

The Effects of Level of Counselor Education on Client Outcomes in the Public Vocational Rehabilitation System of New Jersey

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To fulfill the goal of having counselors qualified through the Comprehensive System of Personnel Development (CSPD), the Division of Vocational Rehabilitation Services in New Jersey (DVRS-NJ) committed to have selected counselors attend a Master's Degree in Rehabilitation Counseling (MRC) graduate program. This study examines 14 student/counselors who attended the MRC program while employed by DVRS-NJ and the 3,180 clients they served before, during, and after the attainment of their graduate degree. This research provides evidence that a graduate degree in rehabilitation counseling benefits not only the clients receiving services but also the efficacy and fiscal health of the entire rehabilitation services system. In addition, connection of the student to the profession of rehabilitation counseling during the pursuit of a graduate degree may suggest better outcomes. The evidence points to the value of continuing graduate degree programs, even during periods of fiscal restraint.

The public vocational rehabilitation (VR) system in the United States has had a long and politically motivated history. Rehabilitation counseling, as a profession, has a past clearly bound to the policies and regulations brought about by rehabilitation legislation. The forces that shaped the publicly funded rehabilitation system were greatly influenced by historical events, individual and national political agendas, and people who represented and served the population of persons with disabilities. It has often been described as one of the few professions structured around and directed by regulation (Hershenson, 1982).

REHABILITATION EDUCATION

The overall objective of each iteration of the Rehabilitation Act has been effective and efficient

reclamation of work and life skills for individuals who have lost or never acquired them. To achieve this, it has generally been expected that the practitioners serving those individuals must, themselves, possess specific demonstrated competencies. The required competencies have evolved from policies and mandates that emanated from the act. A preference for graduate-level education in rehabilitation counseling emerged with The Rehabilitation Act of 1954 [Public Law 565].

Rehabilitation Act Amendments in 1986, 1992, and 1998 increasingly ramped up the expected requirements of vocational counselors (Hershenson, 1982; Rubin & Beardsley, 1987). According to the cumulative amendments, to be considered a "qualified" rehabilitation counselor

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in state and federal programs requires a master's degree in rehabilitation counseling (MRC). Preferably, this MRC is from a Council on Rehabilitation Education (CORE) accredited program. To meet the new demands of the amendments, the U.S. Rehabilitation Services Administration (RSA) required states to provide a Comprehensive System of Personnel Development (CSPD) plan, which established policies specific to hiring and retaining personnel based on the highest standards (Public Law 102-569).

In the Division of Vocational Rehabilitation Service of New Jersey (DVRS-NJ), the CSPD focuses on the following areas: (a) preservice training, (b) recruitment of qualified personnel, (c) staff development and training needs of current employees, (d) continuing education and lifelong learning, and (e) retention of qualified VR personnel (DVRS-NJ, 2009). In measures taken to meet their goals, DVRS-NJ collaborated with the Department of Psychiatric Rehabilitation and Counseling Professions at the University of Medicine and Dentistry of New Jersey—School of Health Related Professions (UMDNJ-SHRP) to develop an MRC program with curriculum that delivered educational content from CORE.

The curriculum was designed to reflect CORE regulations, standards, and best rehabilitation practices and to assist DVRS-NJ in meeting the requirements of “qualified personnel” of the amended Rehabilitation Acts of 1986, 1992, and 1998 (Szymanski & Parker, 1989b). The MRC degree at UMDNJ-SHRP consists of 51 credits and is designed to be completed in 33 months. The areas of study are as follows: counseling and consultation; rehabilitation services and resources; human growth and development; medical and psychosocial aspects of disability; individual assessment; social and cultural diversity; employment and career development; group work; professional identity as a rehabilitation counselor; and research in rehabilitation counseling. Counselors were enrolled with the encouragement and financial support of DVRS-NJ.

Several previous studies (Cook & Bolton, 1992; Shapson, Wright, & Leahy, 1987; Szymanski, 1991; Szymanski & Danek, 1992; Szymanski &

Parker, 1989a, 1989b; Wright, Leahy, & Riedesel, 1987) suggest that a graduate degree in rehabilitation counseling and the attainment of counselor competencies increased positive outcomes for clients served in the public VR system. Most of the studies empirically validated the degree of positive effect under various conditions, including the relationship between education and outcomes such as competitive closure rates with severe disabilities, net case service encumbrances, and years of experience of the counselor.

However, as of this research period, there are no studies that examine the educational pursuit of specific state-employed VR counselors and compare outcomes of the clients they served before, during, and after the attainment of a graduate degree. Specifically, this study examined the following research question: Is there a difference between counselor education and successful competitive employment closures, total expenditures, and service time while controlling counselor years of experience?

EDUCATIONAL IMPACT ON PROFESSIONAL OUTCOMES

Research efforts to identify the knowledge and skills required to serve people with the most severe disabilities within the rehabilitation have also helped to establish professional identity (Leahy & Szymanski, 1995). Academic preparation for this degree incorporates fundamentals of professionalism, including an exploration of how individual values and beliefs relate to people with varying disabilities. By enrolling in the MRC program, the students/counselors have committed to the profession of rehabilitation counseling.

For the purpose of this study, the development of professional identity for the student/counselor in the field of rehabilitation is an important phenomenon. The factors contributing to development of a professional identity have been studied in the counseling, social work, and rehabilitation field. According to Kyril (1988), professional identity for counselors comes with real-life experiences and trusting to make the right decision. It would appear this happens when students

have prior work history and the opportunity to build both skills and competence levels. Carlson, Portman, and Bartlett (2006) suggest that this identity is built on a foundation of educational opportunity and growth. Others suggest that this identity has a direct relationship to the counselor educators (Calley & Hawley, 2008). In qualitative research by Howard, Inman, and Altman (2006), the five themes that emerged are professional identity, personal reaction, competence, supervision, and philosophy. In addition, Nelson and Jackson (2003) culled seven themes: knowledge, personal growth, experience, relationships, accomplishments, costs, and perceptions of the profession.

Evaluation of the effect of the MRC on client outcomes must necessarily include consideration of changes in counselor behaviors and attitudes that might arise from acquiring a tone of professionalism. Historical evolution of the rehabilitation counselor role has gone from what was essentially a lay aide to a trained and well-versed rehabilitation counselor. Codification of the skill sets required to attain success brings this role to the level of a professional practice. Does the set of skills provided in the MRC program result in improvements in outcome as should be expected from any professional regimen?

There is some indication that the evolution of a professional identity in graduate school occurs through the influence of the curriculum and the faculty. Such professional identification may influence the outcomes of the clients served by the student/counselor during the pursuit of graduate-level education.

METHODOLOGY

This archival study examines the effect graduate-level counselor training had on clients receiving services within New Jersey's public VR system.

Participants

The first class in the MRC Program in 1998 consisted solely of DVRS-NJ employees. They are

civil service workers who were hired by DVRS-NJ based on their education and experience levels in working with people representing an array of disabilities. Prior to enrollment in the graduate program, all of the counselors possessed an undergraduate degree. The counselor/students attended school while continuing to work full-time for DVRS-NJ. That first class graduated in 2002; the data for this study were collected on 14 counselor/students to graduate (12 females, 2 males). Although there were 20 DVRS-NJ counselors who completed the program within the stated period of data collection, counselors promoted to management or supervisory positions were excluded from this study because they no longer carry a caseload of consumers receiving services after attaining their degree. The subjects in this study are consumers to whom public rehabilitation services were provided by the 14 counselors while employed at DVRS-NJ. Rehabilitation services offered through DVRS-NJ are available to residents in the State of New Jersey who have a documented disability resulting in serious impediment that inhibits or prevents participation in the workforce.

The data was retrieved from the management information system at DVRS-NJ. The study period uses day-to-day client data collected by DVRS-NJ from October 1996 to October 2004. This allows for a significant period before and after attainment of the graduate degree to measure outcomes related to educational attainment. During this 96-month period, 5,029 consumers were provided services by the 14 students/counselors located at 8 offices throughout the state. For the purpose of addressing the study research questions, client cases were selected that were opened and closed during each counselor education category (before, during, and after counselor graduate education). Table 1 reports total client cases analyzed were 3,180: 1,739 (54.7%) males and 1,441 (45.3%) females. Those clients served by counselors in preeducation totaled 1,525 (48.0%), whereas in graduate school the total is 902 (28.2%), and those served by counselors after receiving their Master of Science (MS) degree totaled 753 (23.7%).

TABLE 1. Frequencies for Categorical Variables

| | N | % |
|--|-------|------|
| Male | 1,739 | 54.7 |
| Female | 1,441 | 45.3 |
| Preeducation | 1,525 | 48.0 |
| During education | 902 | 28.4 |
| After education | 753 | 23.7 |
| Served by counselor with 5–8 years' experience | 835 | 26.3 |
| Counselors with 5–8 years' experience | 4 | 28.6 |
| Served by counselor with 9–12 years' experience | 1,360 | 42.8 |
| Counselors with 9–12 years' experience | 6 | 42.8 |
| Served by counselor with 13–22 years' experience | 985 | 31.0 |
| Counselors with 13–22 years' experience | 4 | 28.6 |
| Successful closures | 2,243 | 70.5 |
| Nonsuccessful closures | 937 | 29.5 |

Years of experience was measured as the number of years the counselors had worked at DVRS-NJ as of the date each attained their graduate degree. They were coded into categories from 5–8 years, 9–12 years, to 13–22 years. The categories were derived as a method to group clients served by the counselors into a manageable format for analysis. Table 1 indicates that counselors in the 5–8 years' experience range totaled 4 (29.0%), in the 9–12 years' experience range totaled 6 (42.0%), and in the 13–22 year range totaled 4 (29.0%). In the recipient category, 835 (26.3%) of the clients received services from counselors with 5–8 years' experience, 1,360 (42.8%) received services from counselors with 9–12 years' experience, and 985 (31.0%) of the clients received services from counselors who had 13–22 years' experience. Table 1 also reports 2,243 (70.5%) clients reached successful closure, whereas 937 (29.5%) of clients were unsuccessfully rehabilitated.

Measurements

The study measures include one independent variable, three dependent variables, and one control variable. For the independent variable levels of counselor education, clients were separately coded into three categories; those served by a counselor before, during, and after graduate school. All client cases were opened and closed in each of the three specified periods. Those clients served by counselors in the before counselor graduate education period totaled 1,525 (48.0%), during totaled 902 (28.2%), and those served by counselors after receiving their MS degree totaled 753 (23.7%). In addition, three consumer outcome (dependent) variables are analyzed in this study: competitive employment closures, length of service, and total service expenditures. The three dependent variables are described in the following texts.

Competitive employment closures must (a) have been declared eligible, (b) have received appropriate diagnostic and related services, (c) have had a program for VR services formulated, (d) have completed the program as far as possible, (e) have been provided counseling as an essential rehabilitation service, and (f) have been determined to be suitably employed for a minimum of 90 days after completion of services.

Consumers who achieved a successful closure were coded as successful (1). Consumers who met Criterias (1), (2), and (3) earlier and at least one of the services provided for by the program must have been initiated, but one or more of Criterias (4), (5), and (6) earlier were not met were classified as nonsuccessful closures (0). Length of service was measured in months calculated from the date the consumer was deemed eligible for services to the date the consumer was terminated from services. Total expenditures are the total cost in dollars of all services rendered to the consumer during the service period.

The control variable used in this study was counselor's years of experience. Years of experience was measured as the number of years the counselors had worked at DVRS-NJ as of

the date each attained their graduate degree. They were coded into categories from 5–8 years, 9–12 years, to 13–22 years. The 835 (26.3%) of the clients received services from counselors with 5–8 years' experience, 1,360 (42.8%) received services from counselors with 9–12 years' experience, and 985 (31.0%) of the clients received services from counselors who had 13–22 years' experience.

Data Analysis

The Statistical Program for Social Sciences (SPSS version 16) was used to analyze the data. The two main types of statistical analyses used to examine the study research questions were cross-classification analysis (cross tabs) with the Chi-square test and one-way analysis of variance (ANOVA) with the *F* test. A post hoc analysis using least squares analysis was used to examine significant *F* tests.

Because of the large sample size, levels of significance were increased to .017 using a Bonferroni adjustment (Tabachnick & Fidell, 2001). Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, and homogeneity of variance–covariance, with some serious violations noted for normality and outliers (Field, 2005). To address these concerns, a recheck of the data did not indicate error in the data but rather extreme values in service time and total expenditures. This outcome validated the assumption that there would be extreme scores considering the sample size

and the number of years covered. Because these variables are necessary measurements to address the research questions, deleting them would be detrimental to the final analysis; therefore they were included in all follow-up analysis.

Cross-classification analysis was used to examine the relationship between levels of counselor education (categorical) and successful closure (categorical). One-way ANOVA was used to examine the relationships between counselor education (categorical), total expenditures (interval), and length of service (interval). ANOVA was also used to examine the relationships between counselor education and the interval level dependent variables for the control variables. This approach provided an examination of the relationships between the independent variable and the dependent variables while controlling for the effect the control variable has on the relationship.

RESULTS

As shown in Table 2, there is a significant difference between the level of counselor education and successful competitive employment closures for 3,180 clients receiving services from the 14 counselors ($\chi^2[2, N = 3, 180] = 118.2, p < .001$). Before counselor graduate education, 61.7% ($n = 1,525$) of the clients receiving services during this period attained a competitive employment closure. During counselor graduate education, services provided to clients observed an increased competitive employment closure rate to 75.7% ($n = 902$). After counselor graduate

TABLE 2. Period of Education and Competitive Closures Rates

| | Successful Rehabilitation | Nonsuccessful Rehabilitation | Total |
|------------------|---------------------------|------------------------------|----------------------------|
| Preeducation | 61.7% <i>N</i> = 941 | 38.3% <i>N</i> = 584 | 100.0% <i>N</i> = 1,525 |
| During education | 75.7% <i>N</i> = 683 | 24.3% <i>N</i> = 219 | 100.0% <i>N</i> = 902 |
| After education | 82.2% <i>N</i> = 619 | 17.8% <i>N</i> = 134 | 100.0% <i>N</i> = 753 |

Note. $\chi^2 = 118.2, p < .001$.

TABLE 3. Means, Standard Deviations, and One-Way ANOVA for Education Levels

| | Level of Counselor Education | | | | | | <i>F</i> |
|---------------------------------|-------------------------------------|------------|---------------------------------------|------------|--------------------------------------|------------|----------|
| | Preeducation (<i>n</i> = 1,525) | | During Education (<i>n</i> = 902) | | After Education (<i>n</i> = 753) | | |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| Total expenditures ^a | \$3,272.25 | \$5,322.28 | \$2,329.98 | \$2,904.04 | \$1,887.83 | \$2,191.84 | 33.65* |
| Service time ^b | 22.76 | 21.03 | 11.70 | 6.53 | 9.89 | 5.33 | 245.57* |

^aIn dollar amounts spent on client from open to closure of case. ^bTime reported in months.

* $p < .001$

education, successful closures increased to 82.2% ($n = 619$). Thus, these data show that the higher the level of education, the higher the percentage of overall successful competitive employment rates.

As Table 3 shows, the mean differences in total expenditures before counselor graduate education was \$3,272.00 ($SD = \$5,322.00$), whereas during counselor graduate education it decreased to \$2,329.00 ($SD = \$2,904.00$), and after counselor graduate education it decreased to \$1,887.00 ($SD = \$2,191.00$). The decrease in total expenditures from the preeducation to aftereducation categories is statistically significant ($F[2, 3,177] = 33.6, p < .001$). In a post hoc analysis, there were significant differences from before education to during education ($p = .001$), however there was no significant difference from during to after education ($p = .030$).

As also shown in Table 3, the mean length of time that clients received services before counselor graduate education was 22.76 ($SD = 21.03$) months. The length of services fell by half during counselor graduate education, decreased to 11.70 ($SD = 6.53$), and decreased again after counselor graduate education to 9.89 ($SD = 5.33$) months. The decrease in length of service from the before to after education categories is statistically significant ($F[2, 3,177] = 245.57, p < .001$). A post hoc follow-up indicates significant differences between pregraduate education and during graduate education ($p = .001$) and between pregraduate education and postgraduate education ($p = .001$). There was also a significant decline in the mean length of service between the during and the postgraduate education groups ($p = .160$).

Table 4 reports the total expenditures controlling for the years of experience of the

TABLE 4. Counselor Graduate Education With Total Expenditures, Controlling for Years of Experience

| | 5–8 Years (<i>n</i> = 835) | | 9–12 Years (<i>n</i> = 1,360) | | 13–22 Years (<i>n</i> = 985) | |
|------------------|--------------------------------|-----------|-----------------------------------|-----------|----------------------------------|-----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Preeducation | 4,532.67 | 8,471.67 | 2,641.28 | 3,753.85 | 3,334.81 | 4,459.96 |
| During education | 2,177.86 | 2,542.14 | 2,328.07 | 3,052.58 | 2,501.29 | 3,066.00 |
| After education | 1,698.03 | 2,643.43 | 1,906.91 | 1,969.63 | 2,099.08 | 1,894.22 |
| | $F = 21.3$ $p < .001$ | | $F = 5.8$ $p < .003$ | | $F = 9.2$ $p < .001$ | |

counselor and indicates significance at the 5–8 year mark ($F[2, 832] = 21.3, p < .001$), with mean total expenditures before counselor graduate education being \$4,532.67 ($SD = \$8,471.67$), decreasing to \$2,177.86 ($SD = \$2,542.14$), and lowering again to \$1,698.03 ($SD = \$2,643.43$). The post hoc analysis indicates that there are significant differences between before counselor graduate education and during counselor graduate education ($p = .001$) as well as between before counselor graduate education and graduation ($p = .001$). However, there are no significant differences between during counselor graduate education and after graduation ($p = .325$).

A small but significant effect is indicated ($F[2, 1,357] = 5.8, p < .003$) in the 9–12 years' experience period. The mean total expenditure per consumer is \$2,641.28 ($SD = \$3,753.85$) before counselor graduate education, \$2,308.07 ($SD = \$3,052.58$) during counselor graduate education, and decreasing to \$1,906.91 ($SD = \$1,969.63$) following counselor graduate education. The post hoc analysis showed no significant fluctuations between before and during counselor graduate education ($p = .137$). There were differences between before and after counselor graduate education ($p = .001$), but not between during and after counselor graduate education ($p = .087$). Counselors with 13–22 years' experience witnessed \$3,334.81 ($SD = \$4,459.56$) of total expenditures before counselor graduate education, \$2,501.29 ($SD = \$3,066.00$) during counselor graduate education,

and \$2,099.08 ($SD = \$1,894.22$) after counselor graduate education with a significant effect ($F[2, 982] = 9.2, p < .001$) for all total expenditures on clients served. In the post hoc analysis, there are significant differences between before and during counselor graduate education ($p = .003$), as well as between before and after counselor graduate education ($p = .001$), but there are no significant differences between during counselor graduate education and after counselor graduate education ($p = .266$).

Years of experience of the counselor on service time is reported in Table 5. Before counselor graduate education, counselors with 5–8 years of service experienced has a mean service time for clients at 23.3 months ($SD = 30.4$), decreasing to 11.3 ($SD = 6.6$) during counselor graduate education, and lowering again to 8.7 ($SD = 4.7$) after counselor graduate education thereby reaching significance ($F[2, 832] = 47.1, p < .001$). Post hoc analysis indicates significant differences between before and during counselor graduate education ($p < .001$) and between before and after counselor graduate education ($p = .001$). There were no differences between during and after counselor graduate education ($p = .125$).

In the 9–12 years' experience stage, the mean service time before counselor graduate education is 20.6 months ($SD = 14.4$), lowering to 6.2 months ($SD = 10.7$) during counselor graduate education, and leveling to 5.4 ($SD = 9.6$) following counselor graduate education, reaching significance ($F[2, 1,357] = 112.1,$

TABLE 5. Counselor Education With Service Time Controlling for Years of Experience

| | 5–8 Years (<i>n</i> = 835) | | 9–12 Years (<i>n</i> = 1,360) | | 13–22 Years (<i>n</i> = 985) | |
|------------------|------------------------------------|-----------|-------------------------------------|-----------|-------------------------------------|-----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Preeducation | 23.3 | 30.4 | 20.6 | 14.4 | 25.0 | 21.0 |
| During education | 11.3 | 6.6 | 12.6 | 6.2 | 10.7 | 6.5 |
| After education | 8.7 | 4.7 | 10.8 | 5.4 | 9.6 | 5.6 |
| | <i>F</i> = 47.1 <i>p</i> < .001 | | <i>F</i> = 112.1 <i>p</i> < .001 | | <i>F</i> = 101.8 <i>p</i> < .001 | |

$p < .001$). Post hoc analysis reports significant differences between before and during ($p = .001$), before and after ($p = .001$), but not during and after ($p = .036$).

For counselors with 13–22 years' experience, before counselor graduate education service time mean is 25.0 ($SD = 21.0$), decreasing to 10.7 ($SD = 6.5$) during counselor graduate education, and resting at 9.6 ($SD = 5.6$) after counselor graduate education, also reaching significance ($F[2, 982] = 101.84, p < .001$). Post hoc analysis reports significant differences between preschool and during school ($p = .001$) and preschool and graduation ($p = .001$). There were essentially no differences between during and after counselor graduate education ($p = .453$).

DISCUSSION

This study points to a significant difference between education levels of rehabilitation counselors and positive results for people with whom they are working. Consumers of services from the DVRS-NJ showed improved overall outcomes with counselors enrolled in, and those who had graduated from, a program offering an MS degree in rehabilitation counseling. This outcome supports the theories of professionalism discussed previously in that specialized training and formal education following a tested and effective regimen result in occupational competence (Scuilli, 2007).

The findings of this study show a positive relationship between level of counselor education and client outcomes. Level of counselor education was significantly associated with successful rehabilitation closures, lower total cost expenditures on clients, and a reduced amount of time clients received services. In addition, the relationship between counselor education and client outcomes remained significant when the data were controlled for the influence of the years of experience of the counselor.

The findings substantiate earlier research, which compares an MRC degree with other

graduate and undergraduate degrees, and identifies significant relationships between a graduate degree and a successful competitive closure rates (Szymanski, 1991; Szymanski & Danek, 1992; Szymanski & Parker, 1989a). Previous research in VR has not studied successful rehabilitation based on total expenditures and length of time clients receive services.

Evidence suggests that successful rehabilitation outcomes for people with severe disabilities increase in relation to counselor education. However, this study illuminates the importance of *graduate* education, where client outcomes ameliorate during the educational process, and continue to improve beyond the attainment of the degree. The study validates prior research by finding that people receiving services show increases in successful rehabilitation outcomes in response to graduate education participation by their counselors, thereby decreasing the organization's overall rate of nonsuccessful outcomes.

Thus, it is the combination of life and work experience, coupled with a specialized graduate degree that appears to promote professional identity development (Kyril, 1988). The evolution of the counselor role into one of professional appears to have had substantive positive effect on client outcomes and attainment of agency objectives. The MRC program imbues the graduate with the academic elements required of a profession: per Scuilli (2007) training that is specialized yet also systematic and scholarly, and belief that the counselors' expert services are of special importance for society and the common wealth.

This study controlled for years of experience in the anticipation that the findings would contribute to the existing knowledge base. The years of experience of the counselor differed on each of the variables. Notably, counselors with 5–8 and 9–12 years' experience witnessed higher outcomes after graduate school, whereas counselors in the 13–22 year group had significant changes during graduate school, yet remained the same after graduate school. A review of literature on years of experience of the

student/counselor employed in the public VR system supports these mixed results (Lustig & Strauser, 2006).

Counselors in the 5–8 years range were overall more effective in lowering total client expenditures after graduation. Perhaps this was because of improved goal planning with clients, enhanced knowledge of community resources for cost-effective rehabilitation services, and/or a better understanding of the real cost of various services.

Counselors in the 9–12 year range produced better outcomes by reducing service time after the attainment of the graduate degree. Because there is no previous research in this area, one might surmise that the counselors in this group developed competencies through the curriculum and greater fluency in the profession of rehabilitation counseling.

Many of these competencies were self-identified by rehabilitation counselors in the Wright et al.'s (1987) study using the Rehabilitation Skills Inventory. In addition, these findings would concur with the Wright et al.'s study that reported increased competencies that declined after 15 years.

Alternately, counselors in the 13–22 year range produced higher successful rehabilitation outcomes after graduation from an MRC program than did their less experienced colleagues. This finding departs from previous research, which has compared an MRC to a Bachelor's degree and stated that years of experience and successfully rehabilitated cases taper off after 10–12 years of service, respectively (Cook & Bolton, 1992; Szymanski & Parker, 1989a). Although previous studies compared counselors with an MRC against an undergraduate degree, the differences in findings are worthy of future research attention.

Limitations

The use of archival data (sometimes referred to as secondary data) is an efficient, cost-effective, and timely method to use when conducting

research but may have limitations. The data extracted for the study are from DVRS-NJ. Staff of DVRS-NJ enter these data on every client actively receiving services and submit it monthly through the mainframe computer system. Data entry is subject to human error, especially with a system that provides daily services to thousands of clients. The extent of error in the data is unknown. Caution is warranted, however, because the data set is quite large and the findings very robust. The degree of error needed to reverse the findings would have to be substantial. It is not indicated that these data have error rates of that magnitude.

There are several threats to validity for which controls were unable to be developed. Firstly, with regard to external validity, people, place, and time are all considered possible threats. The clients' reported outcomes are reflective of clients eligible for services within the New Jersey system, meaning they reside in New Jersey. The state is the most densely populated in the country and includes a broad diversity of ethnic backgrounds. Although all county offices of DVRS-NJ operate under the same Federal regulations, regional and town-to-town economic patterns (e.g., employment rates, wages) may influence client outcomes. Therefore, although public VR services in every state operate under the same federal regulations, the ability to generalize the results of this study outside of New Jersey is unknown. This research does not address whether people receiving services at DVRS-NJ are representative of clients in other states or geographic locations.

Also, it is important to note that clients identified and included within each of the educational pursuit periods of a particular counselor were opened and closed by that counselor during that specific period. The same client may have been included again in other educational periods if they reapplied and were granted services, but that does not necessarily mean they were reassigned to the same counselor. The reported activity related to any one client's progress through

the rehabilitation process was conducted by one counselor.

Furthermore, the 14 student/counselors in this study represented several offices of DVRS-NJ, covering a wide geographical area of the state. They were chosen for this study because they graduated from the first cohort and data was available on the three levels of the independent variable. As stated earlier, DVRS-NJ reported that student/counselors were encouraged by management and chosen according to who management considered would be the most likely to succeed in a graduate program. This selection process further facilitates a sense among the student/counselor of being part of a profession; being viewed to have particular experience and capability (Abbott, 1988).

Because the data covered an 8-year period, it is reasonable to anticipate that unexpected events occurred in the environment that might have altered the outcomes. However, a search of the economic climate affecting employment rates and client wages in New Jersey revealed minimal changes during those 8 years. For example, the average rate of unemployment for the State of New Jersey from 1996 to 2004 was 4.9% with the lowest rate of 3.0% in 2000 and the highest rate of 5.3% in 2003 (U.S. Census Bureau, 2013). Changes to state and national VR policies during this period were also investigated as possible threats to external validity.

According to DVRS-NJ, an order of selection did occur for a very short period in Federal Fiscal Year (FFY) 2001. In addition, the 1998 Amendments limited the ability to include sheltered workshops as competitive employment leading to successful closures. Neither of these regulatory nor policy changes negatively affected outcomes presented in this research. In fact, the closure rates and expenditures results are determined to have only a token impact on the study outcomes.

With regard to internal validity, limitations may exist with the student/counselor outcomes over an 8-year period. It is reasonable to expect

that events in their personal and professional life might impact these outcomes. Issues related to history and maturation of the subjects (student/counselors and clients) are not controlled in this research design. However, counselor years of experience throughout the duration of this study might be considered a contributing factor to improved outcomes over time while employed at DVRS-NJ.

The length of service time for clients decreased significantly during school and after graduation of the student/counselors. As noted in the "Discussion" section earlier, there are several factors that might have contributed to this outcome. DVRS-NJ frequently contracts to outside vendors that provide various programs and services that assist clients to obtain employment. However, a limitation of the study is that the data does not specify how much of the service time includes direct interactions with the DVRS-NJ student/counselor. Determining the amount of time a student/counselor spends with clients directly would be a valuable contribution to future research on the impact of graduate-level counselor education.

Because this was quantitative study using archival data, the significant differences related to the level of graduate education can only be interpreted through data analysis. A qualitative study would have provided information on the counselors' motivation to pursue a graduate degree as well as the differences they experienced during the education periods. Moreover, the clients' perspective on the changes in their counselor would enrich the body of literature. Future research is recommended in this area.

Finally, the students/counselors in this study were the first graduates of a newly developed program. The curriculum reflected all of the necessary knowledge domains needed for future accreditation. However, accreditation for this program could not be granted until the first cohort of students graduated, which was in 2002. CORE accreditation was subsequently granted in 2005. Although all efforts to follow accreditation were made, not having the final

approval during the study period could be considered a potential limitation.

SUMMARY AND CONCLUSION

This study has demonstrated a significant relationship between counselors educated at the graduate level and improvements in outcomes for the clients they serve. In addition, this study indicates that graduate level education positively affected these client outcomes on variables not previously studied. The findings not only contribute to the existing body of knowledge but also add new information to the importance of the MRC degree and, possibly, of advanced degrees within other helping professions.

Moreover, it begs the question “how do federal policy mandates affect existing and developing professions, the professionals, and the services they provide to the public domain?”

This study showed a positive relationship between educational policy mandates resulting in direct cost savings, thus indicating a positive outcome for the investment of graduate-level education of civil servants. The continued research suggested would make important contributions not only to the field of rehabilitation counseling but other professions as well. Is there a shift in their level of or perception of professionalism? If so, what exactly is responsible for it and what effects are there on client outcomes?

Second, such research would be of importance to educators who strive to develop curricula that draw on the experiences of working students while keeping them engaged in their course work. Collaborative learning and applying work and academics at the students' workplace is an intriguing area, especially considering the current emphasis on lifelong learning.

Perhaps these findings address and answer Thomas's (1990) assertions of “what type of education is most effective for *which* counselor working with *which* client with *what* problem

being served by *which* agency under *which* set of circumstances” (p. 155). Only further research will tell.

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