

Rehabilitation Counselor Degree Type as a Predictor of Client Outcomes: A Comparison of Quantity Versus Quality in Closure Rates

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Abstract

Closure rates (CR) of counselors with a master's degree in rehabilitation counseling (MRC) and master's degrees in related disciplines (RM) were compared. *High-quality closure rates* (HQCR) were also compared, defined as CR for full-time jobs that paid a living wage. Analyses examined all counselors and, separately, only those with 6 or fewer years of experience. Last, analyses examined if disability severity predicts HQCR. Eighty-nine counselors completed a survey assessing their educational background. These data were linked to outcomes of 13,460 clients. CR of MRC and RM counselors did not differ. However, MRC counselors had higher HQCR ($p = .034$), higher living-wage closure rate (LWCR; $p = .025$), and almost higher full-time job closure rate (FTCR; $p = .066$). MRC-RM comparisons using only counselors with 6 or fewer years of experience were also significant (all $ps < .05$) and, importantly, showed even stronger effects. Also, although clients with most-severe disabilities had lower CR ($p = .029$), they had much lower HQCR, LWCR, and FTCR (all $ps < .001$). Although CR does not differ between MRC and RM counselors, MRC counselors are more likely to secure high-quality jobs for clients. Also, clients with most-severe disabilities are more likely to be placed in lower quality jobs. Implications for hiring rehabilitation counselors are discussed.

Keywords

rehabilitation education, evidence-based practice, credentialing, career/vocational counseling

The present study offers initial results from an ongoing multiagency data collection effort that aims to determine the necessary educational requirements for vocational rehabilitation (VR) counselors. The passage of the Workforce Innovation and Opportunity Act of 2014 (WIOA) removed the requirement that rehabilitation counselors possess advanced education in rehabilitation counseling. According to WIOA, degrees in "business administration, human resources . . . and economics" (Section 412) are sufficient to gain employment as a counselor, despite the fact that knowledge specific to rehabilitation and disability management has been identified as essential for rehabilitation counselors (Leahy, Chan, & Saunders, 2003) and that these knowledge areas are assessed on the CRC (certified rehabilitation counselor) certification exam (Leahy, Chan, Sung, & Kim, 2013).

Furthermore, the WIOA amendment was made despite the fact that there is no recent evidence showing that counselors without specific training in rehabilitation are as effective as those with such training (i.e., a master's degree in

rehabilitation counseling [MRC]). All research conducted on this topic is more than 25 years old (e.g., Abrams & Tucker, 1989; Szymanski, 1991; Szymanski & Parker, 1989a), making the applicability of these results to the current rehabilitation context questionable. As such, the first aim of the present study is to assess whether counselors with an MRC have higher client closure rates (CR) than counselors who have a master's degree in a related discipline (RM). As the second aim of the study, we introduce the construct of *high-quality closure rate* (HQCR), operationalized as the percent of clients who acquire full-time jobs (30 hr or more weekly) that pay a living wage (US\$11.07 or more per hour; Glasmeier, 2004), and we

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examine whether MRC and RM counselors differ on HQCR. No research has examined CR from this perspective, and we feel this is an important issue as high-quality jobs are imperative to meeting Rehabilitation Services Administration's (RSA; 2017) mission to maximize clients' independence and integration into the competitive labor market. Put another way, we feel that previous studies examining differences in CR addressed the issue from the perspective of quantity, whereas the present study expands on this literature by focusing on CR quality.

Given that high-quality jobs are crucial to realizing RSA's mission, the third aim of the study is to further explore the newly introduced construct of HQCR, not from the perspective of counselor education, but from the perspective of disability severity: We investigate whether HQCR for clients with most-severe disabilities differs from the HQCR for clients whose disabilities are less severe.

Past Research on Counselor Education and CR

In a seminal article on this topic, Szymanski and Parker (1989a) used data from the New York VR Office to examine the role of counselor educational achievement on CR for clients with the most-severe disabilities. The authors compared MRC counselors with counselors with all other degrees (including bachelor's degrees) and found that MRC counselors had higher CR and were also most cost-effective. An interesting part of the results is that these effects were only present for the first 6 years of job tenure, after which no significant differences existed. Notably, this study focused solely on clients with most-severe disabilities and did not make a specific comparison between MRC counselors and counselors with RM, which is the goal of the present study.

A subsequent publication by Szymanski and Parker (1989b) reanalyzed the same data set using all levels of disability and a more fine-grained operationalization of education level: The authors compared counselors with an MRC degree to those with RM degrees, and those with a bachelor's or unrelated master's degree. Although a few significant differences were found between MRC and bachelor's/unrelated degrees, there was not a single significant difference between MRC counselors and counselors with RM.

These studies were replicated with a Wisconsin sample (Szymanski, 1991) comparing MRC counselors to counselors with RM, related bachelor's degrees, and unrelated degrees. Similar to previous findings, although there were differences between MRC counselors and those with unrelated degrees, no significant differences were found between MRC and RM. Interestingly, virtually the same results were reported a year later by Szymanski and Danek (1992) using Maryland counselors. Likewise, Abrams and Tucker (1989) found no relationship between degree type and client outcomes in a Florida sample.

Last, Wheaton and Berven (1994) conducted a cluster analysis to determine whether counselor-related variables, including educational background, could be used to form counselor groups that designate different performance levels. Their results suggested that counselors with the most positive outcomes (identified as "Efficiency Experts" or "Severe Disability Specialists") were more likely to have an MRC degree than an RM, offering the first set of results suggesting possible advantages of the MRC degree. However, because the results were based on a cluster analysis which simultaneously used a myriad of variables to form clusters of counselors (e.g., funds spent on successful closures, time to successful closure, disability severity, caseload size, speed of eligibility-ineligibility decision), a specific CR comparison by level of counselor education alone was not made, making it impossible to partial out the effects of education from the other variables.

In summary, the existing literature suggests counselors who have an MRC degree may have better outcomes than counselors who have a bachelor's degree or an unrelated master's degree, although this effect may fade once counselor experience reaches more than 6 years (Szymanski & Parker, 1989a). Of relevance to the present study's aims, not a single study in the literature provides conclusive evidence that MRC counselors have better outcomes than counselors with RM, regardless of the level of counselor experience or client disability severity used in the analysis. This conclusion is echoed by the results of a meta-analysis by Frain, Ferrin, Rosenthal, and Wampold (2006), which found that the difference in CR between counselors with MRC and RM was not significant (i.e., the 95% confidence interval for Cohen's *d* included zero).

The implication of this body of research is that specific master's-level training in rehabilitation may not be necessary to successfully perform the job of a rehabilitation counselor, and that RM degrees in disciplines such as counseling or social work may be sufficient. That said, the findings have to be accepted with caution for a number of reasons. First, as mentioned previously, the literature is more than 25 years old and applicability of these results to today's rehabilitation counseling context is questionable. Second, the number of studies that compared MRC counselors with counselors with RM is low; in all of the literature, only four papers specifically made this comparison. Last, two of these studies did not report effect sizes in their results, leaving the reader unsure of the magnitude and importance of the reported results. Given the passage of WIOA, there is a need to reinvigorate research in this area and reassess whether CR differs between MRC and RM counselors.

Job Quality Upon Case Closure

Although studies have examined whether counselor education predicts CR, no study to date has examined whether

there is a relationship between counselor education and the quality of jobs clients obtain upon case closure. Job quality is important to take into consideration given RSA's mission to help individuals with disabilities achieve financial independence and become integrated into the competitive labor market (RSA, 2017). To meet this mission, clients need to be placed in jobs that offer income and benefits sufficient enough so they can achieve financial independence and become unreliant on government entitlement programs.

Existing research suggests this is not the case. The majority of VR clients obtain employment in what has been termed the *secondary labor market* (Berger & Piore, 1980; Doeringer & Piore, 1971), characterized by jobs that have lower wages, less job security, more inequitable working conditions, and limited potential for advancement to higher quality positions (Hagner, 2000). According to Walls and Fullmer (1997), the five most common occupations of individuals who achieved employment through the VR system included janitor, cook, attendant, porter/cleaner, and kitchen worker. A more recent study by Martin and coauthors (2012) corroborated these findings, concluding that the most commonly held jobs after VR closure were service-related jobs such as janitor, housekeeper, and stock clerk. Similar findings were presented by Boutin (2010), who reported that the majority of VR clients obtained employment in service-oriented positions, and by Capella (2003), who concluded that VR clients were more likely to be employed in lower skilled jobs than the general labor force.

In line with these findings, studies show VR clients who obtain employment tend to have lower earnings than the general labor force. Revell, Smith, and Inge (2009) found that VR clients' national average weekly earnings upon case closure in 2007 were US\$350. Although these findings are more than 10 years old, more recent research by Martin and coauthors (2012) presented similar results. The authors found that across all 50 of the most-popular job categories, VR clients had hourly wages that were lower than the median wage of the general labor force for that specific job category. For some job categories (e.g., maintenance and repair work) the wage disparity was quite large, exhibiting a twofold difference between workers with disabilities and the general labor force. On top of wage differences, studies have also shown that VR clients tend to have jobs with fewer benefits (Lustig, Strauser, & Donnell, 2003), more hazardous working conditions (Graham & Shakow, 1990), and limited opportunity for career advancement (Martin et al., 2012).

Perhaps most importantly, the primary and secondary markets are becoming increasingly polarized, making it difficult for clients to transition to the primary market once they have been employed in the secondary market (Autor & Dorn, 2013). This lack of upward mobility is partly due to the fact that work experience gained in the secondary labor market does not easily transition to the primary labor

market (Hagner, 2000). Furthermore, even if clients have the necessary experience to work in the primary market, Cook (2006) suggested many end up in a "poverty trap" once they gain employment in the secondary market due to their low incomes, lack of nearby quality jobs, and transportation challenges.

In summary, research findings show that VR clients tend to obtain secondary labor market jobs that provide incomes too low to ensure financial independence, and that these clients subsequently have trouble transitioning to better quality jobs found in the primary labor market. These findings have led researchers to call for increased focus on placing clients in jobs that offer adequate income and benefits (Lustig et al., 2003), and for amending closure guidelines to include job quality criteria and emphasize clients' career development versus mere job placement (Rumrill & Roessler, 1999). Thus, an examination of whether counselor degree type predicts CR ought to take into consideration the quality of jobs clients obtain. On top of examining whether MRC and RM counselors differ on CR, it is important to also examine whether they differ on a measure of CR that incorporates job quality.

Study Research Aims

Given RSA's mission to help individuals with disabilities become financially independent and participate in the competitive labor market, in the present study we formed the construct of *HQCR* and expanded upon existing literature by assessing whether MRC and RM counselors differ with regard to HQCR. We operationalized HQCR as the closure rate specifically for jobs that are full-time (at least 30 hr per week) and pay a living wage, which for the present study's participants was estimated to be a minimum of US\$11.09 per hour (Glasmeier, 2004). The issue of quality of work has not been examined by previous studies that used overall CR as the outcome variable; essentially, those studies addressed differences from the quantity perspective whereas the present study also assessed closure rate quality.

It is possible that MRC and RM counselors do not differ on CR, as previous research suggests, but that differences arise when job quality is considered. In other words, RM counselors may not have the same job placement skills as MRC counselors, but they compensate for this deficiency by placing their clients in lower quality jobs that are easier to secure. This would suggest the true benefit of an MRC degree is rooted not in the mere ability to place clients in jobs, but in the ability to place clients in jobs that are highly competitive.

On top of comparing HQCR between MRC and RM counselors, we further explored the construct of HQCR by assessing whether it differs from the perspective of disability severity. Specifically, we explored whether HQCR differs between clients who have the most-severe disabilities

Table 1. Degree Types of Rehabilitation Counselors.

Degree	<i>n</i> (%)
Master's degree with specific training in rehabilitation (MRC)	53 (59.55)
Enrolled in rehabilitation-specific master's	7 (7.87)
Master's degree in related disciplines (RM)	27 (30.34)
Counseling	7 (7.87)
Social work	5 (5.62)
Education	3 (3.37)
Clinical or counseling psychology	3 (3.37)
Special education	3 (3.37)
Other psychology	2 (2.25)
Educational psychology	1 (1.12)
Educational counseling	1 (1.12)
Public administration	1 (1.12)
Mental health counseling	1 (1.12)
Bachelor's degree only	2 (2.25)

and those whose disabilities are less severe. Although previous research examining this issue found that CR tends to be lower for clients who have higher levels of disability (e.g., Kaya & Chan, 2017; Shattuck et al., 2012), these studies examined differences in overall CR and did not take job quality into perspective. Thus, the present study assessed the following research questions:

Research Question 1 (RQ1): Do counselors with an MRC degree have different CR than counselors with an RM degree?

Research Question 2 (RQ2): Do MRC and RM counselors differ with respect to HQCR?

Research Question 3 (RQ3): Do CR and HQCR differ between clients with most-severe disabilities and those whose disabilities are less severe?

Method

Participants

Participants in the study were rehabilitation counselors employed by the Utah State Office of Rehabilitation and the clients whose cases the counselors had closed in the 2014 to 2017 fiscal years.

Rehabilitation counselors. One hundred twenty-nine counselors were invited to complete an online survey assessing their level of education, degree type, and work experience. Eighty-nine responded at least partially to the survey (69% response rate). Average counselor age was 27.97 ($SD = 9.81$) and 49 (55.06%) of counselors were female. Counselors had an average of 7.78 ($SD = 5.94$) years of experience working as a rehabilitation counselor. Table 1 presents the breakdown of educational degrees. Of note, MRC and RM

Table 2. Demographics of Rehabilitation Clients.

Variable	<i>n</i> (%)
Sex	
Male	7,007 (52.06)
Female	6,453 (47.94)
Race	
Caucasian/White	12,583 (93.48)
African American/Black	403 (2.99)
Native American or Alaskan Native	302 (2.24)
Asian American	98 (0.73)
Pacific Islander	74 (0.55)
Education	
Elementary school	190 (1.41)
Secondary school, no degree	2,033 (15.10)
Special education degree	724 (5.38)
High school or equivalent	5,865 (43.57)
Post-secondary education, no degree	2,773 (20.60)
Associate degree	1,058 (7.86)
Bachelor's degree	563 (4.18)
Master's Degree	130 (0.97)
Above master's degree	11 (0.08)
Vocational certificate	96 (0.71)
Unknown	16 (0.12)

counselors did not differ from each other on age ($p = .792$), years of experience ($p = .590$), number of years working at the current agency ($p = .563$), caseload size over the last 3 years ($p = .218$), self-rated caseload difficulty ($p = .457$), and client disability severity ($p = .724$).

Rehabilitation clients. Data from 13,460 clients were linked to the rehabilitation counselors described in the section above. Table 2 shows clients' demographic characteristics. Of note, average age was 34.81 ($SD = 12.71$), 7,007 (52.06%) were male, majority ($n = 12,583$; 93.48%) identified as White, and the mode level of education was high school or equivalent ($n = 5,865$; 43.57%). In relevance to the study's research questions, 2,889 (21.46%) of the clients were identified as having most-severe disabilities.

Measures and Procedures

Prior to data collection, this study was approved by the university's institutional review board (IRB) for the protection of human subjects. The Utah State Office of Rehabilitation sent email invitations to currently practicing rehabilitation counselors ($N = 129$) to complete a 23-item online survey. The survey was designed for the purposes of the present study and assessed counselors' demographic variables, type of highest educational degree, discipline of highest educational degree, the year of degree completion, years of experience as a rehabilitation counselor, feelings of preparedness

for work as a rehabilitation counselor, and other variables not of focal interest to research aims of the present study. Counselors received no compensation for participating.

Data relating to 13,460 client outcomes were provided to the researchers via case service records (i.e., RSA-911 reports) for the 2014 to 2017 fiscal years by the Utah State Office of Rehabilitation. These data were disaggregated (i.e., presented at the level of the individual client) and included, among other things, each client's demographic variables, closure status (employed vs. not employed), job title, hourly wage, hours of work per week, and the client's level of disability severity. Out of the total number of clients, 2,889 (21.54%) were classified as having most-severe disabilities.

Of relevance to the present study's research questions, 6,999 (52.00%) clients were employed at case closure, 2,579 (36.85%) of the employed clients were earning a living wage, and 2,450 (35.01%) of them had a full-time job (i.e., 30-hr or more per week). The relatively low percentages of jobs that paid a living wage or were full-time further underscore the present study's research aims.

Data Analyses

To answer RQ1 and RQ2, analyses of variance (ANOVAs) were performed in which counselor education (MRC vs. RM) was the between-subjects variable and one of the closure rate variables was the outcome variable. For RQ1, CR was operationalized as the number of clients a counselor placed in competitive employment divided by the counselor's total number of clients. For RQ2, HQCR was operationalized similarly to CR, except it only included clients placed in jobs that were full-time (30-hr per week or more) and paid at living wage (US\$11.09 or higher). Given that past research has found MRC-RM differences in closure rate to exist only in counselors with 6 or fewer years of experience (Szymanski & Parker, 1989a), a separate set of analyses was conducted on only these counselors. Similarly, given that CR differences have been reported to exist only for clients with highest levels of disability (Szymanski & Parker, 1989a), a separate set of analyses was also performed using only clients who were identified as having the most-severe disabilities.

For RQ3, a repeated-measures analysis of variance (RMANOVA) was conducted in which disability severity (clients with most-severe disabilities vs. clients with less-severe disabilities) was the within-subjects variable given that each counselor had a unique closure rate for each set of clients. Separate analyses were performed for each type of closure rate.

Results

Before analyses were conducted, client outcome data from the case service reports were matched to data collected from

counselors to link counselor degree type (i.e., MRC and RM) to client outcomes. Seven counselors (three in MRC group, four in RM group) provided incomplete responses to the online survey and their data could not be matched to client outcome data, making it impossible to include them in the analyses. After also excluding counselors who only had a bachelor's degree ($n = 2$) or counselors who were enrolled in a master's degree program ($n = 7$), the final group sizes for RQ1 and RQ2 were 50 for MRC and 23 for RM when analyzing counselors with all amounts of experience, and 25 for MRC and 11 for RM when analyzing only counselors with 6 or fewer years of experience. For RQ3, which did not compare MRC to RM counselors, data from all counselors that could be linked to client outcome data were used in the analyses ($n = 82$), including those with a bachelor's degree and those currently enrolled in a master's program.

RQ1: Differences Between MRC and RM Counselors on CR

As Table 3 shows, when counselors with all levels of experience were included in the analysis and the outcome variable was CR for all clients, the ANOVA revealed that CR did not differ between MRC and RM counselors, $F(1, 71) = 1.03, p = .313, \eta^2 = .01$. The results were similar when the outcome variable was CR for clients with the most-severe disabilities: There was no significant difference between MRC and RM counselors on CR, $F(1, 71) = .22, p = .638, \eta^2 = .00$.

When the analyses were repeated using only counselors with 6 or fewer years of experience (see Table 3), there were no significant differences on either CR for all clients ($p = .313$) or CR for clients with the most-severe disabilities ($p = .196$). Overall, the results show that CR does not differ between MRC and RM counselors, regardless of the level of counselor experience or severity of client disability examined, as the p -values for all four analyses relating to RQ1 were above the threshold for statistical significance.

RQ2: Differences Between MRC and RM Counselors on HQCR

The top of Table 4 shows that when counselors with all levels of experience were included and the outcome variable was HQCR for all clients, the MRC group had significantly higher HQCR, $F(1, 71) = 4.67, p = .034, \eta^2 = .06$. Of note, the effect size for this difference was of medium size by conventional standards (Cohen, 1988) and indicated that 6% of the variance in HQCR was explained by counselor degree type. When the analysis was repeated with the outcome variable being HQCR for clients with the most-severe disabilities, no significant difference was found between MRC and RM counselors, $F(1, 71) = 1.17, p = .282, \eta^2 = .02$.

Table 3. CR Differences Between MRC and RM Counselors.

Counselor experience	Outcome variable	Group	M (SD)	F	p	η^2
All years	CR for all clients	MRC	.53 (.12)	1.03	.313	.01
		RM	.50 (.16)			
	CR for clients with most-severe disabilities	MRC	.48 (.17)	0.22	.638	.00
		RM	.50 (.24)			
Six years or fewer	CR for all clients	MRC	.48 (.11)	1.05	.313	.03
		RM	.44 (.14)			
	CR for clients with most-severe disabilities	MRC	.42 (.18)	1.74	.196	.05
		RM	.49 (.16)			

Note. CR = closure rate; MRC = master's degree in rehabilitation counseling; RM = master's degree in related discipline.

Analyses examining only counselors with 6 or fewer years of experience showed similar results (see Table 4). When the outcome variable was HQCR for all clients, MRC counselors had significantly higher HQCR, $F(1, 33) = 5.49, p = .025, \eta^2 = .14$. The effect size for the analysis was large (14% of explained variance), and notably, was more than double of the effect size for the analysis above that used counselors with all levels of experience (6.2%). When the outcome variable was HQCR for clients with the most-severe disabilities, no significant difference was found between MRC and RM counselors, $F(1, 33) = .81, p = .376, \eta^2 = .02$.

Given that significant differences between MRC and RM counselors were found on HQCR for all clients (i.e., clients with all levels of disability), follow-up analyses were conducted in which HQCR was split into two variables, living-wage closure rate (LWCR) and full-time job closure rate (FTCR), and differences between MRC and RM counselors were explored.

For LWCR, when counselors with all levels of experience were examined, MRC counselors showed significantly higher LWCR, $F(1, 71) = 5.25, p = .025, \eta^2 = .07$. The analysis had a medium effect size and indicated that 7% of the variance in LWCR was attributable to counselor degree type. When LWCR differences were examined using only counselors with 6 or fewer years of experience (see Table 4), MRC counselors once again showed higher LWCR, $F(1, 33) = 5.32, p = .027, \eta^2 = .14$. Of interest, the effect size for this analysis was large (14% of variance explained) and was double the size of the analysis when all counselors were used (7%).

For FTCR, when all counselors were included in the analysis, the results showed a non-significant difference between MRC and RM counselors, $F(1, 71) = 3.48, p = .066, \eta^2 = .05$. When the same analysis was conducted using only less experienced counselors, the difference became significant, with MRC counselors showing higher FTCR, $F(1, 33) = 5.05, p = .031, \eta^2 = .13$. The effect size was large, indicating that 13% of variance in FTCR was

explained by counselor degree type. It is notable that the effect size for this analysis was more than twice the size of the analysis when all counselors were used (13% vs. 5%), although caution must be used when comparing these results because the 5% effect size came from an analysis that had a p -value of .066 and is non-significant by conventional standards.

Overall, results for RQ2 showed that although MRC and RM counselors did not differ on HQCR for clients with most-severe disabilities, MRC and RM counselors did differ on HQCR, LWCR, and FTCR for all clients. The results were substantively the same regardless of whether all counselors were used in the analysis or only those with 6 or fewer years of experience, with the caveat that the FTCR analysis for all clients was nonsignificant ($p = .066$) whereas it was significant when examining counselors with 6 or fewer years of experience ($p = .031$).

RQ3: Closure Rate Differences by Severity of Disability

These analyses examined whether CR and HQCR for clients who have most-severe disabilities differs from CR and HQCR for clients who have less-severe disabilities. Table 5 shows that CR for clients with most-severe disabilities was significantly lower than CR for clients with less-severe disabilities, $F(1, 81) = 4.97, p = .029, \eta^2 = .06$. The size of the effect was medium, showing that 6% of variance in CR was attributable to client disability severity. For HQCR, clients with the most-severe disabilities were associated with a much lower HQCR than clients with less-severe disabilities, $F(1, 81) = 63.17, p < .001, \eta^2 = .44$. The effect size for the analysis was very large, indicating that 44% of variance in HQCR was explained by clients' level of disability.

Given the large effect sizes found for HQCR, follow-up analyses were performed in a similar fashion to RQ2, examining the extent to which LWCR and FTCR differed for clients with most- and less-severe levels of disability. Similar effects were found to those of HQCR: Clients with the

Table 4. HQCR, LWCR, and FTCT Differences Between MRC and RM Counselors.

Counselor experience	Outcome variable	Group	M (SD)	F	p	η^2
All years	HQCR for all clients	MRC	.17 (.07)	4.67	.034	.06
		RM	.13 (.06)			
	HQCR for clients with most-severe disabilities	MRC	.08 (.07)	1.17	.282	.02
		RM	.06 (.05)			
	LWCR for all clients	MRC	.21 (.08)	5.25	.025	.07
		RM	.17 (.08)			
Six years or fewer	FTCR for all clients	MRC	.35 (.10)	3.48	.066	.05
		RM	.30 (.12)			
	HQCR for all clients	MRC	.16 (.06)	5.49	.025	.14
		RM	.11 (.06)			
	HQCR for clients with most-severe disabilities	MRC	.08 (.07)	0.81	.376	.02
		RM	.06 (.05)			
	LWCR for all clients	MRC	.20 (.07)	5.32	.027	.14
		RM	.14 (.06)			
	FTCR for all clients	MRC	.33 (.10)	5.05	.031	.13
		RM	.24 (.10)			

Note. HQCR = high-quality closure rate; LWCR = living-wage closure rate; FTCT = full-time job closure rate; MRC = master's degree in rehabilitation counseling; RM = master's degree in related discipline.

Table 5. Closure Rate Differences by Severity of Disability.

Outcome variable	Level of disability	M (SD)	F	p	η^2
CR	Most-severe	.48 (.20)	4.97	.029	.06
	Less-severe	.52 (.14)			
HQCR	Most-severe	.08 (.09)	63.17	<.001	.44
	Less-severe	.18 (.08)			
LWCR	Most-severe	.13 (.10)	54.24	<.001	.40
	Less-severe	.22 (.10)			
FTCR	Most-severe	.19 (.13)	111.66	<.001	.58
	Less-severe	.36 (.14)			

Note. CR = closure rates; HQCR = high-quality closure rate; LWCR = living-wage closure rate; FTCT = full-time job closure rate.

most-severe disabilities were associated with a much lower LWCR, $F(1, 81) = 54.24$, $p < .001$, $\eta^2 = .40$, and also a much lower FTCT, $F(1, 81) = 111.66$, $p < .001$, $\eta^2 = .58$. Notably, the effect sizes for both analyses were very large, with 40% and 58% of variance being attributable to client disability severity, respectively.

Discussion

The study's three research questions had the following aims: (a) to determine whether there are differences in CR between MRC and RM counselors, (b) to assess if HQCR differs between MRC and RM counselors, and (c) to explore whether HQCR is different for clients with the most-severe disabilities and those with less-severe disabilities.

Regarding the first research question, we found no significant differences on CR between MRC and RM counselors.

This was true regardless of whether we conducted the analyses on all clients or only on those with the most-severe disabilities, and regardless of whether we used all counselors in the analysis or only those with 6 or fewer years of experience. Thus, overall, we found no evidence that MRC and RM counselors differ on CR. These findings corroborate the results of previous studies, which also failed to find significant MRC-RM differences on CR (Abrams & Tucker, 1989; Szymanski, 1991; Szymanski & Danek, 1992; Szymanski & Parker, 1989b).

Although there are many possible reasons for these results, one possible explanation is that the success of a VR counselor does not depend on having formal rehabilitation training, but rather on the counselor's ability to establish a trusting and collaborative counseling relationship with clients (i.e., a strong *working alliance*, Bordin, 1994), which is taught not only in MRC programs but in any

counseling-related curriculum. Indeed, research has shown that working alliance is a significant predictor of client success (Donnell, Lustig, & Strauser, 2004; Lustig, Strauser, Rice, & Rucker, 2002). Put another way, the similar counseling abilities of MRC and RM counselors may be the reason there are no significant CR differences.

Such a conclusion seems tenuous, however, when the results of RQ2 are considered. Analyses revealed that MRC counselors had significantly higher HQCR than RM counselors, and this effect was present when we included all counselors in the analysis or only those with 6 or fewer years of experience. This effect also persisted when HQCR was further broken down into LWCR and FTCT, with the exception of the single non-significant analysis which compared FTCT in all counselors ($p = .066$). Thus, very different conclusions are made when examining overall CR and when examining closure rates that take into account job quality (i.e., HQCR, LWCR, FTCT). Whereas the analyses of RQ1 found no significant differences on CR, the results of RQ2 suggest that full-time and high-paying jobs are more likely to be secured by MRC counselors. This is a finding that has not been reported before and is impressive considering that numerous other variables influence counselors' ability to secure jobs for clients, such as the availability of jobs in the local economy, employment barriers such as transportation, and differences in client motivation, education, and work experience.

The main implication of these results is that MRC counselors are more likely to place clients in higher quality jobs. This is important given that RSA's mission is to help clients achieve financial independence, yet research shows clients tend to get jobs in the secondary labor market (Hagner, 2000) that provide low incomes (Martin et al., 2012), few benefits (Lustig et al., 2003), and hinder clients from moving to better quality jobs in the primary labor market (Cook & Burke-Miller, 2015; Hagner, 2000). Counselors with MRC degrees are therefore more able to meet RSA's mission than counselors with RM degrees. We state this with an important caveat: The effect sizes for these results are medium (.06 for HQCR, .07 for LWCR, .05 for FTCT), so although the differences between MRC and RM counselors are significant, they are not very large.

A possible explanation for the significant MRC-RM differences on HQCR, LWCR, and FTCT lies in the specific content areas taught in MRC training programs. Curriculum standards for the MRC degree include content regarding the importance of independent living, successful rehabilitation across the life span, and strategies to analyze employment trends and labor market data (Council for Accreditation of Counseling & Related Educational Programs, 2016). These content areas are unlikely to be taught in detail in RM training programs; thus, it appears the advantage of an MRC degree is that it gives counselors the tools to secure quality jobs for their clients.

Given that we found significant MRC-RM differences on HQCR when all clients were analyzed, it was somewhat surprising that no significant HQCR differences were found when only clients with the most-severe disabilities were included in the analysis. This suggests that if the utility of the MRC degree lies in providing counselors with the ability to secure high-quality jobs, this advantage does not extend to clients with the most-severe levels of impairment. A possible reason for this finding may be that these clients have levels of impairment too great to allow employment for 30 or more hours weekly, and no amount of specialized training in rehabilitation and disability management can overcome this. Another explanation is that there may simply be fewer quality jobs available for individuals with such levels of disability. Put another way, despite the fact that MRC counselors have a higher ability than RM counselors to place clients in high-quality jobs (as the results for HQCR suggest), they do not showcase this ability due to the lack of suitable quality jobs. The results relating to RQ3, discussed below, offer further insights regarding client disability severity.

A last noteworthy result from the analyses for RQ2 relates to counselors' level of experience. When examining counselors of all levels of experience, the MRC group had significantly higher HQCR and LWCR but not FTCT. However, when examining only counselors with 6 or fewer years of experience, all three outcome variables revealed significant differences, despite the fact that sample sizes in the latter analyses were about half the size and thus had lower statistical power. More importantly, the effect sizes for the latter set of analyses were much stronger, being double or more: 14% versus 6% for HQCR, 14% versus 7% for LWCR, and 13% versus 5% for FTCT. The MRC-RM differences are therefore much more pronounced in counselors who have 6 or fewer years of experience.

These results suggest that MRC counselors may be better prepared to perform their jobs when they are novices (vs. novice RM counselors), a finding which is supported by other research (Mackay, Suedmeyer, Schiro-Geist, West, & Strohmer, 2018). However, the results suggest MRC-RM differences for these types of closure rates diminish as counselors gain job experience over time, a finding that was also suggested by Szymanski and Parker (1989a). Notably, a key difference between our findings and those of Szymanski and Parker are that their study compared MRC counselors with all other counselors, including those who had bachelor's degrees, whereas this study specifically compared MRC and RM counselors. The present study is therefore the first to offer evidence that closure rate differences between MRC and RM counselors diminish as counselor experience increases.

The goal of RQ3 was to explore the extent to which client disability severity predicts different types of closure rates (i.e., CR, HQCR, LWCR, and FTCT). Although these

analyses did not specifically compare MRC to RM counselors, they shed some light on why there were no significant MRC-RM differences on CR (RQ1) or HQCR (RQ2). The results revealed that all four types of closure rates were lower for clients with the most-severe disabilities, but the differences were considerably more pronounced for HQCR, LWCR, and FTCCR. Whereas the CR result was significant at the .05 level and had a medium effect size ($\eta^2 = .06$), the other three results were highly significant (all p values < .001) and had much larger effect sizes, ranging from .40 to .58. Put another way, the results show that disability severity predicts 6% of variance in overall CR, but this jumps to between 40% and 58% when the closure rates take into account job quality, representing a sevenfold to ninefold increase. In comparison, effect sizes for the analyses comparing MRC and RM counselors in RQ1 and RQ2 had effect sizes ranging from 5 to 14%. This indicates that a client's disability severity is a very strong predictor of whether the client is placed in a high-quality job.

Numerous previous studies have shown that VR clients tend to get low quality jobs that tend to be in the secondary labor market (Boutin, 2010; Capella, 2003; Martin et al., 2012; Walls & Fullmer, 1997), but these findings suggest this is especially the case for clients with the most-severe disabilities. We reiterate our comment above that a possible explanation for these findings is that clients with the most-severe disabilities may have levels of impairment that prevent them from acquiring high quality jobs, or that such jobs may simply not be available for these clients. That said, it is notable that all clients in the present study were deemed eligible for rehabilitation services at the time of initial assessment (i.e., clients who are deemed to have disabilities that are too severe are not eligible to receive rehabilitation counseling).

Overall, the present study's findings can be summed up to the following: (a) we found no significant differences between MRC and RM counselors on CR, and this was true regardless of the level of counselor experience or level of client disability severity; (b) MRC-RM differences in closure rates were discovered once job quality was taken into consideration; that is, significant differences on HQCR, LWCR, and a close but non-significant difference on FTCCR; (c) these differences became even larger when the analyses were conducted using only counselors with 6 or fewer years of experience, with the effect sizes being twice as large; and (d) although clients with most-severe disabilities are less likely to be placed in jobs (i.e., lower CR), they are much less likely to be placed in high-quality jobs (i.e., HQCR, LWCR, FTCCR).

Implications for Research and Future Directions

The study's findings present a number of directions for further research. First, future studies examining the

relationship between counselor education and closure rate need to take into account the quality of jobs clients obtain upon case closure. Not doing so may continue to produce results suggesting that MRC and RM counselors do not have different closure rates (as a number of studies have reported), ignoring the possibility that differences may arise once job quality is considered. Admittedly, our data come from a single state agency and the study's results may not generalize to other agencies, warranting replication efforts. As mentioned at the outset of this article, the results presented here are preliminary and part of an ongoing data collection effort across multiple agencies, and we plan on investigating the same series of research questions using a more representative sample of counselors in the future.

Second, future studies should explore why MRC counselors exhibited higher HQCR when clients with all levels of disability were analyzed but not when the analysis only included clients who have the most-severe disabilities. As mentioned previously, it is possible that these clients have disabilities that are too severe to allow them to work enough weekly hours to earn a sufficient income, or that there is a lack of high-quality jobs for these clients. Although these are viable explanations, it is also possible the results are a reflection of deficiencies in the training of MRC counselors. Research should examine whether the MRC curriculum needs to be modified to better prepare counselors to work with this population, or whether providing counselors with additional on-the-job training could increase these closure rates. Perhaps more training in assistive technology, which is more likely to be useful for these clients, would be beneficial.

Third, studies should also explore other operationalizations of high-quality closure rates. In this study, we focused on full-time jobs that pay a living wage, but other operational definitions are conceivable. In particular, the use of Specific Vocational Preparation (SVP) codes is promising because these codes estimate the amount of training required to perform a job, and the codes are available for almost every job in the Dictionary of Occupational Titles (U.S. Department of Labor, 1991).

Last, another avenue for future research is to examine the role other variables play in predicting client closure rates. In the present study, we found that disability severity is a strong predictor of whether a client obtains employment. However, it is foreseeable that a myriad of other variables affect closure rates, such as a client's motivation to find work, his or her education level, previous work experience, and the availability of jobs in a client's community. Previous research has shown that counselors perceive these variables to be important predictors of whether a client obtains employment (Mackay, 2018). It is important to determine how strongly these factors predict client success because, if they prove to be more important than a counselor's degree type, then the debate about the degree

requirements for VR counselors becomes somewhat moot. Put another way, these variables may simply overshadow any existing differences between MRC and RM counselors, and assessing them in future studies will provide deeper insights about what factors most strongly predict client success.

Implications for Rehabilitation Education and Practice

The study's main implication for VR practice is that counselors with MRC degrees are more likely to place clients in high-quality jobs. The practice of hiring counselors with MRC degrees is therefore more in-line with RSA's mission to help individuals with disabilities achieve financial independence and integration into the community. It is important to point out that the effect sizes for the analyses examining MRC-RM differences were not large; thus, they do not necessarily warrant the exclusion of hiring counselors with RM degrees. This is especially true if these counselors already have job experience, as our findings suggest that MRC-RM differences diminish as counselor experience increases. If agencies do hire RM counselors who happen to have little work experience, they ought to provide on-the-job training that will help these counselors place clients in high-quality jobs.

The study's results also show that clients with the most-severe disabilities are much less likely to be placed in high-quality jobs. Thus, another implication for VR practice is that agencies ought to explore ways in which this client population can be better served. This suggestion extends to counselor training programs, which should explore ways in which MRC counselors can be better trained to meet the needs of these clients. As mentioned earlier, the results of this study need to be replicated before they can be assumed to be credible, but if they are, it may be necessary to adapt the MRC training curriculum to better serve clients with the most-severe disabilities.

Perhaps the most significant implication for VR practice stems from our findings that MRC and RM counselors did not differ on overall CR, but did differ on closure rates that took into account job quality. Given that high-quality jobs are more likely to help clients achieve independence, it is important to consider the types of jobs clients obtain upon case closure. We echo previous researchers' assertions (Rumrill & Roessler, 1999) that closure guidelines should incorporate job quality criteria, and that increased focus needs to be placed on clients' career development throughout the VR process.

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