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Postschool outcomes for young adults with mental retardation receiving transition services in Virginia: Caregiver perceptions

Marguerite Beth Graham

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POSTSCHOOL OUTCOMES FOR YOUNG ADULTS WITH MENTAL RETARDATION RECEIVING TRANSITION SERVICES IN VIRGINIA: CAREGIVER PERCEPTIONS

A Dissertation
Presented to
The Faculty of the School of Education
The College of William and Mary

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Philosophy

by
Marguerite Beth Graham
January 2007
POSTSCHOOL OUTCOMES FOR YOUNG ADULTS WITH MENTAL RETARDATION RECEIVING TRANSITION SERVICES IN VIRGINIA:
CAREGIVER PERCEPTIONS

by

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DEDICATION

I wish to commend my family and friends for their support, encouragement and enduring faith during the dissertation process. To Meg, William, and Jack, I thank you from the bottom of my heart for being patient, while I wrote, gathered my thoughts and studied. For without your cooperation, I would not have reached this life long milestone. You all are incredibly special and I am truly blessed. I hope that through my dedication and perseverance that you, my lovely children will always value the importance of education and will pride yourselves in completing any task you begin with pride and exceptional quality.

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The purpose of this study was to examine perceptions of caregivers of young adults ages 18 to 26 with mental retardation in the Commonwealth of Virginia and their transition outcomes post–high school. The study was designed to examine caregivers’ perceptions about the community services accessed by the young adults with mental retardation in their care and the effects of transition services received on the postschool outcomes of these young adults. Postschool outcomes included independent living, transportation, employment, and quality of life. Specifically, the study examined the effects of transition services for male and female students of African American, Asian American, Hispanic, and Caucasian racial/ethnic backgrounds in Virginia. Access to the young adults with mental retardation was arranged through local community service boards. These are the agencies from which young adults with mental retardation and their families typically seek support services upon completion of high school.

The results indicated that young adults with mental retardation in Virginia, ages 18 to 26 years, have limited access to transportation, are dependent upon others for their residence, and experience high levels of unemployment and low wages. The findings indicated no significant differences within the subscales for gender and
race/ethnicity among the young adults whose caregivers within Virginia responded to the survey.

Further research may be gathered to identify and document the types of support that families require to meet the needs of their young adults with mental retardation in terms of independent living and employment. Additional research is needed concerning the quality of services received in preparation for living life as an adult with a disability post–high school.

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POSTSCHOOL OUTCOMES FOR YOUNG ADULTS WITH MENTAL RETARDATION RECEIVING TRANSITION SERVICES IN VIRGINIA: CAREGIVER PERCEPTIONS
CHAPTER 1

INTRODUCTION AND REVIEW OF THE LITERATURE

The current study focuses on postschool outcomes of young adults with mental retardation in Virginia. The primary purposes of the study were to (a) identify postschool outcomes of young adults (ages 18-26 years) with mental retardation as a function of the individuals’ gender, race, and ethnicity, and (b) identify caregiver perceptions of the quality of transition services received.

Significance of the Study

The transition of youth with mental retardation from school to work and onward to independent community living continues to be a concern for caregivers, professionals, and policymakers (Brown, 2000; Johnson, McGrew, Bloomberg, Bruininks, & Lin 1998; Lustig & Strauser, 2004; Moore, Feist-Price, & Alston, 2002). Attention has been focused on transition practices because of the documented poor outcomes for adults with mental retardation in the areas of postschool employment and independent living and also because of the continued need for community support services for this population. Researchers maintain that effective transition practices help disabled youths adjust to adult life (Anderson & Asselin, 1996; Furney, Hasazi, & DeStefano, 1997; Haywood & Schmidt-Davis, 2000).

However, young adults with disabilities, including young adults with mental retardation, still experience disproportionate levels of adjustment difficulties in their pursuit of postsecondary education, employment, community living, and other aspects of adult life compared to their nondisabled peers (Benz & Halpern, 1993; Blackorby
Data-based studies (i.e., empirical, follow-up, and surveys) on young adults with mental retardation that were reviewed for this paper have not disaggregated findings on the basis of either gender or race, which results in limited understanding of the differential needs of these demographic groups. To better understand the efficacy of transition services and the needs of individuals and demographic subgroups of young adults with disabilities, it is important to continue gathering, analyzing, and disseminating data on the postschool experiences of young adults with mental retardation as an aggregate group, as well as on the basis of race and gender.

According to Murray (2002), a number of social and demographic variables influence interpretation of research findings on young adults with mental retardation. It is clear that youth with high-incidence disabilities (e.g., mental retardation, learning disabilities, and emotional disabilities) experience poorer postschool outcomes than nondisabled young adults, but little is known about differential outcomes on the basis of race and gender (Kohler, 1993). Yet it has long been documented that gender is an important variable in the diagnosis of several high-incidence disabilities (e.g., mental retardation, learning disabilities, and emotional disabilities), with males being identified at significantly higher rates than females for the presence of a disability (U.S. Department of Education, 1999, 2000). Although females are identified at a lower rate for the presence of a disability, those with high-incidence disabilities have poor postschool outcomes and the likelihood of successful outcomes is lower than for
their male peers (Benz, Yovanoff, & Doren, 1997, Murray, Goldstein, & Edgar, 1997; Wagner, 1992).

Race has also often been associated with poorer postschool outcomes for youth with high-incidence disabilities, with African Americans, Native Americans, and Hispanic students posting poorer postschool outcomes than White students (The Civil Rights Project Harvard University, 2002, as cited in Feagin & Feagin, 2003). Students of color are more likely to be diagnosed and placed in high-incidence disability categories than are White students, with African Americans with disabilities also having a higher incidence of poor postschool outcomes (U.S. Department of Education, 2000). According to Murray (2002), research to date has documented the need for improved transition services, but there is a critical need for a better understanding of the difference in the postschool success of individuals with mental retardation based upon race and gender.

Although federal law (Individuals with Disabilities Education Act, 1997) mandates transition programming for youth with disabilities in public school, little is known about the variables that influence transition outcomes and successful school-to-work transition for young adults with mental retardation (Guy, 1998). Currently, there is considerable of literature in the area of transition for students with specific learning disabilities (e.g., emotional disability and learning disability), yet few studies have examined the postschool outcomes for young adults with mental retardation. According to Johnson et al. (1998), previous studies have focused on the efficacy of training programs for young adults with mental retardation while ignoring life experiences of young adults with mental retardation. Relatively little is known about
the postschool experiences, independent living, quality of life, and employment of individuals with mental retardation. This study offers an opportunity to examine the life status of young adults with mental retardation and the outcomes and influences on the transition of this population as perceived by their caregivers.

The continued study of postschool outcomes might allow a better understanding of disabled students’ postschool employment, independent living, social interaction, and quality of life. Data collection across gender and race groups is necessary to evaluate the efficacy of existing school programs and to develop new programs, as well as to provide the foundation for public policy and community service delivery that better meet the needs of individuals with disabilities and their families, especially as race and gender may interact uniquely with these needs.

Purpose of the Study

The focus of this study was on young adults with mental retardation in Virginia and their outcomes post-high school. The study was designed to examine caregivers’ perceptions about the community services accessed by the young adults with mental retardation in their care and the effects of transition services received on the postschool outcomes of these young adults. Specifically, this study differentially examined the effects of transition services for male and female students of African American, Asian American, Hispanic, and Caucasian racial/ethnic backgrounds in Virginia.
Definition of Terms

Mental Retardation

The American Association of Mental Retardation (AAMR) defines mental retardation as "a disability characterized by significant limitations both in intellectual functioning and in adaptive behavior as expressed in conceptual, social, and practical adaptive skills. This disability originates before age 18" (American Association of Mental Retardation, 2006). The Americans with Disabilities Act of 1990 (ADA) does not list specific conditions by name as "disabilities," so no specific definition for mental retardation is given. Rather the ADA (1990) defines disability as "a physical or mental impairment that substantially limits a person's ability to perform major life activities such as walking, reading, or performing self-care activities like bathing or eating. The nature of the impairments can range from 'invisible' disabilities such as heart disease or schizophrenia to visible disabilities such as paraplegia or mental retardation" (Hunt & Hunt, 2004).

Federal legislation defines mental retardation as "significantly sub average general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance" (Individuals with Disabilities Education Act, P.L. 105-17, 34 Code of Federal Regulations 300.7 [c][6], 1997). The young adults with mental retardation whose caregivers responded to the survey fell under the federal definition of mental retardation (IDEA, 1997) while they received special education services in public schools. There are no definitions set forth by the community service boards in Virginia or by the Virginia Department of Mental Health, Mental Health.
Retardation, and Substance Abuse Services (VDMHMRSAS). Eligibility for services is determined by independent evaluations conducted on the local level through the community service boards.

Transition

Transition planning is currently viewed as a partnership between schools, community agencies, students with disabilities, and their families. The planning process is intended to help students in school to prepare for postsecondary jobs and vocational experiences and facilitate their adjustment to adult life. Transition services are defined in IDEA 2004 legislation as “a coordinated set of activities for a child with a disability that is designed to be a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child’s movement from school to postschool activities, including postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation” (IDEA, 20 U.S.C., Section 602, 2004). Activities designed to enhance students’ postschool outcomes may include postsecondary education, integrated employment, supported employment, continuing and adult education, adult services, independent living, and community participation. According to IDEA 1997 and 2004, coordinated activities shall be provided on the basis of students’ needs and interests and shall include vocational training, instruction, continuing education, community experiences, employment, adult services, and, when appropriate, daily living skills.
Special Education Legislation

Historical Overview

Many pertinent pieces of legislation have paved the way for transition programming and improved postschool outcomes for youth with disabilities. For instance, during the 1970s several landmark pieces of legislation were enacted that were prompted by two separate Supreme Court decisions: Pennsylvania Association for Retarded Citizens (PARC) v. Commonwealth of Pennsylvania (1972) and Mills v. Board of Education (1972). These cases addressed the constitutional right of access to public education and the provision of services for all students with disabilities (Murdick, Gartin, & Crabtree, 2002). Section 504 of the Rehabilitation Act of 1973 provided significant changes in the training and hiring of individuals with disabilities by ensuring that employers who receive federal dollars did not discriminate against persons with disabilities on the basis of their disability (Stodden, 1998). In addition, the act expanded its services to help individuals with disabilities prepare for and obtain employment (Rehabilitation Act of 1973, P.L. 93-112). In 1975, the 94th Congress passed a milestone in special needs legislation: The Education for All Handicapped Children Act of 1975 (EAHCA). This law mandated a free and appropriate public education to all qualified students with disabilities, with the centerpiece being the Individualized Education Program (IEP) (Yell, Rogers, & Rogers, 1998). Since its passage in 1975, new legislation has clarified and extended the requirements of EAHCA. For example, the Vocational Education Act Amendments P.L. 94-483 of 1976 resulted in increased funding for vocational
education and assisted schools with the coordination of vocational planning within the IEP (deFur & Patton, 1999).

According to Stodden (1998), the 1980s legislation passed by congress fostered increased student vocational training and preparation for adulthood. For example, in 1984, the Carl D. Perkins Vocational Education Act was signed into law. This act ensured access to quality vocational programs for youth with disabilities as well as other disadvantaged youth. With this renewed focus, federal programs sought to improve students' transition from school to postsecondary environments (e.g., work). Additionally, legislation mandated vocational assessment, counseling, and support and transition services to facilitate adjustment to and success within postschool life (Stodden, 1998).

Transition services were intended to facilitate students' progress from secondary education to postsecondary environments; however, the focus of transition services remained on the student and his or her exit from the secondary environment with little emphasis on outcomes or expectancies following secondary education. Failure to acknowledge students' long-term individual needs has resulted in limited success for special needs students as they transition from school to work (Blackorby & Wagner, 1996; Field & Hoffman, 2002; Karge, Patton, & de la Garza, 1992). Transitional issues faced by young adults include (a) finding and maintaining employment, (b) making a successful integration into the community, (c) developing a social network, and (d) achieving independence (Benz & Halpern, 1993; Blackorby & Wagner, 1996; Hasazi, Gordon, & Roe, 1985; Johnson et al., 2002; Marder & D'Amico, 1992; Mithaug & Horiuchi, 1983; Ward & Halloran, 1993). Equally
disconcerting are the difficulties (e.g., ineffective interagency planning, limited access to community services, and essential family supports) that students encounter in their attempts to gain access to adult services and postsecondary education and training programs (Johnson et al., 1998).

Young adults with mental retardation and their families overcome many obstacles in order to function and live life after high school. Not only are these young adults reliant on family and friends, but they are also in constant need of community services and supports that assist in almost all aspects of postschool outcomes and community adjustment. Without family supports, effective interagency planning, adequate high school preparation, and access to community services, young adults with mental retardation and their families experience difficulties in postschool adjustment (Guy, 1998).

Federal Legislation

In 1990, President George H. W. Bush signed legislation enacting Public Law 101-476. This landmark reauthorization changed the title of the Education for All Handicapped Children Act (P.L. 94-142) to the Individuals with Disabilities Education Act (IDEA). In 1997, the Individuals with Disabilities Education Act was amended and reauthorized (P.L. 105-17) in an effort to improve the performance and educational achievement of students with disabilities in both the special and general education curriculum (Senate Report, 1997, as cited in Yell et al., 1998).

One significant addition to the 1990 amendments to P.L. 94-142 was intended to improve the transition of students with special needs from postsecondary school to employment (Heumann, 2001). On December 3, 2004, President George W. Bush
signed the reauthorization of IDEA 1997, changing the name once again to the Individuals with Disabilities Education Improvement Act (IDEIA). Under IDEA 1997, the law required that all special needs students have transition plans incorporated into their Individual Education Plan (IEP), beginning as early as age 14 and no later than age 16 (IDEA, 20 U.S.C., Section 614 [D], 1997). This legislative addition allowed students to participate in the development and direction of their special education programming (deFur & Patton, 1999). IDEA 2004 (P.L.108-446) has established one clear starting-age requirement for the initiation of transition planning. IEP teams must now include transition planning in the first IEP that is in effect when the child turns 16 years of age. For the purposes of this study, the reauthorization in 2004 affects current special education students and does not apply to the young adults who exited and/or graduated from high school prior to July 1, 2005.

Current Legislative Requirements

Congress recently reauthorized the nation’s special education law (i.e., IDEA 1997), which is now titled the Individuals with Disabilities Education Improvement Act (IDEA, 2004). This recent legislation sought to improve postsecondary results for students with disabilities by requiring public high schools to provide better transition planning (Cortiella, 2005). IDEA (2004) expanded the requirements for transition planning from merely a statement of needed transition services (IDEA, 1997) to the development of “appropriate measurable postsecondary goals based upon age-appropriate transition assessments related to training, education, employment, and, where appropriate, independent living skills” (Cortiella, 2005). The measurable
postsecondary goals are intended to identify and reflect the student’s strengths, preferences, and interests. In determining appropriate student goals, the IEP team and the student are expected to work together to determine the instruction and educational experiences that will help prepare the student for a successful transition from secondary education to postsecondary life.

IDEA (1997) applies to students who graduated and/or exited high school prior to July 1, 2005. The 1997 legislation promoted outcome opportunities for students with disabilities through postsecondary education, vocational training, continuing and adult education, adult services, independent living, and community participation (Hasazi, Furney, & DeStefano, 1999). In combination, IDEA (1990, 1997, 2004) fostered more inclusive involvement by requiring students, parents, and school staff to participate in transition meetings. When appropriate, IEP meetings are also required to include interagency participation.

The goal of the IEP meeting is to focus on the transition of the young adult and to identify the necessary activities and components required to facilitate his or her successful transition from the secondary environment to adult life. The IEP is required to include a statement about transition services, including goals and objectives that are based upon functional vocational evaluations and the student’s desired postschool outcomes. The IEP must include, when appropriate, a statement outlining the adult agency’s role and responsibility in facilitating the student’s transition from school to adult life. In the event the named agency is unable to fulfill its role in the transition process, the school is required to reconvene the IEP team and
identify alternative strategies to meet the transition needs of the student (IDEA, 34 CFR 300.344[b][3], 1997).

IDEA also requires that the transition plan be revisited annually (West, Corbey, Boyer-Stephens, Jones, Miller, & Sarkees-Wircenski, 1999). In addition to IDEA (1997), laws were introduced during the 1990s to protect Americans with disabilities against discrimination and to provide disabled individuals equal opportunities for employment. Related statutes include the Americans with Disabilities Act (ADA) of 1990, the Workforce Investment Act of 1998, and the reauthorization of the Rehabilitation Act of 1998. The ADA (1990) contains five titles, with Title I and II being the most relevant to school-to-work planning and implementation. Title I prohibits employment discrimination from private employers, and Title II prohibits public entities from discriminating against individuals with disabilities regardless of whether they receive federal funds (Hallahan & Kauffman, 1997). The Workforce Investment Act of 1998 (WIA; P.L. 105-220) was signed into law by President Clinton on August 7, 1998. It is comprised of five titles, with Title IV containing the amendments to the Rehabilitation Act of 1998. The act consolidates federally funded programs on the state and local levels and creates a comprehensive job-training system that allows individuals to access job training and employment services at one location and aligns employers with employees (National Center on Secondary Education and Transition, 2002). The act was established to meet the needs of businesses for skilled workers and the needs of individuals for training, education, and employment.
Legislative Work Incentives

Ticket to Work Incentive

On December 17, 1999, President Clinton signed the Ticket to Work and Work Incentives Improvement Act of 1999 (P.L. 106-170). This law was introduced to help individuals with disabilities maintain needed governmental support (e.g., health care, employment preparation, and placement services) while working toward a higher level of personal independence. The act was established to reduce individuals' dependence on cash programs (e.g., social security, food stamps), provide the option of purchasing Medicaid coverage to maintain employment, maintain Medicare coverage while employed, and enable individuals to access services that would facilitate obtaining and maintaining employment. The program works by allowing the individuals to select their employment or rehabilitation provider (e.g., vocational rehabilitation, employment, and other support services); Social Security pays the selected provider for services rendered. Successful outcomes are required for agencies to receive payment. The law (P.L. 106-170) defines successful outcomes as obtaining employment with self-supporting incomes or reducing or eliminating dependence on assistance from the Social Security Disability Insurance Program (SSDI) and the Supplemental Security Income Program (SSI) (Golden, O'Mara, Brewer, & Blessing, 2002).

Social Security Work Incentive

The Supplemental Security Income Program (SSI) is funded by the federal government from general tax revenues and pays cash assistance to the elderly, blind, and disabled (including children under age 18) who have limited income and
resources. The monthly payment is $564 for eligible individuals and $846 for eligible couples. For most Americans, this amount is insufficient to meet daily expenses and their incomes require a supplement from one of a combination of agencies such as the Food Stamp Program, Medicaid, or personal employment. In spite of this low level of income, SSI recipients fear losing benefits based upon employment earnings (Dejong & O’Day, 1997).

In response to individual fears and the need to prepare adults and youth to enter the workforce as productive members, the Social Security Administration developed the program Plans for Achieving Self Support (PASS) to help individuals with disabilities maintain paid benefits while they are employed. For example, students may continue to receive assistance while engaged in paid job experiences without fear of losing their benefits, and SSI work incentives may be included in the student’s IEP. PASS enables young adults to receive assistance while building skills necessary for postschool adjustment. The goal of the PASS program is to enable individuals with disabilities to reduce their dependence on SSI benefits while exploring employment opportunities (Johnson, 2002).

In addition to the PASS program, SSI offers four additional work incentives to students with a transition plan: Earned Income Exclusion (EIE), Student Earned Income Exclusion (SEIE), Impairment-Related Work Expense (IRWE), and Blind Work Experience (BWE). Each of the work incentives is an income or resource exclusion that helps individuals with disabilities maintain necessary SSI benefits until they are self-sufficient. These incentives can be particularly helpful in designing community-based paid employment programs for students without decreasing their
cash assistance benefits. Under these exclusions, as much as $85 a month ($20 general income exclusion and $65 earned income exclusion) is not counted toward the specified SSI income limit (Johnson, 2002).

Through the incorporation of the Ticket to Work Act (1999) and PASS, young adults with mental retardation and others with disabilities are able to access necessary skill training and rehabilitation services in order to assist in advancing their abilities both in employment skills and wage earnings. It is hoped that these incentives will foster a reduction in the need for social dependence and encourage individual independence.

From Legislation to Practice

Models of Transition

Several transition models have emerged since the 1970s, with each new model expanding the view of transition. Such models include the Three-Step Transition Model (Will, 1983), the Secondary Vocational Program (Wehman, Kregel, & Barcus, 1985), the Community Adjustment Model (Halpern, 1985), and the Quality of Life Model (Halpern, 1993). One of the most commonly cited models of the 1980s is the Three-Step Transition Model developed by Madeline Will (1983), commonly known as the OSERS Transition Model. Will's model consisted of three “bridges,” which provide support to students as they exit high school. Will’s Bridges Model (1983) focused on employment and transition outcomes; the bridges included (a) no special services needed, (b) time-limited services needed, and (c) on-going services needed. No special services refers to services available in local communities that are accessible by everyone (e.g., community colleges). Time-limited services refers to
specialized services that help individuals with disabilities gain training for employment (e.g., vocational rehabilitation). *On-going services* refers to on-going support provided to individuals while they are employed (e.g., job coaching).

The Community Adjustment Model developed by Halpern (1985) not only included provisions for employment assistance but also considered residential living and social and interpersonal networks as important dimensions in an individual’s effort to adjust to adult life. Halpern indicated that success in one dimension of the model does not guarantee success in other dimensions. Moreover, Halpern suggested further that for transition planning to be successful each dimension of community adjustment requires attention. To achieve positive postschool outcomes, Halpern and others have recommended that educators incorporate all dimensions of the Community Adjustment Model into the planning process (Halpern, 1993; Whitney-Thomas & Hanley-Maxwell, 1996).

During the 1990s, service providers began to focus not only on issues of community adjustment but also on quality of life issues for young adults with disabilities (Dennis, Williams, Giangreco, & Cloninger, 1993; Goode, 1990; Halpern, 1993). In defining “quality of life,” a spectrum of definitions exists, although there is no consensus on a single best definition (Rusch & Millar, 1998). However, a group of international researchers in the field of intellectual disabilities have developed a consensus related to the conceptualization, measurement, and application of quality of life (The Special Interest Research Group on Quality of Life, 2000, as cited in Turnbull, Turnbull, Wehmeyer, & Park, 2003). This group underscored that the key characteristics of all definitions of quality of life include (a) general feelings of well-
being, (b) feelings of positive social involvement, and (c) opportunities to achieve personal potential. Indeed, researchers have agreed that quality of life is multidimensional and includes both subjective and objective dimensions (Halpern, 1993; Testa & Simonson, 1996; The Special Interest Research Group on Quality of Life, 2000, as cited in Turnbull et al., 2003).

**Quality of Life**

Quality of life consists of several dimensions that through investigation and awareness of a student’s interest and abilities can facilitate the transition planning process. In 1995, Hughes, Hwang, Kim, Eisenman, and Killian conducted extensive literature reviews of the disability and nondisability literature and identified 44 definitions of quality of life and a collection of 15 dimensions of quality of life. The 15 dimensions of quality of life identified by Hughes et al. include (a) employment, (b) community integration, (c) recreation and leisure, (d) personal competence, (e) community adjustment and independent living skills, (f) social relationships and interactions, (g) support services received, (h) self-determination, (i) autonomy and personal choice, (j) social acceptance, (k) residential environment, (l) normalization, (m) civic responsibility, (n) individual and social demographic indicators, (o) physical and material well-being, and (p) psychological well-being and personal satisfaction.

Repetto and Correa (1996) pointed out that focusing on only one dimension, such as employment, is far too limiting. They insisted that what is needed to ensure quality of life is a more comprehensive approach that considers several relevant dimensions.

Examination of these 15 dimensions highlights their coincidence with Halpern’s Community Adjustment Model (1985). The areas that coincide include
community adjustment, employment, residential environment, and social/interpersonal relations. In combination, these quality of life dimensions, Halpern’s model (1985), and the coinciding areas provide a working framework that can be used to examine transition services for mentally retarded youth systematically and comprehensively. That framework is outlined in Figure 1.
FIGURE 1. Transition Dimensions.
Essential Features of Effective Transition Planning

To plan for effective transition, it is essential for families, educators, professional agencies, and students to collaborate. Parents know their children and their children’s needs, and the students know their own interests and future goals (Lankard, 1993). A primary challenge for individualized transition teams is to ensure that all parties participate and work together to deliver effective transition experiences. Importantly, research shows that students frequently are not active participants in the transition planning process (de Fur, Getzel, & Kregel, 1994; Morningstar, Turnbull, & Turnbull, 1995). Increased student involvement, along with the participation of all required transitional parties, can help ensure that the student’s personal needs are addressed and better guarantee a successful transition process (Benz & Lindstrom, 1997; Benz, Lindstrom, & Halpern, 1995).

Transition Service: Interagency Collaboration

IDEA (1990) introduced the concept of interagency and community linkages by requiring agency representation in the planning process (Repetto & Correa, 1996). Interagency collaboration is an integral part of the transitional planning process, involving supports and services as provided by community service agencies (i.e., health, mental health, human services, rehabilitative services, and transportation) as well as the nationally funded Social Security Administration. Other agencies that may serve a one-time purpose or serve as ongoing consultants may include representatives from postsecondary schools, Department of Labor job services agencies, representatives from school-to-work opportunities programs, community leaders, and community recreation centers (e.g., Boys Clubs, YMCAs, and 4-H Clubs). These
agencies provide a variety of job counseling, training, and employment services to students in transition. To facilitate successful transition planning, an agency representative typically may (a) provide linkages to high schools through outreach efforts; (b) inform secondary school personnel of the prerequisites for the transition to postsecondary education; (c) disseminate information concerning college and vocational school preparation; (d) explain the role of the student and the service provider in the postsecondary environment; (e) provide orientation programs to students who will be attending postsecondary institutions; (f) empower students to advocate for themselves; (g) provide job development services with follow-up consultations; and (h) interpret services offered for students and their families (National Information Center for Children and Youth with Disabilities [NICHCY], 1999). If an agency is unable to fulfill or abide by an IEP contract, a new IEP meeting must be convened and an alternative route identified to accomplish the stated goals established during the original IEP meeting (IDEA, 1997, 2004).

Access to Community Support Services

In Virginia, community-based services, such as community service boards (CSB), have the goal of helping young adults to make a successful transition from high school to postsecondary life. The boards serve as bridges between the social service community and the individuals with mental retardation in need of services. Transition services available in Virginia include employment, independent living skill training, leisure and recreation, and community involvement and participation. These services are intended to help young adults with mental retardation live independently in their communities and, for some, offer alternative care options in the community.
that otherwise would be available only through an institution (Guy, 1998). According to Ratzka (2003), to control and direct one’s own life means making lifestyle choices to minimize reliance on others for decision making and everyday activities and being limited only in the same ways that people without disabilities are limited. Independent living includes managing one’s own affairs, participating in day-to-day activities in the community, fulfilling a range of social roles, and making decisions that lead to self-determination and the minimization of physical and psychological dependence upon others. For the purpose of this study, independent living is defined as the right of people with disabilities to control and direct their own lives and to participate actively and independently in society.

In Virginia, transition services are based upon specific disability categories and disabled residents of the state are required to meet eligibility criteria to receive services (Virginia Department of Mental Health, Mental Retardation, and Substance Abuse Services, 2006). There are 39 CSBs throughout Virginia, with each CSB operating independently in their respective communities. Through collaborative efforts with schools, interagency and community linkages, services, and choices become available to students and their families. Introducing and educating residents with mental retardation in Virginia to local community service boards allows school personnel, agency personnel, employers, families, and young adults with mental retardation to better prepare for the student’s successful transition to postsecondary life and experiences.
Family Involvement in the Transition Process

Family involvement in the education of students with disabilities has been federally mandated since the Education for All Handicapped Children Act (EAHCA; P.L. 94-142) was signed into law in 1975, and continuing involvement and participation have been highlighted through reauthorizations of IDEA in 1990, 1997, and 2004. Family members have an enormous advantage in helping transition their special needs children from school to postsecondary education or employment due to their intimate knowledge of their son’s or daughter’s needs. Members of a student’s immediate family or extended family often observe the student’s skills directly and may be aware of his or her interests in ways not known by the student’s teachers and the other IEP team members.

Family members can assist in the student’s transition and improve transition outcomes by being proactive members of the IEP team and advocates for their children (Morningstar et al., 1995). McNair and Rusch (1991) suggested that parents frequently have very little involvement in transition planning despite their crucial caretaking roles and the powerful potential benefits gained by their involvement (e.g., improved school success rates, preparation for employment, and independent living). Factors that inhibit parental participation include poor relationships between parents and professionals, insufficient communication between home and school, limited parental understanding of or information about the IEP process, and excessive professional control of the transition planning process (Roessler, Shearin, & Williams, 2000; Salembier & Furney, 1997).
Geenen, Powers, and Lopez-Vasquez (2001) found that parents described themselves as actively involved in many areas of their student’s transition, with the exception of their participation in transition planning. The lack of parental involvement in transition planning is consistent with reports from many professionals, who describe parents’ participation in the planning process as low. Also, in contrast to the parents, educators describe parental involvement in other areas of transition planning as low as well. This report is consistent with previous research conducted by Harry, Allen, and McLaughlin (1995), who concluded that parental participation shows a pattern of passive rather than active involvement in the student’s later school years.

NICHCY (1999) recommended that parents advance the transition process by (a) observing the student in an array of situations, focusing on the student’s daily living skills, social involvement, and work behaviors; (b) reporting to the child’s teacher their observations about the student’s abilities and needs in these areas; (c) striving to maintain open communication with teachers and the school; (d) educating their children about their disabilities and encouraging them to work toward self-advocacy and self-sufficiency; and (e) learning about resources available in the community to facilitate a successful school-to-postschool transition.

Best Practices in Transition Services

Since the inclusion of transition planning in U.S. public law, researchers have highlighted and evaluated the importance of best practices as identified in the existing professional literature (deFur & Patton, 1999; Kohler, 1993; Roessler et al., 2000; Rusch & DeStefano, 1989). When comparing these authors’ thoughts on transition
services, several common themes emerge. These themes include such recommendations as (a) beginning the planning process as soon as possible, (b) actively involving the students in the planning process, (c) focusing on necessary issues to guide an effective transition meeting, (d) promoting general education and special education collaboration, (e) exploring with and explaining to family and students the available community resources, (f) providing students and families access to a community-relevant curriculum, and (g) inviting all necessary agency personnel to participate in the transition planning process.

With the evolution of transition services, many researchers have published lists of “best practices” intended to inform and guide the transition process (Grigal, Test, Beattie, & Wood, 1997). These best practice lists were compiled as a result of empirical research and literature reviews (Mellard & Lancaster, 2003). Model programs were offered that apply specific strategies to enhance successful student transition outcomes. In one of the first suggested best practices lists, Rusch and DeStefano (1989) identified 10 strategies to influence successful student outcomes. Rusch and DeStefano’s first strategy suggested that early planning should foster the involvement of students, families, educators, and service providers. Interagency collaboration might best be achieved, according to Rusch and DeStefano, by open invitations (i.e., provide a welcoming atmosphere as opposed to a demand for attendance) to IEP meetings and by providing parents with information about the availability of services in the community and how these services might better meet the needs of students and their families. Rusch and DeStefano concluded that to effectively integrate disabled students into their communities educators must be
prepared to explore available employment opportunities with the students, assist them in job placement, help them align recreation and leisure programs, and examine housing options with them.

According to Field and Kohler (2003), a community curriculum or transition-focused education promotes student access to the community to establish daily interactions with nonhandicapped individuals and to incorporate decision-making skills, social skills, and communication skills into their daily routines. Community-based training programs and community service access encourage community integration through vocational programs, self-management training, and recreation and leisure programs.

The success of the entire transition process relies on efforts of the community-based training staff and families to ensure that students learn current knowledge about functioning effectively as an adult in their communities (Hasazi et al., 1999). The duration of the transition process depends to a large degree on the student’s level of functioning and on the program’s efficacy. The evaluation of program effectiveness may be approached from several orientations, including functional assessments, instructional assessments, and follow-up evaluations of student successes, needs, and setbacks as they transition into community living (Furney et al., 1997; Grigal et al., 1997).

Employment Outcomes

Postschool outcomes for students with disabilities remain a principal concern of researchers, educators, and policymakers. Despite national and state efforts to the contrary, disabled students, including young adults with mental retardation, continue
to experience great difficulty transitioning into the postsecondary phase of their lives (Anderson & Asselin, 1996). Too many special needs students leave high school without the necessary academic and occupational skills to be successful in postsecondary environments (Benz & Lindstrom, 1997; Benz et al., 1997; Blackorby & Wagner, 1996; Johnson et al., 2002; Ward & Halloran, 1993). According to a research study on employment outcomes for young adults with mental retardation by Fesko, Temelini, and Graham (1997), 39% of the 116 individuals with mental retardation who responded to the survey reported working 20 hours or less; only 25% worked full time and 82% of these individuals earned less than $5.50 an hour. In 2000, the unemployment trend continued, with more than 80% of people with disabilities absent from the workforce (National Organization on Disabilities, 2000). Furthermore, Johnson and colleagues (2002) found that only 15% of high school dropouts with disabilities were employed 1 year after discontinuing their education, but the rate nearly doubled for disabled students who completed high school (i.e., 30.2%).

In addition to lower rates of employment than their nondisabled peers, young adults with disabilities are generally employed in low-paying positions. These positions are commonly unskilled, entry-level positions (Benz & Lindstrom, 1997; Fesko et al, 1997; Kohler, 1993; Speckman, Goldberg, & Herman, 1992; Wagner et al., 1991). The search for and the ability to retain long-term employment are critical challenges for handicapped individuals (Smith, 1992). According to Fesko et al. (1997), young adults with mental retardation were less actively involved in their job search than individuals with other disabilities.
Unfortunately, employment outcome data for young adults with disabilities are discouraging (Brown, 2000). Wagner and colleagues (1991) reported that disabled young adults who had been out of high school 3 to 5 years and who were working full time earned on average less than $13,000 per year and few earned more than $6 per hour. In previous studies more optimistic employment outcomes have been documented for disabled youth. Blackorby and Wagner (1996) found that 37% of youth with mental retardation were competitively employed 3 to 5 years after graduation. Similarly, Revell, Wehman, Kregel, West, & Rayfield (1994) found that 39.1% of young adults with moderate to severe mental retardation were involved in supported employment. In a follow-up study on two groups of adults with mental retardation living in Washington State, Brown (2000) investigated their postschool status based upon the year they graduated but did not report on race or gender effects. This follow-up study examined students' employment, enrollment in postsecondary school or training, engagement in employment, and independent living. Employment rates for these young adults with mental retardation were more favorable in the Brown study than reported in previous studies (e.g., Haring & Lovett, 1990; Thurlow, Bruininks, & Lange, 1989; Wagner et al., 1991; West, Revell, & Wehman, 1992). However, it is important to note the extremely low number of available respondents in this study. Of the 72 participants, 41 graduates were from 1990 and 31 from 1995. The employment rates of Brown's participants 1 year out of school were 50% for the 1990 graduates and 43% for the 1995 graduates. The author revealed that the high school programs had become more community based and employment oriented and emphasized collaboration with community agencies.
**Independent Living and Access to Transportation**

Despite efforts at the federal and state level, special needs students continue to leave the public schools without benefit of a successful transition to independent living. Most young adults with disabilities remain dependent upon their families long after leaving school and often fail to lead productive, self-rewarding lives (Keigher, 2000; Ward & Halloran, 1993). For example, statistics from the Association of Retarded Citizens (ARC) suggest that approximately seven million individuals with mental retardation will live with their parents for their entire life (Krauss & Seltzer, 1994; The Arc, 1993, as cited in Lustig, 1999). This reliance is not limited to living arrangements but encompasses the need for assistance in traveling to and from community activities, work, appointments, and social activities (Keigher, 2000).

Individuals with mild retardation can expect to live as long as persons without mental retardation (Eyman & Borthwick-Duffy, 1994). For those adults with mental retardation who have no relatives or whose relatives require supplemental support to provide care, their living arrangements may be provided by specialized institutions (e.g., state schools, special homes, nursing homes, intermediate care facilities for the mentally retarded, halfway houses, group homes, community-based residential care facilities, and adult foster care facilities) (Keigher, 2000). In addition, adults with mental retardation may also rely on homeless shelters and place an additional burden on the correctional system (Kane, Kane, & Ladd, 1999).

Johnson et al. (1998) studied the postschool outcomes and community adjustment of young adults with severe disabilities across five states, 1 to 4 years after high school. Outcome data were gathered directly from the young adults’ family...
members or caregivers. Respondents reported that the young adults frequently needed extrafamilial assistance in obtaining community services, finding and maintaining jobs for their disabled youth, and obtaining public or private transportation services. Caregivers also reported that 80% of their disabled postsecondary adult children had received a high school diploma or a certificate of completion. Of the students reported on in this study, 76.3% had worked since high school and 66.3% were working for pay. Of these same disabled young adults, 45.4% had experienced episodes of unemployment since high school. Fifty-seven percent (57%) of the disabled adults were reportedly living with relatives, with only 12% of the young adults living independently and 21% managing their own finances.

Although it is difficult to determine which variables contributed to or were detrimental to the employment outcomes of the young disabled adults studied by Johnson et al. (1998), it is important to note that 50% of these young adults worked while they were students in high school. Although employment histories during high school are important, postschool outcome data on the transition experiences of youth with disabilities have historically been used as the measure of special education program effectiveness and as justification for policy initiation at the federal and state levels (Brown, 2000). The most commonly used outcome measures for program effectiveness are students’ postschool employment status, living arrangements, and participation in postsecondary education (Wagner et al., 1991). Sharing postschool outcome studies with schools and community service agencies may allow a better understanding of the service needs of disabled individuals, thus encouraging
improved collaboration between schools, homes, and agencies that provide service
delivery after the student leaves school (Johnson et al., 1998).

**Postschool Transition Outcome**

Blumberg and Ferguson (1999) analyzed data from national transition
outcome studies published between 1985 and 1998. They reported that national trends
for young adults with disabilities were consistent and described the young adult as
one who (a) was less likely to attend postsecondary schools, (b) was less likely to be
employed, (c) had lower levels of independent living, and (d) was more socially
isolated than his or her peers in the general population. Blumberg and Ferguson noted
that the outcome data suggested that youth with disabilities have made some
significant gains during the 13-year study, but they still lag behind their nondisabled
peers in significant achievements. These authors predicted that the achievement gap
for disabled adults and their nondisabled peers may widen over time. A prominent
theme that emerged suggests that inclusion in regular education classes may result in
improved transition outcomes (i.e., competitive employment, higher earnings, and
postsecondary education and training).

A number of longitudinal studies have examined postsecondary educational
and employment outcomes of students with disabilities (e.g., Benz & Kochhar, 1996;
Dunham, Schrader, & Dunham, 2000; Horner, 2001; Izzo, Cartledge, Miller,
Growick, & Rutkowski, 2000; Knight & Aucoin, 1999). Follow-up studies of this sort
typically describe how well disabled individuals function in a variety of settings and
situations after they leave high school and provide information concerning students’
employment, postsecondary education, financial independence, residential

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independence, and relationships with family members and partners (Levine & Nourse, 1998; Sitlington & Frank, 1998). In addition to reporting data on students’ personal experiences and postschool outcomes, longitudinal studies allow researchers to track the long-term progress of a particular group or population of students. Longitudinal studies also help identify factors that appear to influence students’ successful postschool outcomes over time.

In the first National Longitudinal Transition Study of Special Education Students conducted between 1987 and 1993, results indicated that the following factors were associated with disabled students’ postschool success: (a) high school completion, (b) vocational education, (c) work experience, (d) placement in general education classrooms, (e) enrollment in advanced academic courses, (f) establishment of transition goals, (g) participation in school or community groups, and (h) parent involvement (Wagner et al., 1991). Currently, the United States Department of Education (USDOE) is funding the Second National Longitudinal Transition Study of Secondary Aged Students with Disabilities (NLTS2), which began in 2000. The study is tracking a nationally representative sample of students, ages 13 to 16 years, over a 10-year period as they progress from secondary to postsecondary activities. Data collected will provide information about the value of transition services, the effect of IDEA-mandated services on young adults with disabilities, and postschool outcomes for special needs students, information that will likely be useful for future planning and provision of services for individuals with disabilities (Levine, Marder, & Wagner, 2004). Initial reports revealed that, as a group, 11.7% of young adults with mental retardation were employed at the time of data collection, 46.1% have worked for pay,
and 15.6% were currently working two or more jobs (National Longitudinal Transition Study-2, 2005).

Researchers often compare information obtained from different populations of special needs graduates in hopes of identifying educational or transitional content that may be useful in improving postschool outcomes for students (Guy, 1998; Vogel, 1996). In recent years, it has become more practical and more common for school-to-work transition researchers to conduct follow-up studies. However, few such studies have focused on young adults with moderate to severe disabilities and there is insufficient data to suggest that this population is leading lives as successful as their nondisabled peers (Guy, 1998).

**Gender and Race**

An extensive review of the literature shows that the majority of researchers cite concerns over the low postschool success rates for young adults with mental retardation as a group, but most studies have not disaggregated the data by gender. One exception is a study by Nisbet and Lichtenstein (1992). Isolating the employment success rates for men and women with mental retardation separately, Nisbet and Lichtenstein tracked 50 men and 50 women with disabilities who had graduated from high school in a Northwestern state over a 4-year period. After 2 years, the data indicated that the 50 men in the study were employed at a higher full-time and part-time rate than the 50 women. This finding is consistent with research findings from Benz and colleagues (1997) that women with disabilities have poorer postschool employment success than men. This conclusion is also consistent with the finding from the NLTS-2 (2005), in which 22.9% of males with mental retardation were
employed at the time of data collection compared to 19.6% of females in the same category. According to Murray (2002), there may be unique factors or circumstances that place women at a particular disadvantage or at a higher risk for poor postschool outcomes. For example, some researchers have suggested that females with labeled disabilities may have more significant intellectual, academic, and emotional problems than their male peers (Vogel, 1990; Wagner, 1992).

Extended Transition Services

Federal programs intending to facilitate youth transition from school to work began with the Rehabilitation Act of 1973 (P.L. 93-112); however, school-to-work transition services were neither clearly defined nor stated in public law until they were incorporated into Public Law 101-476 in 1990 and then reaffirmed in the reauthorization of Public Law 105-17 in 1997. Despite the incorporation of federal and state school-to-work initiatives, many students with disabilities had historically left school unprepared for work (Benz & Kochhar, 1996). States and localities were urged by legislators to incorporate their school-to-work transition programs into existing educational initiatives.

Benz et al. (1997) identified three basic components of a school-to-work program in the existing professional literature: (a) school-based learning (i.e., vocational training and career awareness); (b) work-based learning (i.e., on-the-job training); and (c) connecting activities and the community (i.e., postprogram planning, service coordination, and evaluation of postprogram outcomes). Across the country, states and localities implemented programs to better serve the transition needs of all students (Benz et al., 1997). Unfortunately, the mandated safeguards and
supports (i.e., coordinated planning among special education parents and students, general education, and community service agencies) did not guarantee effective implementation of programs, nor did they foster the successful transition of young adults from high school to postsecondary life (Hasazi et al., 1999; Johnson & Sharpe, 2000; Johnson et al., 2002).

Many authors have contended that there is a lack of shared information on students across agencies, which limits the ability to coordinate services. Also, a lack of follow-up data disallows agencies to improve service effectiveness, and a lack of attention to postschool service needs and difficulty in anticipating postschool needs prevent successful transition to postschool life (Hasazi et al., 1999; Johnson et al., 1997; Johnson & Sharpe, 2000). Despite the difficulties experienced by families and agencies in the transition-planning process, interagency collaboration and service coordination remain the primary approach for assisting youth with disabilities (Johnson et al., 2002). According to Johnson and colleagues (2002), it is difficult to identify exactly which variables contribute to, or are detrimental to, employment outcomes of youth with mental retardation, but they propose that it is conceivable that increased transition planning during high school and interagency collaboration may play a positive role.

Vocational Training

In an attempt to better understand student needs for employment, researchers have concerned themselves with studying the beneficial outcomes of vocational training and competitive employment for disabled youth (Kohler, 1996; Lemaire, Mallik, & Stoll, 2002; Moore et al., 2002). Career- and vocational-oriented
researchers have focused attention on the training available for special needs students while the student is still enrolled and functioning in the public secondary school environment (Benz et al., 1997; Morgan & Hecht, 1990). Several researchers have documented the positive effects of on-the-job training combined with educational experiences (e.g., vocational classes). Students may be exposed to vocational training in a variety of ways, including experience within the school environment or combined school- and work-based site experiences (Benz et al., 1997; Kohler, 1996; Morgan & Hecht, 1990; Posthill & Roffman, 1991). Vocational education is used as an instructional tool that allows students to develop important life and employment skills, which ultimately help students transition from school to the workforce (Bassett & Underwood, 1999).

In a study conducted by Benz and colleagues (1997), which was based upon a larger concurrent study conducted in Oregon and Nevada, the researchers reported that employment outcomes for students were influenced most by having had two or more prior experiences within the workforce. In a similar study, Hasazi et al. (1985) had earlier found that increases in postschool employment were associated with the opportunity for students to have had vocational classes in high school, as well as either summer or part-time employment experiences. Morgan, Salzberg, Moore, and McSweyn (1995) surveyed 44 directors and vocational coordinators of supported work programs across several states and found that matching student job skills to specific jobs, teaching students social skills, involving parents and guardians in the employment development, and ensuring interagency cooperation to further support
the employed student were the most critical contributors to successful employment for young adults with developmental disabilities.

One study that examined extended transition services and vocational outcomes was conducted by Izzo and colleagues (2000). A pretest-posttest study was designed to examine the value of providing extended transitional services for 2 years after graduation. Extended transition services included vocational assessment, agency contacts, IEP meetings, extended vocational training, employment counseling, job club, job interview preparation, job development, and job coaching. The control group was not offered extended transition services. Izzo et al. used monetary earnings as the dependent variable. Five years after extended services were terminated there were significant differences between disabled students who had received extended services and those who had not, with the experimental students earning more money than the control students without extended services. The follow-up survey revealed that disabled students who had received extended services were more likely to be employed than those who had not been exposed to extended services and, importantly, the experimental students earned an average of approximately $3,000 more per year than the control students. Additionally, students who had received extended services were more likely to be employed five years after graduation.

Dunham et al. (2000) conducted a two-year longitudinal study to assess the vocational outcomes of students with co-morbid borderline mental retardation and specific learning disabilities. The research focused on the effects of testing, evaluation, job training, job placement, guidance, counseling, and job follow-up on vocational outcomes. The researchers reported that of the 98 students participating in
the study 55 (56%) were successfully employed after 2 years and 43 (44%) were not. Of the 55 employed students with complete occupational placement data, 25 (47%) were placed in service occupations and the remaining 28 held a variety of jobs across occupational domains. The researchers reported nonsignificant differences between subgroups (i.e., psychometric, demographic, and vocational rehabilitation service years), except race groups. The reported race difference was associated with unsuccessful employment. However, the data were inadequate for hypothesis testing due to the low numbers of African Americans in the study. The researchers were unable to identify which external factors aided or hindered each subgroup. It is believed that further investigation of relevant variables may lead researchers to understand why certain individual participants were successful whereas others were not.

Decker and Thornton (1995) conducted a 6-year longitudinal study of individuals who participated in the Social Security Administration’s Transitional Employment Training Program (SSATETP), which operated between 1985 and 1991. The SSATETP was developed to help young adults with mental retardation obtain and maintain employment. Participants remained eligible for SSI benefits during employment and were placed in competitive jobs, with on-the-job training and postplacement support. The program was credited with an increase in earnings and a decrease in SSI payments among individuals assigned to the treatment group. The average increase in income was almost $4,300, or about 72 %, per treatment group member, and the increased earnings continued for 6 years. The powerful effect on increased earnings was as strong in the 6th year as it had been during the 1st year.
The young adults' rise in income was believed to be due to their ability to maintain benefits while participating in the program. The SSATETP program resulted in elevated income levels, work experiences, and community integration for young adults with mental retardation, without the threat or disincentive of lost benefits.

Summary

Researchers continue to evaluate transitional service outcomes by examining student wages, employment, and level of independent living (Benz & Lindstrom, 1997; Benz et al., 1997; Blackorby & Wagner, 1996; Johnson et al., 2002; Ward & Halloran, 1993). For years, the focus has been on identifying best practices for achieving positive results in transition services (Furney et al., 1997; Halpern, 1999; Neubert & Moon, 2000; Roessler et al., 2000; Thoma, 1999; Wolfe, Boone, Filbert, & Atanasoff, 2000). Prior to the “best practices” era, researchers were concerned primarily with identifying the components of the transition-planning process. These researchers were interested in isolating the components that facilitate transition planning and produce positive outcomes (Kohler, 1994).

Renewed public attention has shifted the focus toward transitional service outcomes in conjunction with vocational training and assessment (Asselin, Todd-Allen, & deFur, 1998; Benz et al., 1997; Kohler, 1996; Wagner et al., 1991). Researchers are currently focusing their efforts on evaluation follow-up studies with the intent of informing educators of new directions that transition planning might take in the future (e.g., Brown, 2000, Dunham et al., 2000, Guy, 1998, Johnson et al., 1998). Several researchers are focusing on empirically based recommendations to
ensure the efficacy of best practices (Halpern, 1999; Neubert & Moon, 2000; Rusch & DeStefano, 1989; Thoma, 1999).

Although there are different perspectives about what constitutes successful transition, the efficacy of transition programming for students with disabilities has typically been gauged by the employment status of the individual after graduation. Despite focused efforts on best practices to ensure effective school-to-work transition, researchers contend that special needs graduates are continuing to earn less than their nondisabled peers and remain at a disadvantage in terms of hours worked. However, few studies to date have empirically examined the variables that contribute to successful employment outcomes for this population (Affleck, Edgar, Levine, & Kortering, 1990; Benz & Halpern, 1993; Blackorby & Wagner, 1996; Hasazi et al., 1985; Johnson et al., 2002; Marder & D’Amico, 1992; Mithaug & Horiuchi, 1983; Ward & Halloran, 1993).

Transition training and the outcomes for special needs students continue to require extensive interventions and collaboration among all parties for effective school-to-work transition to occur. For students with more severe disabilities (e.g., multiple disabilities, severe and profound mental retardation), the educational components that are a critical part of the transition program may be quite different than for those students who are more mildly disabled.

In summary, the literature indicates that employment status for individuals with disabilities, including those with mental retardation, is frequently used as a determinant of successful transition planning. Although the data on the employment
status of individuals with disabilities, particularly severe disabilities, are less than ideal, the trend shows increasing employment rates for this population.

Research Questions

Research questions for this study evolved from a review of the literature focusing on the employment status, wages earned, and sustained independent living of postschool young adults with mental retardation as related to transition services provided, as well as the race and gender of the students. Employment status in this study involves four levels: (a) a graduate’s ability to obtain and maintain desirable employment, (b) hours worked per week, (c) salary range, and (d) best practices for supporting effective transitioning for graduates and their families.

1. To what extent do young adults with mental retardation differ in independent living as a function of gender and race/ethnicity?
2. To what extent do young adults with mental retardation differ in their access to transportation as a function of gender and race/ethnicity?
3. To what extent do young adults with mental retardation differ in their access to services as a function of gender and race/ethnicity?
4. To what extent do young adults with mental retardation differ in their employment as a function of gender and race/ethnicity?
5. To what extent do young adults with mental retardation benefit from transition services as a function of gender and race/ethnicity?
6. To what extent do young adults with mental retardation differ in quality of life as a function of gender and race/ethnicity?
7. To what extent do young adults with mental retardation differ across the unique content of each individual item as a function of gender and race/ethnicity?

8. What is the relationship between young adults' independent living, access to services, employment, quality of life, transportation, and services received to factors that facilitate or inhibit transition to adulthood?
CHAPTER 2

METHOD

Data Source

The data for this research were derived from a survey created for the purposes of this study and completed by caregivers of young adults with mental retardation. In an effort to contact individuals after they had completed high school, the researcher elected to collaborate with the agencies that young adults with mental retardation and their caregivers access for transitional support. Caregivers were identified from client lists from Virginia Community Services Boards (CSBs) (i.e., local government agencies that provide the delivery of community-based mental health, mental retardation, and substance abuse services to citizens). Virginia CSBs were selected as the contact point because of their involvement in local communities and the extended transition services that are offered through their agencies to young adults with mental retardation. Due to laws ensuring patient confidentiality under the Health Insurance Portability and Accountability Act of 1996 (HIPAA; P.L. 104-191), the researcher was not permitted to contact individuals directly and thus sought the intermediary aid of Virginia CSBs. Random sampling was used to select which CSBs acted as agents for mailing surveys to potential respondents.

Participants

Participants in this study included caregivers of young adults with mental retardation who live in the Commonwealth of Virginia and whose charges are eligible for services from their local CSB. Prior to the young adults' graduation from high school, their caregivers, families, and the students themselves may apply for services
with their local CSB to assist in the students’ transition from high school to postschool life. A sample of 600 caregivers was selected randomly from CSB rosters. The sample included individuals from a wide range of racial and ethnic backgrounds, regions within the Commonwealth of Virginia, and residential communities (i.e., urban, suburban, and rural) with urban and suburban communities having the highest representation. Participants were selected from their local CSBs based upon their charge’s age (between 18 and 26 years). All CSBs were mailed letters requesting their participation in the research study. All boards that agreed to participate were selected.

Table 1

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<th>Participating Caregiver Demographic Characteristics</th>
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<tr>
<td></td>
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<td>Percent</td>
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<td>Male</td>
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<td>Caregiver Race</td>
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<tr>
<td>Caregiver Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td>15</td>
<td>7.9</td>
</tr>
<tr>
<td>26-35</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>36-45</td>
<td>20</td>
<td>10.5</td>
</tr>
<tr>
<td>46-55</td>
<td>101</td>
<td>52.9</td>
</tr>
<tr>
<td>56-65</td>
<td>44</td>
<td>23.0</td>
</tr>
<tr>
<td>66+</td>
<td>8</td>
<td>4.2</td>
</tr>
<tr>
<td>Caregiver Relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>147</td>
<td>77.0</td>
</tr>
<tr>
<td>Father</td>
<td>30</td>
<td>15.7</td>
</tr>
<tr>
<td>Grandparent</td>
<td>4</td>
<td>2.1</td>
</tr>
<tr>
<td>Sibling</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Foster family</td>
<td>1</td>
<td>0.5</td>
</tr>
</tbody>
</table>
The young adults ranged in age from 18 to 26 years, with a mean age of 22 years. The majority of the young adults (55%) had completed grades 9 through 12, and 36% continued in school without graduating until they were no longer eligible for services (see Table 2 for a description of the youth). For the purposes of identifying students’ race/ethnicity, the U.S. federal classifications were used, which included African Americans (Blacks), American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and White Americans (Whites) as races; Hispanic (Latino) was classified as an ethnicity (U.S. Office of Management and Budget, 1978). As can be seen in Table 2, the sample reflected diversity in terms of the young adults’ gender, race/ethnicity, and grade completed. In addition to gender, race/ethnicity descriptive statistics (i.e., frequencies and percentages) are presented at a demographic level to describe the sample of participants by marital status, age, and education.

Instrument Development

A review of available instruments revealed no appropriate instruments for the purpose of assessing caregivers’ perceptions of students’ transitional needs, services sought, and outcomes achieved as investigated in this study. As a result, a survey was developed for this project to gather participants’ responses to questions about their students’ postschool outcomes. The instrument was created and piloted, and its technical adequacy was investigated for use in this study. The survey questions were developed by the researcher with the intent of collecting data about specific

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Family friend</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>Group residence supervisor</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>
postschool outcomes for young adults with mental retardation, as well as gaining their caregivers' perceptions of the quality and utility of services received by their charges.
Table 2

*Demographic Characteristics of Participating Young Adults*

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Young Adult Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>103</td>
<td>53.9</td>
</tr>
<tr>
<td>Female</td>
<td>88</td>
<td>46.1</td>
</tr>
<tr>
<td><strong>Young Adult Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>124</td>
<td>64.9</td>
</tr>
<tr>
<td>Black</td>
<td>39</td>
<td>20.4</td>
</tr>
<tr>
<td>Oriental, Asian, or Pacific Islander</td>
<td>18</td>
<td>9.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Young Adult Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>182</td>
<td>95.3</td>
</tr>
<tr>
<td>Married</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>Separated</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Divorced</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>Widow or widower</td>
<td>4</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Young Adult Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.00</td>
<td>12</td>
<td>6.3</td>
</tr>
<tr>
<td>19.00</td>
<td>17</td>
<td>8.9</td>
</tr>
<tr>
<td>20.00</td>
<td>18</td>
<td>9.4</td>
</tr>
<tr>
<td>21.00</td>
<td>21</td>
<td>11.0</td>
</tr>
<tr>
<td>22.00</td>
<td>24</td>
<td>12.6</td>
</tr>
<tr>
<td>23.00</td>
<td>31</td>
<td>16.2</td>
</tr>
<tr>
<td>24.00</td>
<td>21</td>
<td>11.0</td>
</tr>
<tr>
<td>25.00</td>
<td>29</td>
<td>15.2</td>
</tr>
<tr>
<td>26.00</td>
<td>18</td>
<td>9.4</td>
</tr>
<tr>
<td><strong>Young Adult Grade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-8 grade</td>
<td>16</td>
<td>8.4</td>
</tr>
<tr>
<td>9-12 grade</td>
<td>106</td>
<td>55.5</td>
</tr>
<tr>
<td>13+ grade</td>
<td>9</td>
<td>36.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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The dimensions of postschool life examined included (a) students' employment, (b) independent living, (c) quality of life, (d) transportation, (e) services accessed, and (f) caregiver perceptions of their student's postschool outcomes as related to services received.

Instrument Design

The initial 30-item survey used in the study contained a combination of respondent-completed demographic questions and a series of Likert-scale items. The four-point scaling for the Likert scale is $1 = \text{strongly disagree (SD)}, 2 = \text{mildly disagree (MD)}, 3 = \text{mildly agree (MA)}, 4 = \text{strongly agree (SA)}$. Part I of the survey collected demographic information for the purpose of describing the sample of young adults and their caregivers. Participating caregivers were asked to provide information about their young adults' age, gender, race/ethnicity, education, marital status, gender, and the transition services received. Part II of the survey included six subcategories that asked caregivers about their student's employment status, independent living, quality of life, transportation, services accessed, and perceptions of services received. The survey also solicited data on each student's employment status, hours worked, wages earned, personal living arrangements, independent living skills, agency assistance, and caregiver perceptions of the usefulness of transition planning and resources accessed. The survey was developed based upon current quality of life literature and the theoretical and practical aspects (i.e., the six subcategories) of postschool life for adults with mental retardation.

The initial 30-item survey was reduced to 24 items based on item analyses and total scale and subscale reliability analyses. Item numbers 1, 10, 14, 15, 29, and 30
were eliminated from the survey; however, for continuity, the original item numbers are referred to throughout this text. Each of the six subscales was systematically reduced from five items to four items, yielding a total scale of 24 items. Because items 12 and 28 were phrased in a negative manner and all other items were phrased positively, the former items were reverse-scored to maintain consistent scaling across all items. Reliability analyses demonstrate that the scale’s total scale reliability (Coefficient Alpha) was strong (i.e., $r = .85$) for the 191 respondents. Scale reliability at this level is appropriate for research purposes (Bracken, 1987; Gay, 1992; Wasserman & Bracken, 2003). Subscale reliabilities, however, were more variable and ranged from a low of .17 to a high of .88. Specifically, the six subscales, in order of the magnitude of their reliabilities were: Transportation ($r = .17$); Independent Living ($r = .47$); Quality of Life ($r = .52$); Employment ($r = .56$); Community Services Accessed ($r = .69$); and Caregiver Perceptions of Transition Services Received ($r = .88$). Reliabilities for most subscales were moderately strong for the four-item scales, whereas others (i.e., Transportation) were suspect in terms of further analyses; these analyses were conducted as planned to answer proposed questions despite the less-than-desired reliability for some scales.
Table 3  
**Final Scale Reliability (N = 191)**

<table>
<thead>
<tr>
<th>Scale</th>
<th>$R$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>.17</td>
</tr>
<tr>
<td>Independent Living</td>
<td>.47</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>.52</td>
</tr>
<tr>
<td>Employment</td>
<td>.56</td>
</tr>
<tr>
<td>Community Services Accessed</td>
<td>.69</td>
</tr>
<tr>
<td>Caregiver Perceptions of Transition Services Received</td>
<td>.88</td>
</tr>
<tr>
<td>Total Scale</td>
<td>.85</td>
</tr>
</tbody>
</table>

**Survey Validation**

*Survey review committee.* All survey items were evaluated for content validity by asking individuals who were familiar with postschool outcomes and quality of life issues for young adults with mental retardation to respond to the instrument and its items. These individuals were experienced caregivers for young adults with disabilities and included (a) the director of a local chapter of the Association of Retarded Citizens (ARC), (b) a retired math teacher who is a mother of a young adult with mental retardation, and (c) a case worker from the local CSB who interviews and surveys young adults and their families on a daily basis. The group was selected because of the group members’ professional knowledge, daily experience with caregiver needs, unique perspectives, and realistic views of daily living needs and postschool outcomes for young adults with mental retardation.
The reviewers were asked to comment on the ease of readability of the instrument and the alignment of each item with the targeted dimensions of postschool life assessed by the scale. An informal evaluation consisting of five questions was given to the reviewers to assess their perceptions of the utility of each item (Appendix A). Reviewers’ comments provided valuable information about the readability and appropriateness of the survey, which helped shape the instrument prior to piloting.

*Piloting the survey.* Once the survey had been evaluated for content validity and changes were made as a result of the respondents’ comments, the instrument was piloted using 10 families who are members of a local ARC chapter. The caregivers were asked to complete the survey and answer five questions about the survey experience (Appendix B). Additionally, the pilot study participants were asked to provide feedback on the clarity of the survey directions and any suggestions they might have for improving the scale. Finally, the respondents were asked to estimate the time required to complete the survey and describe the relative ease of completing it.

Based on feedback from the group of reviewers, use of the word “parent” was replaced with “caregiver” in six subscales and the term “student” was replaced with “young adult.” The group was also asked to identify questions and/or items that required additional information or that should have information deleted to improve them. The reviewers recommended that all items and questions should remain as presented. Based on the reviewers’ recommendations, the survey also retained the original 30 items as well as the questions intended to collect demographic data for both the young adults with mental retardation and their caregivers. The alignment of
the survey was altered slightly by soliciting the demographic data for both groups at the beginning of the survey as opposed to placing the demographic questions at the end of the survey. The pilot group reported that the survey required approximately five minutes to complete, and they unanimously agreed that if they had received the survey in the mail, they would be willing to complete and return it in a postage-paid return envelope.

Procedure

Community Service Boards throughout the state of Virginia were mailed letters seeking their participation. Of the 12 CSBs that responded, three declined because they believed their population numbers would be too low and participants would not respond to the survey, two declined due to a lack of resources and time required to devote to the project, one withdrew before the surveys were mailed out, and another withdrew because the time line conflicted with a change in leadership within their organization. All local CSBs that agreed to participate were asked to mail surveys to the caregivers of all of their clients between the ages of 18 and 26 years. As a result, selected caregivers of young adults with mental retardation (i.e., between the ages of 18 and 26 years) eligible for services provided by their local CSB within the Commonwealth of Virginia were provided a survey packet. Caregivers were asked to complete the survey and mail it directly to the researcher at a post office box at the College of William & Mary. Participants were assured that their responses would be kept confidential. Each caregiver was provided a postage-paid return envelope along with the survey.
Based on conversations with local CSBs, 600 surveys were confirmed mailed. Caregivers were asked to complete the five-minute survey and return it to the researcher within two weeks. The survey packet contained a cover letter (Appendix C), a survey form (Appendix D), a self-addressed stamped business-reply envelope, and a coupon for an opportunity to win $100 from a random drawing of all caregivers who completed and returned the survey. Upon receipt of all surveys, the drawing was held and the respondent was identified and paid the $100. Of the 600 surveys mailed, 206 responses were received, yielding an overall response rate of 34.3%. Fifteen surveys were deemed unusable because the respondent declined to participate in the survey (1.5%) or the post office returned the envelope unopened and undelivered (5.8%). Of the 600 surveys mailed, the overall usable response rate was 31.8% (N = 191).

**Data Analyses**

Data analyses for this study were conducted using the Statistical Package for the Social Sciences (SPSS, 2005). Age, gender, race/ethnicity, education, marital status, hours of employment, income, and adult service access of the individuals in the caregivers' charge were reported and served as demographic variables or independent variables. Additionally, caregiver demographics (i.e., gender, race/ethnicity, age, and relationship to the student) were collected, analyzed, and reported. These demographic responses were summarized in Table 2 to provide an overall view of the sample using descriptive statistics.

For between-subject analyses (questions 1-6), a series of exploratory 2 (gender) x 4 (race/ethnicity) ANOVAs were run on each scale to test differences...
across the unique content of each individual scale; these ANOVAs were conducted with an overall experimentwise error rate of $p < .05$. With six individual scale contrasts, each ANOVA used a Bonferroni-corrected alpha level of .008 (i.e., .05/6).

A series of exploratory 2 (gender) x 4 (race/ethnicity) ANOVAs were run on each of the 24 items to test differences across the unique content of each individual item (research question 7); these ANOVAs were conducted with an exploratory overall experimentwise error rate of $p < .10$ due to their relative unimportance and number. With 24 individual item contrasts, each ANOVA used a Bonferroni-corrected alpha of .004 (i.e., .10/24) to yield an overall experimentwise alpha of .10. All post hoc analyses on significant main effects and follow-up analyses on interactions were conducted using the Tukey HSD or $t$ tests, with an alpha level of .05.

To consider the relationship between the six dimensions for the entire sample (research question 8), correlations between the mean dimension subscores were conducted, resulting in a 6 x 5 correlation matrix. These correlation analyses were also conducted by gender and race. These exploratory correlations were also corrected for alpha slippage, with an alpha level set at $p < .05$ (i.e., .05/30), or .001.

Table 4 summarizes the methodology, data collection instrumentation, and analysis by research question. Primarily, descriptive statistics, correlations, and inferential statistics were used.
Table 4

Data Analysis Matrix

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Methodology</th>
<th>Data Collection Instrumentation</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 To what extent do young adults with mental retardation differ in independent living as a function of gender and race/ethnicity?</td>
<td>The means of items related to “variable 1” were contrasted by gender and race/ethnicity.</td>
<td>Forced-choice response items on the Likert Scale survey</td>
<td>2x4 ANOVA</td>
</tr>
<tr>
<td>2 To what extent do young adults with mental retardation differ in their access to transportation as a function of gender and race/ethnicity?</td>
<td>The means of items related to “variable 2” were contrasted by gender and race/ethnicity.</td>
<td>Forced-choice response items on the Likert Scale survey</td>
<td>2x4 ANOVA</td>
</tr>
<tr>
<td>3 To what extent do young adults with mental retardation differ in their access to services as a function of gender and race/ethnicity?</td>
<td>The means of items related to “variable 3” were contrasted by gender and race/ethnicity.</td>
<td>Forced-choice response items on the Likert Scale survey</td>
<td>2x4 ANOVA</td>
</tr>
<tr>
<td>4 To what extent do young adults with mental retardation differ in their employment as a function of gender and race/ethnicity?</td>
<td>The means of items related to “variable 4” were contrasted by gender and race/ethnicity.</td>
<td>Forced-choice response items on the Likert Scale survey</td>
<td>2x4 ANOVA</td>
</tr>
<tr>
<td>5 To what extent do young adults with mental retardation benefit from transition services as a function of gender and race/ethnicity?</td>
<td>The means of items related to “variable 5” were contrasted by gender and race/ethnicity.</td>
<td>Forced-choice response items on the Likert Scale survey</td>
<td>2x4 ANOVA</td>
</tr>
<tr>
<td>6 To what extent do young adults with mental retardation differ in quality of life as a function of gender and race/ethnicity?</td>
<td>The means of items related to “variable 6” were contrasted by gender and race/ethnicity.</td>
<td>Forced-choice response items on the Likert Scale survey</td>
<td>2x4 ANOVA</td>
</tr>
<tr>
<td>7 To what extent do young adults with mental retardation differ across the unique content of each individual item as a function of gender and race/ethnicity?</td>
<td>The means of items related to “variable 7” were contrasted by gender and race/ethnicity.</td>
<td>Forced-choice response items on the Likert Scale survey</td>
<td>2x4 ANOVA; Tukey post hoc analysis</td>
</tr>
</tbody>
</table>
What is the relationship between young adults’ independent living, access to services, employment, quality of life, and factors that facilitate or inhibit transition to adulthood?

The means of each of the six scale subsections were correlated for the entire sample and by gender and race/ethnicity.

Ethical Safeguards and Considerations

Individuals with disabilities are considered a “protected population” when conducting research. As such, additional considerations for ethical safeguards are necessary to protect this vulnerable group. As the researcher, I had no direct contact with the respondents and all communications were facilitated by and conducted through the respective CSBs. A point of contact was established within each of the CSBs. The individuals who served as points of contact distributed the surveys, which were coded by region and given an identification number to ensure participant confidentiality. Identification numbers were communicated to the point of contact for the purpose of awarding financial incentives. Only the CSB point of contact possessed the identification numbers and therefore knew the identification of the participating individuals. Dr. Bruce Bracken, a professor in the School of Education and an acknowledged expert in instrument construction, guided the development of the survey and reviewed the item content, with considerable contribution by Dr. Sharon de Fur. The proposed study was submitted to the College of William and Mary’s Human Subjects Review Committee. Upon approval from the College, written approval was sought from each CSB through their research approval committee. Once approval was granted, participants were contacted by letter, which
outlined the purpose of the study and requested their participation. Participants were assured confidentiality and informed of their rights to decline participation.
CHAPTER 3

RESULTS

Data analyses for this study included descriptive statistics, correlations, and inferential statistics; results are presented in the sections that follow. Descriptive statistics (i.e., frequencies and percentages) are presented in Tables 5 through 9 for independent living, services accessed, employment status, and income and hours worked by young adults with mental retardation. Caregiver demographics (i.e., gender, race/ethnicity, age, and relationship to the student) were collected, analyzed, and reported in Table 1 using descriptive statistics. Results are presented in such a manner as to address each of the eight research questions in sequence.

Analysis of the descriptive statistics for Table 5 revealed that the young adults differed slightly in their living arrangements, regardless of their gender or race/ethnicity, with the majority of the young adults living with their parents (76%) or with other relatives (10%). Three percent of the individuals were currently living independently, and 8% resided in some type of supported living (i.e., group home).

Table 5

<table>
<thead>
<tr>
<th>Living Arrangement</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>On his or her own</td>
<td>6</td>
<td>3.1</td>
</tr>
<tr>
<td>With parents</td>
<td>146</td>
<td>76.4</td>
</tr>
<tr>
<td>Nonfamily or legal guardian</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>Group home</td>
<td>15</td>
<td>7.9</td>
</tr>
<tr>
<td>Relatives</td>
<td>19</td>
<td>9.9</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The agency most widely accessed by the participants was the Social Security Administration (85%), followed by the local Community Service Boards (84%); the least accessed agencies or services were Centers for Independent Living (6%) and the use of Food Stamps (12%).

Table 6

<table>
<thead>
<tr>
<th>Services Accessed</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSB Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>160</td>
<td>83.8</td>
</tr>
<tr>
<td>No</td>
<td>31</td>
<td>16.2</td>
</tr>
<tr>
<td>DRS Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>79</td>
<td>41.4</td>
</tr>
<tr>
<td>No</td>
<td>112</td>
<td>58.6</td>
</tr>
<tr>
<td>SSI Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>162</td>
<td>84.8</td>
</tr>
<tr>
<td>No</td>
<td>29</td>
<td>15.2</td>
</tr>
<tr>
<td>Center for Independent Living Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>11</td>
<td>5.8</td>
</tr>
<tr>
<td>No</td>
<td>180</td>
<td>94.2</td>
</tr>
<tr>
<td>Medicaid Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>117</td>
<td>61.3</td>
</tr>
<tr>
<td>No</td>
<td>74</td>
<td>38.7</td>
</tr>
<tr>
<td>Food Stamp Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23</td>
<td>12.0</td>
</tr>
<tr>
<td>No</td>
<td>168</td>
<td>88.0</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Of the 191 young adults with mental retardation, 115 (60%) were unemployed. Part-time employment for both genders was 23%, whereas full-time
employment was 17%. Caregivers reported that 16% \((N = 16)\) of males worked full time and 24% \((N = 25)\) worked part time. Females worked at a full-time rate of 18% \((N = 16)\) and a part-time rate of 22% \((N = 25)\).

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>African American</th>
<th>Asian American</th>
<th>Hispanic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N)</td>
<td>(%)</td>
<td>(N)</td>
<td>(%)</td>
<td>(N)</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>12</td>
<td>17.4</td>
<td>2</td>
<td>9.5</td>
<td>1</td>
</tr>
<tr>
<td>Part time</td>
<td>20</td>
<td>29.0</td>
<td>4</td>
<td>19.0</td>
<td>1</td>
</tr>
<tr>
<td>Unemployed</td>
<td>37</td>
<td>53.6</td>
<td>15</td>
<td>71.4</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>100.0</td>
<td>21</td>
<td>100.0</td>
<td>10</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>9</td>
<td>16.4</td>
<td>4</td>
<td>22.2</td>
<td>2</td>
</tr>
<tr>
<td>Part time</td>
<td>16</td>
<td>29.1</td>
<td>2</td>
<td>11.1</td>
<td>0</td>
</tr>
<tr>
<td>Unemployed</td>
<td>30</td>
<td>54.5</td>
<td>12</td>
<td>66.7</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100.0</td>
<td>18</td>
<td>100.0</td>
<td>8</td>
</tr>
</tbody>
</table>

The young adults who were employed differed considerably in terms of their hourly wage, with wages ranging from $0.10 to $12.50 per hour, and in number of hours worked. Slightly more than 59% of the sample was unemployed and earned no wages. Four percent of the total sample (i.e., males and females) earned the national minimum wage (i.e., $5.15 per hour); 15% earned less than minimum wage; and only one individual (0.5%) reported an hourly wage of $12.50 per hour. Forty young adults, or 21% of the sample, earned above minimum wage, with wages ranging from $5.25 to $12.50 per hour and an average wage of $7.76. Of these young adults earning above minimum wage, 23 were male and 17 were female; 30 were White, 7
African American, 2 Asian Americans and 1 of Hispanic origin. Two percent of the entire sample reported that their young adult worked less than 5 hours per week, 15% worked between 5 and 20 hours, 21% worked between 21 and 39 hours, and 3% worked 40 or more hours per week.

Table 8
Young Adult Pay Scale and Hours Worked

<table>
<thead>
<tr>
<th>Hourly Wage</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>113</td>
<td>59.2</td>
</tr>
<tr>
<td>$0.10-$5.10</td>
<td>30</td>
<td>15.7</td>
</tr>
<tr>
<td>$5.15</td>
<td>8</td>
<td>4.2</td>
</tr>
<tr>
<td>$5.25-$12.45</td>
<td>39</td>
<td>20.4</td>
</tr>
<tr>
<td>$12.50</td>
<td>1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Number of hours worked per week

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployed</td>
<td>115</td>
<td>60.2</td>
</tr>
<tr>
<td>Less than 5</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>5-10</td>
<td>12</td>
<td>6.3</td>
</tr>
<tr>
<td>11-20</td>
<td>16</td>
<td>8.4</td>
</tr>
<tr>
<td>21-39</td>
<td>40</td>
<td>20.9</td>
</tr>
<tr>
<td>40 or more</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The sample included individuals from a wide range of racial and ethnic backgrounds, regions within the Commonwealth of Virginia, and residential communities (i.e., urban, suburban, and rural). Although the sample’s diversity speaks well to generalization of the results across the Commonwealth, only gender and race/ethnicity were analyzed due to sample sizes and the research questions asked. The usable surveys were administered to 191 caregivers of young mentally retarded adults between the ages of 18 and 26 years, including 103 males and 88
females across each of four race/ethnic groups. For the purposes of this study, only African Americans, Asian Americans, Caucasians, and Hispanics were compared. Table 9 presents the raw score means and standard deviations for the survey scales and total scale score for each race/ethnic group by gender. A 4-point Likert response mode with four items per scale results in a possible score range of 4 to 16 points. Most of the scales produced means close to the midpoint of this range (i.e., 10.0), meaning that respondents were generally neither above nor below the midpoint of the range, with the exception of Transportation, which was 2 to 4 points below the scale midpoint.
Table 9
Survey Subscale and Total Scale Raw Score Means and Standard Deviations for Gender and Race/Ethnicity

<table>
<thead>
<tr>
<th></th>
<th>Independent Living</th>
<th>Transportation</th>
<th>Community Services Accessed</th>
<th>Employment</th>
<th>Caregiver Perceptions of Transition Services</th>
<th>Quality of Life</th>
<th>Total Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American</td>
<td>10.43</td>
<td>2.84</td>
<td>8.33</td>
<td>2.06</td>
<td>10.67</td>
<td>3.02</td>
<td>10.29</td>
</tr>
<tr>
<td>Hispanics</td>
<td>10.00</td>
<td>2.65</td>
<td>6.00</td>
<td>1.73</td>
<td>9.33</td>
<td>4.51</td>
<td>8.67</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whites</td>
<td>9.95</td>
<td>2.54</td>
<td>7.56</td>
<td>2.20</td>
<td>10.02</td>
<td>3.20</td>
<td>10.02</td>
</tr>
<tr>
<td>African</td>
<td>10.50</td>
<td>3.2</td>
<td>7.67</td>
<td>1.78</td>
<td>9.22</td>
<td>3.34</td>
<td>8.61</td>
</tr>
<tr>
<td>American</td>
<td>10.13</td>
<td>2.95</td>
<td>7.00</td>
<td>0.00</td>
<td>11.00</td>
<td>3.02</td>
<td>9.63</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8.86</td>
<td>1.07</td>
<td>7.43</td>
<td>0.79</td>
<td>8.86</td>
<td>3.08</td>
<td>8.71</td>
</tr>
<tr>
<td>Total</td>
<td>9.93</td>
<td>2.53</td>
<td>7.44</td>
<td>2.10</td>
<td>9.71</td>
<td>2.91</td>
<td>9.49</td>
</tr>
</tbody>
</table>
Research questions 1 through 6 were based on perceptions of caregivers and addressed whether young adults with mental retardation differ in their independent living, access to transportation, access to services, employment, benefit from transition services, and quality of life as a function of gender and race/ethnicity. Additionally, a series of exploratory 2 (gender) x 4 (race/ethnicity) ANOVAs were run on each scale to test mean score differences across the unique content of each individual scale; these individual ANOVAs were conducted with an overall experimentwise error rate of $p < .05$. With six individual scale contrasts, each ANOVA used a Bonferroni-corrected alpha of .008 (i.e., .05/6).

Specifically, research question 1 asked about the extent to which young adults with mental retardation differ in their independent living arrangements as a function of gender and race/ethnicity. A 2 (gender) x 4 (race/ethnicity) ANOVA was conducted to test this hypothesis. The results revealed no significant differences in the independent living among the young adults as a function of their gender, $F(1, 183) = .02, ns$; or race, $F(3, 183) = .71, ns$; or as an interaction between gender and race, $F(3, 183) = .22, ns$.

Research question 2 asked about the extent to which young adults with mental retardation differ in their access to transportation as a function of gender and race/ethnicity. A 2 (gender) x 4 (race/ethnicity) ANOVA was conducted to test this hypothesis. The results revealed no significant differences in transportation access among these young adults as a function of their gender, $F(1, 183) = .00, ns$; or race $F(3, 181) = 1.6, ns$; or as an interaction between gender and race, $F(3, 181) = 1.9, ns$. 

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Research question 3 asked about the extent to which these young adults with mental retardation differ in their access to services as a function of gender and race/ethnicity. A 2 (gender) x 4 (race/ethnicity) ANOVA was conducted to test this hypothesis. The results revealed no significant differences in the degree to which these youth access services as a function of their gender, $F(1, 183) = .02, ns$; or race, $F(3, 183) = .39, ns$; or as an interaction between gender and race, $F(3, 183) = 1.7, ns$.

Research question 4 asked about the extent to which these young adults with mental retardation differ in their employment as a function of their gender and race/ethnicity. A 2 (gender) x 4 (race/ethnicity) ANOVA was conducted to test this hypothesis. The results revealed no significant differences in employment rates among these youth as a function of their gender, $F(1, 133) = .01, ns$; or race, $F(3, 133) = .35, ns$; or as an interaction between gender and race, $F(3, 133) = 2.1, ns$.

Research question 5 asked about the extent to which these young adults with mental retardation benefit from transition services as a function of gender and race/ethnicity. A 2 (gender) x 4 (race/ethnicity) ANOVA was conducted to test this hypothesis. The results revealed no significant differences in perceived transition benefits derived by these youth as a function of their gender, $F(1, 176) = .01, ns$; or race, $F(3, 176) = .68, ns$; or as an interaction between gender and race, $F(3, 176) = 1.6, ns$.

Research question 6 asked about the extent to which these young adults with mental retardation differ in their quality of life as a function of gender and race/ethnicity. A 2 (gender) x 4 (race/ethnicity) ANOVA was conducted to test this hypothesis. The results revealed no significant differences in the perceived quality of life.
life of these youth as a function of their gender, \( F(1, 181) = .13, ns; \) or race, \( F(3, 181) = .7, ns; \) or as an interaction between gender and race, \( F(3, 181) = .5, ns. \)

Research question 7 asked about the extent to which these young adults with mental retardation differ in each of the unique behavioral issues assessed across each of the 24 individual items on the scale as a function of the youth’s gender and race/ethnicity. A series of 2 (gender) x 4 (race/ethnicity) ANOVAs were run on all survey items to test differences across the unique content assessed by each individual item; these ANOVAs were conducted with an overall familywise error rate of \( p < .10. \) With 24 individual item contrasts, each ANOVA used a Bonferroni-corrected alpha of .004 (i.e., .10/24). Of the 24 individual ANOVAs corrected for alpha slippage using a Bonferroni correction, with \( p < .004, \) only items 21, 22, and 25 were significant. All post hoc analyses were conducted using the Tukey HSD, with an alpha level of .05.

Of the three significant ANOVAs, item 21 asked how aware the young adult was of services provided in the community by agencies, and the analyses of the data revealed a significant difference between mean scores for race, \( F(3, 183) = 4.9 p < .002, \) with post hoc analyses revealing that White respondents claimed to be significantly less aware of service availability than African American respondents. The difference between the mean ratings of White and African American caregivers on item 21 yielded an effect size of .67, which is considered a moderate effect (Cohen, 1988). Item 25 asked how much assistance the young adult needs when making important life decisions, and the analyses of the data revealed a significant difference between mean scores for race, \( F(3, 183) = 5.2 p < .001, \) with African
American respondents claiming to need less assistance than White respondents. The difference between the mean ratings of White and African American caregivers on item 25 yielded an effect size of .59, which is considered a moderate effect. Item 22 asked about the young adult’s ability to support him- or herself, and the ANOVA identified no main effects but did reveal a significant gender by race disordinal interaction, \( F (3, 183) = 5.7 p < .001 \), with Whites differing in orientation from African Americans as a function of gender (see Figure 2).

**FIGURE 2. Young Adult Earnings: Gender by Race Interaction.**

![Graph showing the interaction between young adult gender and race on earnings.](image)

The significant gender by race interaction was followed with four independent \( t \) tests, dividing the sample by race/ethnicity and comparing males and females within their respective racial groups. The Levene’s test for equality of variances was

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conducted for each \( t \) test and was significant for both gender contrasts for Whites and African Americans, thus necessitating the use of corrected degrees of freedom. Detailed analysis of the four independent \( t \) tests revealed that African American males earned more income than females, \( t (36) = 2.1, p < .05; d = .31 \), and White females earned more income than males, \( t (74.4) = -3.1, p < .05; d = .30 \).

Research question 8 asked about the nature of the relationship between young adults' independent living, access to services, employment, quality of life, transportation, and services received as factors that facilitate or inhibit transition to adulthood. Table 10 presents the intercorrelations between the subscales of the survey, revealing that all subscale intercorrelations were significant and ranged from .15 to .60. The correlation between Caregiver Perceptions of Transition Services Received and Transportation was low at .15 (\( p < .05 \)). The highest correlation was between Community Services Accessed and Caregiver Perceptions of Transition Services Received. The strongest scale in terms of overall intercorrelations was between the various scales and the Community Services Accessed subscale, which typically yielded correlations in the range of .30 to .60, with a median of .52, and sharing approximately 30% variance with the other subscales.
Table 10
Correlations between Subscales for Young Adults with Mental Retardation

<table>
<thead>
<tr>
<th></th>
<th>Employment</th>
<th>Independent Living</th>
<th>Quality of Life</th>
<th>Community Services Accessed</th>
<th>Caregiver Perceptions</th>
<th>Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.23 (**)</td>
<td>.37 (**)</td>
<td>.52 (**)</td>
<td>.58 (**)</td>
<td>.18 (*)</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.002</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.015</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>191</td>
<td>191</td>
<td>189</td>
<td>191</td>
<td>184</td>
<td>191</td>
</tr>
<tr>
<td><strong>Independent Living</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.23 (**)</td>
<td>1</td>
<td>.52 (**)</td>
<td>.32 (**)</td>
<td>.24 (**)</td>
<td>.46 (**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.002</td>
<td>.000</td>
<td>.000</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>191</td>
<td>191</td>
<td>189</td>
<td>191</td>
<td>184</td>
<td>191</td>
</tr>
<tr>
<td><strong>Quality of Life</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.37 (**)</td>
<td>.52 (**)</td>
<td>1</td>
<td>.55 (**)</td>
<td>.38 (**)</td>
<td>.29 (**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>189</td>
<td>189</td>
<td>189</td>
<td>182</td>
<td>182</td>
<td>189</td>
</tr>
<tr>
<td><strong>Community Services Accessed</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.52 (**)</td>
<td>.32 (**)</td>
<td>.55 (**)</td>
<td>1</td>
<td>.60 (**)</td>
<td>.30 (**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>191</td>
<td>191</td>
<td>189</td>
<td>191</td>
<td>184</td>
<td>191</td>
</tr>
<tr>
<td><strong>Caregiver Perceptions of Transition Services Received</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.58 (**)</td>
<td>.26 (**)</td>
<td>.39 (**)</td>
<td>.59 (**)</td>
<td>1</td>
<td>.15 (*)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
<td>.041</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>184</td>
<td>184</td>
<td>182</td>
<td>184</td>
<td>184</td>
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</tr>
<tr>
<td><strong>Transportation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>.18 (*)</td>
<td>.46 (**)</td>
<td>.30 (**)</td>
<td>.30 (**)</td>
<td>.15 (*)</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.015</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.041</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>191</td>
<td>191</td>
<td>189</td>
<td>191</td>
<td>184</td>
<td>191</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Summary of Results

The results of the data analyses revealed no significant differences between young adults with mental retardation as a function of their race or gender in terms of their independent living, use of transportation, access to services, employment, transition services received, and quality of life. Independent investigation of the 24 items revealed significant differences in only three items (i.e., 21, 22, and 25) after the alpha level was corrected for experimentwise error. Questions 21 and 25 revealed a significant race difference between White and African American youth, and question 22 revealed a significant race by gender interaction that showed that African American and Asian American males scored higher than females and White and Hispanics males scored lower than females.

Intercorrelations between the six subscales were all significant, which indicates that there is a common thread of independence/dependence that appears to run through all six areas of functioning. The subscale with the least relationship with the others was Transportation, and the one area that seemed to be most foundational and correlated the strongest with the other areas of functioning was the scale that assessed services received.
CHAPTER 4
DISCUSSION

This study investigated postschool transition services and outcomes of young adults with mental retardation in Virginia. The primary purposes of the study were to (a) identify postschool outcomes of young adults (ages 18-26 years) with mental retardation as a function of the individuals’ gender, race, and ethnicity, and (b) survey caregivers about their perceptions of their young adults in six areas of functioning, including employment, independent living, quality of life, transportation, community services accessed, and transition services received.

The general findings in this study are similar to those identified in other postschool outcome studies. The results indicated that young adults with mental retardation in Virginia, ages 18 to 26 years, have limited access to transportation, are dependent upon others for their residence, and experience high levels of unemployment and low wages. Marital status of the young adults included in this study was similar to youth considered in other studies (Liebert, Lutsky, & Gottlieb, 1999). Ninety-five percent of the young adults had never been married, and the small percentage who were or had been married included those who are now separated, divorced, or widowed. Postschool adjustment is difficult for young adults with mental retardation, and these young adults often require multiple services to help them overcome difficulties associated with postschool transition. Services provided assist in improving employment, independent living, community service access, quality of life, engagement with peers, and transportation.
Given the vast needs of these young adults, it is understandable that 84% of them access services from their local community service boards. The remaining 16% were registered with their local community service board but were currently not receiving services. But, given the magnitude of need, it is surprising that so few young adults (41%) sought additional help from other agencies, such as the Department of Rehabilitative Services. Whereas financial assistance to individuals with mental retardation is provided by the Social Security Administration (SSA), not all of these youth received SSA benefits; 85% of the young adults were receiving SSA benefits and 61% were receiving Medicaid services. Survey respondents also indicated that only 6% of the young adults in this study used the services provided by Centers for Independent Living. The low percentage of young adults accessing this service may in part be due to a lack of skills needed to live independently or the inability to support oneself due to low wages (Lustig & Strauser, 2004; Vanderschie-Bezyak, 2003).

Mental Retardation: An Equal Opportunity Disability

Mental retardation is difficult and challenging for the estimated nine million Americans who have the disability (University of Maryland Medical Center, 2006). In Virginia it is estimated that of the six million residents, 39,414 individuals live with mental retardation (Virginia Department of Mental Health, Mental Retardation, and Substance Abuse Services [VDMHMRSAS], 2006). Throughout the Commonwealth of Virginia it is estimated that over 2,400 young adults with mental retardation between the ages of 18 and 26 receive services through local community service boards (VDMHMRSAS, 2006). Individuals with mental retardation may be
limited not only in their cognitive and adaptive behavior skills but also in their ability to learn new skills, adapt to changes in their environments (as well as new environments), and develop appropriate social skills (Hudson & Chan, 2002). These limitations do not segregate based upon gender or race/ethnicity (Reschly & Myers, 2002).

Individuals with mental retardation have unique learning characteristics; they learn less and have difficulty generalizing learned skills to other settings and maintaining what they have learned over time (Stuart & Smith, 2002). Individuals with mental retardation have difficulty learning job skills. As a result, they perceive that they are incapable of successful employment, which causes them to be further stigmatized and reduces the possibility that employers will hire them, which in turn affects their ability to integrate fully into society (Hunt & Hunt, 2004).

A review of the 24 items on the survey instrument shows that gender and race/ethnicity groups had no significant differences across the six subscales. However, significant differences were identified with a race main effect (i.e., questions 21 and 25) and race by gender interaction (i.e., question 22). It is reasonable to question the meaningfulness of the non-insignificant findings for the other 21 questions presented on the survey. Being a young adult with mental retardation is difficult regardless of gender. The disability does not discriminate based upon gender or race/ethnicity and does not favor one gender or ethnic group over another. There is an important distinction provided by the data presented in this survey. Significance was obtained in three of the questions (awareness of services, assistance in making important life decisions, earning enough money to support oneself) and not in the
other 21 questions presented. A finding of no significance among the groups within the 21 items and the subscales based upon gender and race/ethnicity implies that the disability itself results in shared experiences among young adults with mental retardation. Gender or race/ethnicity may not be the variable that resulted in the responses being similar in nature; rather the common variable is that of mental retardation.

One might assume that one’s gender or race/ethnic group (i.e., African American, Asian American, White, or Hispanic) would have produced responses that may have indicated significant differences among the subscales. Based upon the surveys distributed in Virginia, the results show no significant differences among the groups based upon gender and race/ethnicity. For example, research question 4 asks if the young adult is satisfied with his or her current employment. The mean score for this response was 9.4 (see Table 9), falling just below the midpoint of the range (i.e., 10.0), which means that there were no significant differences within this question or within the Employment subscale, resulting in a similar number of agreements and disagreements to the question presented. For every caregiver who responded with an agreement on the Likert scale, a similar number of caregivers responded with a disagreement.

Too often survey studies do not report the reliability of the survey used; however, in this study reliability of the survey was conducted and reported. Total scale reliability (Coefficient Alpha) was strong, with a coefficient of .85. The six four-item subscale reliabilities were less robust and ranged from .17 to .88, with a median reliability of .54. As stated previously, the six subscales, in order of the
magnitude of their reliabilities, were: Transportation \((r = .17)\); Independent Living \((r = .47)\); Quality of Life \((r = .52)\); Employment \((r = .56)\); Community Services Accessed \((r = .69)\); and Caregiver Perceptions of Transition Services Received \((r = .88)\). Reliabilities for most subscales were moderately strong, whereas others (i.e., Transportation) were suspect in terms of further analyses. Regardless of the magnitude of the reliabilities, statistical analyses were conducted as planned to answer proposed research questions.

Discussion of Findings

Data from the eight research questions were analyzed and are presented here in serial order. A description of each survey scale, the findings regarding the respective scales, and an interpretation of the scale results in relation to the existing literature are presented in the subsections that follow.

Independent Living

Independent living is defined as the right of all people, but especially people with disabilities, to control and direct their own lives and to participate actively and independently in society (Turnbull et al., 2003). Independence can be achieved by (a) making lifestyle choices that minimize reliance on others for decision making and everyday activities and (b) being limited only in the same ways that people without disabilities are limited (Ratzka, 2003). Striving for independence is an essential part of life for young adults with mental retardation and for their families. Researchers of previous studies have examined the extent to which young adults with mental retardation achieve certain levels of independence and the reliance that is placed upon caregivers (Lustig, 1999; Luftig & Muthert, 2005).
Independence is valued and viewed differently by each individual. What may seem like meaningful independence to one individual may in turn be restrictive in nature to another. For the purposes of this study, the Independent Living subscale reflected independence in a broader sense than just living arrangements. For example, the scale addresses the youth's independence in decision making, spending money, and preparing meals, as well as satisfaction with his or her current living arrangements. As a result of investigating the extent to which young adults with mental retardation differ in independent living as a function of basic demographic characteristics, the data revealed no significant differences in independent living patterns based on the young adult's gender or race/ethnicity, with one exception (i.e., item 25). Item 25 asked how much assistance the young adult needed when making important life decisions; data analyses revealed a significant difference \( p < .001 \) between mean scores for race, with African American respondents claiming to need less assistance than White respondents.

The descriptive statistics revealed that only 3% of the young adults lived independently, whereas 76% lived with their parents, 3% lived with a nonfamily member or a legal guardian, 8% lived in a group home setting, and 10% lived with other nonparent relatives. These findings are consistent with results from other studies, which have reported that only small percentages of young adults with mental retardation live independently (Blumberg & Ferguson, 1999).

The responses from the caretakers of these young adults are consistent with findings reported in several other studies with respect to the additional areas of independent functioning. For example, Johnson et al. (1998) reported that individuals
with moderate or severe retardation who are dependent on others for residence were content with their living arrangements and were able to exert some level of financial independence (i.e., making purchases and spending choices). Seventy-five percent of the caregiver respondents in this Virginia survey reported that their young adult with mental retardation was happy with his or her current living arrangements. The same caregivers reported that 48% of the youth have varying degrees of control over discretionary money, whereas 52% do not have any control over personal funds. The young adults’ lack of control over personal finances does not appear to affect their overall happiness; caregivers reported that it has not affected their young adults’ personal satisfaction concerning current living arrangements.

Transportation

Transportation through operating a motor vehicle, accessing public transportation, or making transportation arrangements with community service agencies is viewed as one form of independence. Many young adults with mental retardation are unable to drive, access public transportation, or make arrangements for transportation. Many of these young adults are still heavily reliant on family members or service providers for transportation assistance (Moore et al., 2002). Given this tendency for heavy reliance, the Transportation scale included items that addressed a wide range of transport, including the youths’ ability to walk alone to public places, as well as their dependence on special transportation, use of public transportation, operation of a motor vehicle, and reliance on family and friends for transportation.

Other studies have consistently reported that young adults with mental retardation require assistance in meeting their transportation needs either from family
members or public agencies (Johnson et al., 1998; Moore et al., 2002). Large numbers of young adults with mental retardation are reliant on family members not only to provide transportation but also to make any and all transportation arrangements (Keigher, 2000). According to the National Longitudinal Transition Study-2 (2005), only 27.2% of young adults with mental retardation find it difficult to get to where they need to go whereas 49.4% report it to be very easy. The question presented in the NLTS2 study does not inquire from whom or whether any assistance is required. It simply states, “How difficult is it for youth to get to where s/he needs to go?” The question specifically addressed perceptions of difficulty in self-transport as opposed to ability to achieve independent transportation goals.

Consistent with previous studies in which ability to access and acquire transportation was evaluated, this survey determined that the young adults with mental retardation in Virginia were heavily dependent on others for transportation. The Transportation subscale analyses also investigated the extent to which young adults with mental retardation differed in their transportation needs and access to transportation as a function of gender and race/ethnicity. The data revealed no significant mean score differences on the Transportation subscale among the groups based upon gender or race/ethnicity. That is, regardless of gender or race/ethnicity characteristics, these young adults with mental retardation were dependent on others for their transportation needs. Only 4% of the young adults with mental retardation operate a vehicle, 20% rely on special transportation, 12% walk independently, and 73% access public transportation.
Access to Community Services

Community agencies and the services they provide are varied (i.e., social/recreational or educational/vocational) and are only beneficial if they are readily available and can be accessed without difficulty (i.e., funding and availability are present). Individuals and caregivers are more likely to access services if they are aware of their availability and transition contacts have been established prior to the students' completion of high school.

Access to services should be clearly defined and assistance provided in conjunction with high school transition coordinators and community service providers. Lack of information and collaboration among service providers and schools creates problems for families and caregivers of young adults with mental retardation. Without proper information, families may be unaware of services and resources that may prove beneficial to their young adult with mental retardation. As a result of this lack of awareness, young adults with mental retardation may become isolated from crucial community services (i.e., across agencies). The goal of collaboration and communication is to provide appropriate services and supports to accommodate the unique needs of the young adults with mental retardation and empower caregivers to make informed decisions, which ultimately enhances their caregiving capacity (Vanderschie-Bezyak, 2003).

The Community Services Accessed subscale addresses such topics as the ease of access, benefit of services, participation within available services, awareness of services available, and satisfaction with overall services received. The subscale analyses also investigated the extent to which young adults with mental retardation
differed in their access to available community services as a group and also as a function of their gender and race/ethnicity. The data revealed no significant differences for the subscale among the groups on the basis of gender or race/ethnicity, except in one specific area (i.e., item 21). Item 21 asked if the young adult was aware of services provided by agencies in the community. The analyses revealed a significant ($p < .002$) mean score difference for race, with White respondents claiming to be significantly less aware of service availability than African American respondents. It is possible that White caregivers of young adults with mental retardation perceive there to be more services available that they are not aware of or feel they have not been informed of the presence of additional programs.

In a review of the literature, one frequently cited caregiver complaint is that they report needing help obtaining community services and understanding which agencies provide necessary support services. In contrast to the race findings in this study concerning respondents' awareness of service availability, Cornelius, Simpson, Ting, Wiggins, and Lipford (2003) cited African Americans as being less inclined to seek services than Whites. These researchers did not directly address the issue of service awareness, but they did report that African Americans were less inclined to seek services based on fear of discrimination and lack of accessibility to needed services. The current study suggests that young adults with mental retardation are aware of services in the community, with one racial group (i.e., African Americans) being more aware than another group (i.e., Whites). This study did not investigate fear or perceptions of discrimination as deterrents to seeking services.
Employment

Employment for young adults with mental retardation is viewed as one measure of successful transition to adulthood and independent living. As with independent living arrangements, earning a self-supporting wage provides young adults with mental retardation a real sense of independence. For most young adults with mental retardation, however, employment is very difficult to obtain and is often based on placement availability through rehabilitation services rather than individual employment preferences (Huang & Rubin, 1997). This type of employment placement may hinder job satisfaction and one’s ability to develop and advance necessary job and social skills. Rehabilitative placements are often limited and do not allow for employment opportunities with nondisabled peers. West, Wehman, and Wehman (2005) suggested that the working environment and relationships with nondisabled coworkers may be the most important factors that contribute to job satisfaction for young adults with intellectual and developmental disabilities, particularly those employed in positions requiring less skill.

Employment opportunities for young adults with mental retardation are often limited in availability due to strained resources from community services agencies (i.e., state and local funds), as well as the limited job preparedness skills and communication abilities of young adults with mental retardation (Johnson et al., 1998). The Employment subscale included questions concerning job modification, employment satisfaction, employment-seeking assistance, job coaching, and salaries. The subscale analyses reflect the extent to which young adults with mental retardation differ in their employment as a function of gender and race/ethnicity. The data

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revealed no significant differences within the subscale among the groups on the basis of gender or race/ethnicity, except on item 22. Item 22 asked if the young adult earns enough money to support him- or herself. The ANOVA identified no main effects but did reveal a significant gender by race disordinal interaction, with Whites differing in orientation from African Americans. The difference between African American males and White female raters on this item yielded effect sizes of .31 (African American) and .30 (Whites), which are considered moderate effects (Cohen, 1988). Caregivers indicate that African American males earn more than African American females; however, the opposite was found for Whites, with males earning less than females.

Overall, the descriptive statistics revealed that of the 76 employed young adults with mental retardation 35 were women and 41 were men. For the White young adults, 16.4% \((N = 9)\) of White females worked full time and 29.1% \((N = 16)\) worked part time, whereas 17.4% \((N = 12)\) of White males worked full time and 29% \((N = 20)\) worked part time. For Hispanic females, 14.3% \((N = 1)\) worked full time and 14.3% \((N = 1)\) worked part time. For African American males, 10% worked full time \((N = 2)\) and 19% worked part time \((N = 4)\). In summary, White males are perceived as working at a higher rate of full-time employment as compared to other groups and White men and White women are equal in terms of part-time employment.

The employment responses to this survey from the caregivers are consistent with findings reported in other studies. According to Nisbet and Lichtenstein (1992), the men in their study were employed at a higher full-time and part-time rate than the women. In this Virginia study of young adults with mental retardation, the part-time rate is consistent with the Nisbet and Lichtenstein study except for the full-time rate.
for women. The survey respondents indicated that young women are employed at a full-time rate of 18% and young men at a full-time rate of 16%. This also contradicts findings from Benz and colleagues (1997) that women with disabilities, including those with mental retardation, have poorer postschool employment success than men. The men and women in the Virginia study whose caregivers responded to the survey reported the rate of employment for both men and women full and part time to be 40%. The men worked part time at a rate of 24.3% (N = 25) and the women at 22% (N = 19). This conclusion is also consistent with the finding from the NLTS2 (2005), in which 22.9% of males with mental retardation were employed at the time of data collection compared to 19.6% of females in the same category. The survey did not seek information from the caregivers concerning specific vocational training and/or prior work experience while in high school; rather it elicited information concerning caregiver perceptions of the transition process and information delivery. Without additional information concerning vocational training and/or prior work experience while in high school, it is difficult to speculate on the variables that may have assisted the 40% of young adults in this Virginia study with employment outcomes.

Transition Services Received

Parental participation in IEP meetings has been required since the inception of the Education of the Handicapped Act (EHA) of 1975 and is still an essential component today. Parents play a critical role in assisting their children in their educational pursuits and in making the transition from high school to young adult life. Because of this historic and practical involvement of parents, additional effort must be given to actively engage parents in discussions and decisions concerning school
choices and postsecondary options for their young adults with mental retardation. Parental involvement in IEP meetings is one step toward aiding successful transition, but it is not the only step. Open communication and information sharing by teachers, transition specialists, and coordinators are crucial to the transition process. All members of the transition team are responsible for focusing on the postschool experiences of students with mental retardation in the areas of postsecondary education, employment, community service connections (i.e., health, mental health, human services, and transportation), and independent living in an effort to increase the access, participation, and success of youth with mental retardation in postsecondary life while maintaining open communication with families.

The Caregiver Perceptions of Transition Services Received subscale reflects caregivers' opinions about transition services received (i.e., helpfulness and effectiveness of the services received), caregiver participation, postschool transition, and community agency contacts. This subscale reflects the extent to which young adults with mental retardation benefit from transition services differentially as a function of their gender and race/ethnicity. The data revealed no significant differences among the groups based on gender or race/ethnicity. According to Hasazi et al. (1999), the success of the transition process relies on the efforts of the community-based training staff and families to ensure that students learn current knowledge about functioning effectively as adults in their communities. Community acclimation is to a large degree contingent on the student's level of functioning and on the program's efficacy. Support services and the delivery of these transition
services coupled with necessary learned and social skills of a young adult with mental retardation aid in postschool adjustment.

**Quality of Life**

For young adults with mental retardation, quality of life is enhanced by corresponding improvements in life skills, such as social interaction, employment, money management, community adjustment, independent living, self-determination, personal choice, recreation, physical and material well-being, and personal satisfaction (Freedman & Boyer, 2000). Quality of life is unique to the individual and is defined by each person's own expectations and outlook. The Quality of Life subscale posed questions about students' happiness, boredom, social/recreational satisfaction, social visits with friends, and free time. This subscale reflects the extent to which young adults with mental retardation differ in quality of life as a function of their gender and race/ethnicity. The data revealed no significant differences between the groups based on students' gender or race/ethnicity.

Quality of life is a construct that has emerged in the literature in relation to successful transition through policy and practice (Turnbull, 2001). Quality of life is affected by multiple conditions and varies depending on the individual. This is true of successful transition. Postschool transition is not achieved by a single component but by a combination of services and attention to individual need. It is possible that the interactions an individual has between the components of the subscales may influence the degree to which one interprets his or her quality of life. Quality of life and successful transition outcomes cannot be determined by one single variable; rather, both are affected by multiple factors, such as early planning, parent and student
involvement, community resources, interagency participation, education, and individual skills and goals.

*Gender and Race Difference on Each of the 24 Scale Items*

The seventh research question examined the extent to which young adults with mental retardation differ across the unique content represented in each individual item as a function of students’ gender and race/ethnicity. There were six subscales, each with four items. As stated previously, of the 24 questions only items 21, 22, and 25 generated significant outcomes. Of the 3 questions that were significantly different, the differences were not predictable based on the results reported in other research studies. The results of this study as suggested by the caregivers in response to question 21 indicate that Whites (N = 124) in Virginia are less aware of available services than are African Americans (N = 39). It is possible that African Americans in Virginia believe that they are receiving all available services whereas Whites may feel there are other services available that they are unaware of or have yet to receive based upon eligibility. In a contrasting study, African Americans stated a fear of seeking services due to possible discrimination, an inability to seek services due to limited resources (i.e., transportation), and a lack of awareness of available services (Cornelius et al., 2003). In other studies, the issue concerns communication and collaboration rather than race as a means of making families and caregivers aware of available services. Educating families and caregivers about available postschool services is aimed at educating those in disability categories not individual racial groups. The available data provide insight into the perceptions of caregivers of young
adults in Virginia and how they perceive the services available in their local communities.

Another area of concern presented in the literature is wages for young adults with mental retardation, both male and female, and regardless of race/ethnicity. Males in the current study were reported to typically work more hours than females and have a higher rate of pay. In response to question 22, caregivers reported that African American males earn more money than African American females and White females earn more money than White males. The interesting relationship here is the interaction that occurred between White females and African American males. It is possible that these groups were exposed to vocational training or were employed while in high school. Studies have suggested that involvement in vocational education and/or paid work experience while in high school increases wage earnings (Dunham et al., 2000; Izzo et al., 2000). As stated previously, few studies conducted on young adults with mental retardation segregate the data based on participant gender or race but rather report on the disability category as a whole or in comparison to other disabilities. The lack of comparable literature (i.e., gender, race/ethnicity) makes it difficult to hypothesize as to the nature of the relationship reported by the caregivers in Virginia. However, the data presented for the women in Virginia contradict other studies in which females did not perform as well as men in terms of full- and part-time employment (National Longitudinal Transition Study-2, 2005; Nisbet & Lichtenstein, 1992).

Making important life decisions can be challenging for anyone, and having a disability only adds to the pressure and difficulties associated with making life
choices and striving for independence. In response to question 25, caregivers of White young adults agreed or strongly agreed that these young adults require assistance when making important life decisions; on the other hand, caregivers of young adult African Americans with disabilities were less likely to agree that the young adult needed assistance in making life decisions. Perhaps race is not the defining factor, and these groups differ in their abilities to make decisions based upon unique and individual life experiences. It is possible that certain young adults with mental retardation have been sheltered from decision making, relying instead on others such as family members or caregivers to make decisions for them (Heller, Factor, Sterns, & Sutton, 1996). There are many possible answers to why one group requires more assistance than another, but the answers are contingent upon the individual and his or her unique circumstances (Heller et al., 1996). It is possible that some young adults with mental retardation know what is important to them and what they hope to achieve through the decisions they make. Young adults with mental retardation possibly make decisions to achieve a specific goal, and the assistance that is needed or sought after is contingent upon the individual and his or her unique circumstances (Brickman, Rabinowitz, Kamza, Coates, Cohn, & Kidder, 1982). Young adults with mental retardation may seek assistance as a means of gathering input from family and friends, as do their nondisabled peers. Requiring assistance in making decisions can be perceived as a weakness or as a means of gathering additional information.
Facilitating Factors: The Transition to Adulthood

The last research question considered the nature of the relationship between the young adults’ independent living, access to services, employment, quality of life, transportation, and services received and factors that facilitate or inhibit transition to adulthood. All intercorrelations between the subscales of the survey were significant and ranged from small to moderate levels (i.e., .15 to .60). Transportation was lowest at .15 ($p < .05$) and Caregiver Perceptions of Transition Services Received highest at .60. The highest correlation was between Community Services Accessed and Caregiver Perceptions of Transition Services Received. It appears that the strongest scale in terms of overall intercorrelations was the Community Services Accessed subscale, which yielded correlations in the range of .30 to .60, with a median of .52. This median correlation yielded approximately 30% variance shared overall with the other subscales. The Community Services Accessed and Caregiver Perceptions of Transition Services Received subscales indicate that services received by young adults with mental retardation in Virginia positively affect others areas of their lives, which results in improved postschool transition outcomes.

Summary

The data presented as a result of this study revealed no differences between respondents on the basis of race or gender for any of the six subscales. This means that for young adults with mental retardation in Virginia, the perceptions of transition services received on the caregivers are viewed much the same regardless of the young adults basic demographic characteristics. However, an independent investigation of the 24 specific survey items revealed significant differences on three items (i.e., 21,
Questions 21 and 25 revealed a significant main effect for race, and question 22 revealed a significant race by gender interaction. The race by gender interaction for question 22 was followed with four independent $t$ tests, which compared males and females within their racial group. As stated previously, through a detailed analysis of four independent $t$ tests, African American males were ranked higher than females and White females were ranked higher than their male counterparts in terms of their ability to support themselves through their earnings.

The lack of a significant difference among the subscales is not surprising. However, the incidence of race interactions (i.e., questions 21 and 25) and the gender and race/ethnicity interactions (i.e., question 22) are surprising given that so few studies on young adults with mental retardation report the differences in outcomes based upon gender and race. Typically, these studies report gender and race only as a means of describing the sample demographics and report on young adults with mental retardation as a whole group and do not generally segregate analyses by race or gender, with a few exceptions. However, considering the reported outcomes of the young adults in this study, analysis of the descriptive statistics within the demographic data revealed a higher full-time employment rate for young women in Virginia (18.2%) than for men (16%). This finding is in contrast to the data reported in the Dunham et al. (2000) study and the National Longitudinal Transition Study-2 (2005), in which males outperformed females in terms of employment. Also, of the 191 young adults with mental retardation, 115 were unemployed, with 54% of the males having a higher unemployment rate than that of the females (46%).
The intercorrelations between the current study survey subscales are consistent with current literature. Caregiver Perceptions of Transition Services Received had the highest correlation among the subscales, whereas Transportation had the lowest correlation. Research has identified positive correlations between transition services received (i.e., vocational education, paid work experience, parent involvement, and interagency collaboration) and successful postschool transition (Benz & Kochhar, 1996; Dunham, Schrader, & Dunham, 2000; Horner, 2001; Izzo et al., 2000; Knight & Aucoin, 1999; Kohler, 2003; Wagner et al., 1991). Postschool success has been attributed but not limited to independent living, employment, and quality of life. Researchers have also identified the application of best practices (i.e., early planning, student involvement, identifying available community resources, and interagency participation) as being a contributing factor to successful transition (deFur & Patton, 1999; Kohler, 1993; Roessler et al., 2000; Rusch & DeStefano, 1989). Researchers of empirical investigations in the field of mental retardation have identified factors that influence successful outcomes as well as factors that negate transition outcomes. Researchers are in agreement that early intervention, planning, interagency collaboration, caregiver involvement, and student involvement are key variables to the success of the transition process. In the current study, Caregiver Perceptions of Transition Services Received has the highest correlation among the subscales. The transition services received while the young adult with mental retardation was in high school positively affect other areas of the young adult’s postschool outcomes.
Limitations of the Study

The survey used for this study was developed to collect data on six areas of functioning and had not been previously used on the intended population, except through pilot testing. It would have been optimal to have used an existing instrument with expanded subscales. The survey was intended to gather data consistent with current research and limit content sampling (i.e., six subscales) to encourage respondent participation. It would be preferable to increase both the number of subscale categories and items per scale, but this would increase the risk that respondents would be unwilling to complete the survey. As mentioned previously, each of the six subscales was systematically reduced from five items to four items, yielding a total scale of 24 items. The reliabilities for the scale ranged from .17 to .88, and the total scale reliability was .85. Reliabilities for most subscales were moderately strong, although Transportation was suspect in terms of further analyses (see Table 3).

Another limitation of the current study concerns participant response rates. Although a 34% response rate is the norm and is acceptable for survey research, there still remains the unidentified data from the 66% who elected not to respond to the survey. The 34% who responded may overrepresent a select demographic group (i.e., middle to upper class), and the results of the study may have been different if data had been obtained from the other 66%.

The study was also limited in size (i.e., 600 participants) and scope (i.e., Virginia). Although the sample size was sufficient for the study, it is not representative of the entire population of young adults with mental retardation who
are registered with community service boards within Virginia. An enhanced sample size may have generated both a larger return rate and greater responses within certain racial/ethnic groups (i.e., African American, Asian American, and Hispanic).

The current study evaluated the relationship between gender and race/ethnicity for young adults with mental retardation. However, young adults with mild, moderate, and severe mental retardation were not identified separately in the study. Abilities and development levels correspond with IQ scores (Moore et al., 2002). Differences in functional capabilities between young adults with mild and moderate mental retardation warrant further attention and may expand on the current findings.

An additional limitation of the current study was the unavoidable use of a third party (i.e., community service boards) to distribute the surveys. The researcher's intention was to gain information directly from young adults with mental retardation post–high school, but the researcher was unable to contact families or young adults directly due to confidentiality laws. To access this information, the researcher elected to collaborate with an agency in which young adults with mental retardation and their families seek postschool assistance. Of the varied social service agencies available to those with disabilities, the community service boards are widely accessed by young adults with disabilities.

For the purpose of this study, the local community service boards acted as the primary contact for the families as well as the mailing agents for the distribution of the surveys. The surveys were boxed and mailed to the participating community service boards for their distribution. An unavoidable limitation of the study was
having to acquire and maintain a contact person at each of the participating community service boards. The contact persons were responsible for mailing the surveys, maintaining a master list of all survey recipients, and affixing the mailing labels to the coded envelopes provided. All 600 envelopes were coded, and the researcher was able to determine that 100% of the participating community service boards conducted the agreed-upon mailing at the designated time.

Recommendations for Future Study

The results of this study were obtained from a sample population (i.e., 600 young adults ages 18-26 with mental retardation) in a specific place (i.e., local community service boards in Virginia) and need to be compared with studies of similar individuals from other areas of the country. Increasing the sample size and expanding the study beyond the local community service boards to other agencies such as the Social Security Administration would allow for a larger sample size and greater representation within geographic and racial and ethnic groups, and also enhance the researcher’s ability to expand beyond a single geographic location to a broader sample base.

Given that this study confirms that most young adults with mental retardation in Virginia live at home or rely on relatives for support, future research might consider the important role of the family and the family environment on young adults’ ability to live independently, make important life decisions, and obtain successful employment outcomes. It may be beneficial to explore the extent to which support services are accessed by which groups and to compare and contrast the
services that families of young adults with mental retardation are reliant upon for community adjustment.

It is hoped that the analysis within this study will stimulate additional empirical research on specific transition programs (i.e., employment services, transportation, community services, independent living, interagency collaboration, and education) that may enhance the quality of life for young adults with mental retardation. Young adults with mental retardation and their families require assistance from state and local community services upon exiting high school. A further study might examine the needs of families concerning postsecondary education, independent living, transportation, personal choice, and employment as they pertain to the availability of these services within their local communities, and to the extent to which young adults are denied services and/or waiting to receive services.

Additional research may be gathered to identify and document the varying types and degrees of support that families require to meet the needs of their young adults with mental retardation. This could be achieved by expanding the current scale in number of response items and expanding the subscales to include additional areas that influence postschool outcomes (i.e., level of mental retardation, current day time activities, employment history, and sources in finding a job). However, expanding the number of items decreases the probability of participants completing the survey.

Implications for Educational Leadership

The challenge for educators, administrators, and transition specialists is to work together with employers, state agencies, community members, social workers, and individuals with mental retardation and their families to enable young adults to
achieve their independent goals. The current study reflects the need for improvements in independent living, employment, wages earned, transportation, awareness of services available, and the skills necessary to make important life decisions. Based upon the correlations from the current study, Transition Services Received and Community Services Accessed were positively related in terms of the subscales represented in the survey among young adults with mental retardation in Virginia. It is hoped that through collaborative efforts that educate and encourage awareness of services educators and families will begin to see improvements in employment, wages earned, transportation, and independent living for young adults with mental retardation. Educators and community service agencies should explore available opportunities for individuals, as well as address the support needs of young adults with mental retardation and their families.

To improve the quality of life and transition outcomes for young adults with mental retardation, educators and community service agency providers will be required to increase and maintain communication with young adults with mental retardation, their families, and the various agencies providing services and supports with a focus on aligning the programs between the schools and the providers (Nuehring & Sitlington, 2003). Interagency collaboration and support for individual students with mental retardation and their families is a factor so important that when done well it facilitates achievement of transition goals, and when done poorly it limits or impedes those goals (Devlieger & Trach, 1999). Similarly, educational emphasis needs to be placed on actively involving students in the educational planning, decision making, and program implementation process (Nuehring & Sitlington,
2003). This is particularly important in transition planning and program development. Student involvement has the potential to increase student interest in postschool outcomes, motivate young adults to learn transition-related skills, and provide hands-on experience in making choices and decisions.

Transition planning is the link between secondary education and postschool adjustment. Educators (general education teachers, special education teachers, transition specialists, and employment specialists) have a responsibility to be prepared to participate in an ongoing process that begins in secondary schools and continues in the postschool environment. It is the responsibility of the educators involved in the transition process to create linkages between school programs, families, and existing postschool services. To see improvements and advances in post-secondary transition, educators will be required to go beyond the IEP and advance their knowledge base in order to assist young adults with mental retardation and their families. Such activities for educators and administrators include participation in curriculum development teams, teacher or family training, technical assistance training, employment supports, staff development activities, and strategic planning and resource allocation (i.e., knowledge of existing services and functions within each agency) that advance the transition process for young adults with mental retardation. Further attention will be required in the areas (a) data collection concerning employment status, skill requirements, independent living, understanding of services provided, and (b) informative measures regarding access to services and the eligibility requirements imposed on young adults with mental retardation in a postschool environment.
Conclusion

There have been changes in legislation since the original implementation of the Education for All Handicapped Children Act (P.L. 94-142) and an increased awareness concerning the postschool outcomes of young adults with mental retardation. Data gathered through this study and other longitudinal studies serve as a window into the lives of young adults with mental retardation and as an indication of the postschool outcomes and activities that young adults with mental retardation in Virginia are engaging in. The success of programs for young adults with mental retardation in Virginia can only be determined by the satisfaction levels of individuals, their families, and community service providers.

This study has presented data to suggest that young adults with mental retardation in Virginia do not differ based upon their gender and or race/ethnicity within the subscales. Responses from their caregivers indicate satisfaction with transition services received and access to community services. These two services are vital to the postschool success of young adults with mental retardation. The findings for transition services received and community services accessed provide a favorable outlook for young adults with mental retardation in Virginia. However, further attention is required to address the low levels of employment, independent living, and transportation.
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Appendix A

Survey Review Committee

1. Given your knowledge and personal experiences with individuals with Mental Retardation are the questions realistic?

2. In your opinion, do the topics covered in the survey appropriately represent life challenges and concerns for young adults with Mental Retardation?

3. Please identify any topics areas that you feel are absent from the survey.

4. In your opinion is the survey easy to read?

5. What suggestions do you have for improving the survey?
Appendix B

Piloting the Survey

1. Are the directions clear?
2. Was the survey easy to complete?
3. How long did it take to complete the survey?
4. Would you be willing to complete the survey if you received it in the mail?
5. What suggestions do you have for improving the survey?
Appendix C
Survey Letter to Caregivers

16 February 2006

Marguerite Beth Graham
5000 Westmoreland Drive
Williamsburg, Virginia 23188

Dear Parent/Caregiver:

My name is Beth Graham and I am a doctoral student in the School of Education at the College of William & Mary in Williamsburg, Virginia. As a sister of a young adult with mental retardation and a doctoral student, I need your unique help as a caregiver of a young adult with mental retardation.

My study focuses on young adults between the ages of 18 and 26 years who are eligible for transition services from their local community service board. I am very interested in your perceptions of the transition services provided for young adults with mental retardation and about life after high school for these young adults. Please consider completing the attached survey about the transition of young adults to life after high school.

To facilitate your participation, I have provided a copy of the survey and a self-addressed, stamped envelope for the return of the survey. Simply complete the survey and mail it back to me. At the conclusion of the study, all participants who request one will be provided a copy of my study results.

To encourage your participation, all participants who complete and return the survey will be eligible to win $100.00 from a random drawing. Each returned envelope will be coded to identify each survey recipient by a number. To ensure your confidentiality, only your local community services board will know your identification. I will draw a number at random and contact the appropriate local community service board and notify them which number is the winner. Your local community service board will then contact you if you are the winner and arrange for the payment. This process will ensure that I will never know your name or any of your personal information.

Please consider taking a few minutes right now to complete and return this very important survey. Of primary importance, your responses will help us better understand what life is like for young adults with mental retardation in Virginia and possibly help us improve transition services for them. Secondarily, your participation will help me complete my doctoral studies, for which I will be eternally grateful.
Your contribution is critical to the success of this study and will be greatly appreciated. In advance, thank you for completing and returning this brief survey.

Sincerely yours,

Beth Graham
Doctoral Candidate
The College of William & Mary
Appendix D

School to Postschool Transition Survey

This survey asks your opinions and perceptions about your young adult’s transition from school to adult life. I am very interested in improving transition services for students with mental retardation. Your responses are very important to me and are greatly appreciated.

When you have completed the survey, please return it to me in the self-addressed envelope. Please return the survey regardless of whether you choose to complete it. Please check the appropriate consent box below indicating whether or not you are willing to assist me with this study.

________ I decline to participate in this survey.

________ I agree to participate

Part 1: Please complete the following descriptive information requested below about the individual in your care—your young adult with mental retardation. Please fill in all bubbles completely.

1. Young adult’s sex (bubble one)
   O Male
   O Female

2. Young adult’s race (bubble all that apply)
   O White
   O Black
   O Oriental, Asian, or Pacific Islander
   O American Indian or Alaskan Native
   O Hispanic

3. Young adult’s age (bubble one)
   O 18
   O 19
   O 20
   O 21
   O 22
   O 23
   O 24
   O 25
   O 26
   O Other

4. Number of grades completed by your young adult (bubble one)
   O 6-8
   O 9-12
   O 13+

5. Young adult’s marital status (bubble one)
   O Never married
O Married
O Separated
O Divorced
O Remarried
O Widow or widower

6. Have you and your young adult received services from any of the following agencies:
   - Community Service Board
   - Department of Rehabilitative Services
   - Social Security Administration
   - Mental Health and Mental Retardation, Mental Health and SAS
   - Centers for Independent living
   - Medicaid (Health Insurance)
   - Food Stamps
   - Other: ________________________________

   O Yes  O No

7. Young adult’s current employment status (bubble one)
   - O Full time
   - O Part time
   - O Not employed (if no, go to question 10)

8. Hours worked per week by the young adult (bubble one)
   - O Less than 5
   - O 5-10
   - O 11-20
   - O 21-39
   - O 40 or more

9. How much does your young adult earn per hour? $______ per hour

10. Young adult’s current living arrangements (bubble one)
    - O On his/her own
    - O Parents
    - O Nonfamily/legal guardian
    - O Group home
    - O Relatives
    - O Other

Part 2: Please fill in the following information about you, the student’s parent or caregiver.

11. Sex (bubble one)
    - O Male
    - O Female

12. Race (bubble all that apply)
    - O White
    - O Black
    - O Oriental, Asian, or Pacific Islander
    - O American Indian or Alaskan Native
    - O Hispanic

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13. Age *(bubble one)*

- O 18-25
- O 26-35
- O 36-45
- O 46-55
- O 56-65
- O 66+

13. Relationship to the young adult in your care *(bubble one)*

- O Mother
- O Father
- O Grandparent
- O Sibling
- O Uncle
- O Aunt
- O Foster family
- O Family friend
- O Group residence supervisor
- O Other

**PART 3:**

<table>
<thead>
<tr>
<th>Please indicate the degree to which you agree with each of the following statements by filling in a bubble that best represents your opinion. Mark only one bubble. Thank you.</th>
<th>Strongly Disagree</th>
<th>Mildly Disagree</th>
<th>Mildly Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 My young adult is happy where he/she currently lives.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2 My young adult often visits his/her friends.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3 My young adult has found it easy to access community agency services since leaving school.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4 My young adult is generally satisfied with his/her current employment.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5 I believe school transition services and supports have made a positive difference in the life of my young adult.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6 My young adult walks alone to local places.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>7 My young adult has control over his/her own spending money.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>8 My young adult decides what to do with his/her free time.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>9 My young adult has benefited from services and programs received from adult service agencies since leaving school.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>10 My young adult required assistance finding his/her present job.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<td></td>
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</tr>
<tr>
<td>11</td>
<td>As a caregiver, I believe special education classes were helpful in preparing my son/daughter for life after school.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>12</td>
<td>My young adult depends upon special transportation to get where he/she needs to go.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>13</td>
<td>My young adult makes his/her own decisions when making purchases.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>14</td>
<td>My young adult is often bored.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>15</td>
<td>My young adult enjoys participating in available community service activities.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>16</td>
<td>My young adult has received assistance from a job coach.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>17</td>
<td>As a caregiver, I believe school personnel were helpful in arranging contacts with community agencies that help caregivers plan for their student's life after school.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>18</td>
<td>My young adult uses public transportation independently.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>19</td>
<td>My young adult prepares simple meals at home for him/herself.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>20</td>
<td>My young adult is happy with his/her current life.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>21</td>
<td>My young adult is aware of the services provided in the community by agencies.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>22</td>
<td>My young adult earns enough money to support him/herself.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>23</td>
<td>As a caregiver, I believe the schools have provided me with support and information to prepare my student for life after school.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>24</td>
<td>My young adult drives to local places.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>25</td>
<td>My young adult needs little assistance when making important life decisions.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>26</td>
<td>My young adult is satisfied with social/recreational activities that are available to him/her.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>27</td>
<td>My young adult has been satisfied with the services he/she has received since leaving school.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>28</td>
<td>My young adult's most recent job was modified to meet his/her needs.</td>
<td>O</td>
<td>O</td>
<td>O</td>
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</tr>
<tr>
<td><strong>29</strong></td>
<td>As a caregiver, I believe the schools encouraged my participation in planning my student's transition to adult life.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td><strong>30</strong></td>
<td>My young adult relies on family and friends for transportation.</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

Thank you greatly for your participation.
Appendix E

Alignment to the Survey

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Independent Living</td>
<td>1, 7, 13, 19, 25</td>
</tr>
<tr>
<td>2. Transportation</td>
<td>6, 12, 18, 24, 30</td>
</tr>
<tr>
<td>3. Access to Community Services</td>
<td>3, 9, 15, 21, 27</td>
</tr>
<tr>
<td>4. Employment</td>
<td>4, 10, 16, 22, 28</td>
</tr>
<tr>
<td>5. Transition Services Received</td>
<td>5, 11, 17, 23, 29</td>
</tr>
<tr>
<td>6. Quality of Life</td>
<td>2, 8, 14, 20, 26</td>
</tr>
</tbody>
</table>