8-2015

Factors impacting vocational rehabilitation employment outcomes: An analysis of state-federal service provision

Valerie Jeannette Rodriguez
University of Texas-Pan American

FACTORS IMPACTING VOCATIONAL REHABILITATION EMPLOYMENT OUTCOMES:

AN ANALYSIS OF STATE-FEDERAL SERVICE PROVISION

A Dissertation

by

VALERIE JEANNETTE RODRIGUEZ

Submitted to the Graduate School of
The University of Texas-Pan American
In partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2015

Major Subject: Rehabilitation Counseling

FACTORS IMPACTING VOCATIONAL REHABILITATION EMPLOYMENT OUTCOMES:

AN ANALYSIS OF STATE-FEDERAL SERVICE PROVISION

A Dissertation
by
VALERIE JEANNETTE RODRIGUEZ

COMMITTEE MEMBERS

Dr. Shawn P. Saladin
Committee Chair

Dr. Bruce J. Reed
Committee Member

Dr. Jerome M. Fischer
Committee Member

Dr. Xiaohui Wang
Committee Member

August 2015

ABSTRACT

Rodriguez, Valerie J., Factors Impacting Vocational Rehabilitation Employment Outcomes: An Analysis of State-Federal Service Provision. Doctor of Philosophy (Ph.D.), August, 2015, 205 pp., 26 tables, 1 figure, 90 references, 87 titles.

State-federal vocational rehabilitation (VR) programs are widely recognized for providing various services to individuals with disabilities to help them reach their goals of independence and employment. Because rehabilitation programs are required to meet federal and state goals, standards, and indicators, thorough and ongoing program evaluation is necessary to identify predictors of successful and unsuccessful employment outcomes in order to determine best practices in vocational rehabilitation service delivery.

In the large southwestern state examined in this research study, there is an estimated return on investment of $9 for each dollar spent on successful VR cases. Cases closed successfully by state-federal VR programs yield independent and productive members of society that have been rehabilitated and integrated into the world of work. In many instances, the rehabilitated working taxpayer no longer requires government or public-funded benefits, such as social security benefits, temporary assistance for needy families, or housing assistance.

The purpose of this research is to provide the rehabilitation counseling profession with insight regarding whether specific variables (including demographics, purchased services, extraneous income and health benefits, collective effects, and benefits counseling for individuals receiving SSI/SSDI) impact vocational outcomes. Service provision data from state fiscal year

receiving SSI/SSDI) impact vocational outcomes. Service provision data from state fiscal year 2014 from a large southwestern state (N = 18,523 cases) was analyzed. The primary focus of this research was to identify predictor variables of vocational rehabilitation employment outcomes that are within the control of the state-federal VR agency through purchasing capabilities.

Identifying predictor variables is the first step towards ultimately improving return on investment for the state-federal VR agency and improving informed consumer choice. Because purchased services are within the VR agency's control, practical approaches from research findings can be readily adopted to allow for improved informed consumer choice during the service identification and appropriation process.

This research involved an ex-post-facto, non-experimental, correlational, quantitative research design. Five research questions and related hypotheses were formulated for investigation and were tested using binary logistic regression. All research hypotheses were supported. Results yield noteworthy implications for clients, VR counselors, practitioners, researchers, educators, stakeholders, advocacy groups, and policy makers.

DEDICATION

This dissertation is dedicated, with love, to my family. Having a family who has shown me the values of faith, love, hard work, and helping others has blessed me in more ways than I can describe. My loved ones have played such an integral role in my life and throughout my entire dissertation process.

I could not have done this without you: Santos & Sandra Rodriguez, Yvonne, JR, Trey, & Royce Kingston Gulley, John Fuentes, Stacy Fuentes, Casey & Isaac Lozano, Judy Henderson, & RJ Risteen. Thank you for your endless love and support.

I am so thankful to God for putting this dream in my heart and making it a reality. Though this was not a simple process, it has certainly strengthened me. For that, I am grateful.

Being from a small town (Alton, Texas) has taught me many things, primarily to dream bigger than my circumstances. I dedicate this dissertation to all young, Hispanic women. Remain dedicated and empowered to achieve your goals. Forever remember that all things are possible through Christ.

I must also dedicate this dissertation to my beloved mini dachshund, Mr. Bentley, who never ceased to keep me company while I wrote. Lastly, I would like to dedicate this dissertation to the people touched by the field of rehabilitation counseling: clients, counselors, and students. I hope my contributions and love for the field of rehabilitation counseling inspires others to continue to learn, teach, and help others.

ACKNOWLEDGEMENTS

It gives me abundant joy to extend my appreciation and thanks to my dissertation committee chair, Dr. Shawn P. Saladin, who always made himself available to support my educational goals. I am thankful for his positive can-do attitude that always put my constant worries at ease. I want to thank my dissertation committee members: Dr. Bruce J. Reed, Dr. Jerome M. Fischer, and Dr. Xiaohui Wang for providing me with feedback, advice, encouragement, and support throughout the entire research process. Words cannot express my gratitude for all your time and hard work in supporting me through this endeavor.

I would also like to thank my coworkers, particularly those who served as content experts. I want to acknowledge Thelma Garza for all her unwavering and gracious help and support. It means the world to me. I would also like to acknowledge Harold Whitfield for all his expert guidance, encouragement, and assistance.

I thank the entire faculty from the Rehabilitation Counseling program at UTPA for all their help since day one. They have seen me through my bachelor's degree, master's degree, and now finally the doctoral program. I would like to acknowledge Dr. Irmo Marini for helping me through so many of my educational and career journeys. Lastly, I thank all my family, friends, and coworkers for their steady and ongoing support. You have all played such an integral role in my life. I thank you all, humbly and graciously, from the bottom of my heart.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Page

CHAPTER I

INTRODUCTION

In the United States today, the equal opportunity for individuals with disabilities to prepare for, obtain, and maintain competitive employment has become an increasing important priority for disability advocates, legislators, and policymakers. Stemming most significantly from vocational rehabilitation (VR) research and program evaluation first being emphasized in 1954 from Vocational Rehabilitation Act Amendments (Public Law 565), numerous outcome studies have been conducted to monitor and measure the effectiveness of the VR program. Furthermore, disability-related legislation has played a substantial role in identifying best practices and predictors of employment outcomes to improve VR service delivery, even more prominently since the Rehabilitation Act of 1973 (Pi, 2006). Consequently, both state and federal policymakers are promoting employment-focused initiatives to increase the employment prospects for individuals with disabilities. With this in mind, policymakers require convincing evidenciary support to best assess, create, and amend these programs and initiatives (Silverstein, Julnes, & Nolan, 2005).

Vocational rehabilitation (VR) services are found in a variety of different settings. They are often provided by the public sector (commonly referred to as state-federal VR or state VR agencies), private not-for-profit sectors, and private-for-profit sectors (commonly insurance-based rehabilitation agencies) (Pruett, Swett, Chan, Rosenthal, & Lee, 2008). The state-federal

vocational rehabilitation program is regarded as one of the most vital vocational service programs, providing various services to individuals with disabilities to help them reach their goals of independence and employment. The largest program governed by the Rehabilitation Services Administration is the state-federal Vocational Rehabilitation Services Program, also sometimes referred to as the Vocational Rehabilitation State Grants Program. This program funds state VR agencies to deliver employment and other services for eligible people with disabilities to enable them to prepare for, engage in, and maintain gainful employment aligned with their strengths, resources, priorities, concerns, abilities, capabilities, interests, and informed choice. The Rehabilitation Act of 1973, as amended, makes available the statutory right for programs and services that help people with disabilities in the pursuit of meaningful wage employment, independence, autonomy, and full integration into society.

The Rehabilitation Services Administration (RSA) is part of the Office of Special Education and Rehabilitative Services (OSERS), U.S. Department of Education. The Rehabilitation Services Administration is the primary agency responsible for administering Titles I, III, VI and VII, as described in Title V of the Rehabilitation Act. The Rehabilitation Act also allows for extensive research overseen by the National Institute on Disability and Rehabilitation Research (NIDRR) as well as the National Council on Disability (NCD) (http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf). The vocational rehabilitation program has assisted people with physical disabilities to prepare for and enter into the workforce in excess of 90 years. The program has evolved and expanded over time to allow for the ability to serve people with mental disabilities as well. Annually nationwide, the state-federal vocational rehabilitation program serves over 1 million people with disabilities. The state-federal VR program is widely known for providing services to individuals with significant

disabilities. Approximately 91% of people who utilize state-federal vocational rehabilitation services have significant physical or mental disabilities that seriously limit at least one or more functional capacities. Functional capacities are identified as: mobility, communication, self-care, self- direction, interpersonal skills, work tolerance, and work skills. Generally, these consumers need multiple services over the course of an extended period of time (typically six months or more) (U.S. Government Accountability Office [GAO], 2005; http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf).

Vocational rehabilitation services are indispensable to reducing or eliminating impediments to employment, thus leading to independent and productive lives. The Vocational Rehabilitation Services program (authorized under sections 100-111 of the Rehabilitation Act) supports states in functioning as a central part of an organized, statewide workforce investment system to evaluate, plan, develop, and deliver VR services for people with various disabilities. The federal government apportions 78.7% of the programmatic expenses through financial help to the states for VR services. Federal funds are provided to the states on the basis of a statutory formula which takes into account the population of the state as well as the per capita income. States are provided the latitude to tailor service provision based on their unique needs. The states contribute the remaining amount for their programmatic expenses, approximately 20% of the budget (U.S. Government Accountability Office [GAO], 2005; http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf).

The Rehabilitation Services Administration (RSA) reported that a total of 1,402,291 individuals with disabilities were served by the state-federal VR program for fiscal year 2005. Over 50% of all consumers cases closed annually by this program are deemed successfully rehabilitated. Presently the state-federal VR program serves an estimated 1,000,000 individuals with disabilities on a yearly basis

and has expenditures of about $3 billion yearly. These expenditures contribute to the overall success in assisting eligible individuals with disabilities in successfully achieving their employment goals (Dean, Pepper, Schmidt, & Stern, 2013; Dutta, Gervey, Chan, Chou, & Ditchman, 2008; Leahy, Chan, & Lui, 2014; Martin, West-Evans, & Connelly, 2010; U.S. Government Accountability Office [GAO], 2005). In order for an individual to reach successful outcomes as a result of vocational rehabilitation, their disability-related barriers and impediments to employment must be substantially reduced or eliminated and they must be working competitively earning minimum wage or higher for a minimum of 90 days.

The socioeconomic contributions resulting from successfully rehabilitated individuals with disabilities yields notable attention. Still, because rehabilitation programs are increasingly tasked to do more, thorough and ongoing program evaluation and cost-benefit analyses are necessary to identify ways to continue to yield increasingly beneficial outcomes to society at large. Cost-benefit analyses or assessments of the return on investment (ROI) can be considered controversial because they sometimes simplify all dimensions of a given project into numbers by assessing the pros and cons related to the project. A cost-benefit analysis or assessment of ROI typically expresses the impact of proposed or existing projects in dollar terms (Portney, 2008).

Cost-benefit analysis models of VR service provision and labor market outcomes denote that VR services have a positive long-lasting impact on the labor market and national economy that exceed the cost of purchased services. Dean et al. (2013) conducted a study in the state of Virginia and found that vocational rehabilitation services have substantial positive economic returns. The results of the study indicated that even utilizing the most conservative assumptions for non-purchased services, the long-term mean return on investment was estimated to exceed cost by a factor of 3.6 minimally. Empirical evidence to support the effectiveness of VR services in helping individuals with disabilities integrate into the competitive labor market indicates ratios ranging from 3:1 ratio to an 18:1 ratio. These figures

account for public and private sector rehabilitation programs (Dean et al., 2013; http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf; http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf; U.S. Government Accountability Office [GAO], 2005; Rubin & Roessler, 2007).

In the large southwestern state examined in this research study, for each dollar spent by the state-federal VR program, it is estimated the return on investment is in excess of $9 for each dollar spent (http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf). Every case closed successfully by the state-federal VR program yields an independent and productive member of society that has been rehabilitated and integrated into the world of work. In many instances, the rehabilitated working taxpayer no longer requires government or public-funded benefits, such as social security benefits, temporary assistance for needy families, or housing assistance. The impact this has on society and the economy is noteworthy (Pruett. et al., 2008).

Vocational rehabilitation counselors have the capacity to authorize and purchase services for clients, based on what is required, reasonable, and necessary to reduce and/or eliminate the client's impediments to employment. They are mandated to be vigilant stewards of the funds appropriated for VR service provision. Though vocational rehabilitation counselors are expected to help clients identify appropriate services, the counselor must always be fiscally responsible and authorize purchased services using value-based decision-making. Though there have been studies to assess the effectiveness of specific VR service provision on special populations, few studies have been conducted to assess various factors and services and the impact (or lack thereof) the rendered services have on vocational outcomes on a macro scale. Since the onset of state-federal vocational rehabilitation counseling, the central focus has been on client outcomes, and even more specifically, successful employment outcomes (Parker, Szymanski, & Patterson, 2005; Rubin & Roessler, 2007). Provided the importance of employment outcomes, it is imperative for researchers to examine and establish predictors of employment outcomes

for recipients of state-federal VR services (Suanders, Leahy, McGlynn, & Estrada-Hernandez, 2006). The present research will assist rehabilitation professionals in identifying exemplary practices by examining the relationships between purchased services and VR client outcomes, and furthermore understanding how multiple factors contribute to the VR outcome.

This research study provides the rehabilitation counseling profession with insight regarding whether specific variables (including demographics, purchased services/service tracks, extraneous income or health benefit effects, collective effects, and purchased benefits counseling for SSI/SSDI recipients) affect vocational outcomes. A successful VR client outcome is defined as a favorable ratio between VR case dollars spent and tax money returned to the U.S. Government by employed VR clients (Rubin & Roessler, 2007), ultimately utilizing tax-payer's dollars to create more tax payers.

A successful ratio is 1:11 in which every dollar spent on VR services for a given client once closed successfully will return eleven dollars in taxes. The ROI, as cited in past research varies. Commonly cited ROIs range from $3 to $18 for every dollar spent on successfully rehabilitated cases, though most research cites returns ranging from $3 to $11 for public vocational rehabilitation (Dean et al., 2013; http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf; http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf; U.S. Government Accountability Office [GAO], 2005; Rubin & Roessler, 2007). Cases closed both successfully and unsuccessfully were examined to determine trends on the impact specific services and other variables have on vocational outcomes. This study will aid rehabilitation professionals in understanding how selective service provision and other extraneous variables impact vocational outcomes. Results yield noteworthy implications for VR counselors and practitioners, researchers, educators, funding sources, advocacy groups, and policymakers (Rubin & Roessler, 2007).

Statement of the Problem

State-federal vocational rehabilitation programs often safeguard citizens with disabilities, who typically have low employment rates, have access to required services that address their independence needs, economic autonomy, and overall assimilation into society though employment opportunities. As the state's population continues to rise, the number of individuals with disabilities necessitating vocational rehabilitation services also rises. Therefore, the need for VR services escalates over time. Vocational rehabilitation services are an impetus into competitive employment in the integrated labor market. There are many noteworthy socioeconomic impacts and contributions that result from successful VR outcomes. By retirement age, the average rehabilitated client will have recompensed the cost of services at least four times through taxes paid (http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf). Although these statistics shed light on the positive value of VR services, it remains clear that an evidence-based approach to VR service selection and appropriation could significantly improve these numbers.

The literature specific to the vocational rehabilitation discipline is full of research regarding the relationship between the outcome of the VR process and specific consumer characteristics, elements of VR practice, surrounding fiscal and physical external factors, or the knowledge, skills, and abilities of the rehabilitation counselor. Rarely, research studies are found that comprise more than merely one of these sets of factors. Researchers often focus on special groups instead of using a macro approach to better understand VR service provision and program evaluation. Though the micro approach to research is helpful in improving practices specific to target groups, these narrow approaches do not account for the how services impact society at large, nor do they assess the relationship between VR services and employment outcomes on a larger scale (Pi, 2006). There is limited research that examines multiple factors impacting

vocational outcomes. Of existing studies, a majority examined the impacts of the rural or urban factors to VR outcomes (e.g., Faubion, Palmer, & Andrew, 2001; Lustig, Strauser, & Weems, 2004).

The strength of the present research study involves the examination of multiple factors impacting VR outcomes, which can help practitioners identify best practices to improve VR service delivery to clients as well as increase the VR agency's return on investment. The primary intention of this study is to assess variables that are within the control of the state-federal VR agency through purchasing ability, although other variables such as consumer demographics are examined. The present-day standard involves consumers and their advocates being highly knowledgeable and empowered, though in some instances they may even be assertive about the types and quality of services requested. Furthermore, legislators and auditors are major proponents regarding the increasing need for more efficient and effective use of public monies. Non-public bodies are progressively enthusiastic for privatization of service delivery.

In part, this type of analysis gives way to the ever-changing social context in which the vocational counselor must make accurate and informed decisions regarding service selection and appropriation. Having supportive information regarding how specific factors impact vocational outcomes is critical in helping the state-federal agency and more specifically, the vocational rehabilitation counselor, decide which services are providing a high return on investment through evidence-based informed consumer choice.

Key Terms

Basic Living Requirement (BLR): The Basic Living Requirement is based on the Federal Poverty Guidelines (FPG) (http://aspe.hhs.gov/poverty/). This is modified each year as the federal poverty guidelines have been adjusted for inflation. If the client's monthly income (to include any allowable additions to the BLR) or liquid assets exceed the BLR, the client will be asked to help contribute to the cost of VR services. Allowable additions to the BLR include: monthly home mortgage and rent payments, costs for prescribed diets and prescription medications for the client, medical costs and other disability-related expenditures, and debts imposed by court order. Clients who receive social security benefits (SSI or SSDI) are not expected to contribute to the cost of services. In addition, an area manager can also grant an exception to the BLR when the consumer's participation might prevent the consumer from receiving a needed service.

Client: For purposes of this research the terms client and consumer will be utilized interchangeably. Clients/consumers are individuals who have applied for state-federal VR services and are undergoing the rehabilitation process. Generally, someone is not referred to as a client/consumer until they have been determined eligible for services. Prior to being determined eligible for services, these individuals are commonly referred to as applicants.

Comparable Benefit: Consumers are asked to apply for and utilize comparable benefits, which are any benefits they are eligible for that can assist them in reaching their VR goals. These identified comparable benefits or services are to be utilized first, unless using them would interrupt or delay services to the client. Vocational Rehabilitation does not pursue alternate funding for assessments to determine eligibility, employment services, post-employment services, counseling and guidance services, information and referral services to other programs, or rehabilitation technology services, or when pursuing alternate funding would significantly delay or interrupt VR services. Comparable

benefits may include: Medicaid, Medicare, private health insurance, Worker's Compensation benefits, Veteran's Administration benefits educational grants, scholarships, or any available community, state, or federal benefit program (http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf; 34 CFR Section 361.52(b)(4)).

Disability: The Vocational Rehabilitation Program serves people with a wide variety of disabilities such as: mental illness, physical impairments, sensory impairments, hearing impairments, impaired functioning of arms or legs, back injuries, alcoholism or drug addiction, intellectual/learning disabilities, traumatic brain injuries and other physical or mental disabilities that prevent the person from finding and keeping a job independently. The term "individual with a disability" refers to any individual with a physical or mental impairment, which substantially limits one or more major life activity (http://www.dars.state.tx.us/drs/rpm/default.htm).

Employability: A person is considered employable if they are deemed able to get and keep a job after receiving VR services, which are intended to reduce/eliminate their impediment(s) to employment. As a criterion for eligibility determination, one must be presumed capable of achieving an employment outcome, unless there is clear and convincing evidence obtained during an extended evaluation that demonstrates the consumer is unable to achieving an employment outcome after receiving VR services due to the severity of the disability (http://www.dars.state.tx.us/drs/rpm/default.htm).

Extended Evaluation: An Extended Evaluation is utilized to determine whether a client with a significant disability can achieve an employment outcome. It is a written plan that ensures the consumer's abilities, capabilities, and capacities to work are identified through trial work experiences. During this evaluation, services must be rendered in the most integrated setting possible. Often, multiple trial work experiences or situational assessments are conducted in order to adequately determine the overall employability of the client based on their demonstrated tolerance and functionality

(http://www.dars.state.tx.us/drs/rpm/default.htm).

Federal Fiscal Year: In the United States, the current federal fiscal year is identified as beginning on October 1st and ending on September 30th.

Impediment to Employment: An impediment to employment is any disability-related barrier that has resulted in substantial problems or interference in obtaining employment. An impediment to employment, as it relates to disability and eligibility requirements for state-federal VR relates to barriers in the areas of: Mobility, Self-care, Self-direction, Work Skills, Work Tolerance, Interpersonal skills, Communication, SSI Disabled/Blind or SSDI with no limited functional capacities, or Extended Services (supported employment) are expected (http://www.dars.state.tx.us/drs/rpm/default.htm).

Informed Consumer Choice: Consumers have the right to informed consumer choice, that is, after providing information about their options and alternatives regarding services and service providers. They have the right to choose services, service providers, and employment goals utilizing the informed consumer choice process. Generally, the vocational rehabilitation counselor they are working with will provide information to the consumer regarding their options and alternatives. The principles of informed consumer choice are found in regulations that implement the Rehabilitation Act of 1973, as amended, which require the client must be informed about and involved in choosing among alternative: goals, objectives, services, entities providing such services, and methods used to provide or procure such services (34 CFR Section 361.52(b)(4)).

Individualized Plan for Employment: An Individualized Plan for Employment (IPE) is a plan that is mutually created and agreed upon by the vocational rehabilitation counselor and the consumer. The components of the IPE include: the mutually agreed upon employment goal; the steps required to achieve the employment goal; a schedule of how often the consumer and counselor will maintain contact; criteria to evaluate progress; a description of services needed to reach the employment goal (to

include start/end dates for each services, service providers, and how services will be obtained); a brief statement regarding how the consumer was involved in choosing the job goal, services, and services providers; the client's role and responsibilities in achieving their goals; a list of other partners or organizations that will be utilized as comparable benefits; the amount required for contribution to the cost of services if the client exceeds BLR; statements regarding the terms and conditions for services from the state-federal VR agency as well as the client's right to appeal; signatures from the consumer or consumer's representative and the vocational rehabilitation counselor.

Limited Functional Capacities: Functional limitations impacting major life areas include the client's inability to effectively perform activities of daily living in the following areas: communication, self-care, self-direction, interpersonal skills, work tolerance, mobility, & work skills. Severity of disability can be measured by multiple limitations in the noted key life areas.

Severity of Disability: Within state-federal VR systems, if a case is anticipated to require multiple services over an extended period of time in order to become competitively employed, a case is designated a significant disability. The number of functional limitations clients experience determines the significance or severity classification of their disability. The client's counselor identifies these functional limitations. The counselor determines which limitations are present by reviewing existing medical or health records or obtaining new assessments to help identify functional limitations and disability-related impediments that impact the client's ability to obtain or maintain employment independently.

State Fiscal Year: In Texas, the current state fiscal year is identified as beginning on September 1st and ending on August 31st.

Rehabilitation Counseling: The Commission on Rehabilitation Counselor Certification (CRCC p. 43) defines rehabilitation counseling as a

> "systematic process which assists persons with physical, mental, developmental, cognitive, and emotional disabilities to achieve their personal, career, and independent living goals in the most integrated setting possible through the application of the counseling process. The counseling process involves communication, goal setting, and beneficial growth or change through self-advocacy, psychological, vocational, social, and behavioral interventions."
>
> (http://www.crccertification.com/pages/crc_ccrc_scope_of_practice/43.php)

Vocational Rehabilitation Process: The VR process encompasses numerous stages, often sequential in nature, that assist in facilitating the identification of eligible consumers through a progression of reducing/eliminating barriers impediments to employment, while making advancements towards an ultimate vocational goal. The process typically ranges from: 1) Initial Contact Status, 2) Application Status, 3) Eligibility/Plan Development Status, 4) Active Services, 5) Employment Status, 6) Closure Status (Successful or Unsuccessful), 7) Post-Employment Services Status (as needed) (See Appendix C for a complete listing of phase codes associated with each phase/status). See Appendix F for an illustration of the VR phase movement variations. Rubin & Roessler (2007) define the VR process as a sequential process beginning with evaluation, then planning, treatment, and placement.

Vocational Rehabilitation Services: The state-federal VR program provides goods and services to eligible individuals with disabilities to assist them by reducing/eliminating barriers to employment and helping them reach their vocational goals. Service provision is highly individualized and based on the consumer's rehabilitative and vocational needs. Services may include, but are not limited to: assessment, diagnosis and treatment of impairments, vocational counseling and guidance, college or

university training, occupational/vocational training, on-the-job training, basic academic remedial or literacy training, job readiness training, disability-related augmentative skills training, miscellaneous training, job-related services, job search assistance, job placement assistance, on-the-job supports, transportation services, maintenance services, rehabilitation technology, rehabilitation engineering service, assistive technology devices, assistive technology services, reader services, interpreter services, personal attendant services, technical assistance services, information and referral services, and/or other services (http://www.dars.state.tx.us/drs/rpm/default.htm; RSA, 2008).

Purpose of the Study

The primary purpose of this research was to examine the relationship between purchased services and employment outcomes within the state-federal VR program in a large southwestern state. The significance of this research involves the identification of variables that are correlated with successful and unsuccessful vocational outcomes. Data from state fiscal year 2014 was analyzed. The benefits of this research are for rehabilitation professionals and other vested agents in the field of VR, but prominently to clients. Research findings will help clients, researchers, educators, funding sources, policymakers, and practitioners.

Theoretical Framework

Optimizing return on investment (ROI) means refining program costs and risk estimates. Though many studies have analyzed inputs and outcomes, few have assessed the variables surrounding interventions (services and costs) to identify potential risks and benefits from selective service provision. Considering the state-federal budgetary allowances to provide services (interventions) to eligible individuals with disabilities, it would be useful for VR practitioners to be aware of how purchased services correlate with outcomes or outputs to improve service delivery models. According to Kassel (2010), the Government Accountability Office offers refined cost estimation. This will largely depend

on how well the program is defined.

For purposes of this research, outcomes are defined as employment outcomes (successful or unsuccessful). These outcomes are a component of the state-federal agency's performance standards and key indicators. Besides planning for realistic cost estimates per case, the establishment of risk assessments can assist agencies from running into cost overruns on cases or target initiatives. State-federal agencies should continually question presumptions that underlie risk and cost estimates.

Kassel (2010) notes key characteristics of successful procurement programs involve: transparency, accountability, integrity, competition, organizational alignment and leadership, human capital management, and knowledge and information management. Tennent (2014) positions that success is having the ability to create a sustainable superior return on investment (ROI). The ROI must be greater than a deposit rate to convince investors and funding sources of the value of putting their money into the business or agency. Though return on investment is a primary operational performance measure among all agencies and organizations with funding sources to report to, understanding how to maximize return on investment in VR service provision can be utilized to strategically implement approaches for individual cases as well as agency methodologies as a whole.

Social Return on Investment Theory

The concept of Social Return on Investment (SROI) is a context for understanding, evaluating, and overseeing the results of an organization's actions. Social Return on Investment may comprise many varieties of outcomes to include but not limited to: social, economic, and/or environmental outcomes; however, the theory is based on involving stakeholders in shaping which outcomes are pertinent and significant. In the case of VR, employment outcomes are pertinent and significant. Therefore, implementing policy and practices that promote employment outcomes is necessary in improving ROI. For instance, when VR counselors authorize the purchase of contracted services with community rehabilitation providers (CRP),

some purchased services are outcome based. This means the payment for services to the CRP is contingent upon the achievement of the intended goal, such as in the case of Job Placement Services. This type of policy development helps improve client outcomes.

Social Return on Investment has roots stemming from social accounting as well as cost benefit analysis, and shares many key concepts with other similar outcome-based approaches. Nonetheless, SROI is separable from other approaches in that a monetary value is placed on outcomes so that they can be summed up and compared with the investment made; this results in a ratio of total benefits, which is a sum of all outcomes to total investments. For instance, a business might have a ratio of $7 of social value created for every $1 spent on its actions. While the ratio is very important, Social Return on Investment is truly about much more than merely a simple dollar figure and ratio. In reference to a VR setting, although the ROI may be an estimated $9 for every $1 spent on successful cases in some states (http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf), one must also take into consideration all of the socioeconomic impacts and benefits this may have, such as eliminating the need for clients to access other public supports. Additionally, working individuals become tax payers and contribute to economic stimulation through spending.

An effective and impactful SROI represents a story of change, embracing qualitative as well as quantitative findings, and provides information to help agencies capitalize on their bottom line. The ratio should be evaluated and measured in the context of its entirety. Funding sources, due to comprehensible apprehension, may be inclined to utilize the ratio (alone) to guide funding decisions. Nonetheless, it would be unwise for a funder to make funding decisions simply on the basis of one factor. It is not recommended to utilize the ratio approach to compare different organizations. Even if these two organizations are a part of the same sector, there are

numerous variables and factors that may impact the overall service needs and outcome criteria. Although seemingly similar, each sector may have made distinctive conclusions in calculating their ratio. As with any other theory, SROI involves an approach that involves making decisions and judgments that must be well defined and documented so as to be as transparent as possible (Banke-Thomas, Madaj, Charles, & Van Den Broek, 2015; Lingane & Olsen, 2004).

Combining Social and Economic Returns

Defining "return" is crucial to understanding the aim of state-federal VR programs. Different vested entities may define "return" differently. Funding sources may need to account for return on financial or economic investment. Auditing agencies may need to account for time and financial efficiency, quality adherence and compliance to evaluation standards and indicators, accessibility of services, as well as oversight and control of administered programs.

A vocational rehabilitation counselor may define returns as the psychosocial and emotional gains they witness a client experience when the client makes strides towards self-sufficiency and independence by means of benefitting from rehabilitative counseling services. Although all definitions of "return" are noteworthy, the agencies bottom line and reason for existence must always be a priority.

Each state-federal VR agency has federal and state expectations, including standards and indicators that must be met in order for that VR agency to continue to quantify and measure its achievement and overall success throughout the course of a given fiscal year. These standards and indicators measure programmatic breadth and depth, quality and compliance, and how effectively the VR agency meets the needs of a growing population and specific demographic. With this in mind, VR agency personnel (executive leadership, central & regional program specialists, managers, VR counselors, and support staff) all play a vital role in providing high quality services that meet the vision and mission of the state-federal VR agency while also managing their time to ensure they simultaneously adhere to standards and indicators set forth by the state/federal government.

Understanding programmatic return on investment is vital to the success and sustainability of a program or organization. When monitoring and gaging program application, effectiveness, and overall influence, one must understand exactly what an agency must measure in order to consider its efforts and inputs a success. Social return on investment is a principle that helps investors and program evaluators understand how to approach nonprofit structures in a manner that is more suitable when assessing return (Banke-Thomas, et al., 2015; Lingane & Olsen, 2004).

Entrepreneurs create value. For social entrepreneurs, operating social purpose enterprises, this value creation process simultaneously occurs in three ways and along a continuum, ranging from economic, to socioeconomic, to social. To understand socioeconomic principles, one must first become familiar with the economic and social aspects of the continuum. It is this combined value creation process that an SROI analysis purports to gage. Economic value is generated by taking a resource or set of contributions, providing further inputs or practices that intensify the worth of those contributions, and thereby produce a product or service that has grander market worth at the next level of the value chain. This type of value creation or increase can often be found in actions of many for-profit corporations, despite the size. Measures of economic value creation have been developed and fine-tuned over the course of time, resulting in a multitude of econometrics, including return on investment, debt/equity ratios, price/earnings and many others. These measures form the origin for analyzing the vast majority of economic processes worldwide (Lingane & Olsen, 2004).

Social value has intrinsic value; however, defining social value in quantifiable terms can sometimes be a challenge. Social value is generated when resources, inputs, or processes are merged to produce progressions or positive impacts in people's lives or even society at large. The majority of nonprofit agencies and structures base their existence on the social value premise. Due to the ambiguity of defining the intrinsic value of social impact, it can be difficult to measure the true value generated as

a result of the vested inputs (Banke-Thomas, et al., 2015; Lingane & Olsen, 2004).

Measuring Outcomes in Vocational Rehabilitation

Measuring outcomes in VR has been a research focus area since the onset of VR. Because so many extraneous variables are present when working with people from wide-ranging age groups, varying disability types and disease processes, various counselor approaches to VR service provision, and various community rehabilitation programs and other service providers, it becomes difficult to determine whether causal relationships between the VR intervention and outcome are present. These and other extraneous factors largely confound the input-process-outcome interpretations.

Measuring rehabilitation outcomes involves the measurement of effectiveness and efficiency. Vocational rehabilitation service provision is effective when the VR process for a particular input results in the anticipated short-term or long-term intended output. Vocational rehabilitation service provision is efficient in instances in which the degree of short-term or long-term output warrants the extent of investment for a given input (i.e. cost-benefit or return on investment). In research, inappropriate descriptions of the inputs, measurements of the processes, and outcome data collection pose threats to true understanding of the input-process-outcome model, VR science, and the field of research (Walls, 2001). The most apparent return on investment criterion in VR is sustaining a suitable job in the competitive labor market. Less apparent, though still noteworthy, are byproducts of VR services, such as positive changes in functional limitations, minimized impediments to employment, and progress towards job readiness.

The Workforce Investment Act of 1998 implemented a longitudinal study of VR service applicants and recipients to assess the links between VR services and economic and noneconomic outcomes. This study was commissioned by the Rehabilitation Services Administration and mandated by Congress in the 1992 Rehabilitation Act Amendments (Walls,

2001). This initiative called for the Commissioner to identify and disseminate data on exemplary practices pertaining to VR service provision.

According to the Research Triangle Institute (1998), findings of this longitudinal study of a national sample of 8,500 cases found that former consumers of state-federal VR services who achieved a successful VR outcome more often: had a non-severe disabling condition, had orthopedic or hearing impairments, were male, were young, had higher math and reading achievement levels, had a work history at the time of application for VR services, had paid work experience, had work experience with higher wages, and received counseling, education, training, as well as job placement services. These individuals worked on average 35 hours weekly, earned approximately $7.35 hourly, and more than 60% earned $7.00 hourly or less (presumably with jobs that did not offer medical and health benefits). Lower levels of education and reading/math skills correlated with lower paying jobs.

Another study conducted by Bellini, Neath, and Bolton (1995b) utilized measures of client disadvantage as an independent variable (employment status at referral, highest educational level attained, financial assistance, household income, marital status, age, the severity of the disability, and primary/secondary disability classifications), while the VR employment outcomes were the dependent variable. Study findings revealed the strongest predictors for successful employment outcomes were: status of employment at the time of referral, benefits/assistance at referral, type and severity of the individual's disability, and educational level. Bellini, Neath, and Bolton found their Scale of Social Disadvantage yielded similar results in both studies (1995a & 1995b).

Other research has analyzed employment outcomes (outputs) after the provision of services for consumers with specific disabilities. For instance VR outcomes have been examined

for consumers with (inputs) arthritis, autism, intellectual and developmental disabilities, cerebral palsy, hearing impairments, learning disabilities, psychiatric disabilities, spinal cord injuries, substance abuse, and traumatic brain injuries (Cardoso, Romero, Chan, Dutta, & Rahimi, 2007; Hemenway & Rohani, 1999; Kundu, Dutta, & Chan, 2010; Pi, 2006; & http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf).

Some studies have measured specific interventions (services) and their impact on outcomes, while others have measured outcomes (outputs) other than employment outcome. Some studies have widened the scope of outcomes to include vocational outcomes (competitive employment, transitional work, part-time work, full-time work, salary/earnings, work satisfaction, productivity, and reduction of public benefits. Some researchers have also included other vocational and economic outcomes such as occupational type, salary satisfaction, financial status, work-related benefits, potential for training and career development at work, personal life satisfaction after obtaining work, reduction or removal of barriers or other impediments to employment, quality and quantity of work performance, problems on the job, family support, and their counselor's performance (Walls, 2001).

The number of potential outcomes and outcome measures as well as the number of inputs and interventions shed light on the complexity of the extant concerns and nomenclature. Consumer outcomes will always be impacted by extraneous variables, and cannot be examined with a narrow approach. Understanding that extraneous variables are always present and will always interact with the VR process is essential. Consumer outcomes in VR necessarily interact with input and process variables. Outcome measures are decided upon by rehabilitation programs, management teams, legislators, researchers, auditors, policy makers, and funding sources to justify expenditures, evaluate program effectiveness, and most importantly establish and identify optimal intervention strategies and best practices in VR service

provision (Walls, 2001).

Regardless of the approach, researchers and other interested parties seek to answer the following: What consumers, with what disabling conditions, abilities, and environmental circumstances, receive what service, with what outcome? If a simple approach to fully answer this question were easily attainable, this question would have already been answered. A unitary approach to this question may be unrealistic, however, it is up to researchers in the VR discipline to dissect and partition parts of this question one research study at a time. Though it is well known that VR services require individualization, research regarding best practices should continue for the sake of optimal VR service delivery.

Cost-Benefit Analyses of Vocational Rehabilitation Programs

Cost-benefit analyses are useful for organizations and businesses in deciphering the dollar amount invested and returned. A study conducted by Able Trust, a company contracted by the Educational Services Program of Florida State University, detailed information from the Florida Division of VR, the Social Security Administration, as well as the Florida Agency for Healthcare Administration. The sample analyzed included 29,475 consumers of Florida's state-federal VR program, closed in federal fiscal year 1998. A total of 9,598 were closed with a successful vocational outcome. The cost of unemployment for Florida residents with disabilities was estimated at $8.1-$10.5 billion annually. This figure accounts for $2.6 to $5 billion lost in productivity, a total of $3.9 billion in Social Security payments to recipients, and a total of $1.6 billion in public funds spent on health and other medical services. The average VR case cost was identified as $2,917 per closed case, totaling $86 million for 29,475 closed cases. The cost of helping clients with job placement and retention services was estimated at $5,010 per case, totaling $48 million for all 9,598 successfully rehabilitated consumers. Florida's total program expenditures for FY 1998 were approximated at $115 million (Hemenway &

Rohani, 1999).

Consumers of Florida's state-federal VR services closed during FY 1998 (N = 29,475) had an average increase in yearly earnings of $3,011, and an overall increase in earnings of $88.8 million. Consumers who completed planned VR program services and achieved successful vocational outcomes (N = 9,598) got an average of $10,407 in yearly earnings over preprogram earnings, earning a projected total of $126,958,364 in annual earnings in FY 1998. Benefits to the public sector involved less use of public assistance more tax contributions. Public assistance payments reduced among all VR consumers in closed cases by approximately $15 monthly per case or an annual $179 per case, totaling $5.3 million. The reduction in administrative costs was approximated at 10% of the total reduction in public assistance payments, totaling $18 per case or about $527,000 in FY 1998. The average yearly increase in state and federal tax contributions among all clients in closed VR cases was projected at 23% of the increase in earnings, equaling $693 per case or an increase of greater than $20.4 million in FY 1998. In calculating the cost-benefit ratio, costs and benefits were analyzed from a socioeconomic perspective. The results of the analysis suggested that for every dollar spent on vocational rehabilitation services, 16 dollars are returned to society. Overall, benefits to the public sector included a reduction in public assistance use and greater tax contributions, as well as greater consumer spending and economic stimulation as a result of increased earnings. Therefore, state-federal vocational rehabilitation services provide substantial and meaningful benefits to society at a nominal cost to taxpayers and society at-large (Hemenway & Rohani, 1999).

Informed Consumer Choice

The notion of informed consumer choice comes from rehabilitation legislation that allows for consumers to make informed choices regarding services, service providers, and to ultimately be an educated consumer regarding VR services and their rights as an individual with a

disability, a protected class in the United States of America. Since 1975, self-determination, autonomy, empowerment, and consumer driven methods of service delivery have emerged as fundamental premises in vocational rehabilitation (VR) services (O'Brien, Revell, & West, 2003; Storey, 2005).

These principles have been included in disability policy initiatives that have been created to enhance and broaden participation in services and improved quality of life. Some of the most noteworthy initiatives include, but are not limited to: The Individuals with Disabilities Education Act Amendments of 1990, which mandated transition students be involved in their transition plan from high school to the employment of their choice, The Rehabilitation Act Amendments of 1992 which necessitated that VR consumers be provided informed choice throughout the VR process, Title VIII of the Rehabilitation Act amendments of 1992 under the United States Department of Education, the Rehabilitation Services Administration funded projects to address increased choice and control within the VR process (O'Brien, Revell, & West, 2003; Rehabilitation Services Administration, 2001).

Informed consumer choice involves a process in which a consumer sets goals, gathers relevant information, considers a variety of options based on the acquired information, and then takes responsibility for choosing the option that they deem is best suitable considering their needs (Kosciulek, 2007; Storey, 2005). The vocational rehabilitation system is obliged to ensure that all activities and services provided are consistent with the ethical principles of autonomy, justice, beneficence, nonmaleficence, fidelity, and veracity. Arguably, informed choice plays a noteworthy role in each of those principles.

As the field of VR is continually shaped by informed consumer choice, it becomes crucial for VR counselors and management to develop a greater level of consumer expectations.

Providing informed consumer choice allows for more consumers to be and even feel like a vested partner in their rehabilitation plan. Using this approach to VR service provision allows for a consumer-driven approach, which has historically proven to be a more successful method than the VR professional imposing services upon a VR client that they feel would help the client. According to Kosciulek (2003), The Committee on Client Services Consumer Satisfaction Report, the consumer's perception of choice and customer service serves as distinct elements of satisfaction as they relate to the efficacy of vocational rehabilitation services. Kosciulek (2007) notes that an unfortunate fault of existing disability policy and related literature that lacks constructs that may be helpful in conceptualizing specific manners by which to inspect and improve informed consumer choice.

Kosciulek developed the Theory of Informed Consumer Choice Model in Vocational Rehabilitation (ICC-VR) that hypothesized that increased informed consumer choice in VR would lead to enhanced employment outcomes (2007). His research study testing this hypothesis found evidence to support four of his six major hypotheses. This study found that higher levels of informed choice were closely related to higher levels of employment outcomes. Similarly, higher levels of consumer satisfaction were closely associated with increased levels of employment outcomes as well (Kosciulek, 2007). Therefore, taking strides towards improving informed consumer choice plays a central role in improving VR outcomes.

Vocational Rehabilitation Expenditures

According to the U.S. Census Bureau, an estimated 56.7 million people or about 18.7% of the civilian population were individuals with disabilities in 2010 (Brault, 2012). Of this population, only 41% of individuals with a disability (aged 21 to 64) were employed. In contrast, approximately 80% of this age group without a disability were employed. The state-federal VR agency's focus on

independence allows clients who need expert services the opportunity to become independent and productive citizens. Qualified vocational rehabilitation counselors work with individuals with physical, mental, or emotional disabilities to provide counseling related to the personal, social, and vocational effects of their disabling conditions. These VR counselors help people with disabilities to identify their strengths and limitations in order to make informed decisions regarding their vocational goals.

Nationally, the state-federal VR program typically serves 1,000,000 individuals with disabilities annually. Program expenditures are an estimated $3 billion per year. This program is fundamental in the movement towards disability inclusion and equal access to competitive employment for individuals with disabilities. The public VR program rehabilitates and successfully closes over 200,000 yearly, meaning these individuals have successfully maintained gainful employment after receiving VR intervention (RSA, 1997). In FY 2012, the legislature appropriated approximately $622.5 million to the Texas state-federal VR program (The Texas Department of Assistive & Rehabilitative Services). The total amount of money spent for state fiscal year 2012 was $587,359,235 for all service programs. Nationally, in fiscal year 2012, 180,216 individuals achieved a successful employment outcome. Furthermore, 108,449 consumers obtained competitive employment with medical benefits. Over 102,203 were individuals with significant disabilities (http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf).

The vocational rehabilitation program is only one of several service programs administered by The Texas Department of Assistive & Rehabilitative Services (DARS includes the following programs: Rehabilitation Services Program, Blind Services, Early Childhood Intervention Services, Disability Determination Services, and Deaf & Hard of Hearing Services Program). This appropriation is approximately 80% federally funded. In 2012, the VR program in said large southwestern state spent $211,232,953 to rehabilitate and assist individuals with disabilities in achieving competitive employment. Contract expenditures totaled $72,196,262 in FY 2012.

(http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf). Cost-benefit analysis models of VR service programs confirm that vocational rehabilitation services have positive long-term economic and labor market impacts that significantly exceed the cost of providing client services (Leahy, Chan, & Lui, 2014).

The expenditures made in state-federal vocational rehabilitation agencies are made because they are designed to meet the specific individual needs of applicants and eligible consumers of the VR program. Although these services are considered to be useful, there have been no major studies conducted utilizing samples of all successful and unsuccessful closures to assess how various factors correlate with closure outcomes. Numerous extraneous factors can impact employment outcomes; it is vital to examine multiple factors to better understand whether demographics, client's extraneous income/health benefit effects (such as SSI/SSDI, worker's compensation, unemployment benefits, etc.), and purchased services (service tracks), combined effects, and benefits counseling (for SSI/SSDI recipients) predict employment outcomes. Some factors that contribute to vocational outcomes are extraneous and uncontrolled for; however, there are many factors that are not. Some predictors of VR outcomes are specific to service type; therefore those specific factors must be identified and further examined to promote improved VR service delivery. The present study is aimed at assessing numerous factors on a large scale, so as to narrow down which factors predict successful and unsuccessful outcomes. Understanding these correlations will not only assist VR counselors and practitioners with making informed value and evidence-based decisions, but it will also have implications for clients, educators, advocacy groups, funding sources, legislators, policy makers, and ultimately clients.

Research Questions and Hypotheses

R_1: Are there significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics?

H_{01}: There are no significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics.

H_1: There are significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics.

R_2: Are there significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered?

H_{02}: There are no significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered.

H_2: There are significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered.

R_3: Are there significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present?

H_{03}: There are no significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present.

H_3: There are significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present.

R_4: Which variables (demographics #1, service provision #2, extraneous income/health benefits #3) collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program?

H_{04}: There are no variables (demographics #1, service provision #2, extraneous income/health benefits #3) that collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program.

H_4: There are variables (demographics #1, service provision #2, extraneous income/health benefits #3) that collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program.

R_5: Are there significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services?

H_{05}: There are no significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services.

H_5: There are significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services.

CHAPTER II

LITERATURE REVIEW

Introduction

Pursuant to Title I of the Rehabilitation Act, states are provided with funds to administer a formula-based (based on population and per capita income in order to pay for direct services and programmatic administrative costs) state-federal vocational rehabilitation program for individuals with disabilities. The Rehabilitation Services Administration (RSA) is a federal agency under the U.S. Department of Education, established to administer certain functions of the Rehabilitation Act by overseeing grants and other initiatives to assist individuals with physical and mental impairments to obtain employment and function more independently in the community (www.rsa.ed.gov). The Rehabilitation Services Administration provides monitoring and oversight to the state-federal VR programs as mandated by Section 107 of the Rehabilitation Act of 1973 as amended. As a part of the monitoring process, the Commissioner of RSA must conduct yearly analysis to measure whether a given state-federal VR agency is appropriately complying with the State Plan provisions. This is measured by the implementation of Evaluation Standards and Performance Indicators, set forth in Section 106 of the Rehabilitation Act (www.rsa.ed.gov). Some examples of the standards and indicators measured to assess VR effectiveness include assessing VR's impact on employment (change in employment outcomes, percent of employment outcomes, competitive employment outcomes, significance of disability, earnings ratio, self-support) and equal access opportunity to individuals of all groups and backgrounds

(minority background service rate).

The History of Vocational Rehabilitation

Understanding the history of state-federal agencies often helps provide insight regarding their current functioning. State-federal VR programs have undergone a great deal of organizational change over the course of the last few decades (Parker, et al, 2005). Despite this, the goal of assisting individuals with disabilities to obtain and maintain suitable employment in accordance with their strengths, resources, priorities, concerns, interests, skills, abilities, capabilities, and informed choice remains the same.

In 1929, the state of Texas legislature authorized participation in a federal program to promote the rehabilitation of injured workers by creating the Vocational Rehabilitation Division within the Texas State Department of Education. In 1943, federal legislation extended vocational rehabilitation services to people with mental conditions, and services to include physical restoration, transportation, as well as occupational tools. In 1969, the legislature created the Commission for Rehabilitation, later renamed the Texas Rehabilitation Commission. In 1973, Congress enacted the Rehabilitation Act, mandating counselors to develop an Individual Written Service Plan (now known as the Individualized Plan for Employment) for each client. In 1992, Rehabilitation Act amendments mandated state VR agencies to emphasize serving individuals with severe conditions that would require multiple VR services over the course of extended period of time. In 2003, as part of H.B. 2292, the legislature created the Department of Assistive and Rehabilitative Services by consolidating four legacy health and human services agencies: the Interagency Council on Early Childhood Intervention (ECI), the Commission for the Blind, the Commission for the Deaf and Hard of Hearing, and the Rehabilitation Commission. Under the supervision of the Health and Human Services Commission, this state-federal VR agency assists Texans with disabilities to improve overall quality of life and to enable full participation in society. In 2004,

DARS became a state agency (http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf).

The Assistive Technology Act of 2004 along with the Workforce Innovation and Opportunities Act of 2014 (which replaces the Workforce Investment Act of 1998) continue to shape policy and service delivery procedures in today's VR practices (www.rsa.ed.gov). Other modern initiatives under Section 503 of the Rehabilitation Act such as the United States' Department of Labor Office of Federal Contract Compliance Programs (OFCCP) (effective March 2014) were developed to establish a nationwide goal for federal contractors to employ seven percent qualified individuals with disabilities in their workforce. This new regulation resulted from the changes implemented by the ADA Amendments Act (ADAAA) of 2008 in which the "disability" definition changed as well as the description of specific nondiscriminatory provisions. This targeted approach allows for improved employment opportunities for qualified individuals with disabilities (http://www.dol.gov/ofccp/regs/compliance/section503.htm).

Under the Rehabilitation Act, states are required to have a plan in place that conforms to regulations and that has been authorized by the Rehabilitation Services Administration, within the Office of Special Education and Rehabilitation Services, U.S. Department of Education in order to receive federal monies to operate the VR program. The State Plan should ascertain a designated state agency and state unit for managing the VR program. The elected state agency varies among states and may be found in education or workforce agencies or, as with Texas, in organizations that have a mission to provide quality services to individuals with disabilities. Some states have opted to manage their general VR and VR (Blind) programs under separate state programs. (http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf)

The State-Federal Vocational Rehabilitation System

The scope of state-federal VR services is broad. There is a wide array of services that can be provided to consumers based on their specific and individualized rehabilitative and vocational needs.

Although the vocational rehabilitation counselor ultimately authorizes purchased services, empirically validated research to assess how these purchased services impact vocational outcomes is lacking. Though more than 50% (www.rsa.ed.gov) of VR cases are closed successfully each year, empirical data to educate practitioners about how their VR budget expenditures impact vocational outcomes is lacking. Increased studies to empirically validate the effectiveness of these expenditures may lead to improved successful vocational outcomes. Counselors would then better understand which services do and do not yield a high return on investment. The counselor's judgment is critical to their value-based decision-making process to determine which services are reasonable and necessary; empirically-validated data would assist counselors in making wise expenditures to make the best use of VR funds while increasing successful employment outcomes.

The fundamental goal of vocational rehabilitation programs is to restore function in individuals to help them achieve their employment goals. Traditionally, VR programs have focused on the most severe medical conditions, often physical, though over time, and as a result of changing disability-related legislation, this has changed (Pi, 2006). Vocational rehabilitation services are commonly utilized to assist individuals with varying disability types in order to restore functionality to return to work. Vocational rehabilitation programs do not solely address healthcare or disability-related issues. More often than not, the client requires disability and workplace interventions in order to properly address the health issue as well as the work issues. State-federal vocational rehabilitation programs are time-limited and goal oriented. It is a dynamic process of active change, a catalyst for enabling the client experience to move from unable to work to becoming gainfully employed in a suitable vocation. True vocational rehabilitation involves the participation of key team members; these often include the client, the workplace supports (often the client's supervisor), and VR counselor working alongside each other to achieve a common goal. The VR team may also be comprised of community rehabilitation program

contractors/job placement specialists, case managers from other agencies, and family members, to name a few. Optimal strategies for vocational rehabilitation service delivery have always been an intention of state-federal agencies. As a result of the Workforce Investment Act of 1998 and other previous disability-related legislature such as the Rehabilitation Act of 1973, as amended, it is the duty of each state-federal VR program to carry out and implement federal and state mandates to best service eligible individuals with disabilities (to include individuals with the most significant disabilities) by enhancing their ability to become gainfully employed (Walls, 2001).

The benefits and impacts of VR services on clients with disabilities are many. Deciding what to measure may be viewed as difficult because there are several byproducts of VR services that positively impact the client's quality of life. A byproduct of rendered VR services to clients often includes increased self-esteem, increased feelings of self-worth, and improvements in the client's ability to be independent (Parker, et al, 2005; Rubin & Roessler, 2007) . Despite these noteworthy psychological and psychosocial improvements, because VR agencies manage large state-federal budgets, the VR agencies must also account for outcomes and improvements that can benefit society and economy. Additionally, VR agencies must satisfy the requirements of funding sources and legislative representatives and appropriators, such as improvements in vocational functioning. In order for VR programs to remain sustainable, they must prove to be valid, effective, and efficient. State-federal VR agencies must demonstrate that money spent was money well spent and well invested.

A number of studies have evaluated outcome criteria other than employment outcomes that occur as a result of VR services. Many of these outcomes or changes are viewed as positive impacts on the clients' lives; though there must also be measurable positive vocational outcomes tied to these changes in order for the agency to demonstrate effectiveness. Though many of the changes result from services incorporated into the Individualized Plans for Employment, they are not typically the ultimate goal.

These are often considered intermediate objectives, which are designed to help the consumer make noteworthy progress towards the ultimate vocational goal. The ultimate goal is for the client to obtain and maintain satisfactory and competitive employment for a minimum of 90 days after substantial VR services have been rendered in order to maximize their independence.

Many studies utilize vocational outcomes as the dependent variable and other miscellaneous variables as the predictor variables. A study conducted by Bellini, Neath, and Bolton (1995b) utilized client disadvantage as the predictor variable. Client disadvantage included factors such as employment status at the time of referral, educational level, financial assistance, family income, marital status, age, the severity of the client's disability, and primary as well as secondary disability. According to this study, the strongest predictors impacting competitive employment outcomes were: employment status at referral, benefits/assistance at referral, type and severity of disability, and education level, respectively.

The variety of outcomes and outcome measures in the jurisdiction of vocational rehabilitation can be extensive and complex. When trying to understand the true effectiveness of a social services program, specifically a program acutely designed to assist a protected special population, the humanistic factor and social value must not be ignored. The economic return on investment also cannot be ignored. As these programs are social welfare intensive, they must also account for social return on investment. It is imperative to be mindful of two schools of thought: discipline-related theories (social welfare, i.e. Vocational Rehabilitation Services) and systems-related theories (social and economic return on investment). To understand how each theory impacts the other in the field of VR, one must be familiar with the dynamics of the VR process.

The state-federal VR agency's focus on independence allows clients who need expert services the opportunity to become independent and productive citizens. Qualified vocational rehabilitation counselors work with individuals with physical, mental, or emotional disabilities to provide counseling

related to the personal, social, and vocational effects of their disabling conditions. These VR counselors help people with disabilities to identify their strengths and limitations in order to make informed decisions regarding their vocational goals. Nation-wide the state-federal VR program typically serves greater than 1,000,000 individuals with disabilities annually. Program expenditures are an estimated $3 billion per year. Nationally, public VR program rehabilitates and successfully closes over 200,000 yearly (RSA, 1997). In FY 2012, the state of Texas legislature appropriated approximately $622.5 million. The total amount of money spent for FY 2012 was $587,359,235 for all service programs. The vocational rehabilitation program is one of several service programs administered by the state-federal VR agency (to include programs: Rehabilitation Services Program, Blind Services, Early Childhood Intervention Services, Disability Determination Services, and Deaf & Hard of Hearing Services Program). This appropriation is approximately 80% federally funded. In 2012, the VR program in this large southwestern state spent $211,232,953 to rehabilitate and assist individuals with disabilities in achieving competitive employment. Contract expenditures totaled $72,196,262 in FY 2012. (http://www.dars.state.tx.us/news/Sunset/DARS_Accessible.pdf).

The expenditures of state-federal VR agencies are designed to meet the specific individual needs of applicants and eligible consumers of the VR program. Although these services are considered to be useful, there have been limited studies conducted that utilize samples of an entire state's successful and unsuccessful closures to assess how various factors correlate with closure status. Numerous extraneous factors can impact employment outcomes. However, it is vital to analyze each factor to better understand how demographics, extraneous income benefit or health benefit effects (namely when they are beneficiaries of other monetary or income benefits such as social security, worker's compensation, etc.), and purchased services correlate with employment outcomes. Though some factors that contribute to vocational outcomes are extraneous and uncontrolled for, some are not; therefore, those specific

factors must be identified and further examined in order to allow for improved evidence-based practice.

State-federal vocational rehabilitation programs are under increasing pressure to utilize evidence-based practices (Fleming, Del Valle, Kim, & Leahy, 2013). Legislators, funding sources, and auditing agencies scrutinize VR practices to promote optimal VR functioning and the best use of taxpayers' dollars. Many studies have validated the effectiveness of VR counseling (Pruett, et al., 2008). Pruett, et al. (2008) examined literature specific to the efficacy of state-federal VR programs, private sector VR, as well as community-based rehabilitation programs. Evidence-based practice models are commonplace in the field of medicine and now more recently in the healthcare, social services, and educational disciplines as well. In the medical profession, randomized clinical trials are typically utilized in research to obtain empirically validated evidence to support their clinical practices.

Though VR researchers do not typically employ this specific research approach, empirical validation of VR practices is still achieved via alternative research methodologies. Researchers in the discipline of VR often measure how specific disability groups (instead of multiple disability groups) respond to specific services (instead of multiple services). To be noted, are exceptions found in research by (Bellini et al., 1995; Bellini et al., 1998a; Bellini et al., 1998b; Bolton et al., 2000). These pieces afford attention to the prediction of the VR outcome from assorted combinations of elements such as the client's personal history, personal functional limitations, as well as the resources and services provided by the state-federal VR organization. Furthermore, variables (other than race/ethnicity or disability type) that are not within the control of the VR agency are confounded with these demographic features. For instance, cognitive ability, education at time of application, gender, marital status, financial support, severity of the disability, prior work history and customer motivation are characteristics that have been identified by rehabilitation counselors as impacting the client's rehabilitation outcome.

Pursuant to Title I of the Rehabilitation Act, states are provided with funds to administer a

formula-based (based on population and per capita income in order to pay for direct services and programmatic administrative costs) state-federal vocational rehabilitation program for individuals with disabilities. The Rehabilitation Services Administration (RSA) is a federal agency under the U.S. Department of Education, established to administer certain functions of the Rehabilitation Act by overseeing grants and other initiatives to assist individuals with physical and mental impairments to obtain employment and function more independently in the community. The Rehabilitation Services Administration provides monitoring and oversight to the state-federal VR programs, mandated by section 107 of the Rehabilitation Act of 1973, as amended. As a part of the monitoring process, the Commissioner of RSA must conduct yearly analysis to measure whether a given state-federal VR agency is appropriately complying with the State Plan provisions. This is measured by the implementation of Evaluation Standards and Performance Indicators, set forth in Section 106 of the Rehabilitation Act (www.rsa.ed.gov).

The state-federal vocational rehabilitation system was designed to help people with disabilities to prepare for, obtain, and maintain jobs. Work-related services are highly individualized and can include counseling, training, medical treatment, assistive devices, job placement assistance, among other services that may be required to help the individual with a disability meet their employment goals. The state-federal vocational rehabilitation program is eligibility-based. Individuals who apply must meet certain eligibility criterions in order to be determined eligible for state-federal vocational rehabilitation services. Helping eligible consumers meet their employment goals is the primary focus of vocational rehabilitation services. There is a wide array of services that can be provided to consumers based on their specific and individualized rehabilitative and vocational needs.

Although the vocational rehabilitation counselor ultimately authorizes purchased services, empirically validated research to assess how these purchased services impact vocational outcomes is

lacking. Though more than 50% of VR cases are closed successfully each year, empirical data to educate practitioners about how their VR budget expenditures impact vocational outcomes is lacking. Increased studies to empirically validate the effectiveness of these expenditures may lead to improved successful vocational outcomes. Counselors would then better understand which services do and do not yield a high return on investment. Naturally, the counselor's judgment is critical to their value-based decision-making process to determine which services are reasonable and necessary; though empirically-validated data would assist counselors in making wise expenditures to make the best use of VR funds while increasing successful employment outcomes.

The Vocational Rehabilitation Process

When an individual with a disability is interested in applying for state-federal vocational rehabilitation services, they undergo a process. The process consists of various phases. The manner in which each individual goes through the VR process varies. Some phases may not be appropriate for some consumers, such as extended evaluation. This following description of phases and corresponding phase codes is not an exhaustive list. These are some of the most commonly utilized phases and corresponding phase codes. For a complete listing of phase codes, see Appendix C. Furthermore, Appendix F illustrates the vocational rehabilitation phase movement process and its possible variations. Phase 04 is specific to states that have implemented an Order of Selection (OOS) policy. If a state does not operate under OOS, phase 04 is not applicable.

Initial Contact (phase 00). During the initial time frame of contact with the referral, the counselor develops a basic understanding of the prospective client's needs. The counselor is responsible for identifying and explaining the scope and purpose of rehabilitation services and programs. During this phase, the counselor record basic identifying information into the electronic caseload management system and assign the case to the program most suitable for the prospective client based on their expressed needs. Once this is done, an appointment is provided to the prospective applicant in order to

complete the application for services. Some initial contacts may be in-person contacts (i.e. walk-ins) or telephone contacts.

Application (phase 02). Once the initial contact has been completed and the case has been assigned, the individual interested in VR services must complete an application for services. This application involves a series of questions and information gathering in order for the VR counselor to have a thorough understanding of the applicant's situation and rehabilitative needs. The applicant will be asked about personal information, disability information, other agency involvement, insurance policy information, household financial information, and their work history. They will typically sign release and disclosure forms, as well as the application statement. After completing the application, the counselor can request and review existing medical, school, or psychological records to determine eligibility; however, if eligibility cannot be determined within 60 days from the application date, the counselor must discuss this matter with the applicant to inform them of the unforeseen circumstances delaying the decision. With the agreement from the consumer, the counselor can extend the case (i.e. 30 more days) depending on the amount of time warranted to obtain the information needed to determine eligibility. During this process, a case is considered to be in "Extension of Time."

Extended evaluation (phase 06). Extended evaluation plans can be utilized before determining eligibility to determine whether an individual with a significant disability can achieve an employment. This is determined by allowing the applicant to undergo trial work experiences. This process ensures that the client's abilities and capability to perform work are identified through various trial work experiences. The trial work experiences should be conducted in the most integrated setting. This phase is often utilized when there is a question regarding an applicant's employability, or ability to achieve a competitive employment outcome. If the counselor has reason to believe the applicant can achieve an employment outcome, the extended evaluation phase would not be utilized.

Eligibility/plan development (phase 10). The eligibility process is an imperative component of the VR process. The VR counselor must utilize existing information (or if existing information is unavailable or insufficient, assessments may be purchased by the VR agency) to determine eligibility. Recipients of Social Security disability benefits (i.e. Supplemental Security Income and/or Social Security Disability Insurance) are presumed to be eligible for Vocational Rehabilitation Services. Eligibility for this population must be determined immediately after the counselor has obtained the proof of receipt of benefits. However, in some instances, there may be a caveat if there is a question regarding the recipient of Social Security disability benefits' ability to achieve an employment outcome. In this instance, the counselor may decide an Extended Evaluation plan is warranted. If someone does not receive Social Security disability benefits, the basic eligibility criteria must be met. Based on 34 CFR Section 361.42(a)(1), the counselor must determine the client has a physical or mental impairment, the impairment must result in a substantial impediment to employment, the consumer requires VR services to prepare for, obtain, or maintain gainful employment, and presume the client can achieve an employment outcome. Eligibility for the VR program must be determined by the 60th day after the application was signed and completed, unless there is a warranted need for an Extension of Time. Once eligibility has been determined, if an applicant is determined eligible for services the next step in the VR process involves assessing and planning (previously referred to as comprehensive assessment) to determine the consumer's individualized needs. During this part of the VR process the counselor works closely with the consumer to evaluate consumer's unique vocational rehabilitation needs. Existing or purchased assessments are reviewed with the consumer to educate him/her about their abilities, strengths, and limitations. Throughout the assessing and planning process, steps are taken to determine a suitable employment goal, determine the nature and scope of required services, and develop an Individualized Plan for Employment that are aligned with the client's strengths, resources, priorities,

concerns, abilities, capacities, interests, and informed choice (based on CRF Section 361.45(b)).

Active services (phase 14). This phase is marked by the development of the Individualized Plan for Employment (IPE). The Individualized Plan for Employment must be developed with the utilization of the principles of informed consumer choice. This involves the counselor providing information to the client so they are aware of his/her disability, goals, and the available VR services and all their implications. Client participation in the development of the IPE is of utmost importance. The IPE should be developed to include a suitable employment goal, required services and steps to achieve his/her employment goal, objectives that determine how each step will be evaluated, and the consumer's comments about the IPE. The IPE should be completed within 90 days after the eligibility determination date. If this cannot be accomplished, the electronic case system must reflect the counselor's good faith efforts and actions to attempt to meet this standard (based on 34 CFR Section 361.45(a)(1)). Based on CFR Section 361.48(a)-(t), services available through the state-federal VR program include:

- Assessments to determine eligibility and VR-related needs
- Counseling and guidance
- Physical and mental restoration services
- Vocational and other training services
- Maintenance for additional costs incurred during the VR process
- Transportation necessary to participate in VR services
- Services to family members, to support the consumer in their VR endeavors
- Interpreter and note-taking services for Deaf consumers
- Items and supplies required to enter an occupation or operate a small business
- Rehabilitation technology
- Transition services for students to move from school to the employment setting

- Supported Employment Services for consumers with the most significant disabilities; and
- Other goods and services as deemed reasonable and necessary to support the IPE goal (i.e. home modification)

Employment (phase 22). Once disability-related or other impeding barriers have been addressed, the VR counselor and consumer work closely together to help the consumer achieve their identified employment goal. Employment assistance is one of the primary services available in the VR setting. Once employment is obtained, the VR counselor continues to work with the consumer to ensure all job skills are learned, identified employment conditions are met, and the consumer is working and stable on the job for a minimum of 90 days. After 90 days of employment, the case is assessed for successful closure. The employment must be consistent with the client's strengths, resources, priorities, concerns, abilities, capabilities, interest, and informed choice. VR programs are aimed at providing services to individuals with disabilities and businesses with the goal of improving and increasing access to employment opportunities for individuals with disabilities (based on Rehabilitation Act of 1973, as amended Section 101(a)(11)(A)(iv)ii).

Successful closure (phase 26). Once a consumer has achieved a successful employment outcome and has worked a minimum of 90 days, a counselor must assess the case for successful case closure. Before a case may be closed successfully, the client must have received substantial vocational rehabilitation services that have successfully impacted their employment outcome. The client must have obtained an employment outcome as described in the consumer's IPE; and the employment must be consistent with the consumer's strengths, resources, priorities, concerns, abilities, capabilities, interests, and informed choice. They must have maintained employment for a minimum of 90 days after substantial services have been rendered, and the consumer must be employed at the time of closure. Both the client and consumer must be satisfied with the employment outcome and agree the consumer is

stable and performing their job duties well. The counselor must notify the consumer of the closure and the availability of post-employment also referred to as post-closure services.

Unsuccessful closure (phase 28). Unsuccessful closures can occur for a variety of reasons. After a case has undergone IPE development, if a case is closed unsuccessfully, it is assigned phase code 28. Some of the reasons cases are closed unsuccessfully are as follows: (1) Death; (2) The client's disability is too severe and will not allow them to achieve an employment outcome; (3) The client is unable to achieve an employment outcome in an integrated setting or opts for extended (sheltered) employment in a nonintegrated setting; (4) The client could benefit from supported employment services, but there are no sources of extended services available; (5) The client cannot engage in VR services because they are incarcerated in a prison, jail, or other criminal correction facility an extended period of time; (6) The client has entered an institution other than a prison or jail (such as a hospital, nursing home, or treatment center) for an extended period of time; (7) Other reasons, such as the consumer achieved employment without substantial VR services; (8) The client was referred to another agency because their services were more appropriate; (9) Suitable transportation for accepting or maintaining employment is either not available or not feasible (too expensive or inaccessible.); (10) The counselor is unable to locate the client or the client has moved out of state (http://www.dars.state.tx.us/drs/rpm/default.htm).

Post-employment services (phase 32). After a case has been closed successfully, if a former consumer requires assistance because they became unemployed or required some other form of VR assistance, a counselor can provide services under Post-Employment services. Once services are rendered and the consumer becomes employed again, the case is closed again (http://www.dars.state.tx.us/drs/rpm/default.htm).

All states are unique and have undergone changes that have impacted the manner in which services are provided. Some states are under an order of selection policy for VR service provision. In

these instances, individuals with the most severe disabilities are serviced first, if the state is unable to serve all eligible individuals (rsa.ed.gov). Individuals with less severe disabilities are placed on a waiting list. In states that do not utilize an order of selection (OOS) policy, a prospective client can come into the office, apply for services, and if deemed eligible, they may proceed to undergo the VR process to assist them with their vocational rehabilitation needs without being placed on a waiting list.

The fundamental goal of vocational rehabilitation programs is to restore function in individuals to help them achieve their employment goals. Traditionally, VR programs have focused on the most severe medical conditions, often physical, though over time, this has changed. Vocational rehabilitation services are commonly utilized to assist individuals with varying disability types in order to restore functionality in order to return to work. Vocational rehabilitation programs do not solely address healthcare or disability-related issues. More often than not, the client requires disability and workplace interventions in order to properly address their disability or health issues as well as the work issues. State-federal vocational rehabilitation programs administer services that are time-limited and goal-oriented. They involve a dynamic process of active change, a catalyst for enabling the client experience to move from unable to work to becoming gainfully employed in a suitable vocation.

Vocational rehabilitation involves the participation of key team members. This often includes the client, workplace supports (often the client's supervisor), and VR counselor working alongside each other to achieve a common goal. The VR team may also be comprised of community rehabilitation program contractors/job placement specialists, case managers from other agencies, and family members. Optimal strategies for vocational rehabilitation service delivery have always been an intention of state-federal agencies.

Client Outcomes in Vocational Rehabilitation

Measurement of rehabilitation outcomes can be assessed by numerous factors. A byproduct of

rendered VR services to clients often includes increased self-esteem, increased feelings of self-worth, and improvements in the client's ability to be independent (Parker, et. al, 2005; Rubin & Roessler, 2007). Despite these noteworthy psychological and psychosocial improvements, because VR agencies manage large state-federal budgets, they strive for outcomes and improvements that can have potential benefits on society and the economy, such as successful employment outcomes.

Additionally, VR agencies must satisfy the requirements of funding sources and legislative representatives and appropriators, such as improvements in vocational functioning. In order for VR programs to remain sustainable, they must prove to be valid, effective, and efficient. State-federal VR agencies must demonstrate that money spent was money well spent and well invested. According to Walls (2001), there are various positive changes that may manifest as a result of the provision of VR services. Such positive changes can include:

- change from unemployed to employed
- change from unemployed and not wanting to seek employment to unemployed and wanting to see employment
- change from part-time to full-time employment
- change from lower wage job to higher wage job
- change from job that doesn't offer medical insurance to job that does provide medical insurance
- change from lower satisfaction job to higher satisfaction job
- change from an employer's lower evaluation of the employee's performance to a higher performance evaluation
- change from not having a job skill to having a job skill

- change from not being able to perform a job skill to being able to perform a job skill (via the implementation of an accommodation for instance)
- change from not being able to perform or maintain current job to being able to perform or maintain it
- change from more functional limitations to fewer functional limitations
- change from reliance on public benefits or assistance to less reliance or full self-sufficiency

A number of studies have evaluated certain aspects of the effectiveness of VR services. Many of the aforementioned changes are certainly viewed as positive changes; though there must also be measurable positive vocational outcomes tied to these changes in order for the agency to demonstrate true VR effectiveness. Though many of the aforementioned changes result from services incorporated into the Individualized Plans for Employment, they are not typically the ultimate goal. These are often considered intermediate objectives, which are designed to help the consumer make noteworthy progress towards the ultimate vocational goal.

The ultimate goal is for the client to obtain and maintain satisfactory and competitive employment for a minimum of 90 days after substantial VR services have been rendered in order to maximize their independence. Many studies utilize vocational outcomes as the dependent variable and other miscellaneous variables as the predictor variables. A study conducted by Bellini, Neath, and Bolton (1995b) utilized client disadvantage as the predictor variable. Client disadvantage included factors such as employment status at the time of referral, educational level, financial assistance, family income, marital status, age, the severity of the client's disability, and primary as well as secondary disability. According to this study, the strongest predictors impacting competitive employment outcomes were: employment status at referral, benefits/assistance at referral, type and severity of disability, and

education level, respectively.

The variety of outcomes and outcome measures in the jurisdiction of vocational rehabilitation can be extensive and complex. When trying to understand the effectiveness of a social services program, specifically a program acutely designed to assist a protected special population, the humanistic factor and social value must not be ignored. The economic return on investment cannot, however, be ignored. Because these programs are social welfare intensive, they must also account for social return on investment. It is imperative to be mindful of two schools of thought: discipline-related theories (social welfare i.e. Vocational Rehabilitation Services) and systems-related theories (social and economic return on investment). To understand how each theory impacts the other in the field of VR, one must be familiar with the dynamics of the VR process.

Input-Intervention-Output Model

According to Walls (2001), the rehabilitation process can be conceptualized theoretically as an input-intervention-output model. Despite the rehabilitation or agency setting, input must be acquired at the intake stage of the rehabilitation process. State-federal vocational rehabilitation settings, rehabilitation hospitals, rehabilitative companies, and VR professionals utilize this paradigm. In order for eligible clients or consumers with disabling conditions to reach their goals of employment and independence, it is fundamental for the rehabilitation service to facilitate meaningful transitions from the input stage (intake stage) to the output stage (successful or unsuccessful outcome stage) by providing or coordinating interventions (process stage) that have a lasting and profound impact.

Intake phase (input). The input or intake phase involves the preliminary part of the vocational rehabilitation process. This involves assessment for determining eligibility for services. This may include a review or existing medical or psychiatric data or acquisition of new evaluations to determine current functionality and prognosis. Eligible individuals must be

individuals with physical or mental impairments that result in a substantial impediment or barrier to employment (finding or keeping a job independently). In order to be eligible, these individuals must also require VR services with the anticipation that they will benefit from them yielding an employment outcome. They must be presumed employable. Some inputs during this phase may include: interests, skills/knowledge, vocational and educational abilities, functional capacities, intelligence, educational achievements, personality, vocational and educational aptitudes, transferrable skills, and past work experience.

Other factors must also be considered such as psychosocial, social, economic, psychological, psychiatric, cultural, recreational, and environmental inputs are also taken into account to assess the individual's overall rehabilitative needs. Certain inputs are a required part of the application for rehabilitation services. These often include, but are not limited to: age, gender, ethnicity, education level, impairment category or type, the severity of the disability, employment status at the time of application, and earnings (if applicable). This information helps the rehabilitation professional gather the information needed to make an accurate eligibility determination and begin the process of assessing and planning for selective service provision.

There are many agencies available to the public to assist people with their employment needs (local workforce center) and other resources that someone with a disability may apply for (social security cash and medical benefits). These are often referred to as comparable benefits, also known as services or benefits available to the consumer not paid for by the state-federal VR agency. Many of the services provided as a result of the planning in the VR service plan (Individualized Plan for Employment) can be arranged services through other agencies or funding sources. If services are not available to the consumer through other comparable benefits or funding sources, the VR counselor has the ability to purchase the service for the consumer if it is reasonable and necessary in the scope of their

VR plan (IPE). These services are referred to as the intervention (Walls, 2001).

Process phase (intervention). Individuals deemed eligible for VR services are referred to as "clients" or "consumers." Individuals who apply for state-federal VR services must have a presence of a physical or mental impairment(s), a substantial impediment to employment as a result of the impairment(s), must require vocational rehabilitation services, and must be deemed employable (in the competitive labor market). If an applicant for state-federal VR services meets these requirements, the vocational rehabilitation counselor determines them eligible for services. Some states are on an order of selection process which mandates that eligible individuals with the most severe disabilities must be served first, while others are placed on a waiting list.

Throughout the process (intervention) phase, an individualized plan for employment is developed and mutually agreed upon by the vocational rehabilitation counselor and the consumer. Services are appropriated in order to reduce or eliminate the barriers to employment faced by the eligible consumer in order to help them become competitively employed for a minimum of 90 days. Eligible consumers often spend time undergoing trial work experiences or other evaluations in order to assess and identify an appropriate and realistic vocational goal as well as the rehabilitative services required to reduce or eliminate the consumer's impediments or barriers to employment.

Substantial services are services arranged, purchased, and/or provided throughout the scope of the consumer's IPE that assist in helping the consumer achieve his/her vocational goal and intermediate objectives. Substantial services can include, but are not limited to: counseling and guidance, physical restoration services, mental restoration services, rehabilitation technology, deaf/ hard of hearing services, college education, vocational training, technical training, on-the-job-training, job placement assistance, supported employment services, vocational adjustment training, and personal social adjustment training. Post-employment services are also available to assist consumers after their cases

have been closed should the need arise.

When the state-federal VR agency purchases services for the consumer, the qualified vocational rehabilitation counselor will determine service appropriation based on the individual's needs. The VR process itself has remained fundamentally unchanged since its onset. Despite this, the approach taken by counselors may vary. This is due to various reasons; however, understanding the effectiveness of various services and approaches is vital in establishing best practices for current and future VR practitioners (Walls, 2001).

Outcome phase (output). During the outcome or output phase, ideally, the consumer would have benefitted from the intervention(s), thus resulting in suitable employment in the competitive labor market for a minimum of 90 days after substantial VR services were rendered. Though this is the intention, this is not always the case. Consumers may exit the process in any of several outcome statuses. Some may exit based on ineligibility for VR services, closed (not rehabilitated) before IPE initiation, after IPE development (not rehabilitated), or after IPE development (rehabilitated). There are a multitude of factors that may contribute to the output phase. Some common reasons include: failure to cooperate, unable to locate, death, moved/relocated to another state, or not interested in services. In order to achieve a successful rehabilitation outcome, the VR applicant is determined eligible for services, receives appropriate assessments, has a mutually agreed upon IPE (counselor and consumer mutually agree upon goals and services), the consumer completes the planned services, and is suitably and competitively employed for a minimum of 90 days.

Key indicators and performance measures have been implemented by the Rehabilitation Services Administration to assess the effects of VR activities legislated by the Workforce Investment Act of 1998 on an ongoing basis. Based on an extensive review of literature, most commonly, VR researchers focus

primarily on the output, employment status. Though this is the principal output, other outcomes/outputs such as hours worked at time of closure and wages have also been examined (Walls, 2001).

The Evolving Role of Vocational Rehabilitation Counselors

During the infancy of vocational rehabilitation as a profession, in 1927, H.B. Cummings of the Vocational Rehabilitation Service, Federal Board for Vocational Education, noted a move toward the specialization in rehabilitation work (Oberman, 1965). Rehabilitationists (known then as caseworkers) were working in eight states that had state funded vocational rehabilitation programs before the first federal VR act was passed in 1920. A year and a half later, 34 states established VR programs and hired rehabilitation caseworkers. In the 1950s, it became evident that rehabilitation counseling was a widely recognized field and profession, with state-federal programs constituting the vast majority of VR employment settings.

Today, all states have a VR program, with 24 states having two programs. The states with two programs have a separate program for individuals with visual impairments and blindness due to the unique needs of this population. Rehabilitation research became an emphasis during the 1950s and continues to remain a priority for establishing sound VR practices. At the Fifth National Conference on Vocational Rehabilitation in Milwaukee in 1928, rehabilitation caseworkers were able to identify issues faced by the profession at the time. These issues included problems with recruiting qualified rehabilitation workers, issues with training them, the need for specialized college training, and the inability to attract qualified personnel due to narrow salary budgets (Oberman, 1965). Over time, a national VR program was formed without the consistently trained and qualified personnel to implement it.

In the 1940s, three educational programs were created in the fields of vocational education, social work, and special education programs. The Barden-LaFollete Act of 1943 provided state agencies the ability to train or pay for the training of their personnel. As a result, numerous graduate rehabilitation

counseling programs emerged. In 1969, a group of rehabilitationists identified the need for accreditation of rehabilitation counselor education programs. Consequently, CORE was formed in 1971 and incorporated one year later in 1972 (www.core-rehab.org). By 1993, the Council on Rehabilitation Education (CORE) listed a total of 77 accredited programs. To date, CORE accredits roughly 96 university and college-based rehabilitation counselor education programs at the graduate level (www.core-rehab.org) Over the past 15 years, there has been further expansion in the amount of graduate rehabilitation counseling programs.

Legislative changes in the 1992 and 1998 amendments to the Rehabilitation Act of 1973 provided a catalyst for growth and improvement in VR service delivery. The amendments emphasized the need for "qualified" rehabilitation personnel (Parker, et al., 2005). Numerous outcome studies have been conducted to analyze how outcomes differ in relation to counselor's counseling approaches as well as level of training/education (Bolton, 1976; Bolton & Rubin, 1974; Bozarth & Rubin, 1975; Fish, Lesh, Evenson, & Leung, 1982; Ju, 1982; Reagles, Wright, & Butler, 1971). Outcome studies regarding the effects of counselor training/education on rehabilitation outcomes have found that a master's degree in rehabilitation counseling positively contributes to successful rehabilitation outcomes (Cook & Bolton, 1992; Szymanski, 1991; Szymanski & Danek, 1992; Wheaton & Berven, 1994). To appropriately manage the VR process and the complex needs of individuals with varying (primarily severe) disabilities, highly specialized skills are required of the qualified rehabilitation personnel in order to expertly coordinate, purchase, provide, and oversee a wide array of highly individualized consumer services. According to state-federal policy in a large southwestern state, a counselor is seller of confidence, a role model, problem solver, team player, model of competence, advocate, a vehicle of empowerment, helper, vocational expert, educator, partner, myth breaker, and master of alternatives (http://www.dars.state.tx.us/drs/rpm/default.htm).

Qualified vocational rehabilitation counselors (QVRCs) have many functions and responsibilities. These counselors are expected to abide by a professional code of ethics (http://www.crccertification.com/filebin/pdf/CRCCodeOfEthics.pdf). The most recent and updated code of ethics is effective as of January 2010. This code of ethics is developed and administered by the Commission on Rehabilitation Counselor Certification (CRCC). The code emphasizes the six fundamental principles of ethical behavior:

Autonomy: to respect the rights of clients to be self-governing within their social and cultural framework

Beneficence: to do good to others, to promote the well-being of clients

Fidelity: to be faithful; to keep promises and honor the trust placed in rehabilitation counselors

Justice: to be fair in the treatment of all clients; to provide appropriate services to all

Non-maleficence: to do no harm to others

Veracity: to be honest

The principles governing behavior are inherent in the values of rehabilitation counselors are found in nearly all they do. These ethical principles largely dictate how rehabilitation counselors arrive at their decision-making when working with their VR consumers. Besides the aforementioned ethical responsibilities, the vocational rehabilitation counselor today is also largely accountable for: being a good steward of taxpayer's dollars, providing informed consumer choice, managing an agency budget, and providing consumers with required services based on their individualized needs. In the state-federal VR system, consumers receive individualized services and guidance from Qualified Vocational Rehabilitation Counselors, based on the Comprehensive System of Personnel Development (CSPD).

These counselors are required to hold a master's degree in rehabilitation counseling no later than seven years after their initial hire date.

The state-federal agency's missions and unique focus on people with disabilities creates an ideal environment in which the counselor provides expert counseling and guidance, often needed to help consumers reach their vocational goals. In 2009, Leahy, Muenzen, Saunders, & Strauser noted 12 core knowledge domains vital to the modern practice of rehabilitation counseling. They include: individual counseling; group and family counseling; mental health counseling; psychological and cultural issues in counseling; career counseling and assessment; job development and placement services; vocational consultation and services for employers; case and caseload management; medical, functional and environmental aspects of disabilities; foundation, ethics, and professional issues; rehabilitation services and resources; and heath care and disability systems. In sum, the vocational rehabilitation counselor must be highly aware of various factors that may influence the direction of the VR case.

Presently, it is the decision of each state to determine if master degree requirements will remain in place for Vocational Rehabilitation Counselors. In some instances, significant issues may have an impact on the VR process (i.e. cultural assimilation issues, adaptation to disability, resistance to return to work due to fear of losing other health or income benefits) For these reasons, it is vital for counselors to be holistically aware, sensitive, and competent. Overall, the VR counselor today, must possess a wide variety of perceptive skills and must stay current on trends and research in modern VR practice.

Aspiring and practicing rehabilitation counselors must be competent in techniques required to detect and appropriately address human, organizational, and contextual factors affecting a consumer's ability to attain and maintain competitive employment and to live independently within their communities (Kundo, Dutta, Fong, Torres, & 2011).

Employment settings for VR counselors now include state-federal VR programs, veterans'

rehabilitation programs, rehabilitation facilities, rehabilitation hospitals, private VR agencies, pre-service education programs, and insurance companies (Parker, et al., 2005). Hence, the role of the VR counselor is dictated largely by the setting of employment, policies and guidelines at their place of employment, and the values, mission, and vision of their employer. Despite this, there are many duties and functions that overlap despite the work setting. There are many competencies, ethics, abilities, knowledge, judgment, and skills needed for an individual to meet the qualifications of an effective and qualified vocational rehabilitation counselor today. Vocational rehabilitation services have changed over the course of time. Vocational rehabilitation professionals are expected to successfully rehabilitate high numbers of eligible consumers (measured by the number of individuals with disabilities that were rehabilitated and gainfully employed for a minimum of 90 days). Although holds to be true today, vocational rehabilitation counselors are also under increased pressure to provide high quality services (excellent customer service, consumer satisfaction, evidence-based techniques, etc.) throughout the vocational rehabilitation process (Storey, 2005).

Vocational rehabilitation counselors (VRCs) today are charged with assisting individuals with mental and/or physical disabilities address their disabilities, helping clients to obtain and maintain competitive employment, being mindful stewards of state/federal funds, and providing substantial counseling and guidance services, while managing increasingly large caseloads. In addition to managing large caseloads, establishing relationships with employers and community partners, and providing information and referral services, counselors must also be: experts in disability issues, vocational experts, advocates for individuals with disabilities, ethical, efficient, accountable for target successful closure goals, and all the while insure that all these tasks are performed at the highest quality standard possible (Storey, 2005).

State-federal vocational rehabilitation programs are often proponents of continual

training and counselor education while on the job. Because counselors are expected to conduct the aforementioned tasks, the attempt to improve decision-making among vocational rehabilitation counselors is both reasonable and necessary in increasing productivity, improving efficiency, improving the client-counselor relationship, and enhancing and developing the skill level required to adequately serve eligible individuals with disabilities. The present research is aimed at providing rehabilitation counselors and consumers with empirical data that will assist counselors in their decision-making of service selection and appropriation, thus leading to an increase in successful vocational rehabilitation outcomes and a reduction in unsuccessful VR outcomes.

To effectively practice as vocational rehabilitation professionals, counselors are required to understand and adhere to ethical and legal tenets that underlie the fields of counseling and rehabilitation. Counselors must engage in informed ethical decision making on a regular basis. The development of this skill begins in counselor education programs. Counselors are able to be responsive to their client's needs by improving their social-cognitive development (Lambie, Hagedorn, & Leva, 2010). This development accounts for how individuals understand the self, others, and social situations. Effective rehabilitation practitioners possess ethical and legal knowledge. They are able to integrate the code of ethics, organizational policy, and the law with diverse clients in multiple settings (Lambie, Hagedorn, & Leva, 2010).

Rehabilitation counselors must utilize their professional judgment for case management purposes, service coordination, and their approach to each individual case. Professional judgment involves a certain skill level that must be sharpened continually to balance all these tasks to service individuals with disabilities in the best manner possible. One of the most significant human skills is the ability to utilize judgment and make decisions. At personal and interpersonal

levels, decision-making abilities can have a direct or indirect effect on quality of life. Past rehabilitation counseling literature has emphasized the importance of decision-making among rehabilitation professionals and the impact decisions have on empowerment, quality of life, advocacy, and the role of VRCs in the client-counselor relationship (Kosciulek, 2007).

Review of Factors Impacting Vocational Outcomes Studies

State-federal vocational rehabilitation programs are under increasing pressure to utilize evidence-based practices (Fleming, Del Valle, Kim, & Leahy, 2013). Legislators, funding sources, and auditing agencies scrutinize VR practices to promote optimal VR functioning and the best use of taxpayers' dollars. Many studies have validated the effectiveness of VR counseling (Pruett, et al., 2008). Pruett et al. (2008) examined literature specific to the efficacy of state-federal VR programs, private sector VR, as well as community-based rehabilitation programs. Evidence-based practice models are commonplace in the field of medicine and, more recently, in the healthcare, social services, and educational disciplines as well. In the medical profession, randomized clinical trials are typically utilized in research to obtain empirically validated evidence to support their clinical practices. Though VR researchers do not typically employ this specific research approach, empirical validation of VR practices is still achieved via alternative research methodologies. Researchers in the discipline of VR often measure how specific disability groups (instead of multiple disability groups) respond to specific services (instead of multiple services). To be noted, are exceptions found in research by (Bellini et al., 1995; Bellini et al., 1998a; Bellini et al., 1998b; Bolton et al., 2000). These pieces afford attention to the prediction of the VR outcome from assorted combinations of elements such as the client's personal history, personal functional limitations, as well as the resources and services provided by the state-federal VR organization. Furthermore, variables (other than race/ethnicity or disability type) that are not within the control of the VR agency are confounded with these

demographic features. For instance, cognitive ability, education at time of application, gender, marital status, financial support, severity of the disability, prior work history and customer motivation are characteristics that have been identified by rehabilitation counselors as impacting the client's rehabilitation outcome.

Research within the discipline of vocational rehabilitation is often aimed at empirically validating the effectiveness of specific approaches on a specific population. Though this selective approach assists largely with understanding the unique needs of special populations; there is a largely question that has yet to be answered consistently in VR research findings. Paul (1967) posed the fundamental question, "What treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances?" (p. 111). The present research study aims to address major components of this question.

Demographic Effects

A study of predictors of employment outcomes found age, education, marital status, and disability status were significant predictors and explained 5% of variance in competitive employment (Bolton, Bellini, & Brookings, 2000). Xu and Martz (2010) found age, age of disability onset, type of disability, employment status at time of application, and the number of jobs since disability onset were predictors of successful employment outcomes. According to Cardoso, Romero, Chan, Dutta, and Rahimi (2007), Dutta, Gervey, Chan, Chou, and Ditchman (2008), Kundu, Dutta, & Chan (2010), Rosenthal, Chan, Wong, Kundu, & Dutta (2005), and Wilson (2000), European American males with feasible transportation, high levels of motivation, and a stable employment history are likely to have successful employment outcomes. Individuals with sensory impairments with access to health care and insurance (Blackwell, Leierer, Haupt, &

Kampotsis, 2003) and access to required assistive technology (Dutta, Gervey, Chan, Chou, & Ditchman, 2008) can lead to successful VR outcomes.

A retrospective study examined determinants of employment outcomes among individuals with disabilities in VR found that successfully rehabilitated VR clients tended to be White and less than 50 years old. They also had more years of education, less functional limitations, reported higher levels of self-esteem, internal locus of control, as well as higher levels of social capital. In this study a hierarchical logistical regression model was utilized. Findings suggested age, race, education, functional limitations, self-esteem, and social capital were significantly correlated with successful employment outcomes (Daniels, 2007).

Service Effects

Research regarding service effects varies significantly. Many research studies include data from the RSA 911 database, while others employ other methods involving direct client interaction. Some research specific to how VR services impact employment or vocational outcomes include services that are provided, arranged, and purchased, while others specifically look at one method of provision (i.e. purchased) for specific reasons. The methodology for research examining service effects must be closely examined before making generalizations or assumptions. Additionally, VR service provision varies from state to state based upon state-specific regulations and policy, as well as funding availability. Therefore, one must be mindful of the sample size, population, and geographical area in which research was conducted prior to extrapolating research findings. Moore (2002a) and Wheaton, Wilson, & Brown (1996) found that individuals with disabilities that were closed with a successful vocational outcome more likely received restoration services, job referral, job placement services, or counseling services. Bolton, Bellini, and Brookings (2000) found that service variables significantly contributed to

the prediction of VR outcomes, explaining an average of 26% of variance beyond that explained by functional limitations or personal history. Job placement services were the most significant contributing variable impacting vocational outcomes (average bivariate correlation of .50). The provision of college or university training was identified as a predictor of unsuccessful employment outcomes (Wheaton, et al., 1996).

Supported employment services were created to help individuals with intellectual disabilities (formerly referred to as mental retardation) or other developmental disabilities transition to a work setting by utilizing on-site job skills trainers and other supports. According to federal regulations, supported employment services are tailored for individuals with the most significant disabilities. Theoretically, these clients typically require a place-then-train model to acquire job-specific skillsets to maintain employment. They also typically require extended services and long-term supports. An estimated 18,613 individuals or about 53 percent of the total individuals with an IPE with a supported employment goal achieved a successful employment outcome. In fiscal year 2012, the average hourly wage for clients with supported employment outcomes who had successfully achieved competitive employment was $9.05 (http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf).

Extraneous Income Benefit or Health Benefit Effects

When clients have extraneous income or health benefits, this can sometimes help or hinder a case. When clients have extraneous income benefits, such as Worker's Compensation clients, it can be helpful to work with them early in the process while they are receiving both income and health benefits. Their income benefits can be utilized to financially support them while they undergo vocational rehabilitation services. In some instances, when retraining is warranted, this is the ideal time to work with the individual. Furthermore, their health benefits

can be utilized as a comparable benefit. Clients are often unaware of the impact working may have on their benefits. Returning to work can mean numerous things depending on the type of extraneous income or health benefit. In some cases, returning to work does not impact their income or health benefits. In other cases, such as social security recipients, working may have very different effects on their benefits. Regardless of the impact, helping the client understand their benefits and how working may impact those benefits is critical. In many cases, there are program-specific work incentives available to the client. Many of the clients receiving VR services also receive some of the following extraneous income and health benefits unemployment benefits, Worker's Compensation benefits, Veteran's Administration benefits, and Social Security benefits in addition to the services provided by the public VR agency. Services are not to be duplicated. Additionally, comparable benefits should be utilized first.

Unemployment benefits. The Department of Labor's Unemployment Insurance programs provide unemployment income benefits to eligible workers who become unemployed through no fault of their own. The unemployed individual must also meet certain other eligibility requirements. The amount received by the eligible individual is generally based on past earnings. The societal and economic costs of unemployment are noteworthy when viewed from a national perspective. Unemployment consequently results in increased payments from state-federal governments for unemployment benefits. Over $320 billion was spent nationally in 2010 for food assistance as well as Medicaid. Unemployment impacts the United States national economy, primarily because more than 70% of what the U.S. economy earns goes to personal consumption as well as unemployed individuals. Individuals receiving government benefits do not have the spending power that working Americans have. The unemployed individuals no longer supply the economy, which as a result, reduces the gross domestic product

(http://www.dol.gov/dol/topic/unemployment-insurance/).

Worker's compensation benefits. The worker's compensation program is a state regulated insurance program that provides monetary and medical benefits for employees with work-related illnesses and injuries. Established by federal law in 1908 for hazardous government jobs, states have implemented worker's compensation programs by holding employers accountable for compensating workers for work-related injuries. Federal and state regulations may impact program eligibility. Programmatic rules vary from one state to another. In most states, programmatic rules allow for compensation of two-thirds of an injured employees salary for a set maximum number weeks until the worker returns to employment (Fabian & MacDonald-Wilson, 2005).

The Division of Workers' Compensation oversees the workers' compensation system in Texas. The Texas Workers' Compensation Act provides compensation for employees injured on the job. In Texas, employers can opt to not subscribe for worker's compensation. There is no coverage for employees of employers who opt to be non-subscribers. If an employer opts to subscribe to workers' compensation insurance, insured employees receive medical benefits related to a work-related injury, income benefits to replace part of the wages lost as a result of the work-related injury, and death benefits to a legal beneficiary if an employee is killed on the job. There are four types of workers' compensation benefits: income, medical, burial, and death benefits. Income benefits (other than impairment income benefits) replace a portion of any wages lost due to a work-related injury or illness. Income benefits include temporary income benefits (TIBs), impairment income benefits (IIBs), supplemental income benefits (SIBs), and lifetime income benefits (LIBs). The amount of monetary benefits varies annually and is based on the state's average weekly wage.

In Texas, this amount is determined by the Texas Workforce Commission. The amount of weekly monetary benefits is determined by the rate applicable for the specific year the injury occurs. Temporary Income Benefits (TIBs) are paid to the injured employee until the injured employee reaches maximum medical improvement (MMI) or 104 weeks from the date of entitlement to income benefits, whichever is first. Maximum medical improvement is a critical stage for an individual receiving worker's compensation benefits.

Maximum medical improvement is the earliest date after which: (a) based on practical medical likelihood, further substantial recovery from or lasting improvement to an injury can no longer realistically be projected; (b) the expiration of 104 weeks from the date on which income benefits begin to accrue; or (c) when spinal surgery is involved, the date determined as provided by Section 408.104 of the Texas Worker's Compensation Act.

During Impairment Income Benefits (IIBs), seventy percent of weekly wage based on three weeks of benefits for each percent of impairment based on the impairment rating. An impairment rating is the percentage of permanent impairment of the whole body subsequent to a compensable injury. Many work-related injuries do not yield permanent impairments. The injured worker is entitled to Supplemental Income Benefits (SIBs) following the expiration of the impairment income benefit time frame. An injured employee with a designated impairment rating of 15% or more and who has not opted to receive a lump sum payment for any impairment income benefit is eligible to receive SIBs if, during the qualifying time frame, the employee has earned less than 80% of their average weekly earnings as a direct consequence of the impairment from the compensable work injury.

The injured worker must also display an active good faith effort to return to or find employment. State regulations involve work search requirements. A minimum of at least one or

more job search attempts must be met weekly during the qualifying time frame. There is a limit on the number of combined weeks TIBs and SIBs can be received. An injured worker cannot exceed a total of 401 weeks. During Lifetime Income Benefits (LIBs), 75% of the injured worker's pre-injury average weekly earnings are allotted. LIBs are specific benefits for an injured worker that has sustained a catastrophic work-related injury. This may include the loss of hands, feet, and eyesight, among other catastrophic injuries. Death Benefits replace a portion of lost family income for eligible family members of a worker killed while on the job (http:// tdi.state.tx.us/wc/indexwc.html).

Injured employees are often referred by physicians, work hardening programs, rehabilitation facilities, attorneys, health care providers, or can also be self-referred. Working with injured employees early on, while the individual is still receiving income benefits, can help to ensure VR success. Counselors often utilize this framework of options to determine which is best suited for the injured worker:

- same job, same employer
- same job, same employer (modified duties/accommodations)
- different job, same employer
- same job (with or without modification), different employer
- different job (with or without on-the-job training) with the same or different employer
- return-to-work after training program
- self-employment

Workers' compensation benefits are significant comparable benefits for the VR program and receiving worker's compensation monetary/health benefits can substantially help ensure

ability to complete planned services, regardless of whether the WC recipient plans to return to. Expert guidance from the VR counselor can help the consumer plan for their return to work endeavors and navigate through what may seem like a complex return-to-work process (http:// tdi.state.tx.us/wc/indexwc.html).

A study of the post-injury return-to-work status of 502 injured employees in the state of Montana, who also received VR services between the years 1984 and 1991. Researchers sought to reveal which variables enhanced the ability to predict return to work effects post-injury. Client age, education, attorney involvement, mandated VR, and the time frame from work injury to the time of referral for VR services were the identified predictor variables. The amount of education received prior to the work-related injury was a strong predictor of successful return to work outcomes. Client age, attorney involvement, mandated VR and timely service provision were also identified as significant predictors of successful return-to-work (Blackwell, Leierer, Haupt, & Kampitsis, 2003).

Under the Worker's Compensation program definition, a disability is when a work-related injury or illness results in the loss of the ability to earn one's weekly wages. For purposes of the WC program, disability refers to one's inability to earn an income, not necessarily to a physical handicap. Average weekly wage (AWW) is the average amount of weekly wages an employee made during the 13 weeks immediately prior to the compensable work injury. The AWW is important under WC regulations because income and death benefit payments are based on this calculation. Within the WC system, an Impairment Rating (IR) is designated to the injured worker. An impairment rating is the percentage of permanent physical damage to one's body that resulted from the compensable injury (http://www.tdi.texas.gov/wc/employee/benefits.html).

Veteran's Administration benefits. The state-federal VR program provides services to eligible individuals with disabilities. In some cases, these eligible individuals may also receive benefits provided by the Veteran's Administration. There are a number of services provided to eligible veterans with disabilities through the Veteran's Administration. In reference to entitlements, the Veterans Administration offers Veterans Disability Compensation, Veterans Disability Pension, as well as health care. The Veterans Administration also offers educational benefits, vocational rehabilitation, loan assistance programs, housing assistance, burial benefits, life insurance, and other programs with varying eligibility requirements.

Disability compensation is a tax-free income benefit paid to eligible veterans with disabilities. These conditions must be the result of a condition or injury obtained or exacerbated during active military service. In some instances, a veteran may be eligible for monetary benefits for post-service disabilities that are considered related or secondary to disabilities stemming from active service, though they may surface after service. Generally, the severity of disability impacts the amount of compensation with consideration given to the loss of working time from the condition(s) (Fabian & MacDonald-Wilson, 2005). Disability compensation is a monthly benefit paid to veterans who are minimally designated a 10% disability rating due to their disabling condition. The disabling condition can be physical, mental, or emotional. The degree of the veteran's disability can range from a designated 10 percent to 100 percent (increments of 10).

To qualify for these veteran's benefits, certain eligibility criteria must be met. To be deemed eligible, one must have a history of service in the uniformed services on active duty, active duty for training, or inactive duty training, were discharged under other than dishonorable conditions, and must be at least 10% disabled by an injury or disease that was sustained in or exacerbated during active duty, active duty for training, or inactive duty training.

The Veteran's Administration also offers eligible veterans comprehensive medical benefits. For veterans with an established service connection for their disability, a medical benefits package is offered at little or no cost. Veterans with a 100% disability rating, medical benefits are provided at no cost. Veterans with a disability rating of at least 50% though still less than 100% are also eligible for similar benefits. Medical and income benefits are the two of the most important benefits offered to veterans with service-connected disability by the Veteran's administration (http://www.benefits.va.gov/COMPENSATION).

These benefits are imperative because they provide lifetime financial sustenance and medical attention to veterans who have obtained a disability. (Maynard, Flohr, Guagliardo, Martin, McFarland, Pruden, & Reiber, 2010). Vocational rehabilitation counselors must be knowledgeable about VA benefits, as they are vital comparable benefits the realm of state-federal VR services. Knowing what type of benefits a veteran receives can be utilized in various phases of the state-federal VR process, such as eligibility, assessment and planning, and IPE development. This information can help clients and counselors jointly conduct thorough rehabilitation planning and VR service coordination (Fabian & MacDonald-Wilson, 2005).

Social Security benefits. According to RSA, in 2009 nationwide statistics reveal approximately 600,000 individuals applied for state-federal VR services. A total of 981,000 were identified as consumers served by the state-federal VR program. Approximately 1 in every 8 consumers was a SSDI beneficiary, totaling about 12% of individuals who exited the VR program in 2010 (www.rsa.ed.gov). State-federal VR agencies are reimbursed for clients that are rehabilitated successfully through the utilization of Social Security's Vocational Rehabilitation Reimbursement Program. Social Security pays state VR agencies for the total cost of the services they provided to clients receiving Social Security Disability Insurance (SSDI) benefits or

Supplemental Security Income (SSI) payments based on the individual's disability if specific conditions are met. The consumer must earn Substantial Gainful Activity level earnings for a total of nine months (see Appendix D Monthly Substantial Gainful Activity Amounts by Disability Type). The services reimbursed, as outlined in the client's Individualized Plan for Employment. The services provided by the state-federal VR agency are classified in the Rehabilitation Act of 1973, as amended. The services rendered must lead to the client obtaining and maintaining employment for a minimum of nine consecutive months at substantial gainful activity. State VR agencies may take on the role as the client's designated Employment Network (EN) under the Ticket to Work Program or under Social Security's VR Reimbursement Program. State VR agencies are the only entities approved by law to automatically provide services to social security beneficiaries under the Ticket to Work Program without having to undergo a formal process to become designated as an EN. Any time a social security beneficiary receives services from a state-federal VR agency, Social Security deems the ticket assignment as automatically assigned to the VR agency when the IPE is developed and signed (http://www.ssa.gov/work/vocational_rehab.html).

In fiscal year 2012, state-federal vocational rehabilitation agencies received a total of $78,768,058.10 in reimbursements from the Social Security Administration for the successful rehabilitation of 5,343 clients. In fiscal year 2013, VR agencies received a reimbursement of $138,260,580.10 for 9,645 successfully rehabilitated clients. Increasingly, in fiscal year 2014, VR agencies received a total of $141,449,760.46 for the rehabilitation of 9,451 cases. An increase in reimbursements to the VR agency has positive impacts for all parties involved. In these instances, the consumer is often self-supporting based on their earned wages. Furthermore, the VR agency has successfully closed a case (thereby improving the rehabilitation rate) and

SSA has saved money because the client no longer needs income/health benefits. It is important to note that program-specific policy varies drastically for SSI and SSDI in regards to return to work incentives and disincentives; however, there are many safeguards available for clients. Certain requirements must be met in order for a vocational rehabilitation agency to receive reimbursements from SSA. In order to qualify for reimbursements from SSA, the VR agency must have helped the SSI/SSDI beneficiary earn enough to be terminated from benefits (http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf). For a summary of the reimbursements Social Security made to state-federal VR agencies by fiscal year, see Appendix E.

There are many myths associated with return to work impacts for individuals who receive SSI/SSDI. Work incentives benefits counseling can serve as a vital service in helping clients obtain and maintain employment in a manner that promotes informed choice regarding their level of work activity. Work incentive benefits counseling is a service provided by community work incentives coordinators, an individual skilled in SSI/SSDI return to work impacts. Work incentive benefits counseling includes evaluation of the client's circumstances and goals. The service also entails identification of available options and information regarding managing benefits and work activity to best suit their individual needs based on informed choice (Delin et al., 2012).

In fiscal year 2010, the Oklahoma Department of Rehabilitation Services created a statewide Benefits Planning Unit comprised of a manager and six Social Security Administration Certified Benefits Planners (CBPs). These specialists are required to actively visit all VR staff within their respective coverage areas as well as every Workforce Oklahoma office to increase prospective referrals. The certified benefits planners evaluate and explain individualized benefits

reports. CBPs educate consumers regarding the importance of earning substantial gainful activity, methods for increasing income, work incentives opportunities, and information regarding ways to retain income/medical benefits while utilizing available supports from other social services programs. The number of Social Security beneficiaries that Oklahoma's state-federal VR program successfully assisted the Social Security Administration to eliminate from its recipient list doubled yearly since the origination of the Benefits Planning Unit. Statistics reveal that prior to the Benefits Planning Unit an annual average between fiscal year 2007 and fiscal year 2009 of 63 successful closures obtained by social security beneficiaries that achieved substantial gainful activity requirements, to an annual average of 127 successful employment outcomes between fiscal year 2010 and fiscal year 2012. Also noteworthy, are reports that estimate several hundred social security beneficiaries are assisted annually to obtain and maintain employment while maintaining their social security income/health benefits (https://rsa.ed.gov/emerging-practices.cfm).

There are many work incentives available to SSI/SSDI recipients to allow them the opportunity to attempt to work with safeguards in place to avoid complete loss of income or medical benefits. Many federal and state work incentives are aimed at allowing recipients with disabilities receiving SSI/SSDI the opportunity to return to gainful employment. Among the population of SSI/SSDI recipients, there are numerous misconceptions and stigmas regarding returning to work. Many SSI/SSDI recipients underwent a long and arduous process before being awarded benefits. Many applicants had to appeal decisions once, twice, or even more. Therefore, encouraging individuals to return to work can be an overwhelming notion for SSI/SSDI recipients because they are fearful they might lose their income or health benefits.

According to (Tremblay, Smith, Xie, & Drake, 2006), a major contributor for the high unemployment rates among social security beneficiaries (disability) is the fear and misunderstanding of the impact return to work may have on their income and/or health benefits. A majority of these recipients are unemployed because they are unaware of work incentives available to them and they are fearful of losing their benefits (primarily health care benefits). Counseling beneficiaries about the facts, dispelling myths, and providing them with information to help them make true informed decisions regarding their lives is a necessary and vital component to VR success. Past research examined the impact of benefits counseling on individuals with psychiatric disabilities who receive SSA benefits in Vermont (N = 364) compared with matched contemporaneous and historical control group members over the course of a four-year time period. This included two years prior and to years after the intervention. Researchers found participants who received specialized benefits counseling obtained increased earnings by $1,256 annually compared to two control groups, demonstrating the importance of benefits counseling as a vital employment support and service for VR clients (Tremblay, Smith, Xie, & Drake, 2006).

A study of Utah VR clients receiving SSI/SSDI benefits (N = 1,425) found that benefits counseling had a positive effect on employment, while recipients had a higher probability to achieve a successful closure status in their VR program. Overall, study findings revealed benefits counseling through the Work Incentives Planning and Assistance Program (WIPA) yielded a positive relationship with improved client wages, successful employment outcomes, and successful VR case closure status (Wilhelm & McCormick, 2013).

A recent article (2014) examined best practices in VR from a four-state multiple case study. Researchers identified that SSI/SSDI recipients in Maryland VR who received benefits

counseling had a higher rehabilitation success rate 76.51%, as opposed to 43.36% for SSI/SSDI recipients who did not receive the service. Furthermore, Utah consumers who received benefits counseling were 15% more likely to achieve a successful employment outcome than SSI/SSDI recipients who did not receive benefits counseling. The earnings of the population who received benefits counseling was also $451.59 more monthly that those who did not receive benefits counseling (Del Valle, Leahy, Sherman, Anderson, & Tansey, 2014).

Besides the emphasis on return to work via the Ticket to Work program (a program designed and implemented by SSA in 2002 to promote employment opportunities by providing beneficiaries with performance-based vouchers for access to employment services), it is key to ensure SSI/SSDI recipients are aware of how returning to work might actually impact their benefits through individualized services and benefits counseling. Although the Ticket to Work is one component in facilitating return to work, it is not the only one. Educating the beneficiary regarding impacts of return to work and individualized planning is essential. Work incentives benefits counseling and planning performed by Community Work Incentive Coordinators (CWICs) staffed by Work Incentives Planning and Assistance projects (WIPA) can help beneficiaries determine eligibility for additional federal and/or state-specific work incentive programs.

By utilizing the beneficiary's Benefits Planning Query (BPQY), the CWIC can provide tailored and individualized guidance regarding how return to work may impact his/her specific scenario. Presently WIPA funds over 100 projects throughout the United States. By working with WIPA CWICs and obtaining thorough benefits planning and counseling, beneficiaries are able to make true informed decisions about work (Hanophy, 2012). The Texas state-federal VR program, The Texas Department of Assistive & Rehabilitative Services (DARS), has

implemented more in-depth wrap-around supports for this model of Work Incentives Planning & Assistance (WIPA) from Community Work Incentives Coordinators (CWIC) benefits counseling.

According to Sara Kendall (S. Kendall, personal communication, June 29, 2015), she came to Texas in August 2010 as the Director of the Medicaid Infrastructure Grant (MIG) which was housed in DARS Division for Rehabilitation Services (DRS). The MIG was providing financial support to the WIPA CWICs, and it quickly became evident that this amount of coverage, although very useful, was not sufficient to ensure DRS consumers receiving SSI and/or SSDI were getting timely and accurate information to help them make educated and informed decisions about working. In late fall 2010, the MIG sponsored two DRS and one DSHS staff to go to Wisconsin for a three day benefits training put on by Health and Disability Advocates (HDA), a Chicago based firm. John Coburn was an HDA employee at this time and did this training. Formal Smurf Training began in January 2011 when six DRS staff nominated by the five Regional Directors went to either the Virginia Commonwealth University five-day training in Austin or to Chicago for a Health and Disability Advocates training done by John Coburn. All costs were paid by the Texas Medicaid Infrastructure Grant (MIG), which was housed in DRS. In August 2011, the MIG brought the original six Benefits Subject Matter Resource Staff and the 17 WIPA Community Work Incentive Coordinators to Austin for a two-day training on state benefit programs including Medicaid and Temporary Assistance for Needy Families. In 2012, the MIG contracted with HDA to have John Coburn and Laura Gallagher Watkin go to Austin and train 10 DRS staff and nine community partners (including staff from Centers for Independent Living and Disability Rights Texas) for the first five-day intensive training. The MIG continued to contract with HDA through December 2012 (the end of the

MIG) for five-day trainings. From 2011 to December 2012 the SMURFs increased from the original six to 59. In 2013 after the MIG ended DRS contracted with HDA contractors to conduct five-day intensive trainings periodically. Kendall reported, from 2011-2014 HHSC Medicaid/CHIP paid for all travel costs for DRS staff to attend the five-day trainings in Austin as well as to attend the annual statewide meeting through an interagency agreement with the Department of Assistive and Rehabilitative Services. Kendall noted, "I am pointing this out because it was a very unusual arrangement to have another agency pay for all the travel costs, and an example of partnership and blended funding at its best." In January 2014, DRS hired John Coburn as a Central Office Program Specialist and from then on he and Sara Kendall, who had become an SSA certified Community Partner Work Incentive Counselors, fulfilled their mission of training VR staff (counselors, unit program specialists, regional program specialists, area managers, and support staff) to assist SSI/SSDI recipients in making informed decisions about return to work. The intensive training offered at The Texas Department of Assistive & Rehabilitative Services is referred to as SMURF Training. SMURF is an acronym for "Subject Matter Utilization Resource Facilitators." This training immerses participants in a wealth of knowledge specific to SSI/SSDI benefits, work incentives, and strategies to empower VR consumers to make informed decisions about returning to work. To date, there are 144 DRS and DBS SMURFs, 15 Community Partner SMURFs and two Department of Aging and Disability Services (DADS) SMURFs. All these SMURFs have been through the five-day training and successfully passed the comprehensive final test. From 2011 to date there have been over 200 individuals trained statewide as SMURFs, but due to staff turnover these 161 remain active. Reports from VR staff indicate their consumers are well informed and counselors feel more comfortable explaining SSI/SSDI incentives, ultimately leading to improved employment

outcomes. Therefore, in addition to having the option of counselors authorizing benefits counseling as a purchased service, the state-federal VR program also has trained staff to further explain and reiterate what is covered during the benefits planning session with the CWIC. In many instances, the SMURF can provide information and referral services or more detailed benefits planning information independently (S. Kendall, personal communication, June 29, 2015).

Vital components of benefits counseling includes evaluating the client's circumstances and overall life and employment goals, available options, and based on the consumer's informed choices, monitoring and managing benefits to assist the client in achieving their objectives (Delin, Hartman, & Sell, 2012). Because earnings impact the receipt of SSI/SSDI benefits, SSA program rules can potentially result in a decrease in or loss of monetary benefits, or even loss of medical benefits. Benefits counseling can help individuals achieve maximum independence by understanding SSA program rules and the implications for working and earning certain amounts. It can also help guide someone with higher work tolerance and capability to earn more (while still receiving partial benefits such as in the case of many SSI recipients), given the appropriate work incentives and circumstances.

A research study conducted on Wisconsin state-federal VR systems, examined the effect of varying amounts of work incentive benefits counseling had on client employment outcomes. Researchers also assessed the impact of previous work history on VR service provision. The amount of benefits planning/counseling provided to clients had positive and statistically significant impacts on all outcomes. Study findings estimated increases of $34.00 in client work earnings and about $37.00 in income in every calendar quarter over the course of two years for those who received benefits counseling. The increase in the quarterly employment rate was

1.1%. The presence of solid employment outcomes during the time frame between the time of eligibility determination (for SSA program) and becoming involved in a return to work program proved to be a strong predictor of how much service was received by the client. Researchers established improved employment outcomes for persons with severe disabilities, namely earnings, as positively correlated with the receipt of benefits counseling. Clients that received work incentive benefits counseling had improved employment outcomes (Delin, Hartman, & Sell, 2012).

It is essential for VR counselors to understand how other extraneous income and health benefits may impact the mindset and involvement of a client of state-federal vocational rehabilitation services. In some instances, the perceived need for VR services may be impacted because the individual has other sources on which they can rely. In addition, many clients may not fully understand how VR involvement or how returning to work, in general, may impact their extraneous income and/or health benefits.

CHAPTER III

METHODOLOGY

Research Design

The purpose of the research study was to analyze whether specific variables: (a) demographics, (b) purchased services/service tracks, (c) extraneous income benefits or health benefits, (d) collective effects, and (e) social security benefits counseling for SSI/SSDI recipients impact vocational outcomes. The present research study employed an ex-post-facto, non-experimental, correlational, quantitative research design. For purposes of this research, services purchased throughout the life of the case, from application phase through exit from the VR system, as well as post-employment services were accounted for. State-federal VR agencies can arrange or coordinate services through comparable benefits, however, the present research did not analyze services that were not directly purchased by the state-VR agency. Research questions were examined using binary logistic regression.

Procedures

Following approval from the University Internal Review Board, the researcher obtained agency permission from one large southwestern State-Federal Vocational Rehabilitation Services agency for approval to access, obtain, and run queries (utilizing Microsoft Access) from existing data sets in the agency's electronic data warehouse. RehabWorks is the electronic case management system utilized by the state VR agency analyzed in this research. Although RehabWorks is a useful tool for managing client case notes and progress, it is not practical for in-depth data analysis. Therefore, the researcher

accessed the electronic database that stores information entered in RehabWorks by VR personnel and created queries in Microsoft Access to obtain client information pertinent to the research study.

Consumer anonymity was maintained. Personal identifiable information was not queried. Social security numbers and names were not accessed, queried, or reported. As an agency standard, consumer case identification numbers are assigned to each case. Case identification numbers have no relation to personal identifiable information. The case identification numbers were queried. Data sets were extracted based on the independent and dependent variable criterions only for reporting and analysis purposes.

Agency content experts were consulted to ensure methodology for data mining was accurate in terms of coding, query criteria, and findings. Structured data mining methods were employed to find existing patterns in the compiled data. The first research question examined whether client demographics impacted vocational outcomes. The second research question examined how purchased services impact vocational outcomes. The researcher's rationale for examining only purchased services will allow VR counselors to more readily utilize practical approaches for informed consumer choice, as the counselor has the ability to determine what to purchase. Purchased services are within the VR agency's control.

In order to examine how purchased services impact employment outcomes, the following service tracks were created by assigning all of the purchased services provided in state fiscal year 2014 into service tracks. Because there were over 65 service category codes for services purchased for clients in the dataset, service tracks were created. The purpose of developing these service tracks was to narrow the number of service categories into service tracks that would reflect the type of service/intervention received by the client throughout the VR case. RSA identifies a total of 22 different services.

Before finalizing the service tracks, consultation with two central office program specialists, a regional office operations director of programs, three regional office program specialists, a regional field operations support member, one area manager, and two tenured counselors occurred. A total of 10 content experts were consulted in order to develop the services tracks. Once the service tracks were developed, the 65+ service category codes were assigned to the following service track categories (See Appendix A and B). The researcher developed service tracks with feedback from all 10 content experts. These service tracks more descriptively identified the types of services purchased for the client.

The researcher examined purchase order comments and descriptions in addition to the selection of the service category in order to validate coding. The primary reason this approach to obtaining data was utilized was to exclude any possible data entry errors that may have occurred when the counselor completed the closure screen on the electronic caseload management system that describes the services arranged, purchased, or provided. This approach more accurately identified purchased services by specifically examining all purchase orders (sometimes referred to as service authorizations) associated with each case. The service track categories are as follows:

- Service Track 1:

  Service Track 1a: Disability Services

  Service Track 1b: Disability Goods and Equipment

- Service Track 2:

  Service Track 2a: Customized Employment Services

  Service Track 2b: Employment Goods & Equipment

- Service Track 3:

  Service Track 3a: Career Skills Training Services

Service Track 3b: Career Skills Training Goods & Equipment

- Service Track 4:

  Service Track 4a: Supplemental Services

  Service Track 4b: Supplemental Goods

- Service Track 5:

  Service Track 5a: Job Readiness Training Services

- Service Track 6:

  Service Track 6a: Assessment Services

The third research question examined whether clients with extraneous income benefits or health benefits impacted employment outcomes. Specifically, comparable benefits such as Unemployment benefits, Worker's Compensation benefits, Social Security benefits, and Veteran's Administration benefits are examined. The fourth research question involved an examination of the collective effect of research questions one, two, and three. The final research question examined whether purchased benefits counseling services for Social Security disability recipients (i.e. Supplemental Security Income or Social Security Disability Insurance) impacted employment outcomes.

Sampling and Population

The population sample for this research includes information from an internal database of cases closed successfully and unsuccessfully (after plan initiation) from one large southwestern state for state fiscal year 2014. This final dataset included 18,523 eligible consumers that received Vocational Rehabilitation Services and were closed either successfully or unsuccessfully in state FY 2014 (after plan initiation). In order to focus on important subpopulations of the total number of consumers served by the state-federal system, the population sample for the present research was selected utilizing a

convenience sampling technique. Some cases were excluded from the original dataset because the data warehouse did not hold complete purchasing histories for these cases. The first two distinct categories by which variables were analyzed were by grouping cases by successful closures (after plan initiated) and unsuccessful closures (after plan initiated). All cases included in the final dataset had complete purchasing histories in the electronic data warehouse.

Statistical Method and Data Analysis

This research was designed to explore the relationships between the independent variables and a dichotomous dependent variable. Research questions were examined using binary logistic regression. Logistic regression is the appropriate statistical test when trying to predict a dichotomous outcome (employed versus unemployed) from dichotomous, polytomous, or continuous independent variables. Odds ratios are provided to identify how much more likely an outcome is to occur, provided the presence or absence of the predictor variables (Pallant, 2010). One model was tested for each research question. The variables that were determined to be significant predictors of employment outcomes were tested collectively in a final regression model to answer research question four.

Research Questions and Hypotheses

Five research questions and related hypotheses were formulated for investigation. They were tested with binary logistic regression. The research questions and hypotheses were as follows:

R_1: Are there significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics?

H_{01}: There are no significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics.

H_1: There are significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics.

R_2: Are there significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered?

H_{02}: There are no significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered.

H_2: There are significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered.

R_3: Are there significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present?

H_{03}: There are no significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present.

H_3: There are significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present.

R_4: Which variables (demographics #1, service provision #2, extraneous income/health benefits #3) collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program?

H_{04}: There are no variables (demographics #1, service provision #2, extraneous income/health benefits #3) that collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program.

H_4: There are variables (demographics #1, service provision #2, extraneous income/health benefits #3) that collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program.

R_5: Are there significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services?

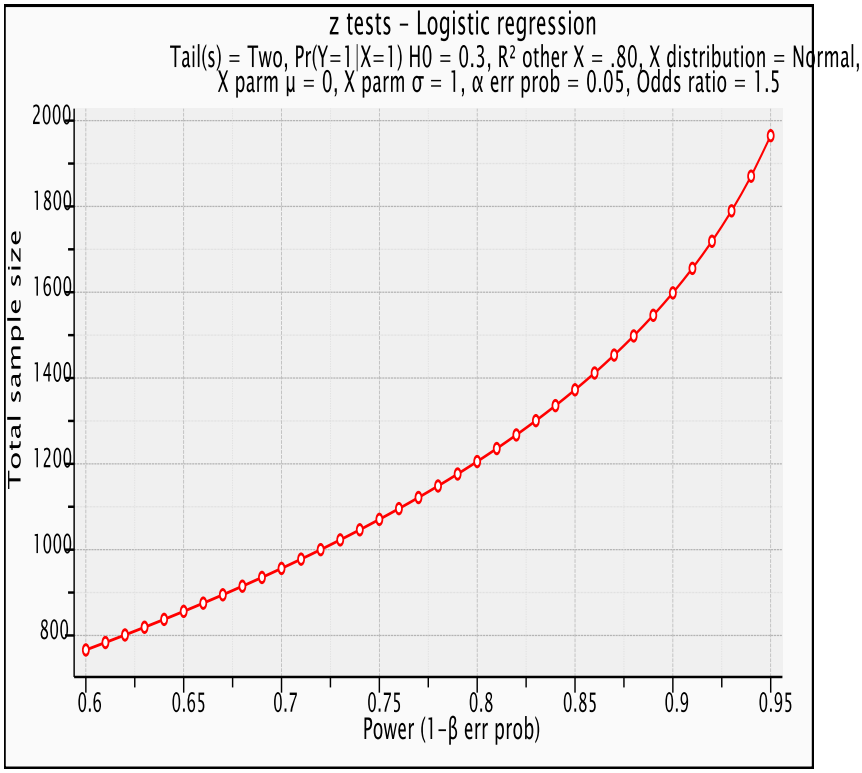
H_{05}: There are no significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services.

H_5: There are significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services.

Power Analysis

A power analysis was conducted with G Power 3.1 **(**Faul, Erfelder, Lang, & Buchner, 2007)**.** For a two-tailed test, an odds ratio of 1.5, an alpha level of .05, a power level of .95, and a R^2 value of .80, a sample size of 1,965 will be required**.** See Figure 1.

Figure 1 Power Analysis



CHAPTER IV

RESULTS

This chapter presents the results and findings of the data analysis in order to analyze the effects demographics, purchased services/service tracks, extraneous income/health benefits, collective effects, and benefits counseling for SSI/SSDI recipients have on employment outcomes. The anticipated benefits of this research are for rehabilitation professionals and other vested agents in the field of VR. Research findings will help researchers, educators, funding sources, policy-makers, and practitioners better understand return on investments regarding purchased services, predictors of vocational rehabilitation outcomes (both successful and unsuccessful), and other factors that may impact vocational outcomes. Chapter Four is organized by a discussion of the sample demographics, descriptive statistics, research question/hypothesis testing, and a summary of the results. The dataset was analyzed with SPSS for Windows. The following provides a discussion of the sample demographics.

Sample Demographics

The data set contained 18,523 cases. Regarding gender, 55.3% (n = 10,245) were males and 44.7% (n = 8,278) were females who ranged from ages 15-92 at application for services (M = 38.13, SD = 15.71). Approximately half (49.8%, n = 9,233) of the consumers were never

married, whereas 24.4% (*n* = 4,521) were married, and 18% (*n* = 3,329) were divorced. Marital status is presented in Table 1.

Table 1 Marital Status

Marital Status	n	%
Married	4,521	24.4
Widowed	447	2.4
Divorced	3,329	18.0
Separated	993	5.4
Never Married	9,233	49.8
Total	18,523	100.0

Regarding race and ethnicity, 74.7% (*n* = 13,832) of consumers were white; 28.8% (*n* = 5,337) were Hispanics/Latinos; and 23.7% (*n* = 4,387) were African Americans. See Table 2.

Table 2 Race/Ethnicity

Race/Ethnicity	n	%
White	13,832	74.7
African American	4,387	23.7
American Indian/Native Alaskan	192	1.0
Asian	256	1.4
Pacific Islander	79	0.4
Hispanic/Latino	5,337	28.8

Note. Total percentage adds to > 100 because counselors could select more than one category.

For 94.4% (n = 17,483) of consumers, English was their primary language; whereas 2.9% (n = 544) of consumers primarily spoke Spanish; and 2.3% (n = 424) primarily communicated in sign language. See Table 3.

Table 3 Primary Language

Language	n	%
English	17,483	94.4
Spanish	544	2.9
Sign Language	424	2.3
Vietnamese	15	0.1
Other	57	0.3
Total	18,523	100.0

At application, the largest group of consumers (42.9%, n = 7,946) relied on family and friends as their primary source of support; 29.6% (n = 5,490) relied on their personal income; and 22.3% (n = 4,125) relied on public support. Primary source of support at application is presented in Table 4.

Table 4 Primary Source of Support at Application

Source of Support	n	%
Personal Income (wages, interest, dividends, rent)	5,490	29.6
Family and Friends	7,946	42.9
Public Support (any SSI, SSDI, TANF, etc)	4,125	22.3
Other sources(e.g., private insurance/charities)	962	5.2
Total	18,523	100.0

At closure, the largest group of consumers (62.3%, *n* = 11,544) relied on their personal income as their primary source of support; 18.7% (*n* = 3,461) relied on family and friends, and 17.1% (*n* = 3,160) relied on public support. Primary source of support at closure is presented in Table 5.

Table 5 Primary Source of Support at Closure

Source of Support	n	%
Personal Income (wages, interest, dividends, rent)	11,544	62.3
Family and Friends	3,461	18.7
Public Support (any SSI, SSDI, TANF, etc.)	3,160	17.1
Other Sources (e.g., private insurance/charities)	358	1.9
Total	18,523	100.0

Regarding educational attainment at application, 30.2% (*n* = 5, 590) of consumers had high school diplomas or equivalency certificates; 18.5% (*n* = 3,436) had post-secondary education, no degrees; and 11% (*n* = 2,032) had Associate Degrees or Vocational/Technical Certificates. Education at application is presented in Table 6.

Table 6 Education at Application

Education	n	%	Cumulative %
No formal schooling	86	0.5	0.5
Elementary/Middle (grades 1-8)	509	2.7	3.2
Secondary education, no high school diploma (grades 9-12)	3,208	17.3	20.5
Special Ed in attendance or completion certificate/diploma	1,933	10.4	31.0
High school grad/equivalency certificate (regular ed)	5,590	30.2	61.1
Post-secondary education, no degree	3,436	18.5	79.7
Associate degree or Vocational/Technical certificate	2,032	11.0	90.7
Bachelor's degree	1,287	6.9	97.6
Master's degree or higher	442	2.4	100.0
Total	18,523	100.0	

Regarding educational attainment at closure, 33.1% (n = 6,129) of consumers had high school diplomas or equivalency certificates; 20.1% (n = 3,717) had post-secondary education, no degrees; and 16.1% (n = 2,978) had Associate Degrees or Vocational/Technical Certificates. Education at closure is presented in Table 7.

Table 7 Education at Closure

Education	n	%	Cumulative %
No formal schooling	73	0.4	0.4
Elementary/Middle (grades 1-8)	471	2.5	2.9
Secondary education, no high school diploma (grades 9-12)	1,415	7.6	10.6
Special Ed in attendance or completion certificate/diploma	1,794	9.7	20.3
High school grad/equivalency certificate (regular ed)	6,129	33.1	53.3
Post-secondary education, no degree	3,717	20.1	73.4
Associate degree or Vocational/Technical certificate	2,978	16.1	89.5
Bachelor's degree	1,466	7.9	97.4
Master's degree or higher	480	2.6	100.0
Total	18,523	100.0	

Among consumers; 0.5% (*n* = 97) lived in colonias. The term "colonia," in Spanish means a community or neighborhood. The Office of the Secretary of State defines a "colonia" as a residential area along the Texas-Mexico border that may lack some of the most basic living necessities, such as potable water and sewer systems, electricity, paved roads, and safe and sanitary housing (http://www.sos.state.tx.us/border/colonias/what_colonia.shtml).

Approximately 44% (*n* = 8,212) of consumers had no insurance. Thirteen percent (*n* = 2,346) had Medicaid. Fourteen percent (*n* = 2,655) had Medicare, about 14% (*n* = 2,583) had private insurance through their own employment; and about 14% (*n* = 2,571) had private insurance through other means. Less than 1% of consumers (0.4%, *n* = 69) had the Children's Health Insurance Program (CHIP); Texas Healthy Kids (*n* = 1), and Children with Special

Health Care Needs (CSHCN) (n = 4). Approximately 6% (n = 1,070) of consumers had public insurance through other means.

Regarding functional limitations, the largest group of consumers had limitations in the area of work tolerance (43.7%, n = 8,086); followed by work skills (29.5%, n = 5,470), and communication (25.2%, n = 4,660). The smallest group of consumers (5.6%, n = 1,044) had limitations in the area of self-care. Functional limitations are presented in Table 8.

Table 8 Functional Limitations

Limitation	n	%
Mobility	2,808	15.2
Self-Care	1,044	5.6
Self-Direction	4,331	23.4
Work Skills	5,470	29.5
Work Tolerance	8,086	43.7
Interpersonal Skills	4,380	23.6
Communication	4,660	25.2
Not Answered	1,421	7.7

Note. Total percentage adds to > 100 because counselors could select more than one limitation as warranted.

Disabilities at closure were classified into three categories; the type of impairment, the subcategory of the impairment, and the cause of the impairment. In addition, they were classified as primary, secondary, and tertiary disabilities.

Primary Disability

Regarding primary disability at closure, 45.3% (*n* = 8,387) had mental impairments; 32.7% (*n* = 6,051) had physical impairments; and 22.1% (*n* = 4,085) had sensory/communicative impairments. The subcategories for those primary impairments included cognitive impairments (25.1%, *n* = 4,641), psychosocial impairments, and hearing loss, primary communication, auditory (13.8%, *n* = 2,553) to name a few. Primary disability impairment subcategory is presented in Table 9.

Table 9 Primary Disability Subcategory at Closure

Primary Disability Subcategory	n	%
Blindness	2	.0
Other Visual Impairments	22	0.1
Deafness, Primary Communication Visual	580	3.1
Deafness, Primary Communication Auditory	276	1.5
Hearing Loss, Primary Communication Visual	306	1.7
Hearing Loss, Primary Communication Auditory	2,553	13.8
Other Hearing Impairment (Tinnitus, Meniere's Disease, Hyperacusis, etc.)	227	1.2
Deaf-Blindness	1	.0
Communicative Impairment (expressive/receptive)	118	.6
Mobility Orthopedic/Neurological Impairments	1,108	6.0
Manipulation/Dexterity Orthopedic/Neurological Impairments	417	2.3
Both Mobility & Manipulation/Dexterity Orthopedic/Neurological	949	5.1
Other Orthopedic Impairments (e.g., limited range of motion)	916	4.9
Respiratory Impairments	242	1.3
General Physical Debilitation (fatigue, weakness, pain, etc.)	992	5.4
Other Physical Impairments (not listed above)	1,427	7.7
Cognitive Impairments-learning, thinking, processing/concentration	4,641	25.1
Psychosocial Impairments-interpersonal/behavioral, difficulty coping	2,854	15.4
Other Mental Impairments (not listed above)	892	4.8
Total	18,523	100.0

Regarding the causes for the primary disabilities, the largest groups of causes were classified as unknown (21.2%, *n* = 3,925), followed by specific learning disabilities (10.1%, *n* = 1,872), and depressive and other mood disorders (10%, *n* = 1,858). A complete list of causes for the primary disability is presented in Table 10.

Table 10 Primary Disability Cause

Primary Disability Cause	n	%
Cause unknown	3,925	21.2
Accident/Injury (other than TBI or SCI)	1,799	9.7
Alcohol Abuse or Dependence	227	1.2
Amputations	331	1.8
Anxiety Disorders	268	1.4
Arthritis and Rheumatism	324	1.7
Asthma and other Allergies	27	0.1
Attention-Deficit Hyperactivity Disorder (ADHD)	539	2.9
Autism	506	2.7
Blood Disorders	34	0.2
Cancer	78	0.4
Cardiac and other Conditions of the Circulatory System	134	0.7
Cerebral Palsy	183	1.0
Congenital Condition or Birth Injury	1,179	6.4
Cystic Fibrosis	11	0.1
Depressive and other Mood Disorders	1,858	10.0
Diabetes Mellitus	203	1.1
Digestive	78	.4
Drug Abuse or Dependence (other than alcohol)	325	1.8
Eating Disorders (e.g. anorexia, bulimia, or compulsive overeating)	5	.0

Continued

Primary Disability Cause	n	%
End-Stage Renal Disease and other Genitourinary System Disorders	251	1.4
Epilepsy or Seizure Disorders	141	0.8
HIV and AIDS	49	0.3
Immune Deficiencies excluding HIV/AIDS	40	0.2
Mental Illness (not listed elsewhere)	300	1.6
Cognitively Impaired	892	4.8
Multiple Sclerosis	84	0.5
Muscular Dystrophy	54	0.3
Parkinson's Disease and other Neurological Disorders	25	0.1
Personality Disorders	45	0.2
Physical Disorders/Conditions (not listed elsewhere)	1,531	8.3
Polio	47	0.3
Respiratory Disorders other than Cystic Fibrosis or Asthma	168	0.9
Schizophrenia and other Psychotic Disorders	372	2.0
Specific Learning Disabilities	1,872	10.1
Spinal Cord Injury (SCI)	175	0.9
Stroke	172	0.9
Traumatic Brain Injury (TBI)	271	1.5
Total	18,523	100.0

Secondary Disability

Regarding secondary disability at closure, 23.2% (*n* = 4,297) had mental impairments; 13.8% (*n* = 2,565) had physical impairments; and 2.5% (*n* = 462) had sensory/communicative impairments. On 60.5% (*n* = 11,199), there was no secondary disability recorded. The subcategories for the recorded secondary impairments included psychosocial impairments (11.1%, *n* = 2,059), cognitive impairments (9%, *n* = 1,674), and other physical impairments (5.3%, *n* = 974) to name a few. Secondary disability impairment subcategory is presented in Table 11.

Table 11 Secondary Disability Subcategory at Closure

Secondary Disability Subcategory at Closure	n	%
Blindness	7	.0
Other Visual Impairments	81	0.4
Deafness, Primary Communication Visual	8	.0
Deafness, Primary Communication Auditory	14	0.1
Hearing Loss, Primary Communication Visual	13	0.1
Hearing Loss, Primary Communication Auditory	169	0.9
Other Hearing Impair. (Tinnitus, Meniere's Disease, Hyperacusis, etc.)	41	0.2
Deaf-Blindness	1	.0
Communicative Impairment (expressive/receptive)	128	0.7
Mobility Orthopedic/Neurological Impairments	221	1.2
Manipulation/Dexterity Orthopedic/Neurological Impairments	133	0.7
Both Mobility & Manipulation/Dexterity Orthopedic/Neurological	204	1.1
Other Orthopedic Impairments (e.g., limited range of motion)	276	1.5
Respiratory Impairments	138	0.7
General Physical Debilitation (fatigue, weakness, pain, etc.)	619	3.3
Other Physical Impairments (not listed above)	974	5.3

Continued

	Secondary Disability Subcategory at Closure	n	%
	Cognitive Impairments-learning, thinking, processing/concentration	1,674	9.0
	Psychosocial Impairments-interpersonal/behavioral, difficulty coping	2,059	11.1
	Other Mental Impairments (not listed above)	564	3.0
	Total	7,324	39.5
Not	Answered	11,199	60.5
Total		18,523	100.0

Regarding the causes for the secondary disabilities, the largest groups of causes were classified as depressive and other mood disorders (6.3%, *n* = 1,163), followed by cause unknown (5.2%, *n* = 971), and specific learning disabilities (3.3%, *n* = 606). A complete list of causes for the primary disability is presented in Table 12.

Table 12 Secondary Disability Cause at Closure

Secondary Disability Cause at Closure	n	%
Cause unknown	971	5.2
Accident/Injury (other than TBI or SCI)	402	2.2
Alcohol Abuse or Dependence	195	1.1
Amputations	31	0.2
Anxiety Disorders	500	2.7
Arthritis and Rheumatism	171	0.9
Asthma and other Allergies	91	0.5
Attention-Deficit Hyperactivity Disorder (ADHD)	512	2.8
Autism	62	0.3
Blood Disorders	22	0.1
Cancer	40	0.2
Cardiac and other Conditions of the Circulatory System	184	1.0
Cerebral Palsy	35	0.2
Congenital Condition or Birth Injury	211	1.1
Depressive and other Mood Disorders	1163	6.3
Diabetes Mellitus	504	2.7
Digestive	18	0.1
Drug Abuse or Dependence (other than alcohol)	274	1.5
Eating Disorders (e.g. anorexia, bulimia, or compulsive overeating)	5	.0

Continued

Secondary Disability Cause at Closure	n	%
End-Stage Renal Disease and other Genitourinary System Disorders	25	0.1
Epilepsy or Seizure Disorders	112	0.6
HIV and AIDS	41	0.2
Immune Deficiencies excluding HIV/AIDS	16	0.1
Mental Illness (not listed elsewhere)	179	1.0
Cognitively Impaired	162	0.9
Multiple Sclerosis	7	.0
Muscular Dystrophy	8	.0
Parkinson's Disease and other Neurological Disorders	9	.0
Personality Disorders	95	0.5
Physical Disorders/Conditions (not listed elsewhere)	447	2.4
Polio	4	.0
Respiratory Disorders other than Cystic Fibrosis or Asthma	34	0.2
Schizophrenia and other Psychotic Disorders	75	0.4
Specific Learning Disabilities	606	3.3
Spinal Cord Injury (SCI)	11	0.1
Stroke	37	0.2
Traumatic Brain Injury (TBI)	65	0.4

Continued

Secondary Disability Cause at Closure		n	%
Total		7324	39.5
Not	Answered	11,199	60.5
Total		18,523	100.0

Tertiary Disability

Regarding tertiary disability at closure, 5.9% (*n* = 1,088) had mental impairments; 3.9% (*n* = 729) had physical impairments; and 0.6% (*n* = 106) had sensory/communicative impairments. On 89.6% (*n* = 16,600), there was no tertiary disability recorded. The subcategories for the recorded tertiary impairments included psychosocial impairments (2.8%, *n* = 522), cognitive impairments (2.2%, *n* = 406), and other physical impairments (1.7%, *n* = 319) to name a few. Tertiary disability impairment subcategory is presented in Table 13.

Table 13 Tertiary Disability Impairment Subcategory at Closure

	Tertiary Disability Impairment Subcategory at Closure	n	%
	Blindness	2	.0
	Other Visual Impairments	18	0.1
	Deafness, Primary Communication Auditory	1	.0
	Hearing Loss, Primary Communication Visual	3	.0
	Hearing Loss, Primary Communication Auditory	35	0.2
	Other Hearing Impair. (Tinnitus, Meniere's Disease, Hyperacusis, etc.)	5	.0
	Communicative Impairment (expressive/receptive)	41	0.2
	Mobility Orthopedic/Neurological Impairments	41	0.2
	Manipulation/Dexterity Orthopedic/Neurological Impairments	30	0.2
	Both Mobility & Manipulation/Dexterity Orthopedic/Neurological	50	0.3
	Other Orthopedic Impairments (e.g., limited range of motion)	63	0.3
	Respiratory Impairments	34	0.2
	General Physical Debilitation (fatigue, weakness, pain, etc.)	193	1.0
	Other Physical Impairments (not listed above)	319	1.7
	Cognitive Impairments-learning, thinking, processing/concentration	406	2.2
	Psychosocial Impairments-interpersonal/behavioral, difficulty coping	522	2.8
	Other Mental Impairments (not listed above)	160	0.9
	Total	1,923	10.4
Not	Answered	16,600	89.6
Total		18,523	100.0

Regarding the causes for the tertiary disabilities, the largest groups of causes were classified as depressive and other mood disorders (6.3%, *n* = 1,163), followed by cause unknown (5.2%, *n* = 971), and specific learning disabilities (3.3%, *n* = 606). A complete list of causes for the primary disability is presented in Table 14.

Table 14 Tertiary Disability Cause at Closure

Tertiary Disability Cause at Closure	n	%
Cause unknown	277	1.5
Accident/Injury (other than TBI or SCI)	88	0.5
Alcohol Abuse or Dependence	56	0.3
Amputations	3	.0
Anxiety Disorders	139	0.8
Arthritis and Rheumatism	37	0.2
Asthma and other Allergies	28	0.2
Attention-Deficit Hyperactivity Disorder (ADHD)	109	0.6
Autism	10	0.1
Blood Disorders	14	0.1
Cancer	14	0.1
Cardiac and other Conditions of the Circulatory System	65	0.4
Cerebral Palsy	7	.0
Congenital Condition or Birth Injury	46	.2
Depressive and other Mood Disorders	224	1.2

Continued

Tertiary Disability Cause at Closure	n	%
Diabetes Mellitus	116	0.6
Digestive	6	.0
Drug Abuse or Dependence (other than alcohol)	73	0.4
Eating Disorders (e.g. anorexia, bulimia, or compulsive overeating)	2	.0
End-Stage Renal Disease and other Genitourinary System Disorders	5	.0
Epilepsy or Seizure Disorders	43	0.2
HIV and AIDS	18	0.1
Immune Deficiencies excluding HIV/AIDS	8	.0
Mental Illness (not listed elsewhere)	54	0.3
Cognitively Impaired	40	0.2
Muscular Dystrophy	1	.0
Parkinson's Disease and other Neurological Disorders	3	.0
Personality Disorders	57	0.3
Physical Disorders/Conditions (not listed elsewhere)	157	0.8
Respiratory Disorders other than Cystic Fibrosis or Asthma	12	0.1
Schizophrenia and other Psychotic Disorders	11	0.1
Specific Learning Disabilities	173	0.9
Stroke	11	0.1
Traumatic Brain Injury (TBI)	16	0.1

Continued

	Tertiary Disability Cause at Closure	n	%
	Total	1,923	10.4
Not	Answered	16,600	89.6
Total		18,523	100.0

Reason Closed

Approximately two-thirds of consumers (67.8%, *n* = 12,560) were closed due to achieving an employment outcome; 14.3% (*n* = 2,654) were closed because they were no longer interested in services; 7.9% (*n* = 1460) were closed due to unable to locate or moved out of state; and 6.8% (*n* = 1,254) were closed for other reasons. If consumers were closed for any reason other than achieving an employment outcome, the closure was unsuccessful. Therefore, 67.8% (*n* = 12,560) were closed successfully and 32.2% (*n* = 5,963) were closed unsuccessfully. A complete list of reasons for case closure is presented in Table 15.

Table 15 Reason Closed

Reason Closed	n	%
Achieved an Employment Outcome	12,560	67.8
Unable to Locate, or Moved Out of State	1,460	7.9
Disability Too Severe	156	0.8
Death	132	0.7
Referred to Another Agency or DARS Program	71	0.4
Transportation Not Feasible	19	0.1
Extended Services Not Available	4	.0
Other	1,254	6.8
Extended (sheltered) employment (VR only)	1	.0
Unfavorable medical prognosis	85	0.5
Individual in institution other than a prison or jail	42	0.2
Individual is incarcerated in a prison or jail	85	0.5
No longer interested in receiving services	2,654	14.3
Total	18,523	100.0

Consumer Employment Occupations

In the federal-state VR program, employment occupations are recorded using the Standard Occupational Classification (SOC) System, which consists of a six-digit format. The first two digits represent a specific group of occupations, and the remaining digits represent occupation subgroups. Based on the SOC codes in the data set, the occupations were grouped into their general employment descriptions. Thus, the largest group of consumers held jobs in

office and administrative support occupations (16.3%, *n* = 3,021); followed by food preparation and service related occupations (7.2%, *n* = 1,327); and transportation and material moving occupations (7.1%, *n* = 1,316). Less frequent occupations included life, physical, and social science occupations (0.2%, *n* = 42); farming, fishing, and forestry occupations (0.2%, *n* = 45); and architecture and engineering occupations (0.6%, *n* = 102). A complete list of general employment occupations is presented in Table 16.

Table 16 General Employment Description

General Employment Description	n	%
Business and Financial Operations Occupations	192	1.0
Computer and Mathematical Occupations	141	0.8
Architecture and Engineering Occupations	102	0.6
Life, Physical, and Social Science Occupations	42	0.2
Community and Social Services Occupations	241	1.3
Legal Occupations	39	0.2
Education, Training, and Library Occupations	521	2.8
Arts, Design, Entertainment, Sports, and Media Occupations	157	0.8
Healthcare Practitioners and Technical Occupations	327	1.8
Healthcare Support Occupations	699	3.8
Protective Service Occupations	331	1.8
Food Preparation and Serving Related Occupations	1,327	7.2

Continued

	General Employment Description	n	%
	Building and Grounds Cleaning and Maintenance Occupations	1,093	5.9
	Personal Care and Service Occupations	881	4.8
	Sales and Related Occupations	1,126	6.1
	Office and Administrative Support Occupations	3,021	16.3
	Farming, Fishing, and Forestry Occupations	45	0.2
	Construction and Extraction Occupations	457	2.5
	Installation, Maintenance, and Repair Occupations	630	3.4
	Production Occupations	866	4.7
	Transportation and Material Moving Occupations	1,316	7.1
	Total	13,554	73.2
Not	Answered	4,969	26.8
Total		18,523	100.0

Benefits Counseling

The majority of consumers (98.6%, *n* = 18,270) did not receive paid benefits counseling as SSI/SSDI recipients. In actuality, less than 2% (1.4%, *n* = 253) of consumers received paid benefits counseling.

Descriptive Statistics

Case Service Costs and Service Provision for Service Tracks

Case service costs for disability services ranged from $0 - $208,370 (M = $1,128.80, SD = $5,537.40). Service costs for disability goods and equipment ranged from $0 - $122,921 (M = $1,209.15, SD = $4,118.20). For customized employment services, costs ranged from $0 - $20,550 (M = $1,057.68, SD = $2,323.34). For employment goods and equipment, costs ranged from $0 - $28,104 (M = $62.48, SD = $431.67). See Table 17.

Table 17 Case Service Costs for Service Tracks

Service Track	N	Minimum	Maximum	M	SD
Service Track 1a Disability Services	18,523	$0	$208,370	$1,128.80	$5,537.40
Service Track 1b Disability Goods & Equipment	18,523	$0	$122,921	$1,209.15	$4,118.20
Service Track 1 Total	18,523	$0	$208,527	$2,337.95	$6,968.22
Service Track 2a Customized Employment Services	18,523	$0	$20,550	$1,057.68	$2,323.34
Service Track 2b Employment Goods & Equipment	18,523	$0	$28,104	$62.48	$431.67
Service Track 2 Total	18,523	$0	$28,104	$1,120.16	$2,361.17
Service Track 3a Career Skills Training Services	18,523	$0	$51,519	$544.64	$1,989.25

Continued

Service Track 3b Career Skills Training Goods & Equipment	18,523	$0	$35,896	$175.29	$921.00
Service Track 3 Total	18,523	$0	$71,672	$719.93	$2,617.32
Service Track 4a Supplemental Services	18,523	$0	$50,970	$216.76	$911.75
Service Track 4b Supplemental Goods	18,523	$0	$11,650	$26.06	$232.71
Service Track 4 Total	18,523	$0	$55,207	$242.81	$968.43
Service Track 5a Job Readiness Training Services	18,523	$0	$13,183	$109.72	$603.35
Service Track 5 Total	18,523	$0	$13,183	$109.72	$603.35
Service Track 6a Assessment Services	18,523	$0	$211,931	$1,160.27	$4,909.75
Service Track 6 Total	18,523	$0	$211,931	$1,160.27	$4,909.75
Grand Total	18,523	$0	$237,668	$5,690.85	$9,572.52

Based on the data from the above table, the variables were recoded into dichotomous variables (provided vs. not provided) using the recode feature in SPSS. If a value was zero, it was recoded as zero for not provided. All other values were recoded as "1" for provided. Thus, the percentage of consumers receiving certain services ranged from 5.7% (n = 1,056) for Service Track 4b (supplemental goods) to 81.6% (n = 15,118) for Service Track 6a (assessment services). See Table 18.

Table 18 Service Provision for Service Tracks

Service Track	Provided	Not Provided	Total
1a Disability Services	*n* = 8,204 (44.3%)	*n* = 10,319 (55.7%)	18,523 (100%)
1b Disability Goods & Equipment	*n* = 6,837 (36.9%)	*n* = 11,686 (63.1%)	18,523 (100%)
2a Customized Employment Services	*n* = 5,097 (27.5%)	*n* = 13,426 (72.5%)	18,523 (100%)
2b Employment Goods & Equipment	*n* = 2,548 (13.8%)	*n* = 15,975 (86.2%)	18,523 (100%)
3a Career Skills Training Services	*n* = 3,641 (19.7%)	*n* = 14,882 (80.3%)	18,523 (100%)
3b Career Skills Training Goods & Equipment	*n* = 2,481 (13.4%)	*n* = 16,042 (86.6%)	18,523 (100%)
4a Supplemental Services	*n* = 5,344 (28.9%)	*n* = 13,179 (71.1%)	18,523 (100%)

Continued

Service Track	Provided	Not Provided	Total
4b Supplemental Goods	*n* = 1,056 (5.7%)	*n* = 17,467 (94.3%)	18,523 (100%)
5a Job Readiness Training Services	*n* = 1,529 (8.3%)	*n* = 16,994 (91.7%)	18,523 (100%)
6a Assessment Services	*n* = 15,118 (81.6%)	*n* = 3,405 (18.4%)	18,523 (100%)

Income Benefits and Case Significance

Consumer income benefits, for those who received them, included SSI Aged amount at application (M = $863.01, SD = $478.89) and closure (M = $855.32, SD = $473.14), SSI amount at application (M = $586.84, SD = $271.59) and closure (M = $575.59, SD = $257.33), SSDI amount at application (M = $887.72, SD = $378.52) and closure (M = $912.26, SD = $391.93), TANF amount at application (M = $234.42, SD = $153.20) and closure (M = $237.04, SD = $181.46), general assistance amount at application (M = $309.48, SD = $291.70) and closure (M = $291.36, SD = $261.48), veteran disability amount at application (M = $841.19, SD = $828.82) and closure (M = $924.08, SD = $851.19), workers compensation amount at application (M = $1,523.09, SD = $782.87) and closure (M = $1,560.53, SD = $752), other public support at application (M = $797.90, SD = $607.48) and closure (M = $826.25, SD = $603.70), unemployment compensation at application (M = $1,067.95, SD = $473.12) and closure (M = $1,002.12, SD = $487.13), and weekly earnings at application (M = $463.50, SD = $360.24) and closure (M = $407.26, SD = $315.58). Case significance can range from 1 (not significant) to 3 (most significant). At eligibility the mean case significance was 1.88. At closure the mean case significance was 2.08. Consumers who worked, worked 1-99 hours per week at application (M = 32.19, SD = 11.61) and 1-99 hours per week at closure (M = 32.15, SD = 10.46). See Table 19.

Table 19 Income Benefit Amounts, Hours Worked, and Case Significance

Type of Income	N	Minimum	Maximum	M	SD
SSI Aged Amount Application	349	$14	$2,295	$863.01	$478.89
SSI Aged Amount Closure	323	$14	$2,295	$855.32	$473.14
SSI Amount Application	2,088	$1	$2,388	$586.84	$271.59
SSDI Amount Application	2,312	$1	$3,400	$887.72	$378.52
SSI Amount Closure	2,407	$1	$2,298	$575.59	$257.33
SSDI Amount Closure	2,788	$1	$3,400	$912.26	$391.93
TANF Amount Application	296	$16	$950	$234.42	$153.20
TANF Amount Closure	266	$15	$1,800	$237.04	$181.46
General Assistance Amount Application	625	$1	$2,848	$309.38	$291.70
General Assistance Amount Closure	591	$1	$2,848	$291.36	$261.48

Continued

Type of Income	N	Minimum	Maximum	M	SD
Veteran Disability Benefits Closure	96	$115	$3,504	$924.08	$851.19
Worker Comp Amount Application	286	$100	$4,802	$1,523.09	$782.87
Worker Comp Amount Closure	107	$100	$4,802	$1,560.53	$752.72
Other Public Support Application	934	$14	$6,889	$797.90	$607.48
Other Public Support Closure	980	$14	$6,889	$826.25	$603.70
Unemployment Comp Benefit Application	524	$64	$2,016	$1,067.95	$473.12
Unemployment Comp Benefit Closure	197	$64	$1,885	$1,002.12	$487.13

Continued

Type of Income	N	Minimum	Maximum	M	SD
Weekly Earnings Amount Closure	12,550	$7	$9,450	$407.26	$315.58
Hours Worked Application	5,886	1	99	32.19	11.61
Hours Worked Closure	12,550	1	99	32.15	10.46
Significant Case Eligibility	18521	1	3	1.88	.336
Significant Case Closure	18523	1	3	2.08	.558

Based on the income amounts from the above table, the variables were recoded into dichotomous variables (received vs. not received). If a value was zero, it was recoded as zero for not received. All other values were recoded as "1" for received. Thus, the percentage of consumers receiving certain types of income benefits ranged from a low of 0.4% (n = 79) for veteran disability benefits at application to a high of 15.1% (n = 2,788) for SSDI at closure. See Table 20.

Table 20 Income Benefits Received

Income Benefit	Received	Not Received	Total
SSI Aged Application	*n* = 349 (1.9%)	*n* = 18,174 (98.1%)	18,523 (100%)
SSI Aged Closure	*n* = 323 (1.7%)	*n* = 18,200 (98.3%)	18,523 (100%)
SSI Application	*n* = 2,088 (11.3%)	*n* = 16,435 (88.7%)	18,523 (100%)
SSDI Application	*n* = 2,312 (12.5%)	*n* = 16,211 (87.5%)	18,523 (100%)
SSI Closure	*n* = 2,407 (13%)	*n* = 16,116 (87%)	18,523 (100%)
SSDI Closure	*n* = 2,788 (15.1%)	*n* = 15,735 (84.9%)	18,523 (100%)
TANF Application	*n* = 296 (1.6%)	*n* = 18,227 (98.4%)	18,523 (100%)
TANF Closure	*n* = 266 (1.4%)	*n* = 18,257 (98.6%)	18,523 (100%)
General Assistance Application	*n* = 625 (3.4%)	*n* = 17,898 (96.6%)	18,523 (100%)

Continued

Income Benefit	Received	Not Received	Total
General Assistance Closure	*n* = 591 (3.2%)	*n* = 17,932 (96.8%)	18,523 (100%)
Veteran Disability Benefits Application	*n* = 79 (0.4%)	*n* = 18,444 (99.6%)	18,523 (100%)
Veteran Disability Benefits Closure	*n* = 96 (0.5%)	*n* = 18,427 (99.5%)	18,523 (100%)
Worker Comp Application	*n* = 286 (1.5%)	*n* = 18,237 (98.5%)	18,523 (100%)
Worker Comp Closure	*n* = 107 (0.6%)	*n* = 18,416 (99.4%)	18,523 (100%)

Continued

Income Benefit	Received	Not Received	Total
Other Public Support Application	*n* = 934 (5%)	*n* = 17,589 (95%)	18,523 (100%)
Other Public Support Closure	*n* = 980 (5.3%)	*n* = 17,543 (94.7%)	18,523 (100%)
Unemployment Comp Benefit Application	*n* = 524 (2.8%)	*n* = 17,999 (97.2%)	18,523 (100%)
Unemployment Comp Benefit Closure	*n* = 197 (1.1%)	*n* = 18,326 (98.9%)	18,523 (100%)

Research Questions and Hypotheses

Five research questions and related hypotheses were formulated for investigation. They were tested with binary logistic regression. The research questions and hypotheses were as follows:

R_1: Are there significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics?

H_{01}: There are no significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics.

H_1: There are significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics.

R_2: Are there significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered?

H_{02}: There are no significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered.

H_2: There are significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered.

R_3: Are there significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present?

H_{03}: There are no significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present.

H_3: There are significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present.

R_4: Which variables (demographics #1, service provision #2, extraneous income/health benefits #3) collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program?

H_{04}: There are no variables (demographics #1, service provision #2, extraneous income/health benefits #3) that collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program.

H_4: There are variables (demographics #1, service provision #2, extraneous income/health benefit #3) that collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program.

R_5: Are there significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services?

H_{05}: There are no significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services.

H_5: There are significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services.

Research Question One

Are there significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics? The dependent variable was

vocational outcomes (successful vs. unsuccessful). The independent variables were consumer demographics. The full model significantly predicted vocational outcomes, $X^2(44, N = 17{,}100) = 1391.42$, $p < .001$. The model accounted for 10.8% (Nagelkerke R^2) of the variance in vocational outcomes. Overall, 66.6% of predictions were accurate. Based on the analysis, gender, marital status, primary language, cases significance at closure, functional limitations, primary disability, education at application, and education at closure reliably predicted vocational outcomes. The values of the coefficients revealed that males were 1.17 times more likely to obtain successful outcomes than females, $p < .001$.

Regarding marital status, consumers who were married were 1.26 times more likely to obtain successful outcomes than consumers who were never married, $p < .001$. Consumers who were divorced had reduced odds by a factor of 0.88 of obtaining employment compared to consumers who were never married, $p = .026$.

Regarding primary language, consumers who spoke Spanish were 2.41 times as likely to obtain successful outcomes than consumers who spoke a language other than English, Sign Language or Vietnamese, $p = .01$. Consumers who communicated primarily in sign language had significantly reduced odds of obtaining successful outcomes by a factor of 0.48 compared to consumers who communicated in a language other than English, Spanish, or Vietnamese, $p = .031$.

Case significance at closure was a significant, negative predictor of successful outcomes. As case significance at closure increased by 1 unit, there was a decrease in the odds of obtaining a successful outcome by a factor of 0.67.

Functional limitations were significant predictors of vocational outcomes. Consumers who had limitations in the area of self-care had significantly reduced odds of obtaining

successful outcomes than consumers who did not have limitations in self-care by a factor of 0.85, $p = .021$. Consumers who had limitations in the area of self-direction were 1.16 times more likely to obtain successful outcomes than consumers who did not have limitations in self-direction, $p = .001$. Consumers who had limitations in communication were 1.45 times more likely to obtain successful outcomes than consumers who did not have limitations in communication, $p < .001$.

Primary disability was a significant predictor of vocational outcomes, $p < .001$. Compared to consumers with mental impairments, consumers with sensory/communicative impairments were 2.56 times more likely to obtain successful outcomes, $p < .001$. Compared to consumers with mental impairments, consumers with physical impairments were 1.18 times more likely to obtain successful outcomes, $p = .002$.

Education at application was a significant predictor of vocational outcomes, $p < .001$. Consumers with elementary or middle school education (grades 1-8) at application were 4.07 times more likely to obtain successful outcomes than consumers with master's degrees or higher at application, $p = .033$. Similarly, consumers with secondary education, no high school diploma (grades 9-12) at application were 3.34 times more likely to obtain successful outcomes than consumers with master's degrees or higher at application, $p = .026$. Consumers with special education or in attendance or completion certificate/diploma at application were 3.55 times more likely to obtain successful outcomes than consumers with master's degrees or higher at application, $p = .02$. Consumers with high school grad/equivalency certificate (regular education) at application were 3.83 times more likely to obtain successful outcomes than consumers with master's degrees or higher at application, $p = .013$. Consumers with post-secondary education,

no degree at application were 3.99 times more likely to obtain successful outcomes than consumers with master's degrees or higher at application, $p = .01$.

Education at closure was a significant predictor of vocational outcomes, $p < .001$. Consumers with elementary or middle school education (grades 1-8) at closure had reduced odds (OR = 0.08) of obtaining successful outcomes compared to consumers with Master's degrees or higher at closure, $p = .004$. Similarly, consumers with Secondary education, no high school diploma (grades 9-12) at closure had reduced odds (OR = 0.11) of obtaining successful outcomes compared to consumers with Master's degrees or higher at closure, $p < .001$. Consumers with Special Ed in attendance or completion certificate/diploma at closure had reduced odds (OR = 0.13) of obtaining successful outcomes compared to consumers with Master's degrees or higher at closure, $p < .001$. Consumers with High school grad/equivalency certificate (regular Ed) at closure had reduced odds (OR = 0.13) of obtaining successful outcomes compared to consumers with Master's degrees or higher at closure, $p < .001$. Consumers with Post-secondary education, no degree at closure had reduced odds (OR = 0.12) of obtaining successful outcomes compared to consumers with Master's degrees or higher at closure, $p < .001$. Regression coefficients for demographics variables are presented in Table 21.

Table 21 Regression Coefficients for Demographic Variables

Demographic Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Age	.001	.002	.556	1	.456	1.00
Gender	.155	.035	19.91	1	.000	1.17
Marital Status			43.61	4	.000	
Married	.233	.055	17.60	1	.000	1.26
Widowed	-.096	.123	.616	1	.432	.908
Divorced	-.126	.057	4.96	1	.026	.881
Separated	-.029	.081	.132	1	.716	.971
White	.167	.178	.886	1	.347	1.18
African American	.150	.179	.703	1	.402	1.16
American Indian/ Alaskan Native	.010	.188	.003	1	.956	1.01
Asian	.125	.217	.334	1	.563	1.13
Pacific Islander	-.067	.275	.059	1	.808	.935
Hispanic/Latino	.039	.043	.821	1	.365	1.04
Primary Language			89.45	4	.000	
English	.150	.317	.224	1	.636	1.16
Spanish	.881	.341	6.67	1	.010	2.41

Demographic Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Sign Language	-.727	.337	4.65	1	.031	.483
Vietnamese	1.71	1.10	2.40	1	.122	5.53
Colonias	.179	.246	.530	1	.467	1.20

Continued

Significant Case elig.	.047	.085	.312	1	.576	1.05
Significant Case cls.	-.406	.051	64.03	1	.000	.666
Mobility	.070	.054	1.63	1	.201	1.07
Self- care	-.164	.071	5.33	1	.021	.849
Self-direction	.148	.046	10.40	1	.001	1.16
Work Skills	.013	.044	.089	1	.766	1.01
Work tolerance	.066	.040	2.67	1	.102	1.07
Interpersonal Skills	.052	.045	1.32	1	.251	1.05
Communication	.369	.062	35.62	1	.000	1.45
Primary Disability			120.06	2	.000	
Sensory/Communicative Impairments	.939	.086	119.93	1	.000	2.56
Physical Impairments	.166	.053	9.90	1	.002	1.18
Education Application			110.80	8	.000	
No formal schooling	1.04	.839	1.54	1	.214	2.83
Elementary/Middle (grades 1-8)	1.40	.656	4.57	1	.033	4.07
Secondary education, no high school diploma	1.21	.542	4.94	1	.026	3.34

Demographic Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
(grades 9-12)						

Continued

Special Ed in attendance or completion certificate/diploma	1.27	.544	5.41	1	.020	3.55
High school grad/equivalency certificate (regular Ed)	1.34	.540	6.18	1	.013	3.83
Post-secondary education, no degree	1.38	.538	6.60	1	.010	3.99
Associate degree or Vocational/Technical certificate	.333	.539	.382	1	.537	1.40
Bachelor's degree	.276	.516	.286	1	.593	1.32
Education Closure			232.43	8	.000	
No formal schooling	-2.48	.868	8.15	1	.004	.084
Elementary/Middle	-2.35	.651	13.03	1	.000	.095

Demographic Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
(grades 1-8)						
						Continued
Secondary education, no high school diploma (grades 9-12)	-2.23	.526	18.00	1	.000	.107
Special Ed in attendance or completion certificate/diploma	-2.03	.524	15.02	1	.000	.131
High school grad/equivalency certificate (regular Ed)	-2.05	.521	15.54	1	.000	.128
Post-secondary education, no degree	-2.11	.520	16.52	1	.000	.121
Associate degree or Vocational/Technical certificate	-.816	.520	2.47	1	.116	.442
Bachelor's degree	-.575	.500	1.32	1	.250	.563

Demographic Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Constant	1.25	.424	8.65	1	.003	3.48

Hypothesis One

H_{01} stated that there are no significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics. The full model significantly predicted vocational outcomes, $X^2(44, N = 17{,}100) = 1391.42$, $p < .001$. Therefore, H_{01} was rejected.

Research Question Two

Are there significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered? For this research question, the variables for service provision were the independent variables and they were entered in the dichotomous format (provided vs. not provided) rather than the numerical format for amounts received. It should be noted that models using both methods were generated, but it was decided that the dichotomous format was best because it yielded regression coefficients that were meaningful. The numerical format for amounts received produced regression coefficients with values of zero. The dependent variable was vocational outcomes (successful vs. unsuccessful).

The full model significantly predicted vocational outcomes, $X^2(10, N = 18{,}523) = 2108.47$, $p < .001$. The model accounted for 15% (Nagelkerke R^2) of the variance in vocational

outcomes. Overall, 72.7% of predictions were accurate. Based on the analysis, disability services, disability goods and equipment, customized employment services, employment goods and equipment, career skills training services, career skills training goods and equipment, supplemental services, and job readiness training services reliably predicted vocational outcomes. The values of the coefficients revealed that consumers who were provided disability services were 1.67 times more likely to obtain successful outcomes than consumers who were not provided disability services, $p < .001$. Consumers who were provided disability goods and equipment were 3.25 times more likely to obtain successful outcomes than consumers who were not provided disability goods and equipment, $p < .001$. Consumers who were provided customized employment services were 2.6 times more likely to obtain successful outcomes than consumers who were not provided customized employment services, $p < .001$. Consumers who were provided employment goods and equipment were 2.1 times more likely to obtain successful outcomes than consumers who were not provided employment goods and equipment, $p < .001$. Consumers who were provided career skills training services were 1.21 times more likely to obtain successful outcomes than consumers who were not provided career skills training services, $p < .001$.

However, consumers who were provided career skills training goods and equipment had significantly reduced odds (OR = 0.85) of obtaining successful outcomes compared to consumers who were not provided career skills training goods and equipment, $p = .006$. Similarly, consumers who were provided supplemental services had significantly reduced odds (OR = 0.82) of obtaining successful outcomes compared to consumers who were not provided supplemental services, $p < .001$. Likewise, consumers who were provided job readiness training services had significantly reduced odds (OR = 0.85) of obtaining successful outcomes compared to consumers

who were not provided job readiness training services, $p < .001$. Regression coefficients for service provision are presented in Table 22.

Table 22 Regression Coefficients for Service Provision

Service Track	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
1a Disability Services	.512	.039	174.30	1	.000	1.67
1b Disability Goods & Equipment	1.18	.043	761.87	1	.000	3.25
2a Customized Employment Services	.954	.042	516.25	1	.000	2.60
2b Employment Goods & Equipment	.741	.056	175.80	1	.000	2.10
3a Career Skills Training Services	.190	.054	12.59	1	.000	1.21
3b Career Skills Training Goods & Equipment	-.167	.060	7.62	1	.006	.847
4a Supplemental Services	-.199	.040	25.18	1	.000	.819
4b Supplemental Goods	.147	.077	3.63	1	.057	1.16
5a Job Readiness Training Services	-.160	.062	6.67	1	.010	.852
6a Assessment Services	.070	.043	2.67	1	.103	1.07
Constant	-.182	.043	18.33	1	.000	.833

Hypothesis Two

H_{02} stated that there are no significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks)

has been rendered. The full model significantly predicted vocational outcomes, $X^2(10, N = 18,523) = 2108.47$, $p < .001$. Therefore, H_{02} was rejected.

Research Question Three

Are there significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present? The independent variables were income benefits and health benefits. For this research question, the variables for income benefits were entered in the dichotomous format (received vs. not received) rather than the numerical format for amounts received. It should be noted that models using both methods were generated, but it was decided that the dichotomous format was best because it yielded regression coefficients that were meaningful. The numerical format for amounts received produced regression coefficients with values of zero. The dependent variable was vocational outcomes (successful vs. unsuccessful).

The full model significantly predicted vocational outcomes, $X^2(23, N = 18,523) = 1790.57$, $p < .001$. The model accounted for 12.9% (Nagelkerke R^2) of the variance in vocational outcomes. Overall, 68.4% of predictions were accurate. Based on the analysis, Medicaid, Medicare, private insurance through employment, CHIP, SSI aged at application, SSI aged at closure, SSI at closure, SSDI at closure, general assistance at application, general assistance at closure, worker's compensation at application, and other public insurance at closure reliably predicted vocational outcomes. The values of the coefficients revealed that consumers who received Medicaid had significantly reduced odds (OR = 0.82) of obtaining successful outcomes compared to consumers who did not receive Medicaid, $p = .019$. However, consumers who received Medicare were 1.41 times more likely to obtain successful outcomes than consumers who were not on Medicare, $p < .001$. Consumers who received private insurance through their own employment were 6.69 times more likely to obtain successful outcomes than consumers

who were not on private insurance through their own employment, $p < .001$. Consumers who received CHIP had significantly reduced odds (OR = 0.44) of obtaining successful outcomes compared to consumers who did not receive CHIP, $p = .001$. Consumers who were SSI aged at application were 1.57 times more likely to obtain successful outcomes than consumers who were not on SSI aged at application, $p = .022$. However, consumers who were on SSI aged at closure had reduced odds (OR = 0.67) of obtaining successful outcomes compared to consumers were not on SSI aged at closure, $p = .048$. Similarly, consumers who were on SSI at closure had reduced odds (OR = 0.41) of obtaining successful outcomes compared to consumers who were not on SSI at closure, $p < .001$. Consumers who were on SSDI at closure had reduced odds (OR = 0.41) of obtaining successful outcomes compared to consumers who were not on SSDI at closure, $p < .001$. Consumers who received general assistance at application were 1.58 times more likely to obtain successful outcomes than consumers who did not receive general assistance at application, $p < .001$. However, consumers who received general assistance at closure had reduced odds (OR = 0.45) of obtaining successful outcomes compared to consumers who did not receive general assistance at closure, $p < .001$. Likewise, consumers who received worker's compensation at application had reduced odds (OR = 0.57) of obtaining successful outcomes compared to consumers who did not receive worker's compensation at application, $p < .001$. Consumers who other public insurance at application had reduced odds (OR = 0.74) of obtaining successful outcomes compared to consumers who did not receive other public insurance at application, $p = .02$. Regression coefficients for health and income benefits are presented in Table 23.

Table 23 Regression Coefficients for Health/Income Benefits

Health/Income Benefit	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
No insurance	-.172	.088	3.82	1	.051	.842
Medicaid	-.197	.084	5.49	1	.019	.821
Medicare	.340	.084	16.42	1	.000	1.41
Private ins. Empl.	1.90	.116	269.72	1	.000	6.69
Private ins. other	.068	.087	.606	1	.436	1.07
CHIP	-.831	.257	10.47	1	.001	.435
Other public ins.	-.143	.104	1.89	1	.169	.867
SSI aged app	.449	.196	5.24	1	.022	1.57
SSI aged cls	-.400	.202	3.92	1	.048	.670
SSI app	.173	.089	3.73	1	.053	1.19
SSDI app	.161	.091	3.11	1	.078	1.17
SSI cls	-.892	.085	109.58	1	.000	.410
SSDI cls	-.894	.085	111.38	1	.000	.409
TANF app	.104	.233	.201	1	.654	1.11
TANF cls	-.368	.242	2.31	1	.128	.692
Gen assist app	.456	.176	6.72	1	.010	1.58
Gen assist cls	-.791	.178	19.79	1	.000	.453

Health/Income Benefit	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Vet disab app	.190	.510	.138	1	.710	1.21
Vet disab cls	-.867	.460	3.54	1	.060	.420
Wrkr comp app	-.558	.128	18.97	1	.000	.573
						Continued
Othr pub app	-.086	.130	.442	1	.506	.917
Othr pub cls	-.300	.129	5.41	1	.020	.741
Unemp comp app	-.030	.098	.092	1	.761	.971
Constant	.925	.086	115.67	1	.000	2.52

Note. Texas Healthy Kids (n = 1) and Children with Special Health Care Needs (CSHCN) (n = 4) were excluded from this analysis due to the small sample size.

Hypothesis Three

H_{03} stated that there are no significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present. The full model significantly predicted vocational outcomes, $X^2(23, N = 18{,}523) = 1790.57$, $p < .001$. Therefore, H_{03} was rejected.

Research Question Four

Which variables (demographics #1, service provision #2, extraneous income/health benefits #3) collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program? Results were similar as in previous analyses (See Research Questions 1-3). However, in this model, Hispanics/Latinos were 1.15 times more likely to obtain successful outcomes than non-Hispanics/Latinos, p = .003. The full model significantly predicted vocational outcomes, $X^2(77, N = 17{,}100) = 4167.71$, $p < .001$. The model accounted for 30%

(Nagelkerke R^2) of the variance in vocational outcomes. Overall, 74.9% of predictions were accurate. Regression coefficients are presented in Table 24.

Table 24 Regression Coefficients for Collective Effects

Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Age	-.001	.002	.278	1	.598	.999
Gender	.100	.038	6.82	1	.009	1.11
Marital Status			18.87	4	.001	
Married	.172	.061	7.81	1	.005	1.19
Widowed	-.030	.133	.051	1	.821	.970
Divorced	-.091	.063	2.10	1	.147	.913
Separated	-.005	.090	.004	1	.951	.995
White	.266	.196	1.84	1	.174	1.30
African American	.353	.197	3.21	1	.073	1.42
American Indian/ Alaskan Native	.090	.205	.193	1	.661	1.09
Asian	.156	.237	.435	1	.510	1.17
Pacific Islander	-.077	.299	.066	1	.797	.926
Hispanic/Latino	.138	.047	8.54	1	.003	1.15
Primary Language			51.85	4	.000	
English	.087	.334	.067	1	.795	1.09
Spanish	.829	.359	5.33	1	.021	2.29

Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Sign Language	-.507	.358	2.01	1	.157	.602
Vietnamese	1.91	1.11	2.93	1	.087	6.72
Colonias	.244	.268	.831	1	.362	1.28
						Continued
No insurance	-.170	.098	2.99	1	.084	.844
Medicaid	-.110	.093	1.39	1	.238	.896
Medicare	.189	.095	3.97	1	.046	1.21
Private ins. Empl.	1.69	.126	179.32	1	.000	5.41
Private ins. other	.131	.097	1.81	1	.178	1.14
CHIP	-.375	.303	1.53	1	.216	.688
Other public ins.	-.117	.117	1.00	1	.317	.889
Mobility	-.010	.060	.028	1	.867	.990
Self- care	-.108	.078	1.91	1	.167	.898
Self-direction	.064	.050	1.60	1	.206	1.07
Work Skills	-.036	.049	.561	1	.454	.964
Work tolerance	.073	.044	2.66	1	.103	1.08
Interpersonal Skills	-.025	.050	.249	1	.618	.976
Communication	.241	.068	12.71	1	.000	1.27
Significant Case elig.	.190	.092	4.27	1	.039	1.21
Significant Case cls.	-.416	.056	54.66	1	.000	.659
Primary Disability			46.65	2	.000	
Sensory/Communicative	.503	.099	25.95	1	.000	1.65

Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Impairments						
Physical Impairments	.341	.059	33.37	1	.000	1.41

Continued

Education Application			169.01	8	.000	
No formal schooling	2.63	.923	8.10	1	.004	13.84
Elementary/Middle (grades 1-8)	2.62	.717	13.32	1	.000	13.70
Secondary education, no high school diploma (grades 9-12)	2.39	.597	16.06	1	.000	10.96
Special Ed in attendance or completion certificate/diploma	2.33	.599	15.11	1	.000	10.28
High school grad/equivalency certificate (regular Ed)	2.42	.594	16.55	1	.000	11.22
Post-secondary education, no degree	2.23	.590	14.24	1	.000	9.28

Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
						Continued
Associate degree or Vocational/Technical certificate	.991	.590	2.83	1	.093	2.69
Bachelor's degree	.569	.566	1.01	1	.315	1.77
Education Closure			304.98	8	.000	
No formal schooling	-3.80	.951	15.97	1	.000	.022
Elementary/Middle (grades 1-8)	-3.32	.711	21.82	1	.000	.036
Secondary education, no high school diploma (grades 9-12)	-3.16	.580	29.59	1	.000	.043
Special Ed in attendance or completion certificate/diploma	-2.94	.578	25.92	1	.000	.053

Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)

Continued

High school grad/equivalency certificate (regular Ed)	-2.88	.574	25.24	1	.000	.056
Post-secondary education, no degree	-2.64	.570	21.54	1	.000	.071
Associate degree or Vocational/Technical certificate	-1.22	.569	4.59	1	.032	.296
Bachelor's degree	-.729	.548	1.77	1	.183	.483
1a Disability Services	.313	.045	47.80	1	.000	1.37
1b Disability Goods & Equipment	.702	.053	174.34	1	.000	2.02
2a Customized Employment Services	1.50	.049	932.45	1	.000	4.50
2b Employment Goods &	.943	.061	241.23	1	.000	2.57

Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Equipment						
3a Career Skills Training Services	.045	.059	.586	1	.444	1.05
						Continued
3b Career Skills Training Goods & Equipment	-.272	.069	15.74	1	.000	.762
4a Supplemental Services	-.077	.044	3.14	1	.076	.926
4b Supplemental Goods	.058	.084	.482	1	.487	1.06
5a Job Readiness Training Services	.122	.068	3.19	1	.074	1.13
6a Assessment Services	.016	.048	.107	1	.743	1.02
SSI app	.236	.219	1.16	1	.281	1.27
SSI aged cls	-.440	.227	3.75	1	.053	.644
SSI app	.191	.099	3.72	1	.054	1.21
SSDI app	.343	.101	11.46	1	.001	1.410
SSI cls	-.982	.095	106.61	1	.000	.375
SSDI cls	-1.06	.095	122.55	1	.000	.348
TANF app	.179	.269	.442	1	.506	1.20
TANF cls	-.299	.281	1.14	1	.287	.741
Gen assist app	.603	.203	8.82	1	.003	1.83

Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Gen assist cls	-.960	.205	21.85	1	.000	.383
Vet disab app	.256	.576	.197	1	.657	1.29
Vet disab cls	-.918	.525	3.06	1	.080	.399

Continued

Wrkr comp app	-.565	.148	14.63	1	.000	.568
Othr pub app	-.097	.144	.452	1	.501	.908
Othr pub cls	-.426	.144	8.74	1	.003	.653
Unemp comp app	-.165	.111	2.22	1	.136	.848
Constant	.242	.463	.272	1	.602	1.27

Hypothesis Four

H_{04} stated that there are no variables (demographics #1, service provision #2, extraneous income/health benefits #3) that collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program. The full model significantly predicted vocational outcomes, $X^2(77, N = 17{,}100) = 4167.71$, $p < .001$, which indicated that at least some variables collectively predicted vocational outcomes. Therefore, the null hypothesis was rejected.

Research Question Five

Are there significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services? For this research question, a subset of the sample was selected for analysis, which included consumers who received SSI at application, SSI at closure, SSDI at application, SSDI at closure, SSI aged at application or SSI aged at closure. There were 5,354 consumers who met the inclusion criteria for Research Question Five. The full model significantly predicted vocational outcomes, $X^2(1, N = 5354) = 28.02$, $p < .001$. The model accounted for 0.7% (Nagelkerke R^2) of the variance in vocational outcomes. Overall, 54.6% of predictions were accurate. Regression coefficients indicated that consumers who received social security benefits and paid benefits counseling were 2.11 times more likely to obtain successful outcomes than consumers who received social security benefits and did not receive paid benefits counseling, $p < .001$. Regression coefficients are presented in Table 25.

Table 25 Regression Coefficients for Benefits Counseling

Variable	*B*	*S.E.*	Wald	*df*	*p*	Exp(B)
Benefits Counseling	.745	.147	25.87	1	.000	2.11
Constant	.153	.028	29.81	1	.000	1.17

Hypothesis Five

H_{05} stated that there are no significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services. The full model significantly predicted vocational outcomes, $X^2(1, N = 5354) = 28.02$, $p < .001$.

Therefore, the null hypothesis was rejected. Table 26 provides a summary of all the hypotheses tested.

Table 26 Summary of Hypotheses and Outcomes

Hypothesis	Nagelkerke R^2 (*100)	p	Supported/Not Supported
H_1: There are significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services based on consumer demographics.	10.8%	< .001	Supported
H_2: There are significant differences in vocational outcomes of consumers of state-federal vocational rehabilitation services after specific service provision (service tracks) has been rendered.	15%	< .001	Supported
H_3: There are significant differences in vocational outcomes when clients have extraneous means of income benefits or health benefits present.	12.9%	< .001	Supported

Continued

Hypothesis	Nagelkerke R^2 (*100)	p	Supported/Not Supported
H_4: There are variables (demographics #1, service provision #2, extraneous income/health benefits #3) that collectively predict vocational outcomes for consumers in the state-federal vocational rehabilitation program.	30%	< .001	Supported
H_5: There are significant differences in vocational outcomes when consumers with social security benefits receive fee-for-service benefits counseling services.	0.07%	< .001	Supported

Summary of Findings

Five research questions and related hypotheses were tested with binary logistic regression. The results of the analyses yielded significant results for all research questions and hypotheses.

Demographic Variables as Predictors of Vocational Outcomes

Based on the analysis, gender, marital status, primary language, cases significance at closure, functional limitations, primary disability, education at application, and education at

closure reliably predicted vocational outcomes. Males were more likely to obtain successful outcomes than females.

Regarding marital status, consumers who were married were more likely to obtain successful outcomes than consumers who were never married. Consumers who were divorced had reduced odds of obtaining employment compared to consumers who were never married.

Regarding primary language, consumers who spoke Spanish were more likely to obtain successful outcomes than consumers who spoke a language other than English, Sign Language or Vietnamese. Consumers who communicated primarily in sign language had significantly reduced odds of obtaining a successful outcome compared to consumers who communicated in a language other than English, Spanish, or Vietnamese.

Case significance at closure was a significant, negative predictor of successful outcomes. As case significance at closure increased, there was a decrease in the odds of obtaining a successful outcome.

Functional limitations were significant predictors of vocational outcomes. Consumers who had limitations in the area of self-care had significantly reduced odds of obtaining successful outcomes than consumers who did not have limitations in self-care. Consumers who had limitations in the area of self-direction were more likely to obtain successful outcomes than consumers who did not have limitations in self-direction. Consumers who had limitations in communication were more likely to obtain successful outcomes than consumers who did not have limitations in communication.

Primary disability was a significant predictor of vocational outcomes. Compared to consumers with mental impairments, consumers with sensory/communicative impairments were

more likely to obtain successful outcomes. Compared to consumers with mental impairments, consumers with physical impairments were more likely to obtain successful outcomes.

Education at application was a significant predictor of vocational outcomes. Consumers with elementary or middle school education (grades 1-8) at application were more likely to obtain successful outcomes than consumers with master's degrees or higher at application. Similarly, consumers with Secondary education, no high school diploma (grades 9-12) at application were more likely to obtain successful outcomes than consumers with Master's degrees or higher at application. Consumers with special education in attendance or completion certificate/diploma at application were more likely to obtain successful outcomes than consumers with master's degrees or higher at application. Consumers with high school grad/equivalency certificate (regular education) at application were more likely to obtain successful outcomes than consumers with master's degrees or higher at application. Consumers with post-secondary education, no degree at application were more likely to obtain successful outcomes than consumers with master's degrees or higher at application.

Education at closure was a significant predictor of vocational outcomes. Consumers with elementary or middle school education (grades 1-8) at closure had reduced odds of obtaining successful outcomes compared to consumers with master's degrees or higher at closure. Similarly, consumers with Secondary education, no high school diploma (grades 9-12) at closure had reduced odds of obtaining successful outcomes compared to consumers with master's degrees or higher at closure. Consumers with special education in attendance or completion certificate/diploma at closure had reduced odds of obtaining successful outcomes compared to consumers with master's degrees or higher at closure. Consumers with high school grad/equivalency certificate (regular education) at closure had reduced odds of obtaining

successful outcomes compared to consumers with master's degrees or higher at closure. Consumers with post-secondary education, no degree at closure had reduced odds of obtaining successful outcomes compared to consumers with master's degrees or higher at closure. Hispanics/Latinos were more likely to obtain successful outcomes than non-Hispanics/Latinos.

Service Provision as Predictors of Vocational Outcomes

Based on the analysis, disability services, disability goods and equipment, customized employment services, employment goods and equipment, career skills training services, career skills training goods and equipment, supplemental services, and job readiness training services reliably predicted vocational outcomes. Consumers who were provided disability services were more likely to obtain successful outcomes than consumers who were not provided disability services. Consumers who were provided disability goods and equipment were more likely to obtain successful outcomes than consumers who were not provided disability goods and equipment. Consumers who were provided customized employment services were more likely to obtain successful outcomes than consumers who were not provided customized employment services. Consumers who were provided employment goods and equipment were more likely to obtain successful outcomes than consumers who were not provided employment goods and equipment. Consumers who were provided career skills training services were more likely to obtain successful outcomes than consumers who were not provided career skills training services.

However, consumers who were provided career skills training goods and equipment had significantly reduced odds of obtaining successful outcomes compared to consumers who were not provided career skills training goods and equipment. Similarly, consumers who were provided supplemental services had significantly reduced odds of obtaining successful outcomes compared to consumers who were not provided supplemental services. Likewise, consumers who

were provided job readiness training services had significantly reduced odds of obtaining successful outcomes compared to consumers who were not provided job readiness training services.

Extraneous Income Benefits or Health Benefits as Predictors of Vocational Outcomes

Based on the analysis, Medicaid, Medicare, private insurance through employment, CHIP, SSI aged at application, SSI aged at closure, SSI at closure, SSDI at closure, general assistance at application, general assistance at closure, worker's compensation at application, and other public insurance at closure reliably predicted vocational outcomes.

Consumers who received Medicaid had significantly reduced odds of obtaining successful outcomes compared to consumers who did not receive Medicaid. However, consumers who received Medicare were more likely to obtain successful outcomes than consumers who were not on Medicare. Consumers who received private insurance through their own employment were more likely to obtain successful outcomes than consumers who were not on private insurance through their own employment. Consumers who received CHIP had significantly reduced odds of obtaining successful outcomes compared to consumers who did not receive CHIP.

Consumers who received SSI aged benefits at application were more likely to obtain successful outcomes than consumers who were not on SSI aged at application. However, consumers who were on SSI aged at closure had reduced odds of obtaining successful outcomes compared to consumers were not on SSI aged at closure. Similarly, consumers who were on SSI at closure had reduced odds of obtaining successful outcomes compared to consumers who were not on SSI at closure. Consumers who were on SSDI at closure had reduced odds of obtaining successful outcomes compared to consumers who were not on SSDI at closure.

Consumers who received general assistance at application were 1.58 times more likely to obtain successful outcomes than consumers who did not receive general assistance at application. However, consumers who received general assistance at closure had reduced odds of obtaining successful outcomes compared to consumers who did not receive general assistance at closure. Likewise, consumers who received worker's compensation at application had reduced odds of obtaining successful outcomes compared to consumers who did not receive worker's compensation at application. Consumers who had other public insurance at application had reduced odds of obtaining successful outcomes compared to consumers who did not receive other public insurance at application.

Collective Effects as Predictors of Vocational Outcomes

It was determined that there were significant collective effects as predictors of vocational outcomes. The collective effects included the demographic, service provision, extraneous income, and health benefits previously mentioned. The collective effects explained 30% of the variance in vocational outcomes, which was higher than any of the single effects tested.

Paid Benefits Counseling for Social Security Recipients as Predictors of Vocational Outcomes

A subset of consumers who received SSI at application, SSI at closure, SSDI at application, SSDI at closure, SSI aged at application or SSI aged at closure were included for this analysis. It was determined that consumers who received social security benefits and paid benefits counseling were significantly more likely to obtain successful outcomes than consumers who received social security benefits and did not receive paid benefits counseling. Implications of these findings will be discussed in Chapter Five.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The primary goal of this retrospective study was to explore the relationship of various factors with employment outcomes in the state-federal vocational rehabilitation program. Based on the findings outlined in the previous chapter, this chapter discusses how the findings can be applied to VR practice and provides recommendations and considerations for future research and policy implementation. This exploratory research study achieved its primary goals of assessing whether various factors, chiefly those within the control of the state-federal VR agency (through purchasing ability) impact employment outcomes for individuals with disabilities. A logistic regression method was employed for this research study due to its application to circumstances in which the outcome variable is dichotomous. It has demonstrated to be an appropriate vehicle in similar research. All research hypotheses analyzed were supported through the statistical analysis.

Demographic Variables as Significant Predictors of Vocational Outcomes

Based on the analysis, demographic variables identified as significant predictors of successful vocational outcomes included: gender (male), marital status (married), primary language (Spanish), functional limitations (self-direction, communication), primary disability (sensory/communicative, physical impairments), education at application (elementary or middle school grades 1-8, secondary education with no high school diploma grades 9-12, special

education in attendance or completion certificate/diploma, high school graduate or equivalency certificate in regular education, post-secondary education with no degree), and ethnicity (Hispanic/Latino). Conversely, demographic variables identified as significant predictors of unsuccessful employment outcomes included: case significance at closure (as significance increased), functional limitations (self-care), and education at closure (elementary or middle school grades 1-8, secondary education with no high school diploma grades 9-12, special education in attendance or completion certificate/diploma, high school graduate or equivalency certificate in regular education, post-secondary education with no degree). Pi (2006) found that in states with a higher proportion of female population, there were significantly higher rehabilitation rates. This finding was inconsistent with the present research. The present research revealed the male gender was significant predictor of successful employment outcomes.

Generally, the VR applicant highest level of education completed is lower than the general public. It would stand to reason that allowing for the provision of higher education services would be beneficial. However, it seems somewhat contradictory that provision of Career Skill Training Goods & Equipment is a predictor of unsuccessful outcomes. Though this may be true, a closer look at the policy surrounding the approval of purchasing such services may be warranted. Past research identified predictors of employment outcomes included: age, education, marital status, and disability status were significant predictors and explained 5% of variance in competitive employment (Bolton, Bellini, & Brookings, 2000).

Purchased Service Provision as Significant Predictors of Vocational Outcomes

Research findings regarding purchased service provision as predictors of vocational outcomes identified the following were significant predictors of successful vocational outcomes: disability services, disability goods & equipment, customized employment services, employment goods & equipment, and career skills training services. Career skills training goods & equipment,

supplemental services, and job readiness training were significant predictors of unsuccessful closures or employment outcomes.

Disability services include the purchase of services such as: individual counseling, physical restoration services, physical therapy, or any other non-consumable service that would reduce or eliminate the client's impediments to employment. Instances in which the client received these services, case outcomes were more likely to achieve a successful employment outcome. This speaks to the importance of reducing or eliminating disability-related impediments to employment. Because these services were purchased, it is likely other comparable benefits were not readily available for the client. Therefore, the continued need for purchased disability services is evident.

Purchased service provision for the disability goods and equipment service track helped clients achieve successful vocational outcomes. In many of these instances, consumers received rehabilitation technology, prostheses, or hearing aids, etc. to address their disability needs.

Customized employment services are related to a successful employment outcome largely because of the nature of the policy surrounding these services. Purchased services for customized employment services are outcome-based. For instance, job placement services are typically paid to a contracted community rehabilitation provider (CRP) once a specific benchmarks and employment conditions are met.

The Employment Goods & Equipment Service Track was a predictor of successful vocational outcomes. These services include tools or equipment needed for a job, uniforms, or interview attire. Tools and equipment to assist clients for job preparation is a vital service. Future research should further examine the types, frequency, and cost of these services to identify strategies to further implement these services.

In relation to Career Skills Training Services, the present research found this service track was a predictor of successful employment outcomes. Past research findings (Roessler & Bolton, 1985) revealed that vocational training services positively affected client outcomes; a total of 79% of past VR clients who were interviewed expressed the quality of vocational training services. Other research (Bowman & Micek, 1973; Kneipp, Vandergroot, & Lawrence, 1980; Spitznagel & Saxon, 1995) found vocational training predicted unsuccessful vocational outcomes at case closure. Pi (2006) found college and university training services were correlated with unsuccessful closures, though the consumer's education level at application was significant predictor of successful VR outcomes. The present research identified purchased services for career skills training (such as paying for collegiate tuition and fees) were predictors of successful closures; however interestingly, purchased career training goods and equipment (textbooks, tools, etc.) was correlated with unsuccessful outcomes. Past research studies did not distinguish whether training services were arranged, purchased, or provided, nor did they report differences between training services and training goods.

Supplemental services were significant predictors of unsuccessful employment outcomes. Supplemental services include services such as maintenance checks and transportation assistance. Often times, when the focus of a VR case is not employment, this can lead to unsuccessful employment outcomes. Further research is warranted to discover why such supportive services are predictors of unsuccessful outcomes. Future research should examine how cost and duration of services impact outcomes. Hypothetically, short-term services may be appropriate. When supportive services are long-term and high cost, this may pose an increased risk for unsuccessful outcomes.

Job readiness training services were significant predictors of unsuccessful employment outcomes. Many job readiness training services (such as vocational adjustment training, work adjustment training, and personal social adjustment training) are provided to assist the client with reducing or eliminating barriers that are keeping them from being job ready. Many of these training programs are designed to teach clients socially appropriate behavior, work skills, and work reintegration skills. Typically, these services are purchased from Community Rehabilitation Providers. State-federal VR policy should require these programs to be outcome-based, to include outcomes of employment or other integrated work experiences. This may help clients achieve successful employment outcomes once they are job ready. Further research examining why these services are predictors of employment outcomes is warranted.

Extraneous Income Benefits or Health Benefits as Significant Predictors of Vocational Outcomes

With regards to individuals with extraneous income or health benefits, the following were identified as significantly correlated with successful outcomes: Medicare, private insurance through own employment, SSI at application, and general assistance at application. Medicaid, CHIP, SSI aged at closure, SSI at closure, SSDI at closure, general assistance at closure, workers compensation at application, other public insurance at application were all predictors of unsuccessful vocational outcomes. Many of the variables identified as significant predictors are tied to social security benefits. Implications and research recommendations regarding extraneous income or health benefits are certainly merited. In essence, research has demonstrated that educating clients about how their extraneous income or health benefits may be impacted should they return to work can improve informed consumer choice and empower clients to reach their goals.

Collective Effects as Significant Predictors of Vocational Outcomes

Collective effects of research questions one, two, and three revealed there were significant collective predictor effects of employment outcomes. Collective effects included demographics, service provision, extraneous income, and health benefits as aforementioned. The collective effects explained 30% of the variance in vocational outcomes, higher than any of the single effects examined. Qualitative research that incorporates client perspectives regarding service delivery and how these factors collectively impact their ability to achieve their goals is warranted.

Paid Benefits Counseling for Social Security Recipients as Significant Predictors of Vocational Outcomes

Purchased benefits counseling was examined in a subset of entire population (n = 5,354). This subsample included only recipients of SSI, SSI aged, and SSDI. Social security recipients that received purchased benefits counseling (through a WIPA CWIC) had 2.11 times greater probability of achieving successful employment outcomes. This is consistent with past research findings, yielding the benefit and value of benefits counseling on VR clients who receive SSI/SSDI. For purposes of this research question, SSI aged was included in the sample population. Although benefits counseling is not appropriate for SSI aged, there were a small number of cases (total of 5) identified in which this service was purchased. This can be explained by one of two probable reasons: the consumer once received SSI, received benefits during this time, then eventually qualified for SSI aged or the counselor erroneously coded the case as SSI aged, when it should have been SSI. Regardless of the reason, these cases were included in the sample population because they received benefits counseling as a paid service throughout the course of their case, which certainly could have impacted the client's decision to return to work.

Past research examined the impact of benefits counseling on individuals with psychiatric

disabilities who receive SSA benefits in Vermont (N = 364) compared with matched contemporaneous and historical control group members over the course of a four-year time period. This included two years prior and to years after the intervention. Researchers found participants who received specialized benefits counseling obtained increased earnings by $1,256 annually compared to two control groups, demonstrating the importance of benefits counseling as a vital employment support and service for VR clients (Tremblay, Smith, Xie, & Drake, 2006).

The number of social security beneficiaries that Oklahoma's state-federal VR program successfully assisted the Social Security Administration to eliminate from its recipient list doubled yearly since the origination of the Benefits Planning Unit. Statistics reveal that prior to the Benefits Planning Unit an annual average between fiscal year 2007 and fiscal year 2009 of 63 successful closures obtained by social security beneficiaries that achieved substantial gainful activity requirements, to an annual average of 127 successful employment outcomes between fiscal year 2010 and fiscal year 2012. Also noteworthy, are reports that estimate several hundred social security beneficiaries are assisted annually to obtain and maintain employment while maintaining their social security income/health benefits (https://rsa.ed.gov/emerging-practices.cfm).

A study of Utah VR clients receiving SSI/SSDI benefits (N = 1,425) found that benefits counseling had a positive effect on employment, while recipients had a higher probability to achieve a successful closure status in their VR program. Overall, study findings revealed benefits counseling through the WIPA program yielded a positive relationship with improved client wages, successful employment outcomes, and successful VR case closure status (Wilhelm & McCormick, 2013).

According to a study assessing the national profile of SSDI recipients and applicants, (Kennedy, Olney, & Schiro-Geist, 2004), approximately 70% of SSDI beneficiaries (2.6 million) have not received vocational rehabilitation services and they believe they do not require those services. Only less than half of 1% of SSDI recipients returns to work according to the U.S. General Accounting Office in 2002 (as cited in Kennedy, Olney, & Schiro-Geist, 2004). Outreach to Social Security offices is certainly warranted. SSA beneficiaries are likely unaware of the potential work incentives and various options available to them. Besides Ticket to Work initiatives, VR agencies should programmatically and systematically work closely with Social Security offices to promote return to work and work incentive options through the support and implementation of early benefits counseling.

Implications for Future Research, Training, and Practice

Findings of the present study strongly suggest the need for additional research and training to improve VR employment outcomes, increase the VR agency's return on investment, and establish best practices. The primary goal of vocational rehabilitation agencies is to assist individuals with disabilities to prepare for, obtain, and maintain competitive employment. Although many factors influence client motivation, ability to engage in services, perception of services and their counselor, and VR outcomes, exploring factors that can be controlled for can help practitioners identify best practices and researchers identify future research possibilities and needs.

The identified predictors of successful and unsuccessful employment outcomes are meaningful and can help VR counselors to identify better approaches when dealing with similar scenarios. Although some factors were correlated positively to unsuccessful employment outcomes, this does not inherently mean the services rendered were not worthwhile or

meaningful; after all, the crux of high quality rehabilitative services involves individualization. This simply means more in-depth research should be conducted to gather input from the recipients of such services to explore why the services were ineffective. For instance, if the Career Training Goods and Services Service Track was not effective for a vast number of clients, perhaps more disability-friendly approaches to training supports would yield more impactful and effective results.

As a result of this research, it is recommended state-federal VR agencies utilize pilot programs to examine approaches that could reduce unsuccessful client outcomes. One recommended future pilot program could involve students with IPE goals that involve higher education. Because the Career Training Goods and Equipment Service Track predicted unsuccessful client outcomes, perhaps the utilization of wrap-around supports, to include a one-on-one training coach to help facilitate growth through the collegiate experience would help clients receiving this service track in achieving successful vocational outcomes. These intensive supports, in addition to purchased Career Training Goods and Equipment may assist the client by guiding them through the collegiate experience in a more meaningful manner. When VR clients receive training services (purchased by the agency or by a comparable benefit), standard accommodations that are provided to the client in the collegiate setting often include: basic classroom accommodations provided by the school, occasional tutoring (often provided for free by the school or can be purchased by the counselor from a third party), and/or exam accommodations provided by the school. This alone may not be sufficient for clients with multiple, severe disabilities. The occasional tutoring service (whether provided for free by the school or purchased by the VR counselor from a third party) may also be insufficient for client needs.

Perhaps, if the VR agency is not paying for Career Training Services (tuition and fees), but is paying for training goods and equipment, the consumer may feel there is no real perceived need for VR services. This scenario often occurs when the client has financial aid or some other comparable benefit. Interestingly, when the VR agency purchased Career Training Services (as opposed to an external source or comparable benefit), outcomes were related to successful employment outcomes. This may be an indicator that demonstrates the influence of purchased services. This may also have an impact on the client's perception of VR services. When the client can readily see the VR agency's contribution to their vocational goals through a purchased service, such as Career Training Services, perhaps there is more commitment and involvement from the client, as opposed to when other comparable benefits pay for the tuition and fees. This notion certainly warrants further research and exploration. Future research should include mixed method approaches to gain useful quantitative and qualitative data based on the consumer's perceptions and experiences with VR services. Examining client perceptions between sample populations of clients that received arranged/provided services versus purchased services should be further explored. This can provide further insight regarding the significant findings present in this research, thus strengthening future best practices in VR service delivery.

Furthermore, with regards to Career Training Services and/or Career Training Services Goods and Equipment, there is something to be said about how the counselor arrives at a decision to support the client's intended employment goal. Many times, when the VR agency is not paying for tuition and fees because the client has a comparable benefit, counselors may be more flexible about the appropriateness of vocational goals. Often, counselors base this decision around informed consumer choice, not always considering labor market effects or the available supports for this service track. This study made a distinction between services and goods for

most service tracks, as applicable. It is helpful to explore the relationship this distinction has on employment outcomes. One must take into account the following example: if a client receives financial aid, the VR agency would not pay for anything within the Career Training Service track. However, if the counselor supports the goals and objectives associated with the client's intended career track, the counselor might authorize Career Training Goods & Equipment that financial aid does not cover, such as textbooks or other tools and equipment required for the training program. In this instance, the counselor is not paying for the Career Training Service. Future research regarding the client's perceived need for services is warranted. It is possible clients may have not have a clear understanding of services when applying. Once the IPE is complete and the client begins their career or collegiate training, they may feel as though the state-federal agency is not doing enough (i.e. not paying for classes) which results in failure to cooperate or the client losing contact with their counselor. Some clients may believe the state-federal VR agency will pay for classes while they keep their financial aid funds. Though this is not the case (comparable benefits must be utilized first), the client may not thoroughly understand that until service provision after IPE development unfolds.

Disability Services, Disability Goods & Equipment, Customized Employment Services, Employment Goods & Equipment, and Career Skills Training Services were all identified as predictors of successful employment outcomes. Customized Employment Services are likely related to successful employment outcomes, primarily because of the nature of the state-federal VR agency's policies surrounding these services. Purchased services for customized employment services are typically outcome-based. For instance, job placement services are typically paid to a contracted community rehabilitation provider (CRP) once certain benchmarks and employment conditions are met. It is possible for a counselor to authorize Customized Employment Services,

the consumer obtains and maintains a job for 90 days or more, and for extraneous reasons, the consumer may not achieve a successful VR outcome. Although this happens infrequently, it is a possibility.

Implementing more outcome-based services could help improve successful outcomes. For instance, additional payment premiums and incentives could be offered to CRPs or counselors when SSI/SSDI recipients achieve employment outcomes or reach substantial gainful activity. This type of incentive would have major positive socioeconomic impacts, as recipients would (in many instances) receive reduced or eliminated benefits, yet have increased wages. This would ultimately be a benefit to the consumer, VR agency, and society.

It is recommended that specific educational sessions about return-to-work impacts for individuals receiving extraneous income or health benefits be offered to clients. Whether these are provided via contracted paid services, or provided by the VRC, it is critical to have an expert explain services to clients. Many states have designated subject matter experts. Perhaps these experts can train counselors to offer educational sessions that thoroughly and accurately explain the impacts of return to work on the client's extraneous income or health benefits.

Moreover, specific courses, minor tracks, continuing education classes, and training programs should be implemented by Rehabilitation Counseling Departments in the education setting to thoroughly prepare counselors to become experts in any return to work scenarios, specifically for clients receiving extraneous income or health benefits (VA benefits, WC benefits, SSA benefits, Unemployment benefits etc.) which may have program-specific incentives and disincentives to employment.

Community rehabilitation providers should receive ongoing training regarding return to work impacts for clients with extraneous income or health benefits. Credentialing requirements

are now being increasingly implemented, specific to CRPs that contract with state-federal VR agencies. Because credentialing requires continuing education, courses in return to work impacts for these specific populations should be offered. Several agencies in a four-state multiple case study indicated it was in the best interest of clients if all CRPs met basic staff training as well as service delivery requirements (Del Valle, et.al., 2014). This could be enhanced by allowing CRPs the ability to understand and reiterate the information relayed to clients about return to work impacts from the counselor and benefits counseling specialist.

Additionally, future research is warranted in states implementing work incentives benefits counseling services as a regular practice for SSI/SSDI recipients to evaluate overall trends and effectiveness. Furthermore, states implementing counselor training programs, such as the SMURF training in Texas should be analyzed in future years to determine the effectiveness of counselor knowledge and reiteration of the content covered in benefits counseling and the impact of that training program on employment outcomes, wages, and consumer satisfaction. Qualitative research on SSI/SSDI clients who received benefits counseling would also be beneficial to the field. Hypothetically, client satisfaction for SSI/SSDI recipients would be higher for individuals who received benefits counseling through a CWIC or for those who received services from a counselor that underwent SMURF training or some form of comparable training as opposed to SSI/SSDI recipients that received no benefits counseling.

Lastly, because research is so vital to the field of rehabilitation counseling, it is critical for state VR agencies to implement additional actions to reduce data entry errors. Although implementing such approaches through prompts or case actions on the state electronic caseload management system may be a lengthy process, it would certainly improve the accuracy of data captured for research, reporting, and analysis. Another approach to reduce user data entry errors

would include management teams reviewing all cases prior to (successful or unsuccessful) case closure. Either of these methods would greatly improve the quality and accuracy of the data captured by the state VR electronic caseload management system.

Limitations

There are a number of limitations in the present research that the reader should be aware of when utilizing research findings. The utilization of ex post facto data is limited to potential data entry errors made by the VR staff that input the data in the electronic caseload management system. The vocational rehabilitation counselor and/or administrative personnel record this information in the state's designated electronic caseload management system. The information is stored in a data warehouse, an electronic compilation of client information that is submitted to RSA for 911 reporting purposes. Although the agency conducts compliance and quality case reviews as well as corrective action of data integrity anomalies, there is a possibility of user input error. User input errors that are not captured by internal quality control efforts are present in the dataset. For instance, counselors indicated clients receive SSI or SSDI benefits that exceed the amount provided by the Social Security Administration.

Additionally, the reader must aware that the data examined only includes cases closed successfully or unsuccessfully during fiscal year 2014. Case sampling was not random. Although many other consumers were served during this fiscal year, if their cases were not closed during the 2014 fiscal year, they were not included in the dataset. Because this research only includes data from fiscal year 2014, a more in-depth exploratory study including numerous years would assist with generalizability and identification of trends. It is important to note, case data from the Division for Blind Services was not included in the dataset. Services for this specific population are administered by a separate division in the state agency examined; therefore, the service

provision data for individuals with visual impairments as primary disabilities that are serviced by the Division for Blind Services were not included.

Lastly, this research does not account for extraneous variables that are not recorded or captured in the electronic data warehouse or reported to RSA. Such potentially confounding variables might include personal motivation, personality type, client-counselor interaction and rapport, family support and influence, the reason the individual is seeking VR services, and client responsiveness to the VR services rendered. This research primarily examined services purchased by the state-federal VR agency. Other arranged or coordinated services are not accounted for. The utilization of ex post facto data does not permit manipulation of independent variables. Furthermore, cause-effect cannot be inferred.

Despite the limitations of the present research, there are many useful findings and implications for the field of rehabilitation counseling. Future research can focus on more in-depth examinations of the significant research findings to help guide future best practices in VR service delivery.

Conclusions

Vocational rehabilitation counselors must identify evidence-based service delivery approaches. They must weigh the potential risks, benefits, and consequences of purchasing VR services while doing so in an objective and streamlined manner. Honing this skill may be difficult, as cases are each unique and require such an approach. Rehabilitation counseling professionals are expected to become experts in decision-making, must have a comprehensive knowledge of various disabilities, and must always have their clients' best interest in mind. The counselor's development of comprehensive skills and knowledge through the use of empirically-

based research aimed at understanding how various factors and services impact vocational outcomes is essential.

Additionally, if researchers in the field of vocational rehabilitation continue to make strides towards understanding predictors of successful and unsuccessful outcomes, the number of unsuccessful outcomes can be substantially reduced and the number of successful client outcomes can be increased. The benefits of this endeavor will increase the return on investment from the state-federal contributions. In many instances, public-sector VR clients will have a diminished need for other public assistance. In other instances, the need for public assistance is completed removed. The successfully rehabilitated client population will offer greater tax contributions and their consumer spending will increase; thereby allowing for economic stimulation as a result of new or increased earnings. Improved service delivery from state-federal vocational rehabilitation services can increasingly provide substantial and meaningful benefits to clients and our society at a minimal cost to stakeholders, taxpayers, and society at-large (Hemenway & Rohani, 1999; Parker, et al., 2005; Rubin & Roessler, 2007).

REFERENCES

Banke-Thomas, A. O., Madaj, B., Charles, A., & Van Den Broek, N. (2015). *Social return on investment (SROI) methodology to account for value for money of public health interventions: A systematic review.* BMC Public Health, 15, 582.

Bellini, J., Bolton, B., & Neath, J. (1998a). Operationalizing multiple services over extended time as a measure of service intensity. *Journal of Rehabilitation Administration, 22,* 47-64.

Bellini, J., Bolton, B., & Neath, J. (1998b). Rehabilitation counselor's assessments of applications' function limitations as predictors of rehabilitation services provided. *Rehabilitation Counseling Bulletin, 41(4*), 242-259.

Bellini, J., Neath, J., & Bolton, B. (1995a). A comparison of linear multiple regression and a simplified approach in the prediction of rehabilitation outcomes. *Rehabilitation Counseling Bulletin, 39,* 151-160.

Bellini, J., Neath, J., & Bolton, B. (1995b). Development of a scale of social disadvantage for vocational rehabilitation. *Journal of Rehabilitation Administration, 19,* 107-118.

Blackwell, T. L., Leierer, S. L., Haupt, S., & Kampitsis, A. (2003). Predictors of vocational rehabilitation return-to-work outcomes in workers' compensation. *Rehabilitation Counseling Bulletin, 46(2),* 108.

Bolton, B. (1976). Case performance characteristics associated with three counseling styles. *Rehabilitation Counseling Bulletin, 19*, 464-468.

Bolton, B. F., Bellini, J.L., & Brookings, J.B. (2000). Predicting client employment outcomes from personal history, functional limitations, and rehabilitation services. *Rehabilitation Counseling Bulletin, 44*(1), 10-21.

Bolton, B., & Rubin, S. (1974). A research model for rehabilitation counselor performance. *Rehabilitation Counseling Bulletin, 17,* 141-148.

Bowman, J., & Micek, L. (1973). Rehabilitation service components and vocational outcome. *Rehabilitation Counseling Bulletin, 17*, 100-109.

Bozarth, J., & Rubin, S. (1975). Empirical observation of rehabilitation counselor performance. *Rehabilitation Counseling Bulletin, 19,* 294-298.

Cardoso, E., Romero, M., Chan, F., Dutta, A., & Rahimi, M. (2007). Disparities in vocational rehabilitation services and outcomes for Hispanic clients with traumatic brain injury: Do they exist? *Journal of Head Trauma rehabilitation, 22*(2), 85-94.

Commission on Rehabilitation Counselor Certification. *Code of professional ethics for rehabilitation counselors.* Retrieved from http://www.crccertification.com/filebin/pdf/CRCCodeOfEthics.pdf

Cook, D., & Bolton, B. (1992). Rehabilitation counselor education and case performance: An independent replication. *Rehabilitation Counseling Bulletin, 36*, 37-43.

Commission on Rehabilitation Counselor Certification. *Scope of practice statement for rehabilitation counseling.* Retrieved from http://www.crccertification.com/pages/crc_ccrc_scope_of_practice/43.php

Daniels, T.M., (2007). *Determinants of employment outcomes among persons with disabilities in public vocational rehabilitation.* Retrieved from ProQuest (3275136).

Dean, D., Pepper, J., Schmidt, R., & Stern, S, (2013). *The effects of vocational rehabilitation for people with cognitive impairments.* Retrieved from http://econweb.umd.edu/davis/eventpapers/SternEffects.pdf

Del Valle, R., Leahy, M.J., Sherman, S., Anderson C.A., & Tansey, T., (2014). Promising best practices that lead to employment in vocational rehabilitation: Findings from a four-state multiple case study. *Journal of Vocational Rehabilitation. 41*, 99-113.

The Department of Assistive & Rehabilitative Services. *Department of Assistive & Rehabilitative Services Self Evaluation Report.* (2013). Retrieved from http://www.dars.state.tx.us/news/sunset_eval_report.shtml

Dutta, A., Gervey, R., Chan, F., Chou, C., & Ditchman, N. (2008). The effect of vocational rehabilitation services and personal factors on employment outcomes of people with disabilities: A national study. *Journal of Occupational Rehabilitation, 18,* 326-334.

Fabian, E., & MacDonald-Wilson, K. (2005). *Professional practice in rehabilitation service delivery systems and related system resources. In R. M. Parker, E. M. Szymanski & J. B. Patterson (Eds.), Rehabilitation counseling: Basics and beyond (4th ed., pp. 55-87).* Austin, TX: Pro-Ed.

Faubion, C., Palmer, C., & Andrew J. (2001). Rural/urban differences in counselor satisfaction and extrinsic job factors. *Journal of Rehabilitation, 67,* 4-13.

Faul, F., Erfelder, E., Lang, A., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191.

Fish, D., Lesh, K., Evenson, T., & Leung, P. (1982). Counselor variables: Relationship to client outcomes and expenditures. *Journal of Applied Rehabilitation Counseling, 13,* 25-28.

Fleming A. R., Del Valle R., Kim M., & Leahy M. J. (2013). Best practice models of effective vocational rehabilitation service delivery in the public rehabilitation program: A review and synthesis of the empirical literature. *Rehabilitation Counseling Bulletin, 56,* 146–159.

Hanophy, J. (2012). Testimony of the Council of State Administrators of Vocational Rehabilitation (CSAVR) on work incentives in social security disability programs. *Journal of Vocational Rehabilitation (36),* 13-20.

Hemenway, D., & Rohani, F. (1999). *A cost-benefit analysis of the employment of people with disabilities in Florida: Final report.* Educational Services Program. Retrieved from http://www.cala.fsu.edu/files/cost_benefit_analysis.pdf

IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.

Kassel, D. S., (2010). *Managing Public Sector Projects: A strategic framework for success in an era of downsized government.* Boca Raton, FL: CRC Press Taylor and Francis Group.

Kennedy, J., M. Olney & C. Schiro-Geist (2004). A national profile of SSDI applicants: Implications for early intervention, *Journal of Disability Policy Studies, 15*(3), 178-185.

Kneipp, S., Vandergroot, D., & Lawrence, R. (1980). An evaluation of two job-search skills training prorams in a vocational rehabilitation agency. *Rehabilitation Counseling Bulletin, 23,* 202-210.

Kosciulek, J. F. (2003). A multidimensional approach to the structure of consumer satisfaction with vocational rehabilitation services. *Rehabilitation Counseling Bulletin, 46* (2), 92-97.

Kosciulek, J. F. (2007). A test of the theory of informed consumer choice in vocational rehabilitation. *Journal of Rehabilitation, 73*(2), 41-49.

Kundu, M. M., Dutta. A., & Chan, F. (2010). *A systems approach to placement: A culturally sensitive more for people with disabilities. In F. Balcazar, Y. Suarez-Balcazar, T. Taylor-Ritzler, & C. Keys (eds.), Race, culture, and disability: Rehabilitation science and practice, (pp. 325-341).* Sudbury, MA: Jones and Bartlett.

Lambie, G. W., Hagedorn, W., & Ieva, K. P. (2010). Social-cognitive development, ethical and legal knowledge, and ethical decision making of counselor education students. *Counselor Education & Supervision, 49*(4), 228-246.

Leahy, M. J., Chan, F., & Lui, J. (2014). Evidence-based best practices in the public vocational rehabilitation program that lead to employment outcomes. *Journal of Vocational Rehabilitation, 41*(2), 83-86.

Leahy, M.J., Muenzen, P., Saunders, J.L., & Strauser, D. (2009). Essential knowledge domains underlying effective rehabilitation counseling practice. *Rehabilitation Counseling Bulletin, 52*, 95-106.

Lingane, A., & Olsen, S. (2004). Guidelines for social return on investment. *California Management*

Review, 46(3), 116-135. doi:10.2307/41166224

Lustig, D., Strauser, D., & Weems, G. (2004). Rehabilitation service patterns: A rural/urban comparison of success factors, *Journal of Rehabilitation, 70*, 13-20.

Martin, R., West-Evans, K., & Connelly, J. (2010). Vocational rehabilitation: Celebrating 90 years of careers and independence. *American Rehabilitation,* 15–18.

Maynard, C., Flohr, B., Guagliardo, T. A., Martin, C. H., McFarland, L. V., Pruden, J. D., & Reiber, G. E. (2010). Department of Veterans Affairs compensation and medical care benefits accorded to veterans with major limb loss. *Journal of Rehabilitation Research & Development, 47*(4), 403-408. doi:10.1682/JRRD.2009.02.0016

Millar, R., & Hall, K. (2013). Social return on investment (SROI) and performance measurement: The opportunities and barriers for social enterprises in health and social care. *Public Management Review, 15*(6), 923-941.

Moore, C.L. (2002a). Comparative competitive employment levels for Latinos and non-Latinos without 12 years of education. *Journal of Applied Rehabilitation Counseling, 33*(1), 13-17.

Oberman, C. E. (1965). *A history of vocational rehabilitation in America.* Minneapolis: T.S. Denison.

O'Brien, D. E., Revell, G., & West, M. (2003). The impact of the current employment policy environment on the self-determination of individuals with disabilities. Journal of *Vocational Rehabilitation, 19*(2), 105-118.

Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using the SPSS program (4th ed.).* New York, NY: McGraw-Hill.

Parker, R. M., Szymanski E. M., Patterson J. B. (Ed.). (2005). *Rehabilitation counseling: Basics and beyond.* Austin, TX: PRO-ED, Inc.

Paul, G.L. (1967). Strategy of outcome research in psychotherapy. *Journal of Counseling Psychology. 31,* 109-118.

Pi, S. (2006). *Micro- and macro-level factors related to vocational rehabilitation outcomes (Order No. 3216166).* Available from Dissertations & Theses @ CIC Institutions; ProQuest Dissertations & Theses A&I. (305305858). Retrieved from http://search.proquest.com/docview/305305858

Paul R. Portney. "Benefit-Cost Analysis." *The Concise Encyclopedia of Economics.* 2008. Library of Economics and Liberty. Retrieved from http://www.econlib.org/library/Enc/BenefitCostAnalysis.html

Poverty guidelines, research, and measurement. *HHS poverty guidelines for 2013*. Retrieved from http://aspe.hhs.gov/poverty/

Pruett, S. R., Swett, E. A., Chan, F., Rosenthal, D. A., & Lee, G. K. (2008). Empirical evidence supporting the effectiveness of vocational rehabilitation. *Journal of Rehabilitation, 74*(2), 56-63. Retrieved from http://search.proquest.com/docview/236284838

Reagles, K., Wright, G., & Butler, A. (1971). Rehabilitation gain: Relationship with client characteristics and counselor intervention. *Journal of Counseling Psychology, 5*(6), 490-495.

RehabWorks. Introduction to Rehabworks. *Getting Started: Phases.* Retrieved from http://darsnet.dars.txnet.state.tx.us/rhwhelp/ch1.htm

Rehabilitation Act of 1973, 29 U.S.C. § 701-744, as amended in 1992, Title 1, Section 21, Public

Law 102-569, United States Congress, Washington, D.C.

Rehabilitation Services Administration (RSA, 2008). *Reporting manual for the case service report (RSA-911)* (RSA-PD-09-01). Washington, DC: Author

Rehabilitation Services Administration. (2001). *Implementation of informed choice. Policy Directive 01-03.* Department of Education, Office of Special Education and Rehabilitation Services. Washington, DC.

Rehabilitation Services Administration. (2014). *Emerging Practices.* Retrieved from https://rsa.ed.gov/emerging-practices.cfm

Rehabilitation Services Administration. (2014). *Vocational Rehabilitation State Grants.* Retrieved from www.rsa.ed.gov

Research Triangle Institute. (1998). *A longitudinal study of the Vocational Rehabilitation service program: Characteristics and outcomes of former VR consumers with an employment outcome.* Washington, DC: Rehabilitation Services Administration, ED Contract No. HR92-022-001.

Roessler, R. & Bolton, B. (1985). Employment patterns of former vocational rehabilitation clients and implications for rehabilitation practice. *Rehabilitation Counseling Bulletin, 28*, 179-187.

Rosenthal, D., Chan, F., Wong, D., Kundu, M., & Dutta, A. (2005). The effects of consumer characteristics and service patterns on vocational rehabilitation employment outcomes. *Journal of Rehabilitation Administration, 29,* 229-244.

Rubin, E.R, & Roessler, R.T. (2007). *Foundations of the Vocational Rehabilitation process (6th ed.).* Austin, TX: Pro-Ed Inc.

Saunders, J.L., Leahy, M.J., McGlynn, C., & Estrada-Hernandez, N. (2006). Predictors of employment outcomes for persons with disabilities: An integrated review of potential evidence-based factors. *Journal of Applied Rehabilitation Counseling, 37*(2) 3-20.

Silverstein, R., Julnes, G., & Nolan, R. (2005). What policymakers need and must demand from research regarding the employment rate of persons with disabilities. *Behavioral Sciences & the Law, 23,* 399-448.

Spitznagel, R., & Saxon, J. (1995). Impact of client variables on the delivery of vocational evaluation and training services in the rehabilitation process. *Vocational Evaluation and Work Adjustment Bulletin, 28,* 109-115.

Social Security Administration. *Claims processing.* Retrieved from http://www.socialsecurity.gov/work/claimsprocessing.html

Social Security Administration. *Vocational rehabilitation cost reimbursement program.* Retrieved from http://www.ssa.gov/work/vocational_rehab.html

Storey, K. (2005). Informed choice: The catch-22 of self-determination. *Research & Practice for Persons with Severe Disabilities, 30*(4), 232-234.

Szymanski, E. (1991). Relationship of level of rehabilitation counselor education to rehabilitation client outcome in the Wisconsin Division of Vocational Rehabilitation. *Rehabilitation Counseling Bulletin, 35,* 23-37.

Szymanski, E., & Danek, M. (1992). The relationship of rehabilitation counselor education to rehabilitation client outcome: a replication and extension. *Journal of Rehabilitation, 58,* 49-56.

Tennent, J. (2014). *The economist guide to financial management: Principles and practice.* (2nd ed.). New York, NY: Public Affairs.

Texas Department of Assistive and Rehabilitative Services. *Rehabilitation policy manual*. Retrieved from http://www.dars.state.tx.us/drs/rpm/default.htm

Texas Department of Insurance. *Division of Worker's Compensation.* Retrieved from http:// tdi.state.tx.us/wc/indexwc.html

Texas Secretary of State. *What is a Colonia?* Retrieved from http://www.sos.state.tx.us/border/colonias/what_colonia.shtml

The Council on Rehabilitation Education. *What is CORE?* Retrieved from www.core-rehab.org

U.S. Department of Education, Office of Special Education and Rehabilitative Services, Rehabilitation Services Administration (2014). *Report on federal activities under the Rehabilitation Act of 1973, as amended*. http://www2.ed.gov/about/reports/annual/rsa/2012/rsa-2012-annual-report.pdf

U.S. Department of Labor. *Unemployment Insurance*. Retrieved from http://www.dol.gov/dol/topic/unemployment-insurance

U.S. Department of Labor. Office of Federal Contract Compliance Programs. *New Regulations: Section 503 of the Rehabilitation Act*. Retrieved from http://www.dol.gov/ofccp/regs/compliance/section503.htm

U.S. Department of Veterans Affairs. *Compensation.* Retrieved from http://www.benefits.va.gov/COMPENSATION

U.S. Government Accountability Office (2005).*Vocational rehabilitation: Better measures and monitoring could improve the performance of the VR Program (GAO-05-865).* Washington, DC: Author.

U.S. Government Publishing Office. *Education; Assessment for determining eligibility and priority for services.* Retrieved from http://www.gpo.gov/fdsys/pkg/CFR-2007-title34-vol2/pdf/CFR-2007-title34-vol2-sec361-42.pdf

U.S. Government Publishing Office. *Education; Development of the individualized plan for employment.* Retrieved from http://www.gpo.gov/fdsys/granule/CFR-2011-title34-vol2/CFR-2011-title34-vol2-sec361-45

U.S. Government Publishing Office. *Education; Informed Choice, 34 CFR Section 361.52(b)(4)* Retrieved from http://www.ecfr.gov/cgi-bin/text-idx?SID=6cc322a9e85eb02165b531482457ce37&mc=true&node=se34.2.361_153&rgn=div8.

U.S. Government Publishing Office. *Education; Scope of vocational rehabilitation services for individuals with disabilities.* Retrieved from http://www.gpo.gov/fdsys/granule/CFR-2004-title34-vol2/CFR-2004-title34-vol2-sec361-48

Walls, R.T., (2001). *Measurement of client outcomes in rehabilitation*. *In Brian F. Bolton (Eds.), Handbook of measurement and evaluation in rehabilitation (pp. 311-337),* Gaithersburg, Maryland: Aspen Publishers, Inc.

Wheaton, J., & Berven, N. (1994). Education, experience, and caseload management practices of counselors in a state vocational rehabilitation agency. *Rehabilitation Counseling Bulletin,*

38, 44-58.

Wheaton, J.E., Wilson, K.B., Brown, S.M. (1996). The relationship between vocational rehabilitation services and the consumer's sex, race, and closure status. *Rehabilitation Counseling Bulletin, 40*(2), 116-133.

Wilson, K. B. (2000). Predicting vocational rehabilitation acceptance based on race, education, work status, and source of support at application. *Rehabilitation Counseling Bulletin, 42,* 97-105.

Xu, Y.J., & Martz, E. (2010). Predictors of employment among individuals with disabilities: A Bayesian analysis of the longitudinal study of the vocational rehabilitation services program. *Journal of Vocational Rehabilitation 32* (1), 35-45.

APPENDIX A

APPENDIX A

SERVICE TRACKS

Service Tracks	Service Category Codes
Service Track 1a **Disability Services**	7652R4 7652K5 7652S9 7652L8 7652P7 7652Q9 7652O5 7652T4 7652R3 7652M2 7652M3 7652R8 7652T6 7652X4 7652M2

Continued

Service Tracks	Service Category Codes
Service 1b **Disability Goods & Equipment**	7652P9 7652Q6 7652L9 7652M1 7652Q5 7652O4
Service Track 2a **Customized Employment Services**	7652K6 7652S7 7652O9 7652O7
Service Track 2b **Employment Goods & Equipment**	7652Q3 7652Q4 7652Q2

Continued

Service Tracks	Service Category Codes
Service Track 3a **Career Skills Training Services**	7652R6 7652P8 7652M7 7652O8 7652M8 7652O2 7652O3 7652R9 7652N7 7652N4 7652P8 7652M8
Service Track 3b **Career Skills Training Goods & Equipment**	7652M9 7652M4 7652R5 7652M6 7652N2 7652N3 7652M9 7652N1

Continued

Service Tracks	Service Category Codes
Service Track 4a **Supplemental Services**	7652N8 7652K7 7652L7 7652O6 7652S6 7652N9 7652R1
Service Track 4b **Supplemental Goods**	7652L4 7652L2 7652L3
Service Track 5a **Job Readiness Training Services**	7652T2 7652N6
Service Track 6a **Assessment Services**	7652J7 7652K2 7652K4 7652K8 7652K9 7652S8 7652P3

APPENDIX B

APPENDIX B

SERVICE CATEGORY CODES AND DESCRIPTIONS

Previous Codes	Previous Description	New Codes	New Description
6001	General Medical Examination	7652K8	Medical Services-Assessment
6002	Specialist Medical Exam	7652K8	Medical Services-Assessment
6003	Dental Examination	7652P7	Other Medical Restorative Services
6004	Speech/Hearing Evaluation	7652P7	Other Medical Restorative Services
6008	Other Medical Exam/Evaluation	7652K8	Medical Services-Assessment
6009	Diagnostic Physician Services	7652K8	Medical Services-Assessment
6010	Existing Medical Records	7652K2	Existing Medical Records-Assessment
6013	Other, Including Drugs & Supplies	7652L9	Restoration Goods, Consumable
6014	Other Evaluation – Independent Living Services	7652Q6	Other Rehabilitation Technology Services
6031	Training to Evaluate Abilities	7652T2	Training to Evaluate Abilities
6032	Vocational Evaluation	7652J7	Assessment
6041	Diagnostic Hospitalization	7652K4	Hospital Services-Assessment

Continued

Previous Codes	Previous Description	New Codes	New Description
6054	Psychological Testing	7652S8	Psychological Testing
6057	Neuro-Psychological Testing	7652S8	Psychological Testing
6059	Non-Medical/Diagnostic Services	7652J7	Assessment
6099	Surgeon or Physician Services	7652K8	Medical Services-Assessment
6101	Fees-Clinic/Off Visit-Medical	7652K8	Medical Services-Assessment
6102	Psychiatric Treatment	7652K9	Medical Services-Diagnostic
6103	Dental Services (no dentures)	7652P7	Other Medical Restorative Services
6107	Drugs & Supplies	7652L9	Restoration Goods, Consumable
6110	Physical/Occupational/Speech Therapy	7652R3	Physical/Occupational/Speech Therapy
6119	Prosthesis, Orthosis	7652M1	Restoration Goods, Non Consumable
6122	Wheelchairs	7652M1	Restoration Goods, Non Consumable
6123	Dentures (full or partial)	7652M1	Restoration Goods, Non Consumable
6124	Hearing Aid	7652M1	Restoration Goods, Non Consumable
6125	Eyeglasses	7652M1	Restoration Goods, Non Consumable
6128	Other Appliances & Devices	7652M1	Restoration Goods, Non Consumable
6129	Hearing Aid Services	7652R4	Hearing Aid Services

Continued

Previous Codes	Previous Description	New Codes	New Description
6130	Hearing Aids (including service charge)	7652T1	Restoration Medical Equipment with Services
6131	Repair of Equipment & Devices	7652O6	Repair of Equipment & Devices
6134	Inpatient Services-Non Comprehensive Rehab	7652K5	Hospital Services Inpatient - Diagnostic & Evaluation
6135	Inpatient Comprehensive Medical Rehabilitation Services	7652M3	Restoration-Inpatient surgery/Treatment
6138	Outpatient-Comp Medical Rehabilitation Services	7652S9	Hospital Services Outpatient-Diagnostic & Evaluation
6144	Outpatient. Services-Non Comprehensive Rehabilitation	7652S9	Hospital Services Outpatient-Diagnostic & Evaluation
6150	Psychological Counseling	7652M2	Restoration Medical Services
6158	Other Restoration Services	7652M2	Restoration Medical Services
6190	Supplies - Academic Training	7652N2	Training Higher Ed - Goods Consumable
6191	Tuition/Fees (undergraduate)	7652N4	Training Higher Ed - Services
6192	Books - Academic Training	7652N3	Training Higher Ed - Goods Non Consumable
6193	Tuition/Fees (post bachelor)	7652N4	Training Higher Ed - Services
6194	Hardware/Software for Training	7652N3	Training Higher Ed - Goods Non Consumable
6195	Tutor for Training	7652M7	Training - Other
6199	GED Preparation (w/ testing)	7652R6	GED Preparation (w/ testing)

Continued

Previous Codes	Previous Description	New Codes	New Description
6200	Tuition/Fees College Prep	7652O2	Training - Other college prep advance pay
6209	Tuition/Fees (Vocational Tech)	7652N7	Training Vocational & Occupational -tuition
6214	Books/Supplies College/Technical, Vocational Technical	7652N1	Training-Vocational/Occupational Goods/Supplies-Non Consumable
6216	Community Rehabilitation Program Skills Training	7652N6	Training Job Readiness & Augmentative Services
6219	Correspondence Courses Training	7652N7	Training Vocational & Occupational -tuition
6220	Books Correspond Course Training	7652N1	Training-Vocational/Occupational Goods/Supplies-Non Consumable
6221	Supplies - Correspondence Training	7652M9	Training-Vocational/Occupational Goods/Supplies-Consumable
6225	Supplies - Vocational Training	7652M9	Training-Vocational/Occupational Goods/Supplies-Consumable
6226	Books for Vocational Training	7652N1	Training-Vocational/Occupational Goods/Supplies-Non Consumable

Continued

Previous Codes	Previous Description	New Codes	New Description
6227	Tools/Equipment (Vocational Training)	7652N1	Training-Vocational/Occupational Goods/Supplies-Non Consumable
6228	Uniform Items (Vocational Training)	7652N1	Training-Vocational/Occupational Goods/Supplies-Non Consumable
6229	Tuition/Fees Community College/TSTC	7652R9	Training - Vocational/ Community College
6303	Training (Appliance/Devices)	7652R8	Training (Appliance/Devices)
6304	Training (Lip reading/Sign Lang)	7652S3	Training (Lip reading/Sign Language)
6306	English as a Second Language	7652M7	Training - Other
6307	Post-Acute Brain Injury Services	7652T4	Post-Acute Brain Injury & Non-Training Room/Board
6308	Vocational Adjustment Training	7652N6	Training Job Readiness & Augmentative Services
6309	Job Quest Training	7652N6	Training Job Readiness & Augmentative Services
6311	Job Coach Services	7652O7	Training - Job Coach
6312	Services Leading to Supported Employment	7652O9	Supported Employment Services
6313	Employment Support Services (ERS)	7652O7	Training - Job Coach
6316	Vocational Adjustment Training (Deaf)	7652N6	Training Job Readiness & Augmentative Services

Continued

Previous Codes	Previous Description	New Codes	New Description
6317	Job Coaching (Deaf)	7652O7	Training - Job Coach
6330	Job Placement	7652K6	Job Placement Services
6331	Job Placement for Deaf Clients	7652K6	Job Placement Services
6334	Halfway House Service-Community Rehabilitation Program only	7652T6	Halfway House Service-Community Rehabilitation Program only
6335	Personal Social Adjustment Training/Work Adjustment Training Community Rehabilitation Program	7652N6	Training Job Readiness & Augmentative Services
6336	State License Fees	7652P8	State License Fees
6353	Other Training	7652M7	Training - Other
6354	Other Non-Degree Training	7652O3	Training - Other non-degree advance pay
6355	On-Job-Training (OJT) Fees	7652M8	Training - Other - Non-Advance Pay
6359	OJT-Books, Tools, Equip, Uniforms	7652M6	Training - OJT Goods & Supplies - Non Consumable
6360	Driver`s Training	7652O8	Training - Other advance pay
6365	Job Quest Training-Deaf Client	7652N6	Training Job Readiness & Augmentative Services
6399	Regular Weekly Maintenance	7652K7	Maintenance
6409	One Time or 3rd Party Maintenance	7652K7	Maintenance

Continued

Previous Codes	Previous Description	New Codes	New Description
6424	Regular Weekly Transportation	7652N9	Transportation - Common Carrier
6434	One Time/3rd Party Transportation	7652S6	Transportation - Private
6450	Vehicle Modifications	7652Q5	Vehicle Modifications
6451	Job-site Modifications	7652L4	Other Goods- non consumable
6452	Residential Modifications	7652L4	Other Goods- non consumable
6453	Rehabilitation Engineering Service	7652O4	Rehabilitation Engineering Service
6456	Computer & Related Equipment	7652Q1	Computer & Related Equip - non consumable
6457	Other Rehabilitation Technology Services/Devices	7652Q6	Other Rehabilitation Technology Services
6458	Other Rehab Technology Devices	7652L2	Other Goods & Equipment - consumable
6459	Other Rehab Technology Devices-Non-Consumable	7652P9	Assistive Technology Devices
6475	Attendant, Note Taker, etc.	7652L8	Interpreter Services or Note Taker
6476	Other Personal Assist Service	7652Q9	Other Personal Attendant Services
6478	Interpreter Services-Deaf (College)	7652L8	Interpreter Services or Note Taker
6481	Interpreter Service-Deaf (Other)	7652L8	Interpreter Services or Note Taker

Continued

Previous Codes	Previous Description	New Codes	New Description
6482	Translator for Limited English	7652R1	Translator for Limited English Proficiency
6483	Uniform Items for Employment	7652Q2	Uniform Items for Employment
6484	Tools/Equipment for Employment	7652Q3	Employment Goods & Equipment - non consumable
6485	Communication Devices	7652P9	Assistive Technology Devices
6486	Hardware/Software for Employment	7652Q3	Employment Goods & Equipment - non consumable
6498	Goods for Self Employment	7652Q4	Self-Employment Goods & Equipment - non consumable
6499	Services for Self Employment	7652S7	Self-Employment Services
6610	Misc. Other Services for Clients	7652O5	Other Services for Consumers – Misc.
6611	Room/Board-Academic Training	7652M4	Room/Board-Academic Training
6612	Room/Board-Vocational Training	7652R5	Room/Board-Vocational Training
6613	Supported Employment Services	7652O9	Supported Employment Services
6614	Child Care	7652N8	Child Care
6896	Services for Family Members	7652L7	Other Services for Family Members
6898	Bulk Buy of Bus Passes for Client	7652N9	Transportation - Common Carrier
9999	Budget Projection	7652ZZ	Inactive Code

APPENDIX C

APPENDIX C

VOCATIONAL REHABILITATION PHASE CODES AND DESCRIPTIONS

Vocational Rehabilitation Phase Codes and Descriptions
99 Initial Contact without Case Assignment
00 Initial Contact with Case Assignment
01 Closure before Application
02 Application
06 Extended Evaluation and Trial Work Experience
08 Closure after Application
10 Eligibility and Plan Development
04 Wait List (as applicable per state)
14 Active Services
22 Employment
26 Successful Closure
28 Unsuccessful Closure after Plan Initiated
30 Unsuccessful Closure before Plan Initiated
32 Post-closure Services/Post-employment Services
34 Post-closure Completed/Post-employment Completed

APPENDIX D

APPENDIX D

MONTHLY SUBSTANTIAL GAINFUL ACTIVITY AMOUNTS BY DISABILITY TYPE

Year	Blind	Non-blind
1985	$610	$300
1986	$650	$300
1987	$680	$300
1988	$700	$300
1989	$740	$300
1990	$780	$500
1991	$810	$500
1992	$850	$500
1993	$880	$500
1994	$930	$500
1995	$940	$500
1996	$960	$500
1997	$1,000	$500
1998	$1,050	$500
1999	$1,110	$700
2000	$1,170	$700
2001	$1,240	$740
2002	$1,300	$780
2003	$1,330	$800
2004	$1,350	$810
2005	$1,380	$830
2006	$1,450	$860
2007	$1,500	$900
2008	$1,570	$940
2009	$1,640	$980
2010	$1,640	$1,000
2011	$1,640	$1,000
2012	$1,690	$1,010
2013	$1,740	$1,040
2014	$1,800	$1,070
2015	$1,820	$1,090

APPENDIX E

APPENDIX E

SOCIAL SECURITY REIMBURSEMENTS TO

STATE-FEDERAL VR AGENCIES BY FISCAL YEAR

Fiscal Year*	**Number of Claims Allowed**	**Amount of Dollars Allowed**	**Average Cost Per Claim**
FY 14	9,451	$141,449,760.46	$14,966.64
FY 13	9,645	$138,260,580.10	$14,334.95
FY 12	5,343	$78,768,058.10	$14,742.29
FY 11	4,679	$72,991,906.25	$15,599.89
FY 10	7,768	$105,964,398.60	$13,641.14

Continued

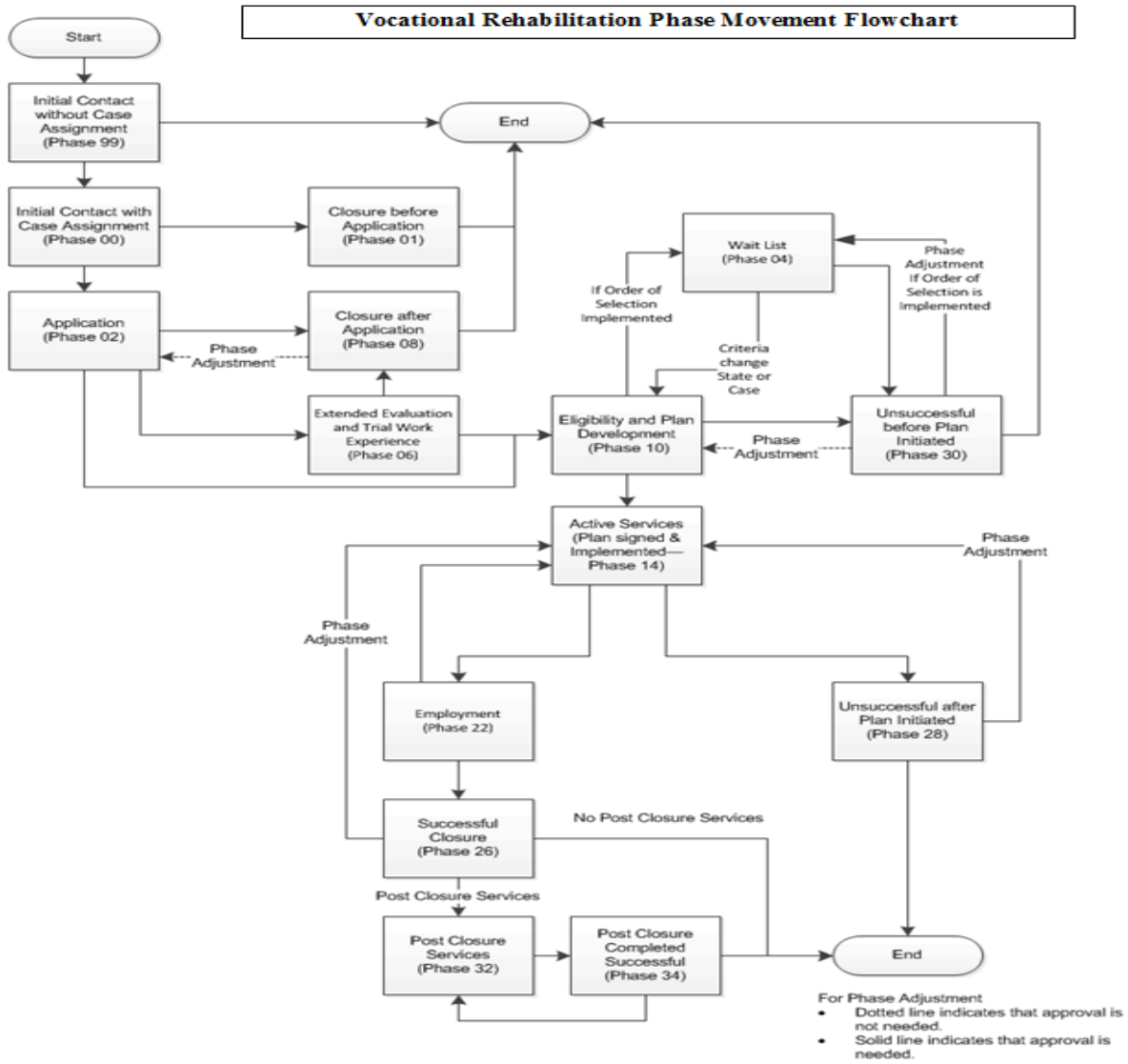
Fiscal Year*	Number of Claims Allowed	Amount of Dollars Allowed	Average Cost Per Claim
FY 09	8,712	$122,268,833.39	$14,035
FY 08	9,325	$124,238,549.09	$13,323
FY 07	6,871	$90,263,129.56	$13,137
FY 06	8,387	$105,049,203.20	$12,525
FY 05	6,095	$75,635,939.94	$12,410
FY 04	6,811	$85,172,425.42	$12,505
FY 03	6,760	$84,599,189.87	$12,514
FY 02	10,527	$131,062,205.10	$12,450
FY 01	8,208	$103,892,717.86	$12,657
FY 00	10,220	$117,024,222.20	$11,451
FY 99	11,126	$119,934,831.23	$10,780
FY 98	9,950	$103,037,127.54	$10,355

* The Federal fiscal year runs from October of one year through September of the next year (http://www.socialsecurity.gov/work/claimsprocessing.html).

APPENDIX F

APPENDIX F

VOCATIONAL REHABILITATION PHASE MOVEMENT FLOWCHART



This flowchart was obtained from http://darsnet.dars.txnet.state.tx.us/rhwhelp/ch1.htm.

BIOGRAPHICAL SKETCH

Valerie Jeannette Rodriguez was born January 25, 1986 in McAllen, Texas. She received her Bachelor of Science in Rehabilitative Services degree with a concentration in Addiction Studies in 2006 from the University of Texas-Pan American (UTPA) with Cum Laude honors. She obtained a Master of Science in Rehabilitation Counseling degree in 2008 and obtained her Doctor of Philosophy in Rehabilitation Counseling degree in 2015 from UTPA. Valerie was awarded the 2013 National Council on Rehabilitation Education Doctoral Student of the Year Award. She has worked for The Texas Department of Assistive and Rehabilitative Services (DARS) since 2008. She was hired in San Antonio, TX as a counselor, a role that allowed her to help individuals with disabilities achieve their employment goals. In 2012, she became a Unit Program Specialist at DARS. Since 2014, she has been employed as a Regional Program Specialist for DARS. She is a licensed professional counselor and certified rehabilitation counselor. She conducts private forensic work in litigation cases, estimating wage loss and developing Life Care Plans for individuals who have sustained catastrophic injuries. She also contracts with the Social Security Administration as a vocational expert witness to provide expert testimony in third level appeal hearings. She was the managing editor for The International Association of Life Care Planners- Journal of Life Care Planning and has been employed as a part-time lecturer for UTPA's Rehabilitative Services program. Valerie has a total of 6 national refereed publications and book chapters and has conducted over 50 local, regional, and national presentations. Address: 5309 N. 45th St. McAllen, TX 78504.