(1)	-.883	.399	4.888	1	.027	.414	
	educ(2)	-.260	.387	.454	1	.501	.771	
	educ(3)	.992	1.126	.776	1	.378	2.696	
	IEP2(1)	-.376	.384	.962	1	.327	.686	
	sig_dis2(1)	3.535	.309	130.902	1	.000	34.289	
	Constant	.869	.590	.2.305	1	.129	2.450	
Step 4a	age_app	-.020	.021	.929	1	.335	.980	
	educ			7.551	3	.056		
	educ(1)	-.951	.392	5.881	1	.015	.386	
	educ(2)	-.101	.352	.083	1	.773	.904	
	educ(3)	1.137	1.116	1.038	1	.308	3.118	
	sig_dis2(1)	3.498	.305	131.386	1	.000	33.047	
	Constant	.539	.460	1.376	1	.241	1.715	
Step 5a	educ			7.460	3	.059		
	educ(1)	-.966	.391	6.112	1	.013	.381	
	educ(2)	-.174	.343	.258	1	.611	.840	
	educ(3)	1.034	1.113	.862	1	.353	2.812	
	sig_dis2(1)	3.481	.303	131.611	1	.000	32.493	
	Constant	.152	.226	.454	1	.501	1.164	

APPENDIX F

*Variables in the Equation-Sample B*

	95.0% C.I. for EXP(B)		
	Variable	Lower	Upper
Step 1a	gender(1)	.593	1.857
	age_app	.941	1.031
	educ		
	educ(1)	.190	.911
	educ(2)	.346	1.592
	educ(3)	.286	23.768
	IEP2(1)	.307	1.391
	pri_supp		
	pri_supp(1)	.370	2.918
	pri_supp(2)	.184	2.337
	pri_supp(3)	.086	3.564
	sig_dis2(1)	19.583	68.057
	Constant		
Step 2a	age_app	.941	1.031
	educ		
	educ(1)	.190	.910
	educ(2)	.346	1.592
	educ(3)	.285	23.686
	IEP2(1)	.308	1.391
	pri_supp		
	pri_supp(1)	.371	2.917
	pri_supp(2)	.185	2.341
	pri_supp(3)	.087	3.587
	sig_dis2(1)	19.582	68.021
	Constant		
	Step 3a	age_app	.937
educ			
educ(1)		.189	.905
educ(2)		.361	1.644
educ(3)		.297	24.509
sig_dis2(1)		18.714	62.826
Constant			
Step 4a	age_app	.941	1.021
	educ		
	educ(1)	.179	.833
	educ(2)	.453	1.802
	educ(3)	.350	27.800
	sig_dis2(1)	18.171	60.103
Constant			
Step 5a	educ		
	educ(1)	.177	.819
	educ(2)	.429	1.646
	educ(3)	.317	24.928
	sig_dis2(1)	17.927	58.894
Constant			

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