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A Study of the Relationship Among Race, Services, and Outcome in Vocational Rehabilitation

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in the Graduate School of The Ohio State University

By

Sharon M. Brown, B.A., M.Ed.

****

The Ohio State University

1997

Dissertation Committee:

Bruce Growick, Advisor
Michael Klein
Michael Scott

Approved by:

[Signature]

Adviser
College of Education
ABSTRACT

The purpose of this study was to explore the relationship among consumer race, vocational rehabilitation outcomes, number and type of VR services and the quality of services, as measured by earnings, hours worked per week and type of occupation according to the first digit of the Dictionary of Occupational titles at closure. Consumers in this study sought VR services in a Midwestern state-federal agency during the federal fiscal 1995. The sampling frame consisted of 45,585 VR consumers.

Chi-square test results indicated that European Americans (n=4,567) are closed successfully (Status 26) more often than African Americans (n=851). For workshop, self-employment, business entrepreneur and unpaid work status there were no statistically significant differences among African Americans and European Americans. However, for homemaker work status European Americans were closed more often in that category than African Americans. For Student Status, African Americans were closed more often than European Americans. Chi-square test revealed statistical differences among African Americans and European Americans in restoration, college, adjustment training, job placement,
transportation, other services and income maintenance.

Results from t-test, mean and standard deviation revealed that European Americans (n=7818) received more VR services than European American (n=1650) and there was a small correlation between race and the number of services received. The chi-square test revealed that African Americans (n=8,270) tended to receive more adjustment training, job placement, transportation, other services and income maintenance. In contrast, European Americans (n=33,368) tended to receive more restoration and college.

For earnings, the t-test revealed a statistical difference among African Americans and European Americans and earnings at closure. There was a small correlation in the average hours worked at closure among African Americans and European Americans. There was no significant difference in medical insurance coverage among African Americans and European Americans at closure. European Americans tended to be closed in professional, technical, management twice as often as African Americans. Most consumers are closed more often in clerical and sales and, service positions. Without question, the largest purveyor of rehabilitation services in the United States is the state-federal system. In the 1988 federal fiscal year alone, over 275,000 persons were closed into either employment or independent living (Ficke, 1992). Despite predictions that racial-ethnic minorities will represent a large segment of the labor force in the future, and that disability tends to be more prevalent among these groups (Ficke, 1992), some evidence exists
suggesting that they may be under served by the state-federal rehabilitation system (Atkins & Wright, 1980; Dziekan & Okocha, 1993). Atkins and Wright stated that “Blacks fare worse than Whites at every step from referral to closure” (p. 44). This view is shared by the 1992 Amendments to the Rehabilitation Act of 1973, which stated that “patterns of inequitable treatment of minorities have been documented at all junctures of the vocational rehabilitation process” (Sec. 21 (a) (3)). Recognizing this problem, should be of paramount concern to the profession of rehabilitation (Wheaton, Wilson & Brown, 1996). The findings of this study should be interpreted with caution and future studies should include a National sample which would provide a more representative sample distribution.
To my namesake Devvon Maurice,

may your goals far exceed Auntie's
ACKNOWLEDGMENTS

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<tr>
<td>November 1, 1958</td>
<td>Born - Hamilton, Ohio</td>
</tr>
<tr>
<td>1984</td>
<td>B.A., Rehabilitation Counseling and Sociology, Wilberforce University, Wilberforce, Ohio</td>
</tr>
<tr>
<td>1985</td>
<td>M.Ed., Rehabilitation Services, Kent State University, Kent, Ohio</td>
</tr>
<tr>
<td>1996 - 1997</td>
<td>Visiting Instructor, Department of Rehabilitation, University of Illinois at Urbana-Champaign</td>
</tr>
<tr>
<td>1995</td>
<td>Adjunct Professor, Cultural Diversity and Rehabilitation Eastern Union Bible College</td>
</tr>
<tr>
<td>1995</td>
<td>Graduate Intern, The Ohio Rehabilitation Services Commission (RSA)</td>
</tr>
<tr>
<td>1994</td>
<td>Adjunct Professor, Wright State University</td>
</tr>
<tr>
<td>1993 - 1996</td>
<td>Graduate Trainee, The Ohio State University</td>
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CHAPTER 1

INTRODUCTION

African Americans and other underrepresented groups have historically been undeserved in the rehabilitation system (Cultural Diversity in Rehabilitation, 1992). There is a growing concern that the lack of representation of underrepresented groups in vocational rehabilitation service will continue to escalate with the projected demographic increase of ethnic minorities (Herbert & Martinez, 1992). According to Section 21 (b) of the 1992 Amendments to the Rehabilitation Act, emphasis has been placed on the importance of preparing minority persons for careers in vocational rehabilitation, independent living, and related services. In the conclusion to the Act, the following was noted: The documentation of inequitable treatment of minorities is prevalent in all major junctures of the vocational rehabilitation process. For example, African Americans are denied acceptance at a greater rate, are closed more often without being rehabilitated, are provided less training, and receive less money as compared to European consumers. Feist-Price (1995) posits that there are currently many racial-ethnic minorities who are not receiving services they deserve. And, this is especially true for African Americans.
In 1980 Atkins and Wright state that many African Americans are plagued not only with a "handicap of physical, mental, or emotional impairments" (p. 119), but also with being a member of a minority race. Researchers such as Marshall (1987) state that there are several factors which are relevant to African Americans with regard to vocational rehabilitation. First, there are a large number of African American adults with disabilities (14.1%), as compared to European Americans (8.4%) who have some type of disability. Some factors contributing to the high incidence of disability among African Americans could be that African Americans work in more physically demanding jobs which lead to impairment, or that they may not have access to the medical care which could prevent permanent disability (Alston, McCowan, & Turner, 1994).

Martinez and Herbert (1992) postulate that African Americans and other underrepresented groups are confronted with multiple stigmas (i.e., ethnicity, gender, age) which could contribute to a failure to reach their vocational potential. Moreover, Atkins (1988) espouses the view that the negative issues of racism and lowered employment expectations must be addressed by practitioners in the field of rehabilitation when working with clients from culturally diverse populations.

In addition, age, education and level of employment are believed to be especially pertinent to African Americans (Feist-Price, 1995). The latter for example, states the medians for who are disabled African Americans tend to be disabled at a age of 42, have a level of education less than high school, and an annual income
of less than $3,000. Atkins and Wright (1980) postulate that African Americans are confronted with issues of prejudice because of their disproportionate number of disabilities of handicaps, both physical and socioeconomic.

According to Marshall (1987), only one in four African Americans with disability are employed, and Briggs (1988) contends that sixty to ninety percent of African Americans under the age of 65 are unemployed or disabled. Herbert and Martinez (1992) state "it is clear that disabilities as well as ethnicity, and educational history represent important concerns to vocational rehabilitation counselors" (p. 10). As Feist-Price (1995) states, some of these numbers appear somewhat out-dated, but the premise seems to be unchanged. There continues to be a large percentage of African Americans who are not able to maximize their full potential through gainful employment.

**African Americans and Disabilities: Issues and Concerns**

African Americans currently comprise an estimated twelve percent (30 million) of the U.S. population, and are said to be the largest racial minority group in the nation (Alston & Mngadi, 1992). Although African Americans have continued to make progress as a group, there are still disparities. African Americans have been confronted with a lengthy history of socio-political problems miseducation, unemployment, underemployment, poverty, and economic oppression.
Historically, African Americans were brought to the U.S. and were compelled to conform to a Eurocentric lifestyle, forced to leave their customs, beliefs, morals, values and religious practices behind. Their social and cultural patterns reflect these historical events. Adjustments and adaptations have led to a myriad of social disequilibrium. The legacy of slavery has had a tremendous impact on the position and prospects of African Americans.

The experience of African Americans in America has been characterized by racism and hardship, and it is essential for the rehabilitation professional to acknowledge issues of cultural sensitivity as they relate to the client's rehabilitation. The socio-cultural experiences of African Americans are unique and warrant assessment. Generally speaking, African Americans have historically been plagued with underemployment. There are many African Americans who work, and have worked for minimum wages or less. Unfortunately this is not only true for the less educated but for those fortunate to acquire the necessary training, expertise, and other related skills as well.

Atkinson, Morten, and Sue (1989) state that unemployment is a significant issue to this group as compared to any other group, and it is reported that this group suffers the most. This is also true for under education and miseducation (Atkinson, Morten, & Sue, 1989). These issues often lead to many other problems.
General Information

According to the U.S. Bureau of the Census (1990), there has been a population increase of 13.2% for African Americans since 1980. It behooves society and professionals to prepare the way to better serve minorities (National Council on Disability, 1993). Leal (1993) describes African Americans as:

- The largest minority population in the United States - 12% of the general population.
- Having a high school graduation rate of 64% in 1987 compared with 77% of European Americans.
- Living below the poverty level at a rate of 31.1% in 1986 compared with 11% of European Americans.
- Being the minority group with the worst health status. (pp. 11-120).

Bowe (1992), states that an estimated 2,512,000 African Americans who were working age were adults with disabilities according to the 1988 Bureau of Census Current Population Survey Data. Walker, Maholmes, Rackley and White (1991) report that the major studies on minorities with disabilities suggest they are on lower levels as far income, and education, as compared to their European American counterparts. There is clearly a need for more research on minority populations with disabilities.

The National Council on Disability (1993) reports that the lack of research on disabled minority populations has been largely due to two reasons: (1) Minority
populations have been occupied with survival needs and with the struggle to eliminate discrimination and racism; therefore minorities have not made disability issues a priority. (2) The disability community has been preoccupied with general disability issues, such as access to health insurance, personal assistance services and assistive technology; and they have not emphasized issues specifically affecting minorities with disabilities (p. 14).

Purpose of the Study

The purpose of this study is to compare the rehabilitation outcome of African Americans to European Americans. They will be compared according to outcome, number and type of services received, wages and hours worked per week at closure, insurance coverage if rehabilitated, and type of occupation at closure according to the first digit in the Dictionary of Occupational Titles (DOT). The state/federal vocational rehabilitation (VR) system provides an array of services driven by guidelines established by individualized needs of the consumer (e.g. training, restoration, counseling and guidance, transportation, and maintenance). Services are provided based on the development of the individualized written rehabilitation plan (IWRP). Services are then rendered directly by the VR agency, or are purchased for clients. The state/federal VR system is the largest agency serving Persons with Disabilities (PWD) since 1920. There are some differences from state to state but the overall system is defined by federal regulations.
Each state vocational rehabilitation agency is responsible for providing services in each of the field offices which are staffed by vocational rehabilitation counselors and other personnel. Each VR agency provide services that are individualized and based on eligibility guidelines. VR is defined by an individualized written rehabilitation plan (IWRP). When the consumer enters evaluation, and is determined eligible for services, an IWRP must be developed by the consumer and an appropriate representative (e.g., vocational rehabilitation counselor). The IWRP must include, but is not limited to, the following:

(a) Eligibility: Whether the client is eligible for an extended evaluation.
(b) Objectives: Long range and intermediate rehabilitation objectives are based on diagnostic study which will ameliorate vocational limitations.
(c) Services: Specific VR services are provided to reach objectives, and the projected beginning date and anticipated duration of each service.
(d) Progress: How progress toward the objectives will be measured using objective criteria, and how often they will be measured; and an assessment, prior to case closure, of the need for ongoing support services.
(e) Client Views: The views of the client (and as appropriate his or her parent, guardian, or representative including suitable and informed professionals and advisors) about the goals and services.
(f) Client Duties: The client's duties in implementing the IWRP, including the extent of participation in the cost of services.
(g) Comparable Benefits: What comparable benefits the client may be eligible for, and what comparable benefits will be used.
(h) Supported Employment: The on-
going support services that will be needed, if applicable, and who will provide them (i.e. state, federal, or private organization, family or private for-profit organization such as an employer). (i) Client Rights: Informing the client of his or her rights, including the methods of appeal, and of the Client Assistance Program.

Each state agency has status numbers, commonly referred to as "Statuses" which are the steps that consumers go through in the process of receiving services. The following is a list of the status numbers which will be used in the present study:

(00) Referral
(02) Application acknowledged
(04) Extended evaluation (six months)
(06) Extended evaluation (eighteen months)
(08) Ineligible (from status 02, 04, or 06)
(10) Eligible (from status 02, 04, or 06)
(12) Rehabilitation plan completed
14) Counseling
(16) Restoration
(18) Vocational training
(20) Services completed
(22) Trial employment
(24) Services interrupted
The following sections address the significance of the problem, need for study, research questions and variables, hypotheses, research design and methodology. This chapter concludes with assumptions and limitations of the study.

**Significance of the Problem**

The demographic picture in the United States is changing rapidly, particularly among ethnic groups. Some scholars have projected that by the year 2000, approximately eighty-six million of the total U.S. population will be from ethnic minority groups (U.S. Congress, 1990). Kundu and Dutta (1992) reported that by the end of this century, one of every three Americans will be a person of color.

They stated, that in 1990 African Americans were a burgeoning 29.3 million (which is an increase of 13.6% over the 1980 figure). The 1990 Census reflects a 2.4% increase over and above the 1988 statistic (30 million). It has been projected that by the year 2000 there will be an estimated 35 million African Americans accounting for a 16.7% increase within a decade (Kundu & Dutta, 1992).
According to Walker, Orange, & Rackley (1993), disability within a minority group is one and one half to two times greater than within the general population. For example, African Americans in the age group of sixteen to sixty-four years constitute a larger segment of minority PWD than any other age group. Furthermore, minorities with disabilities are more likely to be considered ineligible for rehabilitation services, receive fewer services and close fewer cases are closed successfully as compared to European Americans (Atkins & Wright 1980). There seems to be a need to address the quality of rehabilitation services for PWD who are African Americans and who are from other ethnic minority groups.

**Significance of the Study**

The importance of providing effective VR services has been well established in the field of VR (Atkins & Wright, 1980; Ayers, 1977; Briggs, 1988; Dzeikan & Okocha, 1993; Rusalem & Malikin, 1976; Wright, 1980). A comparative study conducted by Dzeikan & Okocha (1993) investigated the acceptance of “minority” and “majority” PWD in a Midwestern VR facility. The following results were found: for the majority individuals VR services were effective at a rate of 60% or greater as compared to minorities (under 50%). Similarly, Herbert and Martinez (1992) similarly studied whether there was a difference in the service participation of African Americans and European Americans through the Pennsylvania State Department of Vocational Rehabilitation. The study reported the following results: African Americans were more likely than European Americans to be assessed as
being ineligible for VR services (39.5% vs. 28.8%). And European Americans had a higher percentage of a successful rehabilitation case closures (42.3%) compared to African Americans (31.2%). It is apparent that a need exists to explore indicators which may address some of these inequities.

Research Questions and Variables

The following research questions will be answered by this study: 1) Do African Americans and European Americans significantly different in terms of rehabilitation outcomes as defined by the state/federal vocational rehabilitation system following participation in one or more services offered? 2) Is there a significant difference in the total number of services received by African Americans and European Americans as identified on the RSA 911 code sheet? 3) Is there a significant difference in the type of services African Americans and European Americans receive as identified on the RSC 0001 form? 4) Do African Americans and European Americans differ in the quality of rehabilitation outcomes, as measured by the following variables: earnings at closure; hours worked per week at closure; insurance coverage at closure; and finally, type of occupation according to the first digit of the DOT at closure?

Variables

The independent variable in this study is racial-ethnic status which is a categorical variable. For the purpose of this study, racial/ethnicity was defined as the race assigned to the person at his or her application for VR services. The
Rehabilitation Services Administration (RSA) (1995) defines a person as “White” if he or she is “a person having origin in any of the original peoples of Europe, North Africa, or the Middle East,” and a person as “African American” if he or she is “person having origin in any of the black racial groups of Africa” (p. 5). The dependent variables, received at closure, are rehabilitation outcome number (interval variable), rehabilitation outcome type (categorical, with 13 possible services), wages (continuous variable), hours worked per week (continuous variable), insurance (dichotomous variable) and type of occupation (categorical variable with nine levels).

Two of these dependent variables warrant further clarification at this point. They are rehabilitation outcome number and rehabilitation outcome type. Rehabilitation outcome number is defined as Status 26 (working) or Status 28 (case closed, not working, after services received). Status 26, closed rehabilitated, occurs when all of the following criteria are met: (a) a diagnostic assessment has been provided; (b) counseling and guidance has been provided; (c) appropriate and substantial services have been provided in accordance with the Individualized Written Plan (IWRP); and the consumer has maintained suitable work for at least 60 days (Ohio Rehabilitation Services Commission, 1995). Cases are closed Status 28 after eligibility for services has been determined and VR services have been provided and one of the following occurs: (a) the consumer cannot be located; (b) handicap too severe, (c) refused service, (d) death, (e) client institutionalized,
(f) transfer to another agency, (g) failure to cooperate, (h) no disabling condition, (i) no vocational handicap, (j) transportation not feasible (k) client declined order of selection and (l) other (Ohio Rehabilitation Services Administrations, 1995).

Rehabilitation outcome type is the second dependent variable in this study. The state/federal agency under study identified thirteen possible services: diagnostic, counseling, adjustment training, restoration, college/university training, business/vocational school training, miscellaneous, on the job training, job placement, transportation, maintenance, job referral and other services. Therefore, a person could receive from one to thirteen services.

Hypotheses

The following hypotheses will be tested in the present study:

1) Do African Americans and European Americans significantly differ in terms of rehabilitation outcomes as defined by the state/federal vocational rehabilitation system following participation of one or more services offered?

H0: There is no significant difference in the rehabilitation outcome of African Americans and European Americans.

H1: There is a significant difference in the rehabilitation outcome of African Americans and European Americans.
2) Is there a significant difference in the total number of services received by African Americans and European Americans as identified on the RSA 911 code sheet?

H0: There is no significant difference in the number of services African Americans and European Americans receive.

H1: There is a significant difference in the number of services African Americans and European Americans receive.

3) Is there a significant difference in the type of services African Americans and European Americans receive as identified on the RSC 0001 form?

H0: There is no significant difference in the type of services African Americans and European Americans receive.

H1: There is a significant difference in the type of services African Americans and European Americans receive.

4) Do African Americans and European Americans differ in the quality of rehabilitation outcomes, as measured by the following variables: wages at closure; hours worked per week at closure; insurance coverage at closure; and finally, type of occupation at closure?

H0: There is no significant difference in the quality of outcome based on wages, hours worked per week, insurance coverage
and type of occupation at closure for African Americans and European Americans.

H1: There is a significant difference in the quality of outcome based on wages, hours worked per week, insurance coverage and type of occupation at closure for African Americans and European Americans.

Definition of Terms

The following terms were determined to need further clarification:

Persons with disabilities

Physical disabilities are defined as those disabilities whose origins are not psychological in nature. They include: deafness, hard of hearing, amputations, orthopedic impairments, cerebral palsy, mental retardation and other developmental disabilities, epilepsy, heart disease, and speech conditions which are physical in nature (Ohio Rehabilitation Services Commission, 1994).

Status 26

When an consumer has completed 60 days of employment successfully, his her case is closed Status 26. Status 26, closed rehabilitated, occurs, when all of the following criteria are met:

(a) a diagnostic assessment has been provided;

(b) counseling and guidance has been provided;
appropriate and substantial services have been provided in accordance with the Individualized Written Rehabilitation Plan (IWRP); and the consumer has maintained suitable work for at least 60 days (Ohio Rehabilitation Services, 1995).

**Status 28**

When an individual fails to complete VR services by achieving employment after rehabilitation services have been provided, his or her case is closed Status 28. Cases are closed Status 28 after eligibility for services has been determined and VR services have been provided and one of the following occurs: (a) the consumer cannot be located; (b) the consumer dies; (c) the consumer is incarcerated or institutionalized and will be unavailable for services for an indefinite or lengthy period of time; (d) the consumer has refused services or further services or has failed to cooperate; (e) the consumer cannot accept or maintain a job because transportation is not feasible or not available (Ohio Rehabilitation Services Administration, 1995).

**Type of occupation:**

Occupation is recorded on the RSC-0001 closure by considering the first digit of the occupational code from the Dictionary of Occupational Titles (DOT).

**Hourly wage at closure:** Wages earned by the consumer at case closure.

**Hours worked at closure:** Hours the consumer worked per hour at case closure.

**Insurance at closure:** Medical Insurance coverage of consumer at case closure.
Vocational Rehabilitation Services (VRS): Categories of VRS rendered by RSC include: diagnostic, restoration, college, vocational training, adjustment training, on the job training, miscellaneous training, counseling, job referral, job placement, transportation, maintenance, and other services.

African American: The Rehabilitation Services Administration (1995) defines a person as “Black” if he or she is “a person having origin in any of the black racial groups of Africa” (p.5) and is referred to as African American in this study.

European American: The Rehabilitation Services Administration (RSA; 1995) defines a person as “White” if he or she is “a person having origin in any of the original peoples of Europe, North Africa, or the Middle East,” (p. 5) and is referred to as European American in this study.

Miseducation: For the purpose of this study miseducation is defined as inadequate educational preparation.

Underemployment: substandard employment opportunities.

Areas: The Ohio Rehabilitation Services Commission is divided into four geographical areas: 1) Northwest 2) Northeast 3) Southwest and 4) Southeast Each area is supervised by an Area Manager.

Kinship: Kinship is defined as any relative or extended family member.
CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this study is to investigate the rehabilitation outcome, number and type of services received, wages, hours worked per week at closure, insurance coverage, and occupation according to the first digit of the DOT upon closure status. These services are provided by a state/federal VR agency in Ohio. The following sections address the significance of the problem, need for study, research questions and variables, hypotheses, and research design and methodology. This chapter concludes with assumptions and limitations of the study.

An historical overview of rehabilitation

During the 1960s and 1980s, the profession of rehabilitation underwent tremendous change. PWD of minority status were looked upon as "devalued," "disadvantaged," and "disabled" (Cultural Diversity in Rehabilitation, 1992 p. 24). Many were looked upon as undeserving and incapable. As a result, the overall success of the rehabilitation system in the United States was thwarted (Cultural Diversity in Rehabilitation, 1992).
At a conference in 1967 entitled “Rehabilitating the Cultural Disadvantage,” Ayers noted that the delivery of rehabilitation services was experiencing significant change. The “socially disadvantaged” (members of minority culture groups) were not receiving services at the rate of their European American counterparts.

The purpose of this conference “Rehabilitating the Cultural Disadvantage,” held at Mankato State College in 1967 was to provide state directors and selected administrative personnel from the Rehabilitation Services Administration and Region IV with the following information: (a) the essential information relative to the characteristics and problems of, as well as the methods for, rehabilitating the culturally disadvantaged; (b) the opportunity to cooperatively develop criteria for utilization by state VR agencies in diagnosing cultural deprivation; and (c) an opportunity to delineate and develop procedure for increasing the provision VR services to the culturally disadvantaged (Ayers, 1967). As indicated at another conference during the same era similarly titled “Rehabilitating the Culturally Disadvantaged,” the National Rehabilitation Association (NRA, undated) published “Ethnic Differences Influencing the Delivery of Rehabilitation Services” in which Kreimer asserted:

“It is a recognized fact that most professional workers in rehabilitation are far from adequately prepared to work affectively (effectively) with many of the socially and culturally disadvantaged people who happen to be members of minorities and
who face the additional problems associated with minority status.” (Kreimer, undated, p. 5).

The latter further noted the need to sensitize professionals working with minorities and the importance of the professional sensitivity and success of these clients. The message was to target problems and attitudes related to the rehabilitation of minorities, and to make the profession of rehabilitation more aware of minorities with disabilities.

Kunce and Cope (1969) offered what was considered some controversial views of PWD as “culturally disadvantaged.” These were labels that were considered acceptable at the time, however today such labels are considered “offensive, stereotypic, and discriminatory” (Cultural Diversity in Rehabilitation, 1992, p. 28). While these labels have appeared in subsequent years in the rehabilitation literature, some improvement has been made to more effectively serve culturally diverse populations.

In 1970 the Vocational Rehabilitation Regulations Section 402.1 defined “disadvantaged” as:

"Disadvantaged individual means any individual disadvantaged in his ability to secure or maintain appropriate employment by reason of physical or mental disability, youth, advanced age, low education attainment, ethnic or cultural factors, prison or delinquency records, or any other condition, especially in
association with poverty which constitutes a barrier to such employment” (RSA, 1970).

In 1970, RSA conducted a study in which the counselors ranked the following problems of rural disadvantaged population.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Problem</th>
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<tbody>
<tr>
<td>(1)</td>
<td>The nature of client’s motivation.</td>
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<tr>
<td>(2)</td>
<td>Inadequate economic opportunities.</td>
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<tr>
<td>(3)</td>
<td>Client’s educational/vocational deficiencies.</td>
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<tr>
<td>(4)</td>
<td>Client’s health-related problems.</td>
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<tr>
<td>(5)</td>
<td>Unavailability of needed medical, psychological, educational and vocational facilities.</td>
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<tr>
<td>(6)</td>
<td>Inadequate public transportation.</td>
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<tr>
<td>(7)</td>
<td>Client’s lack of financial resources.</td>
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<tr>
<td>(8)</td>
<td>Lack of counseling &quot;know-how&quot; to serve this group.</td>
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The report concluded that in 1970, 58.7% of African Americans lived in rural areas and many chose not to migrate to metropolitan areas. According to Amos and Grambs (Cited in RSA, 1970) “the characteristics of the migrant rural disadvantaged can be defined as having minority group status, poor and intermittent educational opportunities, there are generally low aspirations of parents, need to supplement family income, and isolation from normal community life and resources” (p. 9). According to McPhee (cited in RSA, 1970) during this time the unemployment rate
was about 4% nationally, and 18% to 37% for the rural population. These findings yielded disturbing results which indicated a need to do outreach with this population. The findings also set in motion a redefinition of VR goals and objectives.

Rehabilitation and Contemporary Issues

The ethnic and cultural shape of the U.S. is changing significantly (Kellogg, 1988). The fact that the population of the U.S. is “22% Black, Hispanic, Asian, and Native American, and ... by the end of the century, half the work force will be Black and Hispanic” (Jackson, 1988, p. 29) forces us to look at the professional services that are currently provided, (i.e., counselors in the schools, community agencies, private practice, industry as well as VR) (Abraham & Arrendo, 1990). There are a number of issues that continue to face African Americans and other ethnic minorities on every institutional level. For example, African Americans are reported to be greatly impacted in the educational arena. They tend to be expelled from school more often (Carnegie Corporation of New York, 1984/1985) are more often tracked into vocational classes rather than academic classes (Oakes, 1988) and are over represented in special education classes as opposed to gifted classes (Baldwin, 1987; Reschly, Kicklighter, & Mckee, 1988; Richert, 1987; Samuda 1975).

Pine (1972) stated the following views and attitudes by minorities:

“...what it is, is a waste of time; that counselors are deliberately shunting minority students into dead-end, non-academic programs despite student potential,
preferences, or ambitions; that counselors discourage students from applying to college; that counselors are insensitive to the needs of students and the community; that counselors do not give the same amount of energy and time in working with minorities as they do with white-middle-class students; that counselors do not accept, respect, and understand cultural differences; that counselors are arrogant and contemptuous; and that counselors do not know how to deal with their own hangups" (p. 35).

African Americans also are reported to receive fewer services in the mental health systems in the United States (Atkinson, Morten, & Sue, 1989; D'Andrea & Daniels, 1991). Buss (1966) raised the issue of fundamental approaches in defining mental health: Normality is a statistical concept. Normality is what frequently occurs in the population. On the other hand, we define and equated abnormality with those characteristics that are the least frequent. The bell curve, which is frequently used in IQ tests, achievement tests, and personality inventories, is an example of a measurement of 'normality.' With this criterion, the culturally different are at a disadvantage. It places minorities at a disadvantage for the following reasons: (1) the standard/measurement is based on a white-middle class norm group; (2) if deviations of abnormality should occur from the majority, ethnic minorities would be considered abnormal." (Buss, 1966) For example, a group of African Americans were given a personality test and it was found that African Americans tended to score high on suspiciousness of their counterparts. Some
psychologists and educators used such findings for labeling African Americans as paranoid (Sue, 1981). However, Grier and Cobbs (1968) stated that when minorities were brought up under different norms and had been consistently affected by oppression in a racist society, they might in fact have reason to be suspicious and distrustful. In their book, Black Rage, they described this “paranoid orientation” to be functional rather than a dysfunctional mechanism given the opposition that African Americans have faced.

The second reason was the use of the ideal mental health criterion, which was reported to be deficient in that it defines Normality vs. Abnormality as having a universal value base (Sue, 1981). This criterion did not take into account issues of race, culture, beliefs and values. As Yamamoto, James and Palley (1968) postulated clients of minority status tended to be diagnosed differently, and received a less preferred mode of treatment.

As Buss (1966) stated, the issue of IQ and its validity has been challenged, particularly for minorities and people of color. The validity of IQ and people of color is still being challenged today. The furor over race and IQ was rejoined by the book The Bell Curve, by Charles Murray and the late Harvard psychologist Richard Herrnstein (Morganthau, 1994). Murray and Herrnstein attempt to validate the IQ disparity between African Americans and European Americans. They propose that the reason so many African Americans are mired in poverty is that they are at an intellectual disadvantage compared to their white counterparts. They also insist
that they are ahead on all levels because whites are intellectually superior to African Americans genetically and otherwise.

Moreover, Thomas and Sillen (1993) stated that white racism has predominated the United States for centuries. They postulated that out of this history of racism are “a thousand variations on two basic themes - black people are born with inferior brains and a limited capacity for mental growth, and their personality tends to be abnormal, whether by nature or nurture” (p. 1). They further stated that these concepts of inferiority complicate and sanction inferiority and pathology.

Bowie (1983) agreed that an African American who is disabled is more likely to be female (53.9%), 42 years of age, have less than a high school education, and be unemployed. Bowie furthermore related that for decades when scholars and writers have dealt with general issues regarding people with disabilities the focus has usually been on White males. Further, African American women with disabilities were more likely to be confronted with their gender, race, and disability (Hanna & Rogovsky, 1992). There is clearly a racial contrast in disability rates among men and women who are African American (Asbury, Maholmes, Rackley, & White, 1989).

A Census Bureau report (1984) revealed that rates of disability in African American women between the ages of forty and forty-nine are much higher than with any other population group. For example, African American and
European American men reported a disability at 25% respectively, and European women were reported at 24%. For African American women disability was reported at 42%. Headen and Headen stated that "black women are at increased risk (compared with other groups) for illness and disability from a variety of chronic illnesses that require a lifetime of medical care to control both acute and long-term effects" (p. 191).

As stated by Hanna and Rogovsky (1992) there are a number of sociocultural factors that interplay with African American women (e.g., sex ratio number of "eligible" African American men, social roles perceived as not having the capacity to accomplish traditional roles, and spatial mobility which often limits opportunities because of post-industrial deconcentration (Hanna, 1992) and inadequate or unreliable transportation (Belgrave & Walker 1991). Solomon (1976) and Lincoln (1984) support the importance of extended family and church as significant for African American women with disabilities.

Frieden (1988) stated that 16.4% of African Americans with disabilities were employed at this time, and their annual salaries were, on the average, of less than $3,000. The Rehabilitation Services Commission of 1994 wages report revealed that: in seven of the eight areas of the Bureau of Vocational Rehabilitation (BVR) and the Bureau of Services for the Visually Impaired (BSVI) there is a greater percentage of European Americans than African Americans earning more than minimum wage. For example, the average hourly wage for European Americans in the four areas of
BVR there was $6.54 to a total average of $6.36. In the four BSVI areas the average hourly wage was $7.26 to a total average of $7.91. African Americans average hourly wages in the four BVR areas was $5.57 to a total average of $5.77. In four BSVI areas the average hourly wage was $6.00 and the total average of hourly wage was $7.48.

Wright (1980) contended that traditional or standard vocational rehabilitation does not work for the African American client. African American PWD who encounter disability issues are faced with extraordinary circumstances. They have had to contend with a minority status which has prohibited many opportunities on every institutional level. In addition, they are now faced with the same issues of disability encountered by all persons with physical, emotional, or cognitive impairments (i.e. unemployment, underemployment, second class status).

Psycho-social adjustment also seems to be of paramount importance as we assess the conditions of African American PWD. The PWD is impacted greatly and often suffer self-esteem problems that often lead to feelings of inferiority. The African American client with a disability often bears the double burden of this self esteem problem as well as the effects of racism. Wright (1960, 1983) states that these negative emotions that the PWD make it harder to adjust for a number of reasons (i.e. they are already perceived as less valued and plagued with stereotypes). When this is not addressed by trained culturally sensitive personnel, the client encounters difficulty in reaching their vocational potential. Whether the disability is congenital or otherwise incurred, the African American client is
vulnerable and may often become consumed with his or her disability and find it difficult to disclose.

**Cultural Relevancy: Implications for Rehabilitation Counseling and African Americans**

Given the present state of African Americans in vocational rehabilitation, there is much work to be done. The literature seems to suggest that this population represents some critical concerns in vocational rehabilitation. The literature also seems to support the belief that traditional vocational rehabilitation models with this population are of limited effectiveness (Atkins 1988). For example, the National Institute of Mental Health (NIMH; 1981) reported concerns about the underutilization of mental health services by minorities. Martin (1988) stated there was a need to “develop model programs and clinical treatment standards that are culturally and ethnically appropriate” (p. 1). Although these programs speak to mental health issues there seem to be similar concerns for rehabilitation services in federal/state VR programs.

African American consumers are a unique population and require certain expertise when working with them. Rehabilitation counselors should be aware of the cultural issues that are important to African American clients as well as providing the support the client needs. Wright (1988) pointed out it is not enough to just be culturally aware with consumers but rather be sensitive to individual needs as well. Preservice is a recommended tool that can be utilized (Alston &
Mngadi, 1992). Workshops and seminars are good sources to use, as they provide a forum to discuss issues, ideas and concerns (Atkins, Crystal & Alston, 1994). "Rehabilitation counselor education programs (RCE) can increasingly expect to provide the necessary preservice and in-service training which will enhance the ability of rehabilitation counseling professionals to provide rehabilitation services" (Wright, p. 4). There are professionals from various areas (i.e. mental health, VR, college professors as well as other disciplines) who are concerned with the success and rehabilitation of clients. Each discipline would bring to the table knowledge and skills that will benefit each other, and ultimately the consumer.

Because the demographics in the next century will have a great impact on the American society, the focus on ethnic minority concerns has increased (Lee, 1989). With this increase is a need to strategize a plan to effectively work with minority clients, students and employees. Ramirez (1991) discussed the Multicultural Model of Psychotherapy and Counseling and stated that the Counselor should understand that the model addresses the special needs of a client who is of a minority status: (1) The therapist or counselor is encouraged to respect their client's origins as it relates to their cultural and cognitive styles, serving as a foundation for multicultural development and development of the personality. (2) The therapist or counselor is encouraged to become aware of the client's culture and cognitive styles. (3) The therapist or counselor should use the opportunities to develop multicultural growth offered by a diverse society, and encourage clients to take
challenges that promote diversity/growth. (4) Clients should be encouraged to be “change agents,” not only to enhance their own multicultural development, but to promote social justice, peace, and cooperation for all society’s citizens.

From these variables, issues concerning the multicultural movement have continued to surface within many professional counseling organizations and training programs. When a minority client comes into a counseling session, he or she has already suffered some common elements of racial discrimination, (i.e. socio-political oppression, miseducation, alienation, miseducation and feelings of hopelessness). Thus, the ability to key into these issues becomes crucial. Unless the counselor can provide a framework that is non-biased and nonjudgmental, the client is lost in the counseling session.

Baldwin (1979) postulated about the use of one group’s experiences to interpret another group’s experiences. Eurocentric models can-not be presumed as a measure which can speak to the needs of African Americans and other minorities. Eurocentric models ignore the quality, nature and culture of African Americans. Variations of these types of models are treated as pathological. Atkinson (1985) and Boykin (1983) presented new models which valued ethnic minorities, and acknowledged and valued a client’s strengths and beliefs.

The culturally competent counselor “must be able to understand, appreciate, and accept clients perceptions of their relationships to nature, persons, and institutions” (Herbert & Cheatham, 1988, p. 52). This perception was further
explained by Sue (1977) as the client's world view, how it affects client's thinking, behavior, decision making and interpretation of life events. The culturally competent counselor can create the nurturing environment needed to assist consumers and a mutual, reciprocal relationship can take place between the consumer and the counselor.

Sue further stated that there are three influences which counselors should understand, as they relate to the client's world views: (a) control ideology, the belief that external forces play a role in one's success or failure, and how this ideology is strongly associated with the Protestant work ethic. That is, when an individual works hard, puts forth an effort, has skills and abilities, the individual will be successful; (b) personal control, that is the individual has an understanding of self-efficacy/competence as it relates to the degree of a control an individual has in life and finally; (c) locus of responsibility, the extent to which one blames oneself or the system for what happens. Sue stated, the counselor who has an understanding of these three influences will better understand the worldview of their client's would be less likely to impose their own worldview on the client, and may better understand the psychological dynamics of a culturally different consumer. Unfortunately, when this does not occur, the counseling relationship may suffer greatly, particularly with African Americans and other ethnic minority consumers. These issues would therefore seem crucial to the rehabilitation process.
Traditional counseling models are unable to appropriately adhere to the cultural and ethnic needs of clients (Smith, 1981). The latter asserted that traditional counseling models share four common assumptions: (a) client problems are intrapsychically based, as opposed to originating on the outside of the client; (b) client problems can be resolved internally; (c) clients are familiar and comfortable with counselor/client roles and; (d) talk rather than direct action is a much more desirable counseling approach. He further stated that these traditional counseling models do not work (Smith, 1981). Axelson (1993) studied the old versus new counseling theories and stated that theoretical approaches to therapy have historically been accurate gauges for the problems of modern Western society. He further stated that theorists typically use theories that are acceptable to the dominant culture. For example, Freudian concepts had tremendous influence on psychological reality in Western society. Other notable theorists (i.e. Roger, Glasser, and Adler) have also generalized their principles to Western society. Therefore, traditional counseling has failed to fulfill its promises to the culturally different.

Constantino and Blumenthal (1989) described some useful culturally sensitive interventions, which they feel will enhance services provided to ethnic minorities: (a) traditional services should be provided in a more accessible fashion; (b) specific intervention modalities should reflect features of the client's culture and; (c) aspects of specific culture, modifying traditional interventions and strategies, should be used.
There are many different cultures that coexist in American society. It is impossible to separate individuals from their histories or their cultures. If rehabilitation professionals wish to serve all clients effectively, it is important to recognize culturally based beliefs, values, and behaviors. Cultural elements such as language, family roles, sex roles, and religious beliefs can play a significant role in the etiology, symptom manifestation, and rehabilitation treatment of disabilities. Culture can influence beliefs about both the causation of illness or disability, and the conditions that qualify as sickness (i.e. expectations and what the person should do and expectation and actions of others). The assessment and rehabilitation process should include socio-cultural elements so that the client can be more accurately and effectively evaluated rehabilitated (National Institute on Disability and Rehabilitation Research (NIDRR) 1993).

Obstacles Facing African Americans Seeking Vocational Rehabilitation Services

There still exists a large consumer pool of African Americans who are disabled, and the rehabilitation services provided can be two to three times lower as compared to European Americans within the public and private sector (Walker, Akpiti, Roberts, Palmer, & Newsome, 1986). Similarly, Herbert and Cheatham (1988) reviewed research dealing with rehabilitation service delivery to African Americans and found African Americans tend to be accepted for services less often than European Americans. Furthermore, African Americans cases were likely to be closed without job placement and generally receive lower weekly incomes.
Brewington, Daren, Arella, and Randell (1990) identified three obstacles that could impede successful VR for PWD. They are the client, society, and the nature of the rehabilitation program. Alston and Bell (1996) stated these three variables may account “for the low representation and poor success of African Americans in rehabilitation” (p.16).

As stated by Atkins (1986) all clients enter the rehabilitation system with beliefs, attitudes, values and goals which are to a large extent predefined by the client's previous life experiences. Alston and Bell (1996) noted that African Americans with disabilities encounter negative stereotypes that are typically held by the majority of society. In addition, many African Americans who are disabled deal with a combination of societal ills (i.e. racism, discrimination and prejudicial attitudes). Alston and Bell (1996) further discussed that these experiences not only affect how African Americans with disabilities see themselves but also their “attitudes toward the rehabilitation process” (p. 17).

Cultural mistrust has been noted as a possible obstacle to successful rehabilitation for African Americans. For example, Terrell and Terrell (1981) defined cultural mistrust as the tendency for African Americans to distrust European Americans. They stated that cultural mistrust can be found in the following areas: 1) educational and training settings, 2) work/business settings 3) interpersonal/social settings, and manifestation of cultural mistrust surfaced in response to other issues (i.e. racism) (Terrell and Terrell, 1981; Triandis, 1976).
Low expectations are said to be associated with cultural mistrust (Nickerson, Helms, & Terrell, 1994; Thompson, Worthington, & Atkins, 1994). They proposed a hypothetical counseling scenario in which African Americans were assigned to white counselors and the client's expectation of the counselor was to show minimum involvement (i.e. to be less accepting, not trustworthy and expected less in relation to counseling outcome) (Watkins & Terrell, 1988). Watkins, Terrell, Miller, and Terrell (1989) found in another analogous study that African Americans believed white counselors to be less "reliable and sincere" (p. 17) (Alston & Bell, 1996). Furthermore, African Americans felt that white counselors were less able to provide them help with their feelings of anxiety, inferiority, dating difficulties and shyness (Bordin, 1955; Singer, 1970). Thus, client counseling expectation and the interaction clients have with their counselor is significant. Therefore, trust and credibility between the counselor and client is crucial to the success of an effective rehabilitation program (Alston & Bell, 1996).

Cultural mistrust appears to be a direct link to the rehabilitation process of African Americans. For example, Feist-Price and Ford-Harris (1994) suggested that African American clients may struggle with opening up (i.e. introspection) and processing their feelings and the White counselor is often a reminder of the negative experiences they have encountered in the past. Also, self-disclosure is not easy for the African American client. With existing institutional racism, African Americans with disabilities would more likely display resistance and reluctance to the white
white rehabilitation professional. Subsequently, their historical experiences (i.e. police brutality, housing discrimination, credit discrimination and life experiences) could impede successful rehabilitation and as a result, African Americans tend to respond unfavorably to institutions like the state/federal rehabilitation system (Alston & Bell, 1996).

Minorities: Vocational Rehabilitation Services

According to the National Institute On Disability and Rehabilitation Research (NIDRR), 1993 there are a disproportionate number of members of minority groups represented at the low end of the economic spectrum. They are among a high percentage who are unemployed and Census Bureau data corroborate the high incidence of disability among minority groups 14.3% of black males, and 14% black females reporting a disability, as compared to white males at 9% and white females at 7.8% (NCD, 1993). There are also other racial-ethnic groups who are underrepresented in service delivery and success in VR. For example, according to data from the 1989 Census, American Indians had work-related disabilities at about one and one-half times that of the general population. Asian/Pacific persons are also disproportionately disabled and 12 percent of this population lives under the poverty level (Census Bureau, 1980). For example, Asian Americans/Pacific Islanders are: (a) fastest growing population in the United States - 2% of the general population. (b) major subgroups are Filipinos, Chinese, Japanese, Vietnamese, Asian Indians, and Koreans. (c) data are scant on health risks and morbidity patterns. (d) only a few
epidemiologic surveys have been done in the West and most studies have been conducted in Hawaii. (e) median family income is higher than that of other minority groups and European Americans; however, Vietnamese have a very low average family income (NCD 1993 p.12).

Studies show that there have been serious service delivery and success rate disparities among minorities. For example, placement rates are disproportionately lower for racial-ethnic groups than those of white clients. Of 2.5 million Hispanics of working age who were reported disabled in 1981, 25,000 were rehabilitated by rehabilitation programs. As a group, Hispanic Americans (Latino Americans) are:

(a) the second largest minority group in the United States - 8% of the general population. (b) a heterogenous group composed of people of Mexican, Cuban, Puerto Rican, and Central and South American origin. (c) common linguistically with Spanish - either as a first or second language. (d) considered an ethnic group and are classified as “white” 90% of the time in racial categories. (e) saddled with a completion rate of high school of only 49% at age 25. (f) significantly greater in a proportion of the children under 18 years of age living in poverty non-Hispanics (47.7% vs. 38.3%). (g) arguably closer in health status to that of European Americans than that of other minority groups (NCD, 1993 p. 13). Similarly, African Americans and American Indians experienced difficulty utilizing and accessing the rehabilitation system and benefiting from it as has been manifested in low referral rates, high dropout rates, and low success rates as indicated in the factors described above (NIDDR, 1993). Native
Americans and Native Alaskans, reported to be one percent of the general population, the smallest minority group in the United States, have similar poverty rates to African Americans and Hispanic Americans, yet are reported to have the second worst health status among minority groups, after African Americans (NCD, 1993).

There are many ethnic minorities in this country who are disabled themselves and work on behalf of the problems that surround cultural insensitivity and rehabilitation. Robert Davila, former Assistant Secretary of the U.S. Department of Education's Office of Special Education and Rehabilitative Services (OSERS) is Mexican American and disabled. He noted that in order to be effective and improve the quality of service delivery, the rehabilitation profession needs to recognize cultural values of minorities and adopt service delivery approaches accordingly.

The African American Family and Traditional Values

The institution of family is very important to the African American client. Traditionally, the family of African Americans has played a major role in the overall developmental process, and it is of particular importance to African Americans. According to Hines and Boyd-Franklin (1989), African American families have developed numerous coping strategies to deal effectively with crisis (i.e. divorce, disability, drug abuse). In addition, much of the strengths of African Americans families can be contributed to their survival amid the issues of psychological economic and environmental stressors as aforementioned (i.e. miseducation, underemployment, unemployment and other related issues). According to Hill (1972) and Hines and
Boyd-Franklin (1989), the strength of the African American families is described in the ability to maintain a strong kinship bond, role flexibility, strong religious orientation, and strong work and education ethics. These characteristics were also found in a study conducted by Alston, McCowan, and Turner (1994). This study suggests that African American families have the cultural resources for rehabilitation success. The rehabilitation counselor needs to know how important family is to the African American client, and how it is vital to the success of the rehabilitation process.

The internal and external relationships that make African Americans strong are kinships. African Americans believe in the extended family and have been able to utilize extended family members as a source of strength when needed which provides a cultural framework. Role flexibility is also played out in a significant manner (Alston & Turner, 1994). For example, as reported, "33% of African-American children (compared to 14% of white children) have no working parent in the household, 62% of African-American adults who are parents are divorced, separated, widowed, or never married, as opposed to 33% of white adults; 58% of African Americans births are to unmarried mothers as opposed to 11% of white births" (see Glick, 1981; Jorgensen, King, & Torrey, 1980; Reid, 1982). Even with the compounding issues that exist, the African American family has been able to utilize role flexibility in an effort to care for the children involved.

Moreover, Alston and Turner (1994) discussed the importance of education and work ethics. Education is highly respected by African Americans and their families
and they have always highly esteemed education and vocation. This avenue has been a source of strength and redemption for African American families. When the client is supported and has a family who is willing to support him or her, the motivation seems to be there, and the potential for rehabilitation is very good. Deloach and Greer (1981) also support the idea of career success with family support.

The rehabilitation counselor must understand that this support system is a key determinant in the rehabilitation process. They should have some knowledge of how African American families often take what seems to be the worst case scenario, and utilize the strength they have historically used to overcome other obstacles, and strive to help clients succeed in a vocation. As suggested in the findings of this study, an African American client who have accepted his or her disability to a reasonable degree, has done so with the help and support of their families (Alston & Turner, 1994).

Church and the African American Family

Alston and Turner (1994) yielded interesting results from the religious component of African Americans with disabilities, stating the church can play a pivotal role in the adjustment of African Americans with disabilities. Church has been regarded as a place where one can find refuge, courage and spiritual renewal. It is also a place where one can get assistance for many areas of life (i.e. food, clothing, shelter, childcare, pastoral counseling and many other services) (Alston & Turner, 1994). Alston and Turner (1994) further stated that the rehabilitation counselor needs to understand how important church is to most African American clients, and how
knowing this can provide the counselor with knowledge in the rehabilitation process. Alston, McCowan and Turner (1994) suggested that although these findings suggest the rehabilitation influence of four attributes, a strong kinship bond, role flexibility, strong religious orientation, and strong education and work ethics, these strengths may in fact be associated with the psycho-social adjustment of African American clients. Additional studies need to be done to further determine the extent of these findings.
CHAPTER 3

METHODOLOGY

The purpose of this study is to investigate the rehabilitation outcome, number and type of services consumers received, wages, hours worked per week, insurance coverage, and type of occupation at closure. This study will be based on secondary or an ex-post facto research design derived from individual client case reports from the Rehabilitation Services Administration (RSA) 911 database. The database consists of 45,585 consumers at the state/federal rehabilitation agency. It includes persons who seek services, those who are accepted for services, and those identified as being successfully or unsuccessfully rehabilitated during the federal fiscal year (FY) 1995.

Rehabilitation outcome is defined as employment status following participation of one or more services provided by the Ohio Rehabilitation Services Commission. Vocational services is defined as the number and type of services consumers have participated in offered by the Ohio Rehabilitation Services Commission. Two outcomes are possible. Successful outcome can be defined as employment for a minimum of 60 days, Status 26; and unsuccessful outcome can be defined as failed to complete the program, Status 28. VR services are coded on the standard RSC-0001
form. This form is the internal form used by each counselor at referral, while the consumer is receiving vocational services and at closure. This data is then entered on the (RSA)-911 database.

The operational definition for vocational outcome as Status 26 (working) or Status 28 (case closed, not working, after services received). Status 26, closed occurs when the following criteria has been met: (a) a diagnostic assessment has provided; (b) counseling and guidance has been provided; (c) appropriate and substantial services have been provided in accordance with the Individualized Written Rehabilitation (IWRP); and the consumer has maintained suitable work for at least 60 days (Ohio Rehabilitation Services Administration, 1995). Cases are considered closed, Status 28 after eligibility for services has been determined and VR services have been provided and one of the following occurs: (a) the consumer can not be located; (b) the consumer dies; (c) the consumer is incarcerated or institutionalized and will be unavailable for services or for a indefinite or lengthy period of time; (d) the consumer has refused services or further services or has failed to co-operate; (e) the consumer can not accept or maintain a job because transportation is not feasible or not available (Ohio Rehabilitation Services Administration, 1995).

SAMPLE

The population for this study consisted of 45,585 consumers served by the state/federal vocational rehabilitation agency during federal fiscal year 1995. Persons ranged from ages 16 to 64. The two groups are compared for rehabilitation outcomes,
number and type of services, wages, hours worked per week, insurance coverage and type of occupation at closure.

**Data Analysis**

Descriptive statistics (frequencies and percentages) will be used in this study. In addition, chi-square analysis, t-test, and one analysis of variance ANOVA, Phi Coefficient and a Cramer's V will be used to determine whether the two groups differ significantly in rehabilitation outcomes, number and type of services, wages, hours per week, insurance and occupation upon closure according to the first digit of the DOT.

**Explanatory Variables**

**Racial/Ethnic Status**

A categorical variable with two levels (African Americans or European Americans).

**Race.**

The Rehabilitation Services Administration (RSA; 1995) defines African Americans or "Black" as a person having origin in any of the black racial groups of Africa and defines European Americans or "White" if he or she is "a person having origin in any of the original peoples of Europe, North Africa, or the Middle East," (p. 5). Because the sample size for Native Americans (.1%) and Asian Americans (.4%) revealed insignificant numbers there are no categories for these two groups.
Work Status at Closure.

A multichotomous variable with nine levels: (a) competitive labor market (b) sheltered workshop (c) self-employed (d) business enterprise (e) homemaker (f) unpaid (g) student (h) unemployed and (i) non-competitive. Work Status is the work activity of the consumer closed in Status 26.

Criterion Variables

Total Number of Services

A metric variable with interval scaling (ranging from 1-13 services). A consumer could receive one or more services once the Individual Written Rehabilitation Plan has been completed.

1. Diagnostic (assessment): Services needed to determine eligibility or to determine the need for other services.

2. Restoration (physical and mental): Services needed “to correct or substantially modify a physical or mental condition” (RSA, 1995, p. 33, such as surgery, therapy, or treatment.

3. College or University Training: Academic schooling beyond high school.

4. Business and Vocational Training: Noncollege postsecondary schooling, not offering a baccalaureate degree.
5. Adjustment Training: Training to help the person adjust to a particular work situation, such as work hardening, mobility training, literacy training, or lip reading.

6. On-the-job Training: Training with a specific employer for which the person earns wages while in training and for which it is expected that, if the training is successful, the person will remain on the job or go to a similar job.

7. Miscellaneous Training: Training not identified above, such as secondary school level academic training or training at specialized schools for persons who are deaf, blind, or both.

8. Counseling: Although not formally identified by the RSA, counseling was coded as a service when it was a predominant service.

9. Job Referral (Job-Finding Services): Providing information regarding a job that allows the person to contact employers on his or her own.

10. Job placement: Occurs when a person is referred to an employer and is hired. Job placement differs from a job referral in that for job placement to occur, the person must be hired and not merely be in contact with an employer.
11. Transportation: Provided to allow the client to make appointments for assessment, training, or other services.

12. Maintenance: Services provided to finance additional costs while a person is receiving rehabilitation services.

13. Other services: Services not included elsewhere. Examples are providing occupational tools and equipment, initial stocks of merchandise and licenses, or services to family members.

**Type of Services**

A categorical variable with two levels (yes or no). The type of services were coded (received or not received).

**Closure Status 28**

A multichotomous categorical variable with 12 levels are: (a) the consumer cannot be located; (b) the consumer dies; (c) the consumer is incarcerated or institutionalized and will be unavailable for services for an indefinite or lengthy period of time; (d) the consumer has refused services or further services or has failed to cooperate; (e) the consumer cannot accept or maintain a job because transportation is not feasible or not available (Ohio Rehabilitation Services Administration, 1995).
Earnings Per Hour at Closure: Status 26

A metric variable with interval scaling. Earnings ranged from $1.00 to $26.00 per hour. The total number of hours worked ranged between 2 to 41.

Research Questions

The following research questions will be answered in this study:

1) Do African Americans and European Americans significantly differ in terms of rehabilitation outcomes as defined by the state/federal vocational rehabilitation system following participation of one or more services offered?

Variables. The Explanatory variable was race (categorical and dichotomous) and the criterion variable was number of services (metric variable ranging from 1-13).

Sample Test Statistic. The t-test is a parametric statistical test used to see if differences exist between the means of two samples is significant (Fraenkel and Wollen, 1993, p. 199). The means between African American and European American and rehabilitation outcomes (Status 26) closed successfully and (Status 28) closed unsuccessfully. With the t-test the general assumption is both groups are normally distributed in the population (Hopkins, Glass, & Hopkins, 1987).

Method of Sampling. African Americans (n=851) and European Americans (n=4567) whose cases were closed successfully (Status 26) and African Americans (n=1293) whose cases were closed unsuccessfully (Status 28) and European Americans (n=3819) who received one or more VRS.
2) Is there a significant difference in the total number of services received by African Americans and European Americans as identified on the RSA 911 code sheet?

Variables. The Explanatory variable was race (categorical and dichotomous) and the criterion variable were the 13 types of services.

Sample Test Statistic. The Chi-square test of independence was the test statistic used to examine the 13 type of services. With the Chi-square test the expected frequencies and the actual obtained frequencies are compared (Fraenkel & Wallen, 1993, p. 201).

Method of Sampling. All African American (924) and European American (5083) whose cases were closed successfully in (Status 26) and received one or more VRS.

3) Is there a significant difference in the type of services African Americans and European Americans receive as identified on the RSC 0001 form?

Variables. The Explanatory Variable was race (categorical and dichotomous) and the criterion variable were the 13 types of services.

Sample Test Statistic. Percentages were used to examine the type of services.

Method of Sampling. All African Americans (8,270) and European Americans (33,368) whose cases were closed successfully in (Status 26) and received one or more VRS.

4) Do African Americans and European Americans differ in the quality of rehabilitation outcomes, as measured by the following variables: a) wages at closure b) hours worked per week at closure c) insurance coverage at closure d) type of occupation at closure?
For the 5041 African Americans and European Americans employed, hours worked ranged from 2 to 75 hours per week with a mean of 30.74 hours. For earnings, the range was $1.00 to $26.00 per hour. For medical insurance coverage, an entry was coded as yes or no for each consumer upon successful closure (Status 26). Additionally, the first digit of the Dictionary of Occupational Titles (DOT) were compared to race to examine if there was a difference in how many African Americans and European Americans are closed successfully (Status 26) in (professional, technical, and management positions).

Variables. The explanatory variable was race (categorical dichotomous) and the criterion variable was weekly earnings (a metric variable).

Sample Test Statistic. The t-test was used to analyze whether there is a mean difference in hours worked, earnings per hour, medical insurance, and job title according to the first digit of (DOT) by race. The t-test is a parametric statistical test used to examine differences between the means of two samples and whether they are significant (Fraenkel & Wallen, 1993, p. 199).

Method of Sampling. All African Americans and European Americans closed successfully (Status 26) were examined.

Review of Methodology

Descriptive statistics was used to describe the racial composition and closure status of the two groups under study. A chi square analysis was performed to determine the relationship between race and closure status. Means and standard
deviations of the total number of services were computed for African Americans and European Americans. Chi-square analysis was computed on the number of vocational rehabilitation services that African Americans and European Americans consumers received. Relationship between the types of services received by African Americans and European Americans was analyzed by a chi-square. A t-test was performed using the total number of services received by African Americans and European Americans. A one-way analysis of variance (ANOVA) and a t-test was performed to establish the quality of services based on hours working at closure, earnings at closure, insurance coverage at closure, type of occupation based on the first digit of the DOT code, and the relationship tendencies of African Americans and EA.

Subjects

The sample population was 45,585 individuals who received VRS from the Ohio Rehabilitation Services Commission during the federal fiscal year (FY) 1995. The services that each consumer receive is determined by the Individualized Rehabilitation Plan (IWRP) that is completed by each counselor. The clients included in this study are those who were considered successful (Status 26) and those considered unsuccessful (Status 28) after receiving vocational rehabilitation services (VRS). There were 45,585 consumers, of all disability groups. The data was obtained from federal fiscal year (FY) 1995 through the (RSA)-911 coding sheet.
Instrumentation

The instrument used to collect the data for this study was the RSC-0001 coding form used by each counselor. This form is used for each consumer case that is used through the Ohio Rehabilitation Services Commission central data collection process. This instrument is used by the VR staff throughout the vocational services provided for each consumer. A coding procedure of the 911 data complies to federal guidelines established by (RSA, 1995). There are 18 cross checks established by the Rehabilitation Services Administration to decrease coding errors; therefore, if errors occur they are assumed to be random and unbiased. This study will address the following data elements:

13 Types of Service

Counseling
Job Referral
Restoration
College/University Training
Diagnostic
Business/Vocational Training
Adjustment Training
On-the Job Training
Job Placement
Miscellaneous
Job Referral

52
Data Collection Procedure

The data collected by The Ohio Rehabilitation Services Commission was obtained from the 1995 federal fiscal year. The data is recorded on the RSC-0001 form by VR staff at all the statewide ORSC field offices. The data is entered on a central database by each counselor.
CHAPTER 4

RESULTS

This chapter presents the results from the analysis of the data. The purpose of this study was to investigate the types of VRS of African Americans and European Americans. These services are defined by the state/federal vocational rehabilitation system. A secondary aim was to assess the difference of the African Americans and EA on variables such as a) earnings at closure b) hours worked per week at closure c) insurance coverage at closure and d) type of occupation at closure. Clients in this study participated in vocational rehabilitation services in Ohio during fiscal year 1995 (FFY95). The population consisted of 45,585 subjects. The racial composition of this sample included 33,368 European Americans [EA] (73.2%), 8,270 African Americans [African Americans] (18.1%) 65 Native Americans [AI] (.1%), 167 Asians [A] (.4%) and 3,715 missing subjects. Table 1 presents the percentage distribution of African Americans and EA who received VR services. The findings are summarized in Table 1. The results are as follows: African Americans (n = 8,270, 18.1%), EA (n = 33,368, 73.2%).
<table>
<thead>
<tr>
<th>Race</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
<td>33,368</td>
<td>73.2%</td>
</tr>
<tr>
<td>AA</td>
<td>8,270</td>
<td>18.1%</td>
</tr>
<tr>
<td>Total</td>
<td>41,638</td>
<td>91.3%</td>
</tr>
</tbody>
</table>

Note. The column total percentages do not sum to 100%, because African Americans and European Americans are the only two groups under investigation in this study.

Table 1: Percentage of African Americans and European Americans Who Received VR Services

Table 2 presents the and percentage of African Americans and European Americans closure status. In the state/federal system consumers can be moved from status 00 to 32 (see Chapter 1). Status 26 are those closures that involve successful employment for 60 days. Status 28 are those closures that are closed not employed. The findings are summarized in Table 2. Table 2 presents the closure status of African Americans and European Americans.

<table>
<thead>
<tr>
<th>Race</th>
<th>Closed Employed (26)</th>
<th>Closed Not Employed (28)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>35.2%</td>
<td>53.3%</td>
</tr>
<tr>
<td>EA</td>
<td>46.4%</td>
<td>38.8%</td>
</tr>
</tbody>
</table>

Table 2: Type of VR Closure

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>EA Mean</th>
<th>SD</th>
<th>N</th>
<th>AA Mean</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>7818</td>
<td>3.85</td>
<td>2.07</td>
<td>1650</td>
<td>4.11</td>
<td>2.24</td>
<td>-4.76</td>
</tr>
</tbody>
</table>

Note: Individuals had to receive at least one service to be included in cell count.

Table 3: Total VR Services Received By African Americans and European Americans
Table 3 presents the means, standard deviation and t-test results of VR services received by African Americans and European Americans. The results revealed there was statistically significant difference in the VR services received by African Americans and European Americans.

Table 4 presents the distribution of the type of VR services received by African Americans and European Americans. A sample distribution of the thirteen VR services received by African Americans (n = 8,270) and EA (n = 33,368) is summarized in Table 5. Received (R) indicates that the consumer received the services and Not received (N) indicates they did not receive the services. The thirteen services a person could receive as defined by RSA (1995) are:

1. Diagnostic (assessment: Services needed to determine eligibility or to determine the need for other services.

2. Restoration (physical and mental): Services needed “to correct or substantially modify a physical or mental condition” (RSA, 1995, p. 33, such as surgery, therapy, or treatment.

3. College or University Training: Academic schooling beyond high school.

4. Business and Vocational Training: Noncollege postsecondary schooling, not offering a baccalaureate degree.

5. Adjustment Training: Training to help the person adjust to a particular work situation, such as work hardening, mobility training, literacy training, or lip reading.

6. On-the-job Training: Training with a specific employer for which the person earns wages while in training and for which it is expected that, if the training is successful, the person will remain on the job or go to a similar job.
7. **Miscellaneous Training:** Training not identified above, such as secondary school level academic training or training at specialized schools for persons who are deaf, blind, or both.

8. **Counseling:** Although not formally identified by the RSA, counseling was coded as a service when it was a predominant service.

9. **Job Referral (Job-Finding Services):** Providing information regarding a job that allows the person to contact employers on his or her own.

10. **Job placement:** Occurs when a person is referred to an employer and is hired. Job placement differs from a job referral in that for job placement to occur, the person must be hired and not merely be in contact with an employer.

11. **Transportation:** Provided to allow the client to make appointments for assessment, training, or other services.

12. **Maintenance:** Services provided to finance additional costs while a person is receiving rehabilitation services.

13. **Other services:** Services not included elsewhere. Examples are providing occupational tools and equipment, initial stocks of merchandise and licenses, or services to family members.
<table>
<thead>
<tr>
<th>Variable</th>
<th>EA N</th>
<th>EA R</th>
<th>AA N</th>
<th>AA R</th>
<th>Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic</td>
<td>755</td>
<td>4328</td>
<td>155</td>
<td>769</td>
<td>2.24</td>
<td>.133</td>
</tr>
<tr>
<td>Counseling</td>
<td>1823</td>
<td>3260</td>
<td>357</td>
<td>567</td>
<td>2.59</td>
<td>.107</td>
</tr>
<tr>
<td>Restoration</td>
<td>3284</td>
<td>1799</td>
<td>668</td>
<td>256</td>
<td>20.5</td>
<td>.000*</td>
</tr>
<tr>
<td>College</td>
<td>4311</td>
<td>772</td>
<td>866</td>
<td>58</td>
<td>52.13</td>
<td>.000*</td>
</tr>
<tr>
<td>Bus/Voc</td>
<td>4560</td>
<td>523</td>
<td>787</td>
<td>137</td>
<td>16.46</td>
<td>.000</td>
</tr>
<tr>
<td>Adjust/Train</td>
<td>3603</td>
<td>1480</td>
<td>571</td>
<td>353</td>
<td>30.44</td>
<td>.000*</td>
</tr>
<tr>
<td>O/Job Training</td>
<td>4630</td>
<td>453</td>
<td>853</td>
<td>71</td>
<td>1.48</td>
<td>.223</td>
</tr>
<tr>
<td>Misc. Service</td>
<td>3380</td>
<td>1703</td>
<td>613</td>
<td>311</td>
<td>.008</td>
<td>.927</td>
</tr>
<tr>
<td>Job Referral</td>
<td>3273</td>
<td>1810</td>
<td>563</td>
<td>361</td>
<td>4.05</td>
<td>.044</td>
</tr>
<tr>
<td>Job Placement</td>
<td>2368</td>
<td>2715</td>
<td>347</td>
<td>577</td>
<td>25.75</td>
<td>.000*</td>
</tr>
<tr>
<td>Transportation</td>
<td>3283</td>
<td>1800</td>
<td>441</td>
<td>483</td>
<td>94.33</td>
<td>000*</td>
</tr>
<tr>
<td>Other Services</td>
<td>3367</td>
<td>1716</td>
<td>532</td>
<td>392</td>
<td>25.77</td>
<td>000*</td>
</tr>
<tr>
<td>Income Maintenance</td>
<td>4341</td>
<td>742</td>
<td>642</td>
<td>282</td>
<td>140.16</td>
<td>000*</td>
</tr>
</tbody>
</table>

* p > .05 Note: The individual cell counts do not sum to the column total, and percentages do not sum to 100% because a person could appear in more than one cell.

N = Did not receive any services; R = Received the services

Table 4: Distribution of Type of VR Services African Americans and European Americans Received
<table>
<thead>
<tr>
<th>Percentages of Services Received</th>
<th>AA</th>
<th>EA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic</td>
<td>83%</td>
<td>85%</td>
</tr>
<tr>
<td>Counseling</td>
<td>61%</td>
<td>64%</td>
</tr>
<tr>
<td>Restoration</td>
<td>28%</td>
<td>35%</td>
</tr>
<tr>
<td>College</td>
<td>6.3%</td>
<td>15%</td>
</tr>
<tr>
<td>Business/Vocational</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Adjust/Train</td>
<td>38%</td>
<td>30%</td>
</tr>
<tr>
<td>O/Job Training</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Misc. Service</td>
<td>34%</td>
<td>34%</td>
</tr>
<tr>
<td>Job Referral</td>
<td>40%</td>
<td>36%</td>
</tr>
<tr>
<td>Job Placement</td>
<td>62%</td>
<td>53%</td>
</tr>
<tr>
<td>Transportation</td>
<td>52%</td>
<td>35%</td>
</tr>
<tr>
<td>Other Services</td>
<td>42%</td>
<td>34%</td>
</tr>
<tr>
<td>Income Maintenance</td>
<td>31%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Note: The individual cell counts do not sum to the column total, and percentages do not sum to 100%, because a person could appear in more than one cell.

Table 5: Patterns of VR Services Received by African Americans (n = 8,270, 18.1%) and European Americans (n=33, 368, 73.2%)

Table 6 presents the distribution of working hours per week for African Americans and European Americans who received VR services and became employed. For the sample of 5041 individuals, the mean hours for African Americans was 30.8 (standard deviation = 10.9) and the mean hours for European Americans was 30.6 (standard deviation = 10.3). Table 6 presents the t-test results of African Americans and European Americans and the total amount of hours they were working at closure.
This analysis is summarized in Table 6. T-Test results for African Americans and European Americans and was computed for hours worked per week. There was no statistically significant difference in the hours African Americans and European Americans were working at closure.

<table>
<thead>
<tr>
<th></th>
<th>T-test and Hours Worked by Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>802</td>
</tr>
<tr>
<td></td>
<td>30.8 hours</td>
</tr>
<tr>
<td>EA</td>
<td>4239</td>
</tr>
<tr>
<td></td>
<td>30.6 hours</td>
</tr>
<tr>
<td>Total</td>
<td>5041</td>
</tr>
<tr>
<td></td>
<td>t = -.26</td>
</tr>
</tbody>
</table>

Table 6: Hours Working at Closure for African Americans and European Americans Who Received VR Services and Became Employed

Earnings At Closure for African Americans and European Americans

Table 7 presents the distribution of earnings at closure for African Americans and European Americans. For the 5041 individuals of the sample the mean earnings for African Americans was $5.77 (standard deviation = 2.79) and the mean earnings for European Americans was $6.41 (standard deviation = 3.86). T-test results were computed for African Americans and European Americans, and the total amount of wage earnings which they received at closure. Table 7 presents the t-test results of earnings at closure for African Americans and European Americans. Table 7 revealed that there was a statistically significant difference in earnings (.64) found between African Americans and European Americans and earnings at closure.
Table 7: **Earnings at closure for African Americans and European Americans Who Received VR Services and Became Employed**

Table 8 presents a sample distribution between African Americans and European Americans Medical Insurance Coverage at Closure. Cross tabulation tables were computed for African Americans and European Americans and Medical Insurance Coverage. The results are as follows: African Americans (n=12, .6%) did not have medical insurance at closure and (n=1903, 99.4%) did have medical insurance coverage; respectively European Americans (n=102, 1.4%) did not have medical insurance and (n=7407, 98.6%). There is no statistical significant relationship between African Americans and European Americans and medical insurance coverage and closure status: $\chi^2 (1, n=9424) = .6836; > .05$; Phi Coefficient = .026.

<table>
<thead>
<tr>
<th></th>
<th>Distribution of Earnings by Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>802</td>
</tr>
<tr>
<td></td>
<td>$5.77</td>
</tr>
<tr>
<td>EA</td>
<td>4239</td>
</tr>
<tr>
<td></td>
<td>$6.41</td>
</tr>
<tr>
<td>Total</td>
<td>5041</td>
</tr>
<tr>
<td></td>
<td>$t=5.47</td>
</tr>
</tbody>
</table>

Table 7: **Earnings at closure for African Americans and European Americans Who Received VR Services and Became Employed**
Medical Insurance Coverage and Race

<table>
<thead>
<tr>
<th>Race</th>
<th>No Medical/Insurance Coverage</th>
<th>Medical/Insurance Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
<td>102</td>
<td>7407</td>
</tr>
<tr>
<td>AA</td>
<td>12</td>
<td>1903</td>
</tr>
<tr>
<td>Total</td>
<td>114</td>
<td>9310</td>
</tr>
</tbody>
</table>

Note: $\chi^2 (1, n = 9310) = .83$ $p > .05; \text{ Cramer's } \nu = .02$

Table 8: Sample Distribution of African Americans and European Americans Who Had Medical Insurance Coverage at Closure

Sample Distribution of Medical Coverage at Closure

Cross-tabulations were computed for African Americans and European Americans and occupational categories who were closed status 26. There is a significant difference between African Americans and European Americans and occupational category and closure status: $\chi^2 (8, n = 7266) = .1195; p > .05; \text{ Cramer's } \nu = .12$. Table 9 presents the percentage distribution of the types of occupations of African Americans and European Americans at closure according to the first digit of the Dictionary of the Occupational Titles (U.S. Department of Labor, 1991). The results are summarized in Table 9. European Americans (14%) tended to be closed more often in professional, technical/management occupations than African Americans (16%). In occupational category 2; European Americans were closed (16%) of the time and African Americans were closed (15%) of the time, in category 3 European Americans were closed (24%) of the time and African Americans were closed (31%) of the time;
in category 4 European Americans were closed (2%) of the time and African Americans were closed (7%); in category 5 European Americans were closed (12%) of the time and African Americans were closed (8%) of the time; in category 6 European Americans were closed (10%) of the time and African Americans were closed (10%) of the time; in category 7 European Americans were closed (13%) of the time and African Americans were closed (20%) of the time; in category 8 European Americans were closed (3.3%) of the time and African Americans were closed (3%) of the time; in category 9 European Americans were closed (6.5%) and African Americans were closed (6%) of the time for the first digit of the Dictionary of Occupational Titles (U.S. Department of Labor, 1991). Table 9 presents the distribution of the first digit of the Dictionary of Occupational Titles (U.S. Department of Labor, 1991) for African Americans and European Americans who were closed in Status 26.
### Occupational Category 0/1 by Race

<table>
<thead>
<tr>
<th>Type of Occupation</th>
<th>Occupational Category</th>
<th>African Americans</th>
<th>European Americans</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Professional, technical, management</td>
<td>0/1</td>
<td>67 6</td>
<td>847 14</td>
</tr>
<tr>
<td>Clerical and Sales</td>
<td>2</td>
<td>167 15</td>
<td>976 16</td>
</tr>
<tr>
<td>Services</td>
<td>3</td>
<td>359 31</td>
<td>1479 24</td>
</tr>
<tr>
<td>Agricultural</td>
<td>4</td>
<td>8 7</td>
<td>94 2</td>
</tr>
<tr>
<td>Processing</td>
<td>5</td>
<td>96 8</td>
<td>732 12</td>
</tr>
<tr>
<td>Machine Trade</td>
<td>6</td>
<td>113 10</td>
<td>588 10</td>
</tr>
<tr>
<td>Bench Work</td>
<td>7</td>
<td>231 20</td>
<td>804 13</td>
</tr>
<tr>
<td>Structural</td>
<td>8</td>
<td>35 3</td>
<td>205 3</td>
</tr>
<tr>
<td>Misc.</td>
<td>9</td>
<td>69 6</td>
<td>396 7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1145 100</td>
<td></td>
<td>6121 100</td>
</tr>
</tbody>
</table>

Table 9: Occupational Category 0/1 for African Americans and European Americans Who Were Closed Status 26

Table 10 presents the relationship tendencies between African Americans and European Americans who were closed Status 26. Table 10 Cross-tabulation tables was computed for African Americans and employment in Status 26. The results are as follows: for competitive employment: African Americans (n=851, 35.2%); European Americans (n=4567, 46.4%); African Americans workshop: (n=86, 3.7%); European Americans (n=90.9%); self-employed: (n= 6, .2%); European Americans (n=90.9%); BEP: African Americans (n= 3, .1%); European Americans (n=18, .2%); homemaker: 64
African Americans (n= 76, 3.1%); European Americans (n=621, 6.3%); unpaid: African Americans (n=2, .1%); European Americans (n= 19, .2%); student: African Americans (n=90, 3.8%); European Americans (n=282, 3.0%) unemployed: African Americans (n=1239, 53.6%); European Americans (n=3819, 39%); and non-competitive: African Americans (n=8, .3%); European Americans (n=21, .2%).
<table>
<thead>
<tr>
<th>Race</th>
<th>Count/Column</th>
<th>Competitive Employment</th>
<th>Workshop Employment</th>
<th>Self-Employment</th>
<th>BEP</th>
<th>Homemaker</th>
<th>Unpaid</th>
<th>Student</th>
<th>Unemployed</th>
<th>Non-competitive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% ASRESID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-A</td>
<td>Count/Column</td>
<td>851</td>
<td>86</td>
<td>6</td>
<td>3</td>
<td>76</td>
<td>2</td>
<td>90</td>
<td>1293</td>
<td>8</td>
<td>2415</td>
</tr>
<tr>
<td></td>
<td>% ASRESID</td>
<td>(35.2%)</td>
<td>(3.6%)</td>
<td>(2%)</td>
<td>(1%)</td>
<td>(3.1%)</td>
<td>(1%)</td>
<td>(3.7%)</td>
<td>(53.5%)</td>
<td>(3%)</td>
<td></td>
</tr>
<tr>
<td>EA</td>
<td>Count/Column</td>
<td>4567</td>
<td>405</td>
<td>90</td>
<td>18</td>
<td>621</td>
<td>19</td>
<td>282</td>
<td>3819</td>
<td>21</td>
<td>9842</td>
</tr>
<tr>
<td></td>
<td>% ASRESID</td>
<td>(46.4%)</td>
<td>(4.1%)</td>
<td>(9%)</td>
<td>(29%)</td>
<td>(6.3%)</td>
<td>(2%)</td>
<td>(2.9%)</td>
<td>(38.8%)</td>
<td>(2%)</td>
<td></td>
</tr>
<tr>
<td>Column</td>
<td>Count/Column</td>
<td>5418</td>
<td>491</td>
<td>96</td>
<td>21</td>
<td>697</td>
<td>21</td>
<td>21</td>
<td>5112</td>
<td>29</td>
<td>12257</td>
</tr>
<tr>
<td>Total</td>
<td>% ASRESID</td>
<td>44.2%</td>
<td>4.0%</td>
<td>.8%</td>
<td>.2%</td>
<td>5.7%</td>
<td>.2%</td>
<td>.2%</td>
<td>411.7%</td>
<td>.2%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note: $\chi^2 (8, n = 12257) = 209.89; p < .05; Cramer's $\chi = .13$. Positive $z$ scores indicated more consumers were closed in that work status than expected. Negative $z$ scores indicate less consumers were closed in that work status than expected.

Table 10: Chi-Square Between African Americans and European Americans and Work Status upon Closed Status 26
There are significant relationship tendencies in the workstatus of African Americans and European Americans and closure status in competitive employment, student status and unemployment. For service pattern and occupational category the (Cramer’s $V = .13$).

<table>
<thead>
<tr>
<th>Area</th>
<th>Count of Race</th>
<th>Average Hourly Earnings</th>
<th>Average Hours at Closure</th>
</tr>
</thead>
<tbody>
<tr>
<td>BVR</td>
<td>NE</td>
<td>$6.93$</td>
<td>30.6</td>
</tr>
<tr>
<td></td>
<td>NE</td>
<td>$5.70$</td>
<td>31.4</td>
</tr>
<tr>
<td></td>
<td>NE</td>
<td>$4.25$</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>NE</td>
<td>$4.25$</td>
<td>25.0</td>
</tr>
<tr>
<td>NW</td>
<td>323</td>
<td>$6.43$</td>
<td>31.1</td>
</tr>
<tr>
<td>NW</td>
<td>30</td>
<td>$5.94$</td>
<td>34.4</td>
</tr>
<tr>
<td>NW</td>
<td>1</td>
<td>$5.95$</td>
<td>30.0</td>
</tr>
<tr>
<td>SE</td>
<td>415</td>
<td>$6.62$</td>
<td>30.1</td>
</tr>
<tr>
<td>SE</td>
<td>39</td>
<td>$6.09$</td>
<td>29.2</td>
</tr>
<tr>
<td>SE</td>
<td></td>
<td>$5.95$</td>
<td>30.0</td>
</tr>
<tr>
<td>SW</td>
<td>327</td>
<td>$6.88$</td>
<td>30.6</td>
</tr>
<tr>
<td>SW</td>
<td>74</td>
<td>$6.44$</td>
<td>29.8</td>
</tr>
<tr>
<td>SW</td>
<td>5</td>
<td>$9.55$</td>
<td>28.6</td>
</tr>
<tr>
<td>BVR</td>
<td>European</td>
<td>1436</td>
<td>$6.72$</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td></td>
<td>30.6</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td></td>
<td>$6.03$</td>
</tr>
<tr>
<td></td>
<td>American Indian</td>
<td></td>
<td>$4.25$</td>
</tr>
<tr>
<td></td>
<td>Asian/Pacific Island</td>
<td></td>
<td>$7.76$</td>
</tr>
</tbody>
</table>

Table 11: Ohio Rehabilitation Services Commission Quarterly Report March 31, 1996 (Second Qtr. FY 96)

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According to Table 11 European Americans tend to receive a higher average in hourly earnings at $6.72 and respectively, African Americans at $6.03.

Table 12 presents the distribution of earnings at closure for African Americans and European Americans. For the 5041 African Americans and European Americans closed successfully the mean earnings was $6.31 per hour and the (standard deviation = 3.72) with a range of $1.00 per hour to $26.00 per hour.
<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 - 3.00</td>
<td>230</td>
<td>4.6</td>
<td>4.6</td>
</tr>
<tr>
<td>3.01 - 5.00</td>
<td>2327</td>
<td>46.2</td>
<td>50.7</td>
</tr>
<tr>
<td>5.01 - 7.00</td>
<td>1296</td>
<td>25.7</td>
<td>76.4</td>
</tr>
<tr>
<td>7.01 - 9.00</td>
<td>527</td>
<td>10.5</td>
<td>86.9</td>
</tr>
<tr>
<td>9.01 - 11.00</td>
<td>276</td>
<td>5.5</td>
<td>92.4</td>
</tr>
<tr>
<td>11.01 - 13.00</td>
<td>160</td>
<td>3.2</td>
<td>95.5</td>
</tr>
<tr>
<td>13.01 - 15.00</td>
<td>99</td>
<td>2.0</td>
<td>97.5</td>
</tr>
<tr>
<td>15.01 - 17.00</td>
<td>34</td>
<td>.7</td>
<td>98.2</td>
</tr>
<tr>
<td>17.01 - 19.00</td>
<td>24</td>
<td>.5</td>
<td>98.7</td>
</tr>
<tr>
<td>19.01 - 21.00</td>
<td>31</td>
<td>.6</td>
<td>99.3</td>
</tr>
<tr>
<td>21.01 - 22.00</td>
<td>6</td>
<td>.1</td>
<td>99.4</td>
</tr>
<tr>
<td>22.01 - 24.00</td>
<td>6</td>
<td>.1</td>
<td>99.5</td>
</tr>
<tr>
<td>24.01 - 26.00</td>
<td>6</td>
<td>.1</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5041</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>

Mean = 6.31; standard deviation = 3.72; minimum = $1.50; maximum = $25.00

Table 12: Hourly Wage at Closure for African Americans and European Americans who received VR Services and Became Employed

Table 13 presents the distribution of hours worked at closure for African Americans and European Americans. For the 5041 African Americans and European Americans of the sample closed successfully the mean hours worked was 30.74 and the Standard deviation = 10.87 with a range of 2 to 41 + hours.
<table>
<thead>
<tr>
<th>Working Hours</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 - 10</td>
<td>219</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>11 - 20</td>
<td>1279</td>
<td>25.4</td>
<td>29.7</td>
</tr>
<tr>
<td>21 - 30</td>
<td>920</td>
<td>18.3</td>
<td>48.0</td>
</tr>
<tr>
<td>31 - 40</td>
<td>2478</td>
<td>49.2</td>
<td>97.2</td>
</tr>
<tr>
<td>41 +</td>
<td>142</td>
<td>2.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>5041</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Mean = 30.74; Standard deviation = 10.87; minimum = 1 hour; maximum = 76 hours

Table 13: Hours working at Closure for African Americans and European Americans Who Received VR Services and Became Employed

In Table 14 a one-way analysis of variance (ANOVA) was performed to determine if there is a difference in earnings based on race. This analysis is summarized in Table 14. The F for earnings and race was statistically significant, $F(1, 5020) = 25.166, p < .00$. An eta-square of .016 indicates approximately 1.6% of the variance in earnings is accounted for by race.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Means</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>239.5646</td>
<td>25.166</td>
<td>.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5020</td>
<td>9.5194</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5021</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Eta = .004; eta-squared = .016

F Probability = .00

Table 14: Analysis of Variance (ANOVA) of Earnings based on Race

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CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter contains three sections. They are: (1) a Summary of the Study; (2) Conclusions derived from data that addressed the research questions; and (3) recommendations for future research.

The purpose of this study was to investigate rehabilitation outcomes and patterns of services for African Americans and European Americans, number and type of services received, and the quality of rehabilitation outcomes. The consumers for the study were randomly selected through the RSA-911 state-federal reporting systems. The subjects are consumers who received vocational rehabilitation services during FY 95 from the Ohio Rehabilitation Services Commission.

The primary purpose of this study was to determine the rehabilitation outcomes of African American and European Americans as defined by the state/federal vocational rehabilitation system. African Americans and European Americans were evaluated on the following variables: a) rehabilitation outcome b) earnings at closure c) hours worked per week at closure d) medical insurance coverage at closure e) type of occupation at closure f) total number services and g) type of services.
Of the sample there were \((n=8,270, 18\%)\) who were African Americans and
\((n=33,368, 73.2\%)\) European Americans who received vocational rehabilitation services
and was taken from a data base of 45,585 who were closed during FFY95 from the
Ohio Rehabilitation Services Commission.

Do African Americans and European Americans differ in terms of rehabilitation
outcomes as defined by the state/federal vocational rehabilitation system?

In this study, African Americans \((n=851, 35.2\%)\) were closed, employed Status
\((26)\) and for European Americans \((n=4567; 46.4\%)\) respectively. African Americans
\((n=1293; 53.5\%)\) were closed, unemployed Status \((28)\) and for European Americans
\((n=3819; 38.8\%)\) respectively. These reported differences may be attributed to a
number of factors. For example, researchers have reported that vocational outcomes
of African Americans are adversely affected by factors such as education (James, De
Vivo, & Richards, 1993), counseling (Herbert & Cheatham, 1988), socioeconomic status
(Bolton & Cooper, 1980) and reduced expectancies of rehabilitation success (Alston &
Mngadi, 1992), or may be adversely affected by cultural idiosyncrasies and adjustment
to disability (Alston, McCowan, & Turner, 1994). Other possible factors such as
physical and mental restoration, hospitalization, convalescent care, college and
university assistance, vocational school training, on-the-job training, personal and
vocational adjustment training, maintaince services, transportation (Feist-Price, 1995;
pp. 123-124) were also found to have had a negative outcome on African-Americans.
In this study, intergroup comparisons between relationship tendencies of membership status and race reported results that yield varied statistical outcomes. For example, the results suggest that European Americans tend to have more individuals Closed, employed (Status 26), whereas African Americans tend to have more individuals Closed, not employed (Status 28). These results are consistent with previous research which has been done in the area of rehabilitation outcomes. For example, researchers such as Atkins and Wright (1980) asserted that "African Americans fare far worse than European Americans every step from referral to closure" (pp. 44). Similarly, Marshall (1987) found that only one in four African Americans with disability are employed. Furthermore, even more alarming, Briggs (1988) asserted that 60-90% of African Americans with disabilities (< 65 of age) are unemployed. It is suggested that from the results of this study and previous research that ethnicity and educational background plays a vital role in the outcome of rehabilitation services (Feist-Price, 1995). Therefore, African Americans are less likely given an opportunity to utilize their full potential as productive members of this society. Thus, African Americans are under-represented and underappreciated (Humphreys and Provitt, 1980). It can be inferred from the results of this study and previous research reports that European Americans are more readily accepted for service delivery and fare much better in rehabilitation outcome than African Americans (Feist-Price, 1995).
Is there a significant difference in the total number of services received by African Americans and European Americans?

In this study, a comparison between African Americans and European Americans and the total services received, revealed no statistically significant difference found between them. These results are not consistent with previous research which had been done in this area. Researchers such as Dziekan and Okocha (1993) asserted that a number of factors resulted in some disparities. For example, perceptual differences on the part of the rehabilitation counselors, inaccurate assessments and underestimations of rehabilitation potential, rehabilitation counselor's lack of cultural awareness and ability to develop tolerance with individuals from diverse educational and cultural backgrounds.

Other possible concerns are cited by Herbert and Martinez (1992). First, counselor's preconceived attitudes with consumers from racial-ethnic backgrounds. Secondly, the under-appreciation of values and norms of consumers from other racial-ethnic backgrounds. Thirdly, the insensitivity of the counselor and how it is sometimes projected towards the consumers. And finally, consumers perceptions and attitudes inevitably influence the client-counselor relationship.

Is there a difference in the type of services African Americans and European Americans receive?

Table 4 presents the distribution of the type of VRS among African Americans and European Americans. An examination of Table 4 revealed that a statistically
significant relationship exist between African Americans and European Americans and the following services: (a) restoration (b) college (c) adjust/train. (d) job placement (e) transportation (f) other services and (g) income maintenance (see Table 4). These reported results in this study are consistent with research (Atkins & Wright, 1980; Bolton & Cooper, 1980; Feist-Price, 1995) which has been done in the area of VRS, outcomes, and race. It can therefore be argued that there are similarities between the previous research and this study.

Do African Americans and European Americans differ in the quality of rehabilitation outcomes, as measured by the following variables:

a) Earnings at closure
b) Hours worked per week at closure
c) Insurance coverage at closure
d) Type of occupation at closure

Earnings at closure

The t-test was used to examine mean hourly earnings and hours worked after successfully completing VRS. The Levene test indicated that the variances were not equal for earnings at closure (significance $F = 1.91 < .05$) thus, the separate-variance t-test was used. The t-test revealed statistical significance among African Americans and European Americans earning at closure ($t = 5.47, p < .05$). The average hours worked at closure for African Americans was 30.80 and the average hourly wage at closure was $5.77 and for European Americans it was 30.69 and the hourly wage was $6.41.
$5.77 and for European Americans it was 30.69 and the hourly wage was $6.41. Therefore, the present study indicate there is a statistically significant difference in earnings between African Americans and European Americans and, there is a small association between African Americans and European Americans and hours worked at closure ($t = .26, p < .05$). Feist-Price (1995) and Atkins Wright (1980) and reported similar results in earnings among African Americans and European Americans at closure.

**Hours worked per week**

This study, reported results of the hours worked per week at closure for the African Americans and European Americans groups did not show statistically significant differences. Thus, race did not play a significant role in the overall performance of rehabilitation outcomes as it relates to hours worked per week at closure.

These differences in outcome services at work, could be attributed to a number of possible factors. For example, as previously mentioned the unequal distribution of the sample could have influenced the outcome of these results. Another important factor which needs to be taken into account is that fact that this study cannot determine from these results whether a relationship exist between the referral and placement services of African Americans and European Americans. Another important issue which needs be taken into consideration is the fact that most of the African Americans have a very poor educational background. Thus as been reported
by Feist-Price (1995) whites received restoration services, college education and on the job training more often than African Americans.

**Insurance coverage at closure**

In this present study, reported results of insurance coverage at closure suggest no statistically significant difference among European Americans and African Americans and medical insurance coverage at closure.

**Limitations and suggestions for future research**

One of the limitations of this study was the unequal economics among the sample distribution (NIDRR, 1993). The assumption therefore, can be made that European Americans consumers came from a somewhat more educated background than their African Americans counterparts (Bowe, 1983). Opportunities and accessibility to services is known to be linked to socioeconomic status. Thus, this partially explains some variation between the sample of African Americans and European Americans. Future research should attempt to focus on a more equal diverse sample size. Another limitation with regard to sampling, is the fact that the results of the present study can only be generalized to the Midwestern states. Future research should attempt to select a national random sample to better determine outcomes of these types of services. Another limitation of the present study is the acceptance rate of African Americans. Future research should focus on the contributing factors of the low numeric involvement of this group. It can be assumed that African Americans will be less likely to be accepted for services than their
European Americans counterparts (Bolton & Cooper, 1980). Furthermore, African Americans tend to suffer illnesses at a much higher rate than European Americans. Thus, counselors should be trained on cultural sensitivity, tolerance for individuals with diverse backgrounds whom had a limited exposure to educational opportunities. Further, the goal of VR services and future research endeavors should focus on varied strategies to attain equal opportunities for all its clients.

CONCLUSION

African Americans and other under represented groups continue to be undeserved in the rehabilitation system (Cultural Diversity in Rehabilitation, 1992). As stated earlier, there continues to be a lack of representation of under represented groups in vocational rehabilitation. With the projected demographic increase of ethnic minorities more emphasis need to be placed on changes as we move to the 21st century. In the amendments of the Rehabilitation Act of 1992 the following was noted: disparity continues to be a concern in all major junctures of the vocational rehabilitation process. As stated earlier, African Americans are denied acceptance at a greater rate, are close more without being rehabilitated, are provided less training as compared to European Americans, receive less training, and less money is spent on minorities as compared to their European counterparts. Feist-Price (1995) posits that there are currently many racial-ethnic minorities who are not receiving services and this is especially true for African Americans. Despite the large number of African Americans with disabilities, there appear to be minimal vocational services provided.
Minorities with disabilities are more likely to be considered ineligible for rehabilitation services, receive fewer services and fewer cases are closed successfully compared to European Americans (Atkins & Wright 1980). Researchers such as Marshall (1987) stated that there are several factors which are relevant to African Americans. First, there are a large number of African American adults with disabilities (14.1%) as compared European Americans (8.4%) who have some type of disability. Some factors contributing to the high incidence of disability among African Americans could be that African Americans work in more physically demanding jobs which lead to impairment or that they may not have access to the medical care which could prevent permanent disability (Alston, McCowan, & Turner, 1994).

Providing effective VR services has been well established in the field of (Atkins & Wright, 1980; Ayers, 1977; Briggs, 1988; Dzeikan & Okocha, 1993; Rusalem & Malikin, 1976; Wright, 1980) and this is a critical time for rehabilitation professionals to provide equitable rehabilitation services for racial-ethnic minority individuals with disabilities (p. 187, Dzeikan & Okocha). The findings of this study are limited and the data were analyzed for only one state. A National study of the rehabilitation services is recommended, especially in states that have a high percentage of minorities (Dzeikan & Okocha, 1993).

Finally, more research needs to be conducted within the state/federal agency. Presently, there is limited systematic research being conducted on this topic. Indeed, there are rehabilitation educators and vocational rehabilitation personnel who have
contributed to the topic. However, few empirical investigations of the quality of outcomes (i.e. earnings at closure, hours worked per week at closure, insurance coverage at closure, and type of occupation according to the first digit of the DOT at closure) have been performed altogether. Much of the writing to this point has been anecdotal in nature. If significant progress is to be made in the profession of vocational rehabilitation, more empirical research is needed. Also, the profession of vocational rehabilitation must recognize the need to explore the findings of the study and be willing to work collaboratively to address some of these shortcomings in the field of vocational rehabilitation. A critical need exists for the field of vocational rehabilitation to conduct explorative research. Research is also needed to assist vocational rehabilitation counselors in the assessment of traditional counseling methods and models and its implications for the consumer. The challenge rest with the integrity of the field to address its limitations. Only the leadership, commitment and interaction of rehabilitation administrators, and rehabilitation personnel can address the future success of all the clients we serve.
REFERENCES


Atkins, Crystal and Alston, Rehabilitation Education Ethnicity, race and culture in Rehab Counseling.


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