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Running head: vocational rehabilitation competencies in Australia
Abstract

Objectives: Over the past decade there has been growth in the delivery of vocational rehabilitation services globally as countries seek to control disability-related expenditure, yet there has been minimal research outside the United States on competencies required to work in this area. This article reports on research conducted in Australia to determine current job function and knowledge areas in terms of their importance and frequency of use in the provision of vocational rehabilitation.

Methods: A survey comprising items from the Rehabilitation Skills Inventory-Amended and International Survey of Disability Management was completed by 149 rehabilitation counselors and items submitted to factor analysis. T-tests and ANOVAs were used to determine differences between scores of importance and frequency and differences in scores based on work setting and professional training.

Results: Six factors were identified as important and frequently used: 1) vocational counseling, 2) professional practice, 3) personal counseling, 4) rehabilitation case management, 5) workplace disability case management, and 6) workplace intervention and program management. Factors 1, 2, and 3 were significantly more important and performed more frequently by respondents in vocational rehabilitation settings than those in compensation settings. These same 3 factors were rated significantly higher in importance and frequency by those with rehabilitation counselor training when compared to those with other training.

Conclusions: While 'traditional' knowledge and skill areas such as vocational counseling, professional practice and personal counseling were identified as central to vocational rehabilitation practice in Australian rehabilitation agencies, mean ratings suggest a growing
emphasis on knowledge and skills associated with disability management practice.

**Keywords:** vocational rehabilitation, disability management, rehabilitation counseling, competencies
Research into competencies required to deliver vocational rehabilitation services has been conducted in the United States (US) over a 50 year period in an effort to document the role, function and knowledge domains of the profession that delivers these services, rehabilitation counseling. With the increasing global focus on vocational rehabilitation it is critical that similar research be undertaken in other countries and jurisdictions to determine areas of knowledge required for professional practice in vocational rehabilitation and to inform educational curricula.

As with other professions, the knowledge and skills required of rehabilitation counselors continues to evolve in response to changing service delivery systems, legislative mandates and licensure laws (Leahy, Chan, & Saunders, 2003). In the US, for example, amendments to the Rehabilitation Act, the emergence of new areas of work (e.g. life care planning) and the growth of employer-based disability management programs have led to new opportunities for rehabilitation counselors (Leahy et al., 2003).

The impact of these changes on the profession and its knowledge and skill requirements has been tracked through a number of competency studies (Emener and Rubin, 1980; Leahy et al., 1987; Leahy et al., 1993; Rubin et al., 1984). The most recent study (Leahy et al., 2003) identified seven job functions (vocational counseling and consultation, counseling intervention, community-based rehabilitation, service activities, case management, applied research, assessment, and professional advocacy) and six knowledge domains (career counseling, assessment and consultation; counseling theories, techniques and applications; rehabilitation services and resources; case and case-load management; health care and disability systems; and medical, functional and environmental implications of disability).
Due to a dearth of research, the evolution of vocational rehabilitation in Australia, in terms of professional roles and functions, has drawn heavily on the US, despite differences between these countries in legislation and service delivery. The only Australian study has found that rehabilitation counselors rated vocational counseling, personal counseling, professional practice and case management as the most important knowledge domains in their practice (Biggs, 1996). However, this research is now dated as recent changes to legislation and vocational rehabilitation service delivery in Australia have markedly impacted the functions of rehabilitation counselors. Private sector rehabilitation and disability management services have been areas of significant growth due to regulatory changes that have encouraged safer workplaces and improved injury management practices. Most workers’ compensation and motor accident schemes in Australia now include rehabilitation provisions designed to encourage return to work as soon as possible and there are considerable financial incentives for employers to manage their safety and rehabilitation programs. Many large, self-insured employers have introduced in-house disability management and employed rehabilitation counselors to coordinate these programs (Westmorland, Buys & Clements, 2002). Rehabilitation counselors have also expanded their scope of practice into other areas of service delivery including mental health, career counseling, school-to-work transition, community-based rehabilitation, vocational assistance for sole parents and life coaching. For example, the growth in funding for mental health services to provide a ‘seamless’ model of care across all governments and service providers (Council of Australian Governments, 2006) has led to an increased demand for skilled practitioners to provide services in this area.
In disability management service delivery in the US, Rosenthal, Hursh, Lui, Isom and Sasson (2007) identified three primary domains of practice: disability case management, disability prevention and workplace intervention, and program development, management and evaluation. Specialized skills are necessary to undertake these roles, including absence management, integrated benefit practice, health and wellness program design (Rosenthal et al., 2007), conflict resolution, developing transitional work programs, disability data analysis, safety and obtaining the support of managers, labor and supervisors (Habeck, Kress, Scully & Kirchner, 1994).

Buys (2006) demonstrated the growth of employer driven vocational rehabilitation and the increasing need for adequately trained professionals in this area in an overview of articles from several European and American countries. Harder, McHugh, Wagner and Harder (2006), for example reported a growth in the use of disability management strategies in Canada between 1997 and 2003. They cite the both the 1997 Watson Wyatt report which found that 39% of Canadian employers supported disability management, and a 2003 report by Harder and Voaklander which reported 82% of the Canadian employers they surveyed both supported disability management and offered some disability management services. Niehaus and Bernhard (2006) reviewed the 2004 revisions of the German Social Code Book which requires employers to prevent injury and prevent long-term incapacity resulting from injury. These legislative changes include requirements of employers to both ensure sustainable employment for employees with existing disability as well as preventing long-term unemployment due to injury or illness. Selander (2006) noted the increased focus on employers and disability management in an effort to curb Sweden's growing incidence of
long-term health related unemployment. Swedish law makes employers primarily responsible for promoting return to work.

With the expanded scope of vocational rehabilitation practice in Australia in areas such as disability management, there is a need to better understand the contemporary skills and knowledge areas required by rehabilitation counselors to deliver these services using up-to-date survey instruments. Accordingly, the first two aims of this study were: 1) to identify the skills and knowledge areas important to the delivery of vocational rehabilitation by rehabilitation counselors, and 2) to determine the skills and knowledge areas frequently used in vocational rehabilitation. As not all rehabilitation professionals in Australia receive specialist tertiary-level training in the provision of vocational rehabilitation, an additional aim was to determine whether the frequency and perceived importance of skills and knowledge areas in vocational rehabilitation differed in relation to the practitioner’s professional training and work setting.

Method

Participants

Following approval from the ethics committee, data were obtained from a sample of 149 practicing rehabilitation counselors who were recruited through: (1) membership of the Rehabilitation Counselling Association of Australasia or Australian Society of Rehabilitation Counsellors, (2) employment at CRS Australia, a major employer of rehabilitation counselors, and (3) alumni lists of major educators of rehabilitation counselors, The University of Sydney and Griffith University. Participants completed the survey either online or by hard copy.
The respondents (77% female) had a mean age of 35.42 years ($SD = 11.89$). The majority of respondents held a bachelors (68.5%, $n = 102$) or masters degree (23.5%; $n = 35$) and were employed under a job title of Rehabilitation Counselor (42%, $n = 63$), Case Manager (17.4%, $n = 26$), Vocational Rehabilitation Specialist (13.4%, $n = 20$) or Disability/Injury Management consultant (6%, $n = 9$).

Seventy-one percent ($n = 106$) of respondents had completed higher education in rehabilitation counseling, 7% ($n = 10$) in psychology, 4% ($n = 6$) in case management, 2% ($n = 3$) in occupational therapy and 16% ($n = 24$) trained in other areas including nursing, occupational health and safety, and counseling. Employment settings included rehabilitation agencies (43%, $n = 64$), compensation agencies (19%, $n = 29$), educational institutions (5.4%, $n = 8$), private practice in both rehabilitation and compensation services (5.4%, $n = 8$) and not-for-profit community rehabilitation organizations (4.7%, $n = 7$).

**Instruments**

In order to capture disability management in the expanded scope of vocational rehabilitation practice the survey combined items from two instruments – the *Rehabilitation Skills Inventory – Amended 1* (Biggs, 1996) and the *International Survey of Disability Management Practices* (Certification of Disability Management Specialists Commission, 2004). There were a number of overlapping items between the instruments. Where this occurred, the item that most clearly described the particular competency was retained.

The survey comprised general demographic items (age, education, profession, employment setting) and 113 knowledge and skill statements constructed from the following:
1. Rehabilitation Skills Inventory - Amended I (RSI-I). The Rehabilitation Skills Inventory (Wright et al., 1987) is a 114-item self-report scale designed to identify the perceived importance and attainment of tasks regularly undertaken by professionals working in vocational rehabilitation services in the US. The original instrument comprised of ten subscales however validation by Biggs and colleagues using an Australasian sample (Biggs et al., 1995) found that a 7 subscale (64 items) solution was more parsimonious. The seven components included in the RSI-Amended I were vocational counseling, personal counseling, professional practice, job placement, vocational assessment, rules and regulations, and case management.

2. International Survey of Disability Management Practices (ISDMP). An additional 47 items from the ISDMP that captured specific knowledge and skills related to disability management (DM) practice not otherwise included in the RSI-I, were included in the questionnaire. The DM areas covered included occurrence of knowledge/skills demonstrated by disability management specialists, disability case management and disability prevention and worksite interventions.

3. Additional items – 2 additional items were included to capture aspects of supervision and accessing relevant literature to inform practice.

Results

Major knowledge and skill areas

To determine the major knowledge and skill areas perceived to be important to vocational rehabilitation, items in the RSI-I and ISDMP were submitted to separate factor analyses using principal axis factor as the extraction technique. Items with factor loadings equal to or greater than .40 were retained for further analysis. Individual scale analyses were
undertaken for two reasons. Firstly, so that results from the RSI-I in this study could be compared with previous studies using this scale. Secondly, so the additional DM areas identified by the ISDMP could be clearly identified.

Although the sample size was small for factor analysis, a number of authors have argued that smaller sample sizes can be adequate when there are strong correlations and few distinct factors (Guadagnoli and Velicer, 1988; MacCallum et al., 2001; Tabachnik and Fidell, 2007) In the present study, mean communality was 0.767 (RSI-I) and 0.707 (ISDMP), consistent with MacCallum et al.’s (2001) recommended mean of 0.7, and each of the final factors in each scale had 10 or more items loaded at the 0.4 range. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.89 (RSI-I) and 0.88 (ISDMP), well over the acceptable level of 0.5, and Barlett’s Test of Sphericity was highly significant (RSI-I: approx Chi-Square $[df = 2016] = 7622.81, p < .0001$; ISDMP: approx Chi-Square $[df = 1176] = 5092.88, p < .0001$) indicating the factorability of the matrices.

**Vocational Rehabilitation**

The Kaiser-Guttman rule of Eigenvalue greater than 1 and Cattell’s scree test (1966) isolated four factors which accounted for 53% of the variance (see Table 1).

**Factor 1: Vocational Counseling.** With an Eigenvalue of 23.87, this factor accounted for 37.3% of the variance. Items focused on vocational activities and included a counseling component. Activities such as vocational planning, vocational training, job placement, and career counseling were represented in this function. The coefficient alpha value for the sample was .75 and the average inter-item correlation was .75 indicating high internal consistency.
Factor 2: Professional Practice. The second factor (Eigenvalue of 4.24, an additional 6.62% of the variance) comprised 12 items which had a focus on themes relating to professional practice and knowledge, advocacy and marketing. The alpha coefficient for this factor was .87 and the average inter-item correlation was .58 indicating high internal consistency.

Factor 3: Personal Counseling. The third factor of 11 items emphasized personal interaction and client counseling. This function had an Eigenvalue of 3.49 and accounted for an additional 5.46% of the variance. The coefficient alpha for this factor was .91 and the average inter-item correlation was .65 indicating high internal consistency.

Factor 4: Rehabilitation Case Management. This final factor had an Eigenvalue of 2.63 and accounted for an additional 3.96% of the variance. The factor comprised 12 items that represented management processes for identifying, coordinating and supplying the resources needed for effective rehabilitation. The coefficient alpha for this factor was .85 and the average inter-item correlation was .51 indicating high internal consistency for items in this factor.

Disability Management

A combination of the Kaiser-Guttman rule and Scree test identified a 2-factor solution that accounted for 45% of the variance (Table 2).

Factor 1: Workplace disability case management. The first of the two DM factors had an Eigenvalue of 18.56 and accounted for 37.89% of the variance. This factor comprised 23 items and concerns the provision of individualized workplace focused rehabilitation services
and programs for injured/ill workers. The coefficient alpha for this factor was .95 and the average inter-item correlation was .45 indicating high internal consistency.

**Factor 2: Workplace intervention and program management.** This factor included 21 items and represents the knowledge and skills necessary to create the organizational environment for prevention and injury management initiatives to flourish in the workplace. It had an Eigenvalue of 3.66 and accounted for an additional 7.38% of the variance. The coefficient alpha for this factor was .94 and the average inter-item correlation was .45 indicating high internal consistency.

<Table 2 about here>

**Importance and frequency of major knowledge and skill areas**

Rehabilitation case management and personal counseling were rated by respondents as the most important areas and the most frequently performed (see Table 3). Knowledge and skills included in the professional practice factor were rated as the lowest in importance as well as least frequently performed in their work. Paired samples T-tests were computed to determine if differences in ratings for each factor (importance and frequency) were significant. All importance ratings were significantly higher than ratings for performance frequency.

<Table 3 about here>

**Professional training and work setting**

ANOVs were undertaken to: (1) determine whether the perceived importance and frequency of knowledge and skill areas differed in relation to professional training and (2) to compare views from participants in different work settings.
Professional training: Table 4 provides the results of the comparisons of professional training (rehabilitation counseling versus other) and importance and frequency ratings. Tertiary-qualified rehabilitation counselors rated three of the six factors (vocational counseling, professional practice, and personal counseling) as being of greater importance to the provision of vocational rehabilitation than those without specific training in rehabilitation counseling. Vocational and personal counseling were also reported as being performed more frequently by qualified rehabilitation counselors than by other trained respondents.

Work setting: Three of the six factors, namely vocational counseling, professional practice, personal counseling, were rated significantly higher in importance by respondents working in a rehabilitation setting than those working in a compensation setting (see Table 5). The same three factors were performed significantly more frequently by those in rehabilitation settings when compared with compensation settings. Respondents working in ‘other’ settings reported similar importance ratings to those in a rehabilitation setting for professional practice and personal counseling. They rated performance frequency of all factors except organizational workplace/systemic intervention and program management significantly lower than those working in a rehabilitation setting.

Discussion

This study aimed to explore the contemporary skills and knowledge areas in vocational rehabilitation required by rehabilitation counselors to deliver vocational rehabilitation services in Australia. In terms of perceived importance, six factors were
identified. These were vocational counseling, professional practice, personal counseling, rehabilitation case management, workplace disability case management, and workplace intervention and program management. The first four of these factors arose from the RSI-I and mirrored the findings of earlier research done in Australia and New Zealand (Biggs, 1996). There is also a degree of consistency between these findings and the most recent US research in this area (Leahy et al., 2003), whereby US rehabilitation counselors identified vocational counseling and consultation, counseling intervention, community-based rehabilitation service activities, case management, applied research, assessment, and professional advocacy as the most important factors in their work.

Rehabilitation case management, personal counseling and vocational counseling were rated as the most important of the six factors, reflecting the pivotal role and wide use of these knowledge areas in rehabilitation practices across settings. Although Leahy et al. (2003) used the original version of the RSI, their sample of US rehabilitation counselors also rated these areas as important job dimensions, acknowledging their centrality to vocational rehabilitation processes and practice in western countries.

The last two factors, workplace disability case management and workplace intervention and program management identified arose from the ISDMP items. The findings are consistent with those from DM studies undertaken in the US. For example, these factors closely resemble the conceptualization of disability management as two levels of practice - Level I and Level II (Currier et al., 2001; Habeck and Kirchner, 1999). Workplace disability case management is similar to Level II disability management practice, which is concerned with the delivery of disability management services to individual clients. Level I disability management practice relates to administrative and managerial functions, with a
focus on the organizational, rather than the individual level. In a recent role and function study of disability managers, Rosenthal et al. (2007) suggest that Level I and II functions are being blended across three domains of disability case management, disability prevention and workplace intervention, and program development, management and evaluation. The findings of the current study offer some evidence to support this view in that there appears to be an overlap between workplace disability case management and workplace intervention and program management in functions such as workplace assessment, worksite accommodation, on-site education and training, and use of management information systems.

Although there is consistency in the results of current and previous studies, it is also apparent that disability management practice has increasingly become integral to the delivery of vocational rehabilitation in Australia and therefore the role of Australian rehabilitation counselors in the past decade. In effect, the role has expanded to include a greater focus on knowledge and functions that are associated with prevention of injury and retention of injured workers in the workplace. This is consistent with some of the changes that have occurred within the vocational rehabilitation (VR) system. For example, CRS Australia, the federal VR provider, has expanded its provision of services beyond social security recipients, its traditional client base, to offering the full range of disability management services to compensation claimants.

In terms of the frequency of use of the six factors in current delivery of vocational rehabilitation by rehabilitation counselors, the order of rankings almost paralleled those of importance. The similarity in rankings is consistent with previous competency studies in the US (Leahy et al., 2003; Rosenthal et al., 2007; Scully et al., 1999), which found little
variance in the rankings for importance and frequency. However, it was found that the mean ratings for frequency of performance of the key identified areas differed significantly to the ratings of importance on each of the six factors. It is likely that this reflects the struggle between professional ideals (reflected by the importance ratings) over practical reality (reflected by the frequency ratings), whereby rehabilitation counselors perceive particular functions to be important and central to their role in the delivery of vocational rehabilitation, but are constrained by workplace factors (e.g. time pressures, availability of funds) in terms of the degree to which they can offer such services.

This study also examined differences in the nature of professional training on the perceived importance and frequency in use of the knowledge and skill areas used in vocational rehabilitation. Specifically, responses from those with rehabilitation counselor training were compared with responses from respondents with other professional training. Three of the six factors (vocational counseling, professional practice, and personal counseling) were rated significantly higher in importance than by those without specific rehabilitation counselor training. It is likely that this result reflects the emphasis placed on these areas in university rehabilitation counseling professional training programs and the strong association of these knowledge and skill areas with the delivery of vocational rehabilitation by the profession. The significantly higher frequency with which qualified rehabilitation counselors performed vocational and personal counseling may represent acknowledgement of specific professional expertise, and current regulatory requirements in compensation agencies that acknowledges this expertise. It is usual in VR providers which employ multi-disciplinary teams that other professions refer clients to rehabilitation counselors for specific services such as vocational assessment and counseling. In terms of
regulatory requirements, compensation agencies often specify which professions can provide particular services. For example, rehabilitation counselors are accredited by WorkCover New South Wales to provide rehabilitation counseling, vocational assessment and counseling, job analysis and job placement assistance to injured workers under its scheme (WorkCover NSW, 2008). Unlike in the US, however, there are no certification requirements for the profession or delivery of vocational rehabilitation services, though this has been explored in the past and is likely to receive further consideration.

This study’s final aim was to determine whether skill and knowledge sets were rated differently by rehabilitation counselors in different work settings. Our findings indicate that a different emphasis is placed on the importance and practice of core knowledge and skill sets by those working in VR compared to those in compensation settings. Vocational counseling, personal counseling and professional practice are considered significantly more important and are performed significantly more frequently by respondents in VR than those in compensation settings. This finding may be attributed to the fact that clients of VR services are more likely to be seeking employment and require vocational counseling. Counselors in these settings are also more likely to be given the opportunity to offer personal counseling services as part of a multi-disciplinary rehabilitation program compared to counselors in compensation settings who are often limited to providing return to work services.

Rehabilitation case management, workplace disability case management, and workplace intervention and program management were seen as important knowledge and skill areas and were undertaken at similar rates in the two work settings. As stated earlier, this is consistent with the fact that ‘traditional’ VR agencies are now more likely to offer disability
management services, as well as VR programs. It suggests that much greater emphasis on knowledge and skills associated with disability management needs to be given in order to support the vocational rehabilitation processes.

The low response rate and small sample size raises the question as to whether the results are able to be generalized to the broader profession of rehabilitation counseling in Australia. However, low response rates appear to be typical of research in this area (Rosenthal et al., 2007; Scully et al., 1999). Second, the instrument used in this study was a blend of the RSI-I and the ISDMP and therefore lacked any existing psychometric information. Additional studies that further refine this measure for use in vocational rehabilitation competency based studies are warranted. Further, the results have focused on the professional’s perceptions of the importance and reality of actual performance. A more in-depth view would arise from applying a qualitative methodology to complement the current results.

Vocational rehabilitation work environments continue to change in response to legal and system imperatives. Although traditional functions continue to be important, it is apparent that the role now includes a much greater emphasis on knowledge and skills associated with disability management practice. In addition to identifying processes central to effective rehabilitation practice generally, and vocational rehabilitation specifically, this study also provides empirically derived knowledge and skill sets required to work effectively in these changing work environments. University curricula need to respond to the knowledge and skill sets required in the current rehabilitation work environment. Given the role will continue to evolve, it is recommended that regular surveys be undertaken and survey instruments continually updated to reflect new areas of knowledge. Importantly,
research that compares skill and knowledge sets from Australasia, Europe, and North America would provide a greater understanding of the competencies required to provide vocational rehabilitation and disability management services globally.
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