A Validation of the Rehabilitation Skills Inventory in four Australasian Rehabilitation Organisations and its relationship with Occupational Measures

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This thesis, I am sure, is no more or less remarkable in conception and planning than that legion of doctoral theses before it. Like its predecessors the research concepts were readily accessible from prior scholarship, the research design and methodologies were immediately apparent, respondents willing and keen to play their part, and editors of scholarly journals much polite in enquiring as to when manuscripts may be to hand and to please keep their journals in mind!

I quite prefer to entertain such a fiction as a psychological buffer against the realities of completing this research which, in twice the length of time originally planned, I am now relieved and very pleased to present. Personal effort aside, there are several individuals who deserve mention without whose support I would have neither commenced nor completed this academic journey.

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ABSTRACT

Although relatively new to the range of human health providers, rehabilitation services and programmes have developed in response to rapidly changing societal and individual needs and in partnership with technological innovations. In identifying the key historical developments in both New Zealand and Australia arguments are made for the clear identification of rehabilitation skills.

A central theme of this thesis research is to describe and document these differences in rehabilitation practitioner skills. Thomas (1990) argues that an important rationale behind this type of research is "...to reveal what practising rehabilitation [professionals] do so that they can eventually be helped to do it better"(p.75). Skills in modern rehabilitation settings cannot be studied in isolation from other occupational variables which operate in multi-disciplinary organisations and due regard needs to be given to these interactions. Thus a description of the relationship between practitioner skills and other job-related stressors such as workload, job vs non-job, responsibility pressure , quality concern and role conflict and job related strains such as commitment, intention to quit and job satisfaction, is a second important theme of this thesis research.

The development of skills and competency measures in the rehabilitation profession has a firm basis in the United States. The development of the Rehabilitation Skills Inventory (Leahy, Shapson and Wright, 1987a, 1987b), a 114 item self report measure, is reported in this thesis because it has potential as a research and management instrument to describe core skills.

An exploratory pilot use of the RSI on a sample of New Zealand rehabilitation professionals (n=82) was undertaken and subsequently reported as RSI (Amended I) (Biggs, Flett, & Voges, 1995; Biggs, Long, Flett, and Voges, 1994), providing evidence on this sample of a possible 7 component (64 item) amended solution. These components were personal and group counselling, vocational counselling, case management, vocational assessment, job placement, professional practice, and rules and regulations. Additional investigation of this instrument on a larger and more representative group of rehabilitation professionals was argued and a subsequent administration of the RSI (Amended I) to three

New Zealand groups and one Australian group of rehabilitation professionals (n=301) proceeded. The results of this administration (RSI Amended II) indicated a more parsimonious and robust 4 component (47 item) solution. The four components, accounting for 48% of variance, were labelled as vocational counselling, personal counselling, professional practice, and case management. The first three of these four were also identified by Leahy et al. (1987b) as core competencies across specialisations.

Roessler and Rubin (1992) contend that skills and competencies may buffer the rigours of life as a rehabilitation professional and this assertion was examined using a conceptual model of person-environment fit and its relationship with the Minnesota Theory of Work Adjustment (Dawis & Lofquist, 1984). A series of three research goals were proposed for this thesis. The first research goal was to consider the relationships between job related stress (here conceptualised as workload, job vs non-job conflict, responsibility pressure, quality concern and role conflict) and outcomes across a range of occupational groups of rehabilitation professionals. The second research goal was to examine the relationships between rehabilitation skills and outcomes across a range of occupational groups of rehabilitation professionals. The third research goal was to examine the potential moderating or mediating effects of rehabilitation skills (as measured by the Rehabilitation Skills Inventory - Amended II) on the relationship between occupational stress and the job related outcome measures of organisational commitment, occupational commitment, intention to quit, and job satisfaction.

A survey of a sample of human service workers in the disability and rehabilitation field in Australia and New Zealand (n=301) was undertaken. Respondents were drawn from professional staff in the Accident Compensation Corporation of New Zealand, the Multiple Sclerosis Society of New Zealand, Workbridge NZ, and the Australian Commonwealth Rehabilitation Service.

There are a number of differences between groups in age, hours worked per week , and levels of education. Descriptive statistics and group differences on additional variables employed in the study are then provided in sequence as follows: RSI factor scores, job stress sub-scales, and outcome measures of commitment, intention to quit, and job satisfaction.

With regard to the RSI scores, there were marked group differences in all four measures (vocational counselling skills, personal counselling, professional practice, and case management) with the differences generally reflecting the professional orientations of the rehabilitation organisations. With regard to job stress variables, the ACC group scored highest on responsibility pressure and quality concern while the WB group scored lowest on job vs non-job conflict and the MS group (with its predominance of part timers) scored lowest on workload stress. There were a range of group differences on outcome measures but an overall pattern was less clear.

In order to assess the contribution of independent variables (job stress measures) to outcome measures (satisfaction, commitment, intent to quit) and to evaluate the potential moderating effects of rehabilitation practitioner skills, a series of hierarchical regression analyses were undertaken. While in all cases the overall regression models were significant, there was no clear or compelling evidence to suggest that rehabilitation practitioner skills might moderate the effects of stress on outcomes. In order to address the question of whether skills might mediate the relationship between stress and outcomes a further series of hierarchical regression analyses were conducted. Here a number of significant main effects emerged (e.g. job vs non-job conflict was a significant predictor for 4 of the 9 outcome measures while quality concern was significant for 6 of the 9 outcome measures) while, among the skills variables, professional practice skills tended to be the most consistent predictor of outcomes. There was some evidence also that skills mediated the effects of stress for the outcomes of intention to quit the organisation/profession, affective occupational commitment and affective organisational commitment.

The similarities in rehabilitation skills core competencies in the RSI Amended II with the RSI core competencies of the major study of Leahy et al. (1987b) in North America is encouraging and helpful in the process of validation of the scale. On the other hand the lack of differentiation and elaboration of skills evident in the local version of the scale perhaps reflects the lack of growth and specialisation of the Australasian rehabilitation environment into the various specialties and occupational settings that characterise the North American environment.

The mediating effect of skills on outcomes noted in this research is important for the areas of skill and competency acquisition, professional development training, and stress reduction. Understanding more fully how this mediation effect operates is an important question for the future and highlights a need for longitudinal research to identify causal sequences.

The need for ongoing research into rehabilitation skills and competencies has been argued variously as a means of ongoing definition of this professional activity (e.g.Wright et al., 1987; Leahy et al., 1987a, 1987b) and as a tool for professional certification (e.g. Leahy & Holt, 1993; Linkowski et al., 1993). Within this framework psychometric issues also arise as to whether the skill definitional process is best defined by measures of skill frequency of use (as in this research), skill attainment, skill preparedness, or a combination of such measures.

The research outlines in this thesis is intended to make a positive contribution to a fuller understanding of the skills required and the operating environment of rehabilitation professionals in the Australasian region. The profession is emerging in this region and the results of this research will arguably support these developments.

CHAPTER ONE

CHAPTER 1: INTRODUCTION

1.1 Chapter Overview

Although relatively new to the range of human health providers, rehabilitation services and programmes have developed in response to rapidly changing societal and individual needs and in partnership with technological innovations. This thesis examines first the essential skills and competencies in rehabilitation practice, and second, how they interact with other occupational variables. As the rehabilitation professional populations under study are drawn from both New Zealand and Australia, a brief overview of the historical development of rehabilitation service in both countries is given to provide the framework within which the research of this thesis is undertaken.

This chapter identifies the key historical developments in both New Zealand and Australia and outlines the range of current services and the legislative and structural environments in which they operate. It traces the evolution of rehabilitation services from before World War I to the present. Finally it argues for the clear identification of rehabilitation skills and suggests that the skills utilised in modern rehabilitation settings cannot be studied in isolation from other occupational variables which operate in multi-disciplinary organisations.

1.2 Historical Development of Rehabilitation Services in New Zealand

1.2.1 Early development

The development of rehabilitation services in New Zealand has followed the pattern observed in other western societies. In New Zealand in the 19th Century, men disabled on active military service could qualify for a small grant of land or a pension provided for under the Militia Act of 1858 and the Military Pensions Act of 1858.

The First World War, however, had the greatest impact on public perception of war related disability. This was as a result of the unprecedented casualty rate in which 18,500 died and 50,000 were wounded out of a force of 100,000 (McLintock, 1966). This situation led to a rehabilitation challenge of unanticipated proportion. In order to address this challenge a Department of Soldiers' Re-establishment was constituted in 1918 to control hospital and medical Centres providing free medical treatment to soldiers. Within five years it had expanded as it had also given limited and rudimentary vocational re-training to some 40,000 disabled servicemen. The major emphasis of this support was the provision of pensions and medical support rather than services to disabled servicemen and this philosophy underpinned rehabilitation services for many years to come. The means to coordinate these rehabilitation services on behalf of an individual did not exist, nor was there a body of health professionals with the skills to do so. The worldwide Depression in the 1920's and 30's compounded difficulties as paid work became scarce and this served to reinforce the need for financial benefit rather than rehabilitation services. However, not all servicemen benefited from the services and the effect was felt particularly on veterans who could not demonstrate an

eligibility for a disability pension. In an attempt to better support the conditions of ex-servicemen, the Returned Soldiers' Association in 1933 established a Soldiers' Civil Re-establishment League with an intention of attracting Government Grants to integrate the returned servicemen into civilian employment. This process, however, was again assisted primarily by financial grants and not by an active coordinated process of rehabilitation. The rehabilitation that was available was essentially medical rehabilitation. A veteran, once fit, was entitled to a year's free medical treatment, a gratuity, and assistance to acquire land (Maclachlan, 1966; Schull, 1973).

During the period between world wars there was a limited expansion of disability pensions to civilians. Although the principle of State support for those unable to earn a living because of physical incapacity was established through such means as the Blind Pension (1924) and the Invalid's Benefit (1936), the focus was again one of financial aid rather than vocational re-training. One advance was provided by the Social Security Act of 1938 in the form of sickness benefits which provided cover for loss of earnings arising from temporary illness.

1.2.2 Post second World War development

Servicemen returning from World War II had access to services that were generally more efficient and comprehensive than those which had followed the previous War. For example, in addition to primary medical treatment and land settlement schemes, assistance was not provided for further higher education or vocational training. The majority of servicemen were assisted by rehabilitation services provided for all citizens, rather than

special soldiers' disability schemes. Unlike their predecessors from World War I, reintegration into the workforce was aided by the buoyant economic conditions of the late 1940's and 50's and this had important implications for disability and rehabilitation services and provided the potential for greater use of these services and consequent expansion of the services themselves.

In contrast to some other Commonwealth countries (e.g. Australia, Canada), war pensions and medical care for returned soldiers in New Zealand were administered by the same agencies that administered services to civilians. This made a transfer of services to civilian agencies easier to maintain in the post-war years. This was the commencement of a role for organisations in rehabilitation services and an example of this is provided by the Disabled Servicemens' Rehabilitation League .

In order to overcome the limits of the medical services in returning wounded servicemen to civilian life, the Disabled Servicemens' Rehabilitation League was originally established under the Disabled Soldiers' Civil Re-establishment Act (1930) in order to assist the wounded serviceman with training for employment. In 1954 the services were further extended in a limited capacity to civilians and eventually to a full capacity in 1969. Re-named in 1969 as the Disabled Re-establishment League (Incorporated), and then in 1974 as the Rehabilitation League N.Z. (Inc), the League became an official government Department to better reflect the nature of its now predominantly civilian clientele. In 1990, in an acknowledgment of the further changing roles in the disability and rehabilitation sectors, the League was formally disbanded and some of its relevant functions re-constituted in a new organisation, Workbridge (Inc). Workbridge (Inc) continues the association with vocational

training commenced by the League but in a different manner. Where the League provided training for people with disabilities in its own vocational workshops, Workbridge now focuses on direct referrals to employers and industry based trainers to assist in client placement in competitive employment. The rehabilitation service providers employed by this agency are investigated in this thesis.

In summary, although war and its consequences provided an impetus to examine and provide more appropriate rehabilitation services, and although such services developed in New Zealand to provide similar assistance for returned servicemen and civilian alike, there were other features which helped shape the nature and extent of funding and services available and who might receive them. These features relate to the establishment of government services and departments to manage and coordinate the consequences of injury and disability.

1.2.3 Accident and non-accident compensation and rehabilitation

Two important pieces of legislation were enacted in the 1970's which shaped the nature of rehabilitation services that exist in New Zealand today. These were the Disabled Person's Community Welfare Act (1975) and the Accident Compensation Act (1972). The former Act gave recognition to many of the ideas promoting the integration of the disabled into the community. This was a desirable transition from the medical rehabilitation focus between both World Wars, and the post World War II period which provided some basic vocational rehabilitation services. The Act broadened assistance provisions to allow for support to persons caring for disabled children, provided resources to community based support organisations, and emphasised and supported vocational training opportunities.

A point worth noting is that while support was given to organisations and individuals to provide vocational training for people with disabilities, support was not provided to training and education agencies for training of either service providers or specialists in counselling and coordination of rehabilitation services.

The second piece of legislation was a most important development for rehabilitation in New Zealand. The Accident Compensation Act (1972) provided financial relief to accident victims at a level based upon their previous income, it allowed for timely and effective access to rehabilitation services, and gave a focus to injury prevention. In 1992 the Act was repealed and replaced with the Accident Rehabilitation Compensation and Insurance Act. This act, although incorporating a number of new regulations, retained the universal cover, no-fault, no right-to-sue, features of its predecessor. The rehabilitation service providers employed by this agency are also subject to investigation in this thesis.

1.2.4 Current service environment

A recent survey from the New Zealand Health Information Service (1994) reports that four in ten New Zealanders report some type of disability or long term illness and these are serviced by additional rehabilitation providers either through health services directly, or through non-profit agencies such as the Multiple Sclerosis Society which is also investigated in this thesis. This ratio further increases to four out of five for the sixty five years plus age group. Although some caution is to be exercised in a survey of this nature which asked respondents to report on *any* disability or impairment, survey results conservatively estimate the New Zealand population of those with a disability as 15% of the total population. This

is a sizeable proportion of the population that will be seeking to have a range of divergent needs met. Many of these needs will be best met in the rehabilitation process and coordination will be required for both clients of the Regional Health Authorities (RHA) and the Accident Compensation Corporation (ACC).

With the developments in the service structure for disabilities acquired by non-accident, and parallel developments in the ACC for accident related disabilities, the identification of appropriate and representative competencies required by rehabilitation service providers has now become an important and compelling task. The notion of identifying and describing core occupational competencies is widely accepted in industrial and corporate settings as a means of fostering efficiency (Sheth & Sisodia, 1995) and encouraging workers to continually improve their capabilities (Baer, 1996). Identification of core competencies are also seen as important in these settings as a mechanism for assisting organisations in the process of change management (Eadie 1996) and allowing organisations to more efficiently train and nuture competencies that will be needed in the new environment (Bowman 1996). For the individual rehabilitation professional (as for other types of professions) the pursuit of occupational competencies is an important aspect of maintaining employability in the face of limited organisational job security and high levels of rapid technological change (DeFillipi & Arthur, 1994). The identification of competencies has the potential to shape the education and training of case managers and rehabilitation coordinators and/or counsellors in New Zealand for the foreseeable future. An important related issue, to be more fully discussed later in this Chapter, is to examine how such competencies may relate to perceptions of stress and strain in work settings (e.g. Flett, Biggs & Alpass, 1994, 1995a).

The development of skilled coordinators or counsellors in the rehabilitation field has occurred at a more rapid pace in Australia, and in seeking to find compatible skills and competencies for the development of similarly useful structures in New Zealand, it is instructive to examine the comparative development of both countries and for this reason an Australian group was involved in this study.

1.3 Historical Development of Rehabilitation Services in Australia

1.3.1 Early development

The development of rehabilitation services in Australia has parallels with that of New Zealand. As in New Zealand, the initial efforts in rehabilitation were for the war-injured, particularly those injured following the First World War (Rowe, 1958; Skerman, 1961). A commonwealth scheme for the "repatriation" of injured soldiers was established. Disabled ex-servicemen were assisted by the new Repatriation Department which provided medical treatment in army hospitals. This, however, was a major difference to New Zealand's system where medical treatment for ex-servicemen was provided through the public health system.

The social and economic advantages of restoring the working ability of civilians with disabilities, however, did not become apparent to the Commonwealth Government until after the depression of the 30's and the declaration of war against Germany in 1939 (Tipping, 1992). Subsequently, amendments to the Invalid and Old Age Pensions Act were enacted in 1941 and included a vocational training scheme for invalid pensioners.

1.3.2 Post second World War development

Much of the immediate post-war period in Australia varied from that in New Zealand which tended to follow a similar pattern to that of Great Britain. Britain and New Zealand established separate services for medical rehabilitation through a public hospital system. Similarly separate vocational rehabilitation services were provided by a separate government or quasi-government entity. In New Zealand's case, as we have seen, this was the Disabled Re-establishment League.

The Australian approach was influenced by a desire to minimise or avoid this separation of responsibility, if at all possible, within the State/Commonwealth divisions that existed and this hastened large scale organisational development. It was generally accepted that primary medical treatment was to be a State responsibility, but that the Commonwealth would provide both medical treatment and training beyond that point for civilians and non-civilians alike. The full extent of this provision from the Commonwealth Government was based heavily on a report commissioned by Parliament and undertaken by Coombes, Goodes, and Rowe (1947). Known generally as the Coombes Report, its primary recommendation was that the Commonwealth Government provide both rehabilitation treatment and training services within the same organisation. The Centres subsequently established provided a full range of rehabilitation services such as physiotherapy, occupational therapy, speech therapy, psychological assessment, rehabilitation vocational counselling, special education, exercise therapy, and a full range of nursing and medical consultancies in a residential setting. These centres were to persist in one form or another until 1985 when the Commonwealth relinquished its rehabilitation treatment and training facilities throughout the country in favour

of a community based model which purchases external rehabilitation services when needed. Nonetheless, the residential centre's were the catalyst for the development of a previously unknown Australian profession of vocational rehabilitation counselling. In contrast and as previously noted, no such multidiagnostic residential rehabilitation centres were ever established in New Zealand.

1.3.3 Critical development 1970-1976

The Commonwealth Government's decision in the 1940's to provide both rehabilitation treatment and training facilities through the Commonwealth Rehabilitation Service (hereafter referred to as the CRS), had served people with disabilities surprisingly well during its first 30 years. Several ingredients for change, however, were evident by the 1970's. Three Government Reports about rehabilitation, the Griffith Report (1970), the Conybeare Report (1970), and the Report of the Senate Standing Committee on Health and Welfare (1972), made a significant contribution to the climate for change. These reports emphasised the role of the States in medical and educational aspects and the role of the Commonwealth in vocational and social aspects. States were now encouraged to develop medical and educational infrastructures to assist people with disabilities, and the Commonwealth adopted a longer term position to focus on vocational and social rehabilitation.

Seven Commonwealth Regional Units were established throughout Australia by 1972. This was a significant establishment as these Units were to provide working models for the later devolvement from large centre-based services to geographically widely spread community based Units. The service coordination role for unit staff was clearly articulated

as the staff were to provide liaison with hospitals, doctors, and other service providers in the region, as well as between rehabilitees and employees.

More importantly, for the purposes of the overall investigation of this thesis, the Griffith and Senate Reports brought to a focus the need to train specialists in vocational rehabilitation who could assume the role of coordination and counselling. The CRS had previously been able to draw on existing professional groups for much of its staff needs but there had been continuing problems in deciding on the appropriate skills and qualifications needed for vocational counsellors. To meet this need the CRS decided to seek the establishment of a formal tertiary course in vocational rehabilitation counselling. This was commenced as a pilot course at the New South Wales College of Paramedical Studies in 1974 and students, mainly staff of the CRS, were sponsored to attend. The course had an initial curricula in psychology, sociology, casework practice, counselling, medical rehabilitation, occupational rehabilitation, and rehabilitation research methodology and formed the basis of future undergraduate studies at the diploma and bachelor's degree levels. Graduates of this course, and other similar courses developed in separate States, were to provide the leadership and direction of the new Regional Units as well as develop a counselling and facilitation style which would assist in defining a range of service delivery skills for the emerging profession of rehabilitation counselling in Australia. In contrast, it was not until 1983 that a similar undergraduate programme became available in New Zealand. A systematic effort is currently underway (partly via the research reported herein) to define the underlying core competencies for the emerging profession of rehabilitation counselling in New Zealand assisted to some extent by observations from Newsome (1988) and Biggs and Voges (1989).

The leadership mandate to develop counselling and facilitation styles within the CRS was provided without a firm theoretical foundation and open to pragmatic interpretation by an increasing number of rehabilitation professionals. This potential for ambiguity underscores the importance of an instrument such as the Rehabilitation Skills Inventory (see Chapters 3 & 4) which could serve a valuable role in both definition and maintenance of appropriate skills and competencies. Patterson and Marks (1992) emphasise that such skills and competencies are a necessary prerequisite for the provision of quality services to rehabilitation consumers.

1.3.4 Critical development 1977-1984

In 1977 the Commonwealth Government amended the Social Services Act to widen the eligibility to receive rehabilitation assistance to include all people of working age who would be likely to derive substantial benefit from treatment and training. Goals were widened from solely vocational to leading an independent or semi-independent lifestyle.

The CRS end objective for its clients up to this point had always been clear; namely, paid employment. Community attitudes had clearly evolved and the influential Woodhouse Report of 1974 indicated that the needs of handicapped persons who had little or no potential for employment should be catered for. A later Commission of Inquiry into Poverty (1976) reiterated this view, remarking that the availability of rehabilitation should not be dependent upon the possibility of returning to work, or an expressed willingness to return to work.

This legislation presented a challenge to the CRS who still retained the large centres

purchased in the 50's and still had the concepts of comprehensive rehabilitation and teamwork from a diverse specialist staff within well equipped centres - centres predominantly focusing on vocational rehabilitation. The implications of the new Act with its emphasis on social rehabilitation, the changing community attitudes to institutional forms of rehabilitation, and the successful CRS regionalisation program, provided a compelling impetus for change. A shift in emphasis was inevitable and the CRS three year plan for 1981-83 (Department of Social Security Annual Report, 1981) encompassed community outreach and a new regional role with emphasis on efficient use of available resources.

As the ACC, and to some extent Workbridge, in New Zealand has done now, the CRS chose then to adopt a case management model of operation where a set of core competencies in case management were required of every professional staff member irrespective of their original qualifications in the field. The CRS case management model is discussed in the following section.

1.3.5 Current service environment - CRS

The case manager's position incorporates some aspects of all three traditional methods of facilitation viz. casework, group work, and community organisation, but in addition the case manager in the CRS adopts multiple roles very much in the model of O'Connor (1988) which include enabler, broker, advocate, evaluator, mobilizer, and planner. The incumbent is also responsible for five integrated components of the rehabilitation plan; assessment, case planning, service co-ordination, monitoring and evaluation of the case plan, and maintenance of accurate written case records.

The CRS have recognised that they have an organisational need to provide an effective training strategy in case management for the professional staff they recruit. Such staff may have previous qualifications in, for example, psychology, social work, occupational therapy, education, speech therapy, physiotherapy, rehabilitation counselling, or exercise physiology. The CRS has developed a range of in-house training modules covering what they believe to be key competency areas in case management and these are provided as part of the individual case manager's professional development needs.

1.4 Rehabilitation services in large organisations

As will be referred to again later in this thesis (see Chapter 5), the speed associated with changes to the rehabilitation services environment over the last fifty years has demanded rapid adjustment on the part of all in the work arena. The nature of work and the relationship of the individual to it have changed to the point that an individual not only needs to have job skills but also must generally exercise those skills within an organisational environment if they are to be efficient. This means that individuals need to bring to the work process not only their professional and technical skills, but basic attributes in relation to behaviour within organisations. This behaviour in turn, is expected to be affected by a range of work environment factors as organisational variables such as policy and regulations may serve to reduce the effectiveness of an individuals' skill. It becomes important then, in any examination of skills base for rehabilitation professionals, to ensure that such an investigation includes salient organisational dimensions of the working environment where the skills are generally exercised. Flett, Biggs & Alpass (1995d) cogently argue, that if quality service provision is the ultimate goal of rehabilitation, then "...a greater understanding of the

professionals who provide services and the issues of stress and tension that concern them can only enhance work performance and positively influence methods of selection and training and overall professional practice in rehabilitation" (p.275). Research in other contexts suggests that job-related skills and competencies (along with conceptually similar notions such as career self efficacy) may influence the relations between occupational stress and outcomes in a number of ways (e.g. Bhagat & Allie, 1989; Biggs, Flett, & Voges, 1995; Lent & Hackett, 1987). This thesis will undertake such an examination of skills and occupational concerns to understand more fully what these potential relationships might be.

1.5 Conclusion

The developments in rehabilitation services in both Australia and New Zealand have been shaped in recent times by changes in legislation and practice. Both systems are seeking to provide such services in ways that are more efficient, more effective, and more relevant to the needs of the client. The service model of case management has been adopted to achieve these aims and provides a focus to examine the range of skills and competencies that rehabilitation staff may need to operate professionally in this environment. There is a need to define the relevant competencies to enable rehabilitation educators and rehabilitation service providers to manage the education and training processes effectively (see Chapters 2 & 3).

The development of appropriate education and training programmes and an understanding of the competencies required for employment in the rehabilitation field are issues well advanced in the United States. A consistent pattern has emerged in the

development of measures of rehabilitation skills in a wide variety of settings and occupations for the purposes of education, professional development, and more lately for accreditation (of teaching programmes) and credentialing (of licensed practitioners). The Rehabilitation Skills Inventory (Leahy, Shapson & Wright, 1987b) is a recent development that provides an opportunity to examine a range of competencies across rehabilitation occupations and settings. The Inventory has a number of features that could well assist in the process of determining the appropriate competencies required in an Australian or New Zealand setting and for that reason a closer examination is warranted. The following chapter includes the development of this important measure as well as descriptions of a range of other relevant measures.

1.6 Chapter Summary

This chapter notes the key historical developments in rehabilitation in both New Zealand and Australia and outlines the range of current services and the legislative and structural environments in which they operate. It traces the evolution of rehabilitation services from before World War I to the present and argues finally for the clear identification of rehabilitation skills. Several different types of organisations involved in rehabilitation service delivery in both New Zealand and Australia have been described (e.g. Workbridge, Commonwealth Rehabilitation Service, Accident Compensation Corporation, Multiple Sclerosis Society). Given the historical origins of these organisations and their foci of contemporary service provision, a range of differing profiles of rehabilitation skills are likely to occur among the respective service providers. Workbridge, for example are more likely to score highly on vocational rehabilitation skills whereas CRS and ACC should display higher levels of case management skill. A central theme of this thesis research is to describe

and document these differences in rehabilitation practitioner skills. Thomas (1990) argues that an important rationale behind this type of research is "...to reveal what practising rehabilitation [professionals] do so that they can eventually be helped to do it better"(p.75).

Skills in modern rehabilitation settings cannot be studied in isolation from other occupational variables which operate in multi-disciplinary organisations and due regard should also be given to these interactions. A description of the relationship between practitioner skills and other job-related stressor-strain variables is a second important theme of this thesis research and is described in detail in later chapters.

An important first step in this process is the definition and development of appropriate measures of practitioner skills and competencies. The following chapter provides an overview of research in this area.

CHAPTER TWO

2: **Development of Skills and Competency Measures**

CHAPTER 2: DEVELOPMENT OF SKILLS AND COMPETENCY MEASURES

2.1 Chapter Overview

This chapter examines the recent history of the development of skills and competencies measures for various rehabilitation professionals. Substantial developments have occurred in the professional spheres of vocational evaluation, work adjustment, and job placement, and rehabilitation counselling and these developments are reported in depth in each of these areas. The development of the Rehabilitation Skills Inventory (Leahy, Shapson and Wright, 1987a, 1987b) is similarly reported because it has potential as a research and management instrument to describe core skills. Reasons why rehabilitation skills might relate to organisational variables are also advanced, for example, to assist in the reduction of role strain, occupational stress and other environmental occupational concerns.

2.2 Early Development

In an ongoing effort to better define the rehabilitation profession, a number of researchers have studied the competencies of various rehabilitation professionals. Defillippi and Arthur (1994) have proposed a competency-based view of careers which describes three arenas of know-why, know-how, and know-whom competencies. Within this descriptive framework, it could be argued that much of the rehabilitation competency research falls in the know-how category; that is, competencies that reflect career relevant skills and job related knowledge.

As noted in Chapter 1, the importance of competency research is also acknowledged across a wide range of corporate and industrial settings. Geaney (1995), with reference to the computing industry, distinguishes between 2 categories of core competencies: 'hard' and 'soft' skills. Soft skills include flexibility, leadership and trustworthiness while hard skills include project definition, planning and controlling process. A focus on defining and, in some cases, returning to core competencies is seen as an important aspect of corporate survival (e.g. Carroll, 1995; Willett, 1995) and Sheth and Sisodia (1995) emphasise that, in order to maximise efficiency, individuals must focus on "...doing the right things and doing things right" (p.1933).

Within the rehabilitation literature numerous discussions exist regarding the nature, types, and effects of specialisations (DiMichael, 1967; Nadolsky, 1975; Patterson, 1967; Thomas, 1982; Wright, 1980). Competencies of the rehabilitation counsellor have received the most attention (Emener & Rubin, 1980; Emener & Spector, 1985; Fraser & Clowers, 1978; Harrison & Lee, 1979; Muthard & Salomone, 1969; Parham & Harris, 1978; Rubin, 1978; Rubin & Emener, 1979; Rubin, Matkin, Ashley, Beardsley, May, Onstott, & Puckett, 1984; Wright & Frazer, 1975; Zadny & James, 1977) and will be looked at it some detail. Other specialisations which have emerged over recent times, have also received research attention with regard to their competency base. These specialisations comprise vocational evaluation (Coffey, 1978; Coffey & Hansen, 1978; Gannaway & Sink, 1979; Leahy & Wright; 1988; Rubin & Porter, 1979; Sigmon, Couch & Halpin, 1987; Sink, Porter, Rubin, & Painter, 1979; Taylor, Bordieri, Crimando, & Janikowski, 1993), work adjustment (Coffey & Ellien, 1979; Ellien, Menz, & Coffey, 1979, Matkin, 1983), and job placement (Decker & Stanojevich, 1978; Vandergoot, 1984; Willis, 1984).

2.3 Rehabilitation Counselling

The oldest and most established discipline remains that of rehabilitation counselling, and although it is subject presently to crucial debates on whether the primary emphasis is "counselling" or "rehabilitation" (Leahy & Holt, 1993; Remley, 1993; Tarvydas & Leahy, 1993; Thomas, 1993), it's emergence as a profession can be traced back several decades.

A watershed resource decision occurred in 1954. During that year, the United States Federal Government passed legislation authorising grants to Universities for training the professional rehabilitation workers needed to fill the many new positions created by expanded funding and client needs (Roessler & Rubin, 1982). Following this legislative provision of support for the profession of rehabilitation counselling, a complementary role relationship developed among agencies involved in research, pre-service training, foundation education, and continuing education (Scalia & Wolfe, 1984). Initially the process of defining competencies was linked to the curriculum needs of the newly funded training Universities. More lately, the certification and licensing processes used to screen persons into the profession, at least in the United States, have prompted the need to re-define the skill and competency base of rehabilitation counsellors (Leahy, Szymanski, & Linkowski, 1993; Szymanski, Linkowski, Leahy, Diamond, & Thoreson, 1993).

Jaques (1970) suggests research on the work of the rehabilitation counsellor was first undertaken by Rusalem in 1951 when he analyzed the functions of 441 public-sector vocational rehabilitation counsellors in several northeastern US States. Results of that investigation, which incorporated direct observation of counsellors at work and a questionnaire

to sample work activities, revealed nine categories of counsellor functions namely; medical diagnosis, social and vocational diagnosis, case finding, counselling, restoration, training, placement, follow-up, and miscellaneous activities (see Table 2.1 for a summary of competencies). Furthermore the findings suggested that a) general counselling performed in these agencies was little different from general counselling performed in other settings, and b) vocational rehabilitation counselling was more closely related to vocational counselling and guidance than it was to social case work, health, personal, or educational counselling.

Jaques (1958) reported a series of sub-roles resulting from a study of 404 vocational rehabilitation counsellors representative of a range of work settings in public agency, non-profit rehabilitation facilities, educational institutions, and Veterans Administration Hospitals. The sub-roles identified were a) creation of a therapeutic climate, b) structuring by arranging the environment, c) structuring by defining the limits within the counselling relationship, d) information gathering, e) evaluating, f) information giving, and g) interacting. While the intention of the research was to assess counsellors' opinions of effective methods of counselling a client, the identification of the sub-roles provided additional general functions under the broader category of counselling.

Table 2.1: Significant Rehabilitation Counselling Competency Research reported from 1969 - 1994

Jaques (1970) Reporting Rusalem (1951)	Muthard & Salomone (1969)	Wright, Reagles & Scorzelli (1971)	Leahy, Shapson & Wright (1987)	Linkowski, Thoreson Diamond, Leahy, Szymanski, & Witty (1993)	Biggs, Long, Flett & Voges (1994)
Rehabilitation Counselors	Rehabilitation Counselors	Rehabilitation Counselors	Rehabilitation Practitioners (Counseling, Evaluation, Job Placement)	Rehabilitation Counselors	Rehabilitation Coordinators
Counseling Social and vocational diagnosis Medical diagnosis Case finding Restoration Training Placement Follow up Miscellanenous activities	Affective counseling Vocational counseling Group procedures Medical referrals Eligibility and case finding Test interpretation Test administration Placement	Affective and therapeutic counseling Vocational Counseling Group counseling Eligibility Medical and psychological referral Case management Developing a client services plan Case finding Use of community agencies and professionals Community networking Test interpretation Restoration Training Vocational evaluation Job placement Job follow-up Work adjustment counselling Conducting research	Personal adjustment counseling Vocational counseling Group and behavioral techniques Case management Professional and community involvement Assessment planning and interpretation Assessment administration Job analysis Job placement	Individual and group counseling Foundations of rehabilitation counseling Workers compensation assessment Medical/psychosocial aspects of disability Case management/service coordination Vocational and employer consultation Family/gender/ multicultural issues Environmental and attitudinal barriers Program evaluation and research	Personal counselling vocational counselling Rules and regulations Case management Professional practice Vocational assessment Job placement

Miller, Muthard & Barillas (1965) investigated how public agency rehabilitation counsellors used their time relative to their job function (see Table 2.1). Their findings indicated that the largest percentage of time was spent in work activities involving vocational guidance and counselling (25.5%) followed by recording activities (17.5%), and travel (10.5%). Muthard (1969) later made the point that counselling activities per se in the public agency environment studied could not be expected, on this evidence, to account for more than 40-50% of the total work activities within the organisational structure.

Since the mid-60's research into the role and competencies of rehabilitation counsellors generally has been in response to efforts made by Muthard and Salomone (1969) and Wright and his associates (Wright & Frazer, 1975, 1976; Wright, Reagles, & Scorzelli, 1973). Given the noteworthiness of the contribution to the rehabilitation field by this research, some emphasis is deserved.

In the first study, Muthard and Salomone (1969) examined a stratified sample of 378 rehabilitation counsellors. The purpose of the research was to study the roles and function of the rehabilitation counsellors based upon a) substantial increases in the client population, b) increasing presentation of clients with more complex problems that previously, c) developments in new techniques procedures and knowledge, and d) increased numbers of university trained counsellors entering the profession. To enable their investigation, Muthard and Salomone (1969) developed the Rehabilitation Counsellor Task Inventory based upon a job analysis technique (Morsh, Madden, and Christal, 1961). For each of the 119 tasks identified, counsellors were asked to indicate if the statement was part of their job, the extent to which it should be part of their job, how satisfying the task was, with what proportion of

clients the task was performed, the amount of preparation thought necessary to perform the task, and who should perform the task. Further measures assessing the relationships between counsellor characteristics and counsellor role behaviours were also administered.

Major findings reported by the authors (Muthard and Salomone, 1969) based on a factor analysis of the counsellors' responses, identified eight major role behaviours which were labelled affective counselling, eligibility and case finding, group procedures, placement, vocational counselling, medical referrals, test administration, and test interpretation. Further, counsellors time was spent predominantly on counselling activities (33%) followed by administration (25%), and placement activities (7%), and these findings provide support for the earlier findings of Miller et al. (1965). Additional findings include a) roles did not vary significantly across different work settings (public agency, services for the blind, community based non-profit agencies), b) a university based general rehabilitation counselling curriculum was considered a better preparation than a curriculum of specialised training with various disability groups, c) a general belief by respondents that a master's degree was necessary to perform the functions indicated, but that on-the-job training had a place in medical referrals and vocational counselling activities, and d) little relationship was found between personality characteristics and counsellor role behaviour or job satisfaction.

Other studies have supported Muthard and Salomone's (1969) findings that counselling and guidance were the predominant time consuming activities. Katz, Wright, & Reagles (1971) report that counsellors indicated upwards of 42% of their time in face-to-face activities with clients. In a similar vein, Rubin, Richardson, and Bolton (1973) in a study of 87

counsellors from 11 public agencies, found counsellors reporting the majority of their time in direct encounters with clients.

The diversity of the rehabilitation counsellor's role has also been supported by Wright, Reagles and Scorzelli (1973) (see Table 2.1). They surveyed the 1969-1971 graduates of 56 graduate rehabilitation counsellor education programmes to determine the relative importance of counsellor job functions. Respondents, of whom 73% of the 534 were employed full time in rehabilitation settings, rated the following job functions as important; a) developing a plan of client services, b) using community agencies and professionals, c) vocational counselling, d) affective and therapeutic counselling, e) medical and psychological referral, and f) job placement. Twelve other job functions received ratings that indicated some importance but to a lesser extent than those just described. These were work adjustment counselling, case management, job follow-up, determining client eligibility, test interpretation, community contact and public relations, conducting research, group counselling, case finding, vocational evaluation, providing training services, and providing restoration services.

2.4 Vocational Evaluation

The emergence of vocational evaluation as a discrete occupational specialty evolved as rehabilitation practitioners focused specifically on the vocational assessment of individuals with disabilities (McDaniel, 1979). A number of earlier studies were undertaken to identify the knowledge, skills, and techniques used by the vocational evaluator in practice (Egerman & Gilbert, 1969; Nadolsky, 1971; Spieser, 1967). These early efforts were helpful in defining the evaluator's role and in identifying common techniques used in the vocational assessment

of people with disabilities. Later a task analysis approach was used by Pruitt (1972) to identify the functions of the vocational evaluator. In this study 45 evaluators were asked to perform a job analysis of their current positions. The results provided the identification of 67 tasks grouped in seven (7) distinct functions, including; evaluation, counselling and interviewing, training, administration, occupational analysis, communicating and relating, and research and development. Following closely on this research, a critical incident approach was used by Sankovsky, Brolin, & Coffey (1977) in surveying 350 practising evaluators. Subjects were asked to identify three difficult cases from their case load and then consider what skills and knowledge would have helped them perform more adequately in each case. An analysis of the response statements received indicated 25 categories of training needs for vocational evaluators.

Vocational evaluator competencies were further studied by Coffey (1978). Using a series of survey techniques, Coffey (1978) synthesised a list of 175 primary vocational evaluator competencies from a comprehensive collection of over 2500 competency statements generated from a variety of sources. Groups of practising evaluators, graduate students in evaluation, and rehabilitation facility educators (N=116) were administered the Vocational Evaluation Competency Questionnaire and asked to rate each competency in terms of the desired learning setting for attainment of each competency. Of the 175 competency statements provided, 118 were rated by more than 50% of the respondents as essential skills or knowledge. Tentative factors identified included; a) vocational evaluation administration, b) client vocational evaluation process, c) client placement skill/job analysis, d) psycho-social-cultural aspects of disability, e) rehabilitation systems, f) work samples, g) communication skills, and h) programme evaluation.

In a related effort, Sink, Porter, Rubin, and Painter (1979) examined the competencies related to the work of the vocational evaluator and rehabilitation counsellor (Gannaway & Sink, 1979). This extensive investigation involved a methodology of four primary phases; 1) identification and collection of competency based materials and research, 2) appointment and meeting of a planning committee, 3) evaluation of the competencies by teams of experts, and 4) publication of the results (Gannaway & Sink, 1979). Following a multi-stage review process the original pool of over 1000 competencies was reduced to 298 statements, covering 13 categories. These statements were then reviewed by six selected teams of experts. Although the largest number of the competencies related more directly to the work of the rehabilitation counselor (148), a substantial number of competencies (164) were needed equally by the rehabilitation counsellor and vocational evaluator. These competencies substantially covered the categories of administration and case recording, interpretation of client information, job development and placement, medical research, and consultation practice.

A more contemporary effort to research vocational evaluator competencies was reported by Leahy and Wright (1988) (see Table 2.1). As part of the larger study of multiple specialisation (Leahy, Shapson and Wright, 1987), practising vocational evaluators were administered the Rehabilitation Skills Inventory. Of the 803 vocational evaluators included in the multiple specialist sample (Total N=3,614), 270 (34%) returned usable questionnaires. The results indicated that for the three specialisations (rehabilitation counselling, vocational evaluation, and job placement) shared a common core of competencies. These competencies were in the areas of vocational counselling, assessment planning and interpretation, personal adjustment counselling, case management, and job analysis. These common competency areas represented 71 competency statements (62% of the total statements) with a group mean above

the criterion level for each specialisation. As might be expected there were some differences with regard to role. Vocational evaluators were the only specialty to rate assessment administration competencies as an important competency area, and had significantly higher ratings of importance for those competencies related to assessment planning and interpretation.

2.5 Job Placement

A relatively recent innovation in rehabilitation has been the development of a discipline of personnel specifically trained to perform the placement function (Crimando, 1982). Considerable debate has occurred within the literature regarding the appropriateness and effectiveness of this specialty area within the rehabilitation process (Vandergoot, 1982, 1984; Hutchinson and Cogan, 1974; Usdane and Salomone, 1977). Within the United States placement specialists have emerged within state agencies (Decker & Stanojevich, 1978), in non-profit agencies (Menz, 1983), and within the private sector (Matkin, 1982, 1983).

The importance of job placement in the vocational rehabilitation service delivery system cannot be overestimated. Placement services and the outcomes of such services traditionally have been major measures in estimating the effectiveness of vocational rehabilitation programmes (May & Vicelli, 1983). Within the literature there are numerous discussions regarding the problems associated with the effective delivery of placement services by counsellors particularly within public sector services (Crimando, 1982; Flannagan, 1977; Galvin, 1977; Hutchinson & Cogan, 1974; May & Vicelli, 1983; Smits & Emener, 1980; Zadney & James, 1977, 1979). May and Vicelli (1983) in reviewing the potential barriers to effective placement from the perspective of the counsellor, identified a number of

important features, including; 1) counsellors' negative attitudes, 2) time allowed for placement, 3) administrative pressure to perform placement, 4) lack of formal placement training, and 5) lack of defined responsibility and function in the area of placement. The problems of time pressure, administrative pressure, role ambiguity highlighted by May and Vicelli ((1983) further emphasise the potentially important role of organisational variables such as workload and occupational stress for example, in effective placement practices.

Among the many solutions offered to resolve these difficult problems, some suggested the addition of a new member to the rehabilitation process; the placement specialist (Muthard & Salomone, 1969; Usdane, 1974). In the development of this new discipline, however, differing emphases emerged for the placement specialist such as providing a full range of placement functions including the direct job placement responsibility for individual clients (Hutchinson & Cogan, 1974). Another perspective called for the practitioner to be primarily a resource person for counsellors while providing specialist services to employers to promote and open jobs for people with disabilities in general (Vandergoot, 1982, 1984).

There is evident variety in types of services offered by placement services. Vandergoot (1984) in reviewing literature for the last 20 years, identified a number of service categories which were consistently recommended, including work readiness assessment, labour market information, job seeking skills, job development, referral to employers, and coordination with other resources. Relatively little attention was given to the counselling function.

In order to assist the professional development of the discipline, a number of Universities developed masters degree programs in job development and placement, organised, to some degree, by Usdane's (1974) proposed curriculum. While there remains a great deal of variation in these programs, they represent an example of the development of specialised training in response to a defined functional need in the rehabilitation process.

Job placement was one of the vocational rehabilitation specialties examined in the comprehensive study to assess the competencies of rehabilitation practitioners (Danek, Wright, Leahy & Shapson, 1987; Leahy, Shapson, & Wright, 1987a, 1987b; Wright, Leahy, & Riedesel, 1987; Wright, Leahy, & Shapson, 1987). The investigators identified five core areas of competencies that were shared by all three specialties (rehabilitation counselling, vocational evaluation, and job placement). These areas were; vocational counselling, assessment planning and interpretation, personal adjustment counselling, case management, and job analysis.

More recently Beardsley and Rubin (1988) examined the job tasks and job functions of the various rehabilitation specialties using scales developed specifically for the research namely the Rehabilitation Profession Job Task Inventory, and the Rehabilitation Knowledge Competency Inventory. The results of this study generally supported and extended the findings of Leahy, Shapson, & Wright (1987b). Vocationally related competencies were generally perceived as important by each of the specialties including job placement. The findings from both studies have possible implications for both the design or modification of rehabilitation education core curricula, and the accreditation or certification examinations for rehabilitation professionals.

2.6 Instrument Development in Rehabilitation Counselling Research

The development of several instruments or inventories by which to measure aspects of knowledge, skill, competency, or preparedness, has paralleled ongoing discussion of rehabilitation counselling roles.

Wright and Frazer (1975), in order to prepare guidelines for training public agency supervisors to fulfil their human resource allocation responsibilities, constructed a comprehensive task bank, consisting of 294 task statements under 12 main categories which the authors entitled the Rehabilitation Job Task Inventory. The purpose of the inventory was to rate each task with regard to education and experiential requirements necessary to perform the job function. Additionally it was to look at the tasks' impact on services to clients. The task inventory was subsequently converted to the Rehabilitation Task Performance Evaluation Scale by including evaluation criteria for a supervisor to rate performance quality and varying times on listed tasks (Wright & Frazer, 1975, 1976). The method used by the authors to establish the task bank incorporated a functional job analytic procedure developed by Fine and his associates (Fine, 1973; Fine, Holt & Hutchinson, 1974; Fine & Wiley, 1971), a literature review of rehabilitation counsellor job functions, and a review of aptitudes and traits of related job functions using the Dictionary of Occupational Titles. They also analyzed rehabilitation counsellor job descriptions from all state civil service agencies in the Division of Vocational Rehabilitation - the major public agency federally funded rehabilitation organisation in the United States.

The initial task bank of 500 statements was further refined by an expert panel of rehabilitation educators. The resultant 294 tasks, administered to rehabilitation counsellor supervisors, provided several insights into task relevance and educational qualifications. The results suggested a) post masters' university training was required for 49 of the 294 job tasks, primarily administrative and supervisory tasks, b) a master's degree was rated as necessary for 96 tasks concentrated in ares of counselling and client planning or assessment, and c) a bachelor's degree was regarded as necessary to perform 86 tasks in areas of referral, job placement, case management, and in some interviewing situations. Although this research reported reliability coefficients of .82 or above for the ratings both within and between groups (groups being the national sample of public agency supervisors, and a panel of rehabilitation educators and specialists), rehabilitation counsellors, unfortunately, did not participate in the task rating process. This leaves some doubt as to the validity of these tasks and their importance rating from the perspective of the rehabilitation counsellor, the person charged with undertaking the tasks.

In an attempt to widen the level of understanding of contemporary role responsibilities, Emener and Rubin (1980), using the 40-item Abbreviated Rehabilitation Counsellor Task Inventory developed by Muthard and Salomone (1969), investigated changes in counsellor role and function since the mid 60's. Participants in the research consisted of rehabilitation counsellors, managers, supervisors, and educators (total n=266), representing a cross section of public and private agencies. Results indicated some differences between counsellors in public versus private agencies, with the former group reporting more time spent on test interpretation, medical referrals and eligibility determination, and the latter group reporting greater involvement in group counselling procedures. As a group, however, all counsellors

reported having insufficient time to carry out each type of work task with some of their clients. This problem of time pressure and workload pressure is a recurring theme in more recent research on rehabilitation practitioners' job stress (e.g. Flett, Biggs & Alpass, 1994, 1995). Finally, although some changes had occurred to roles and functions over the previous decade, counsellors as a group desired little change in their daily role and function.

A more recent set of structured enquiry (Danek, Wright, Leahy & Shapson, 1987; Leahy, Shapson, & Wright, 1987a, 1987b; Wright, Leahy, & Riedesel, 1987; Wright, Leahy, & Riedesel-Shapson, 1987) examined the competency bases for rehabilitation practitioners and represents a comprehensive set of investigations across specialties and across employment settings. This research represented a nationwide (United States) study on the competencies of vocational rehabilitation practitioners and examined both competency importance and competency attainment. It represents the first empirically based, comprehensive national study on the competencies of vocational rehabilitation practitioners (n=1294) in all three major specialisations (rehabilitation counselling, vocational evaluation, and job placement) and employments settings (public, non-profit, and private-for-profit).

A key feature of the research was the development and use of a new instrument, the Rehabilitation Skills Inventory (see Chapter 3). This instrument, developed over a 13 month period, underwent a four phase development process. Full details of development are provided by Leahy et al. (1987a). The RSI in its final form consists of 114 competency items rated on two separate but parallel 5-point Likert-type scales ranging from 0 (not at all/none) to 4 (very important/maximal) according to a) the extent to which each competency was considered important in the respondents primary work role, and b) the respondents perceived

level of attainment of the competency. The 114 items of the RSI were grouped by function and a hierarchical clustering technique into 10 separate clusters as follows (with number of items in parentheses): Vocational counselling (30), Assessment planning and interpretation (8), Personal adjustment counselling (13), Case management (17), Job placement (9), Group and behavioral techniques (8), Professional and community involvement (5), Consultation (9), Job analysis (5), and Assessment administration (10).

Results of this research suggest that rehabilitation counsellors, vocational evaluators, and job placement specialists, share a common core of competencies to which they attribute at least moderate importance in their respective work roles. Further the results, in identifying competency importance across roles and settings, generally support findings of previous research. This is so in particular of the role of rehabilitation counsellor where the results not only confirm previous studies on function and role (e.g. Muthard and Salomone, 1969; Rubin et al., 1984), but, because such perceptions are from practitioners across all three primary sectors, the generalizability of the findings are enhanced.

This competency research across role and setting arose, according to Danek et al. (1987), from lack of agreement on the overall model of the profession of rehabilitation counselling itself. At the core of the debate are two distinct views. The first (e.g. Thomas and Parker, 1981) contends that rehabilitation counselling is actually an extension of generic counselling principles, knowledge, and techniques applied in rehabilitation settings. There is some support for this point of view provided by the earlier reporting of Jaques (1970). The second (e.g. Reagles, 1981) argues for a profession of "rehabilitation" containing, among others, subspecialities of rehabilitation counselling, vocational evaluation, job placement, work

adjustment, and rehabilitation administration. Although Leahy et al. (1987b) suggest this body of research has important implications for pre-service level curriculum development, the unification of professional training developments for specialisations, and the clarification of professional identities, it is equally clear that this research has not resolved the central issue of agreement on a model of rehabilitation counselling.

As a consequence, it is not surprising to note that the latest research on rehabilitation counsellor competencies has, as its *raison d'être*, certification and licensure in rehabilitation counselling. Participation by individual rehabilitation counsellors in the certification process has a consistent pedigree, with over 13,000 CRC's (Certified Rehabilitation Counsellors) practising in the United States and several other countries (Leahy & Holt, 1993). This latest research on competencies differs in focus from previous research as it attempts to identify competencies, and education and practice paradigms, that assist and reinforce the principle purposes of accreditation and certification at both individual and training provider level.

This research, in relation to certification and accreditation, instigated the development of an instrument to both validate the current standards and examinations content, and to assist in the development of new knowledge areas (Linkowski, Thoreson, Diamond, Leahy, Szymanski, & Witty, 1993) (see Table 2.1). The development of the instrument followed much the same pattern as the RSI (Leahy et al., 1987a) with the identification of an extensive item pool, field trials, expert panel input, and final testing of the instrument with an annual intake of rehabilitation applicants (n=1025) requiring certification. The instrument in its final form consists of 58 items rated on two separate but parallel 5-point Likert type scales ranging from 0 (not important/no preparation) to 4 (very highly important/very highly prepared)

according to a) how important the item was to the rehabilitation counsellor's role and b), how prepared the respondent felt relative to the knowledge area as a result of education or training. The 58 items of the instrument were grouped by a principal components analysis into 10 components as follows (with numbers of items in parentheses): Vocational and employer consultative services (18), Medical and psychosocial aspects of disability (4), Individual and group counselling (7), Program evaluation and research (4), Case management and service coordination (8), Family, gender, and multicultural issues (5), Foundations of rehabilitation counselling (5), Workers' compensation (3), Environmental and attitudinal barriers (2), and Assessment (2). The instrument is unlabelled and the authors' note that it is intended that items will be routinely added to the instrument and tested over time, to study their importance and stability as rated by several samples of rehabilitation counsellors at different preparation levels.

Competency and role research in the rehabilitation profession has clearly been a feature of ongoing attempts to define the profession. Table 2.1 examples a range of studies and the key tasks and functions that are outcomes of this research. What can be noted is a common set of expectations for professional practice observed across these separate investigations. Clearly, and unsurprisingly, involvement in the counselling process itself is paramount with varying emphases on personal, affective, therapeutic, vocational, and group counselling. There is general consensus that competencies are required in the assessment process, the case management process, community and professional networking, social and environmental awareness, data and report interpretation, job placement, and job follow up. The overall gestalt parallels that of the rehabilitation process itself namely; assessment,

planning, program action, and evaluation, and provides evidence to some extent of congruence between consumer need and professional practice.

The Rehabilitation Skills Inventory has been chosen for investigation in this research as it provides access to a wide set of occupational categories of vocational rehabilitation practitioners, and compared to the other measures reviewed in this chapter, its item pool is the most extensively developed, refined and validated. The development of the RSI was the first attempt to investigate a range of specialisations via a nationwide survey. The development methodology of the RSI, in contrast to the other measures reviewed herein, represents a departure from the usual practice of selecting the sample from available membership lists and thus, as Leahy et al. (1987a) note, "... provides a unique view of practitioner characteristics relative to specialization and setting" (p.106).

What then of further attempts to define the profession of rehabilitation counselling in particular via competency based research? Thomas (1987) argues that the landmark study of Muthard and Salomone (1969) provided valuable findings that are essentially relevant today and that the differences found since then "...are interesting but certainly not earth shattering" (p.76). He suggests that researchers dedicate their efforts toward more substantive and topical issues such as, how to promote the integration of persons with disabilities into society at large, how to better facilitate adjustment to disability, how to effectively harness technological advances in the rehabilitation process, and how to facilitate more positive attitudes towards persons with disabilities. Similar comments (Thomas, 1993) are directed at perceived methodological weaknesses in attempts to examine role and function parameters in the credentialing and accreditation process for rehabilitation counsellors and counselling education

programs. Emener (1993) would appear to agree with Thomas (1993) to the extent that accreditation and credentialing, although important in establishing a benchmark or standard, are only there to ensure the consumers of the service gets the service they need.

Perhaps one of the more important features of role and function research is in its application to an emerging, versus an established, discipline. Thomas (1987) contends little new has been evident in the United States environment for some time where the profession of rehabilitation counselling has been long established. In this investigation of rehabilitation professionals in Australasia, where the profession of rehabilitation counselling might be described as emerging, Biggs, Long, Flett, & Voges (1994) assessed the appropriateness of the Rehabilitation Skills Inventory in a New Zealand sample (see Table 2.1). The results (fully described in Chapter 4) of this research and other complementary research (Biggs, Flett & Voges, 1995) provide findings similar to Wright et al. (1987) and indicates further investigations may provide valuable assistance to educators, rehabilitation professionals, funders, and consumers alike.

Research into the role, function, and competency base of rehabilitation counsellors has been significantly active over past decades. Why might such research remain important as a future imperative? Several reasons present.

Firstly, Roessler and Rubin (1992) argue that having the skills and competencies necessary for maximum efficiency and productivity is the best mechanism for coping with the stress associated with rehabilitation work. Biggs, Flett and Voges (1995) in a study of rehabilitation professionals in Australasia, found a direct negative relationship between

competencies and job tension which supports the Roessler and Rubin (1992) contention. In a complementary vein, Flett, Biggs, and Alpass (1994) in an examination of the effects of professional training in core competencies for rehabilitation practitioners, found such training to have beneficial effects on the perceived levels of job related stress and tension, and feelings of positive and negative affect. There are a number of mechanisms through which competencies might influence the relationship between stressors and strain. Highly competent individuals, equipped with the knowledge that they have the skills to handle heavy job demands, should be able to develop strategies to cope with such demands. These strategies might involve utilising other competencies as appropriate, being efficient and accurate in the allocation of time needed to complete tasks, lessening the degree of effort exerted and so on. Thus, the impact of responsibility pressure, high workloads, role ambiguity and other stressors should be minimised for these rehabilitation professionals. Apart from the work of Biggs, Flett and Voges (1995), very little research has systematically documented the linkages between competencies and occupational stressor-strain variables. As was noted in Chapter 1, an analysis of these relationships represents an important theme of the research reported in this thesis.

Secondly, Chinnery (1991) has commented on the blurring of traditional roles that can occur in a new and expanding field of employment such as rehabilitation practice. She notes that newer occupational positions such as "rehabilitation coordinator" and "case manager" are symptomatic of the "...birth of the 'rehabilitation generalist' or 'rehabilitationist' who has an elementary understanding of everything" (p.446) but in fact is representative of a process of deskilling. She argues the process of role definition is critical to avoid role strain and to reverse the movement towards deskilling. It is clearly important that rehabilitation agencies

and rehabilitation educators work closely to ensure professional competencies are matched to local and changing environments.

Finally, Defillippi and Arthur (1994) have noted how careers are increasingly characterised by inter-organisation mobility. They argue that competency accumulation by individuals is better served by boundaryless career principles which they describe in a broad sense as know-why (alternative sources of career identity and work values), know-how (accumulation of occupational skills), and know-whom (mentoring relationships). As noted in Chapter 1, the demise of organisational job security and the pace of technological change converge to promote an individual's continuous pursuit of occupational skills. This in turn has a series of implications for determining what are the appropriate skills or competencies, and how are they to be provided. A contemporary understanding of such changing environments is essential to meet and anticipate competency requirements in the human service profession.

2.7 Chapter Summary

The development of skills and competency measures in the rehabilitation profession has a firm basis in the United States. Within the specialties of rehabilitation counselling, vocational evaluation, and job placement, several researchers have developed a series of measures. An overview of the most significant competency research over these three specialties is provided in this chapter. Most attention, however, appears to have been given to role and function research on the profession of rehabilitation counselling first commenced in 1951. Several of these studies are described in detail as an introduction to the extensive

work on the Rehabilitation Skills Inventory by Wright, Leahy and Shapson (1987) and Leahy, Shapson and Wright (1987a, 1987b) which is also described in detail. Comment is made on the role of skill and competency research as an on-going strategy to define the rehabilitation counselling or coordination profession and more recently as a tool for certification. Arguments are advanced for the knowledge and attainment of such competencies to also assist in the reduction of role strain and occupational stress, and to target appropriate and core skills in an increasingly changing professional work environment. The following chapter examines the extension of the original research on the Rehabilitation Skills Inventory to populations of rehabilitation professionals in Australia and New Zealand in order to assess the utility of the instrument for training, education, and professional development.

CHAPTER THREE

CHAPTER 3: DEVELOPMENT OF THE REHABILITATION SKILLS INVENTORY (RSI)

3.1 Chapter Overview

This chapter details the methodology used in the United States for the development of the RSI (Leahy, Shapson & Wright 1987a, 1987b) and the relative importance to rehabilitation counsellors of professional competencies as measured by the Rehabilitation Skills Inventory (Wright, Leahy, & Shapson, 1987).

3.2 Method, Procedure and Results

3.2.1 Participants

The nationwide sample used in this project consisted of practitioners drawn from the population of rehabilitation specialists who, at the time of the survey, were functioning as rehabilitation counsellors, vocational evaluators, or job placement specialists and who were employed in either public rehabilitation, nonprofit facilities, or private for-profit sectors in the United States.

Because no pre-existing sampling frame was available individual frames were specifically constructed for the project. Three distinct sampling frames were developed that represent practitioners from each of the three sectors. Each frame was also stratified by type of practitioner specialization.

A sample of 3,614 participants was selected for the project by sampling from each of the three sampling frames. This process yielded the following distribution of rehabilitation practitioners across the three primary employment settings: (1) public (n=1294); (2) nonprofit (n=1182); and (3) private for-profit (n=1138).

3.2.2 Instrument development

Instruments developed for this study include the Rehabilitation Skills Inventory (RSI) and a 16-item demographic questionnaire. The RSI was developed over a 13-month period (November 1984-December 1985) by means of a methodology that initially involved expert judges and input from a 10-member national advisory committee, and in the later stages emphasized empirical verification of the instrument through extensive field tryouts and rigorous pretesting. This development strategy included four main phases: (a) systematic literature review and development of a comprehensive pool of competency items, (b) consultation and review of the items by expert judges throughout the country, (c) practitioner tryouts of item quality and inventory format, and (d) pilot testing, with extensive data analysis.

The objective in the first phase of instrument development was to review the competency literature in rehabilitation counseling, vocational evaluation, and job placement to ensure the development of a comprehensive list of those behavioral domains and competencies necessary for effective performance by practitioners within major rehabilitation employment sectors. This comprehensive review yielded approximately 1,800 competency statements that were then categorized into six major areas including 37 subcategories. The

elimination of duplication and redundancy along with statements reflecting trivial and nonprofessional content yielded 306 competency statements from the original pool.

In the second phase of development, the first instrument draft (306 items) was submitted to a national research advisory committee developed for the project, consisting of educators and researchers from all 10 regions of the country. On the basis of their input, the number of items was reduced to 184. Following this effort, item construction was standardized with many items rewritten to reflect a uniform format and the major categorical domains reorganised. This process resulted in a third instrument draft consisting of 167 items organized into seven major categories (assessment, counseling principles, personal adjustment counseling, vocational adjustment counseling, job development and placement, case management, and professional development).

In the third phase of development, the revised inventory was field tested with two separate groups of active practitioners. The first field test consisted of ratings of the inventory (167 items) by 90 graduates of 45 master's level rehabilitation programs who were nominated as exemplary practitioners by the National Council on Rehabilitation Education (NCRE) institutional contact persons. In the second field test, 20 expert practitioners currently practising in the sectors and specializations of interest to this study were administered the inventory. The results of these two field tests were evaluated against the established criteria for item inclusion namely; item clarity, distinctiveness, amenability to self evaluation, requireent of training to be performed well and use in meeting client service needs. This procedure then reduced the number of items in the inventory to 138.

In the fourth and final phase of instrument development, a nation-wide pilot test of the RSI (138 items) was conducted with a random sample (n=586) of rehabilitation specialists selected from a national mailing list (n=2376) that included practitioners from each employment sector of interest. Statistical analyses performed on these data both to verify and to condense the instrument included (a) descriptive statistics on selected demographic items, (b) item response stability (test-retest reliability), (c) intercorrelation among all items to identify potential item redundancy, (d) verification of item groups (a priori categories) through factor analysis, (e) internal consistency, as estimated by Cronbach's alpha, and (f) specialization and sector breakdowns with group means computed and graphed. On the basis of these pretest analyses, the RSI was revised to final form. After successive revisions, the number of competency items on the final inventory totalled 114.

3.2.3 Description of final instrument

The RSI consists of 114 competency items rated on two separate but parallel 5-point Likert-type scale ranging from 0 to 4 according to (a) the extent to which each competency was considered important in the participant's primary work role, and (b) the participant's perceived level of attainment.

In addition to the RSI, participants completed a 16-item demographic questionnaire. Major sections within this questionnaire include: (a) identifying information, (b) employment information, (c) higher education information, (d) professional memberships, and (e) credentials.

3.2.4 Instrument reliability and validity

The use of self-report as a measure of both competency importance and attainment was based on the assumption that rehabilitation practitioners are able and willing to respond accurately to such a survey. Self-report is commonly used to obtain information about individuals through such instruments as interested inventories, attitude surveys, and needs assessment questionnaires (Bolton, 1985; Nunnally, 1970). Furthermore, one primary justification for using self-report is that it provides information not readily available from other sources (Primoff, 1980). Because many of the competencies included in the RSI are knowledge and skill areas that cannot be directly observed by peers or supervisors, the practitioner is clearly in the best position to evaluate the importance of the item and his or her own level of attainment.

Initial estimates of the reliability of the RSI (using pilot-test data) were obtained through computation of Cronbach's alpha, which revealed relatively high reliability coefficients for each of the five a priori item categories (assessment = .95; counseling = .92; placement = .96; case management = .91; professional development = .93).

3.2.5 Response rate

Of the 3,614 RSI questionnaires mailed to practitioners throughout the country, 84 (2.3%) were returned as undeliverable, and 44 (1.2%) were returned by practitioners who indicated they no longer worked in the field of rehabilitation. Of the remaining RSI's (n=3,486), 1,294 were returned (37.1%); these yielded 1,274 usable questionnaires.

Although the response rate obtained (37.1%) was somewhat lower than expected, it does, however, compare favourably to response rates in other recent studies of a similar nature, which have ranged from 17.6% (Rubin, et al., 1984) to 33.3% (Matkin, 1982). The final sample contained 720 (62.7%) rehabilitation counsellors, 270 (23.5%) vocational evaluators, and 159 (13.8%) job placement specialists. In regard to employment settings, the final sample contained 524 (46.6%) respondents from the public sector, 346 (30.1%) from the private nonprofit sector, and 279 (24.3%) from the private for-profit sector. A total of 125 (9.8%) were excluded from the analysis either because they held a different role (e.g. nurse, paraprofessional) or because they did not actively serve clients on a daily basis (e.g. supervisor, administrator). A complete summary of respondents (n=1149) according to specialization and setting is provided in Table 3.1.

TABLE 3.1 **Rehabilitation Skills Inventory respondents by specialization and setting N=1,149 (Wright et al., 1987)**

	Specialization (N = 1,149)							
	Rehabilitation Counsellors		**Vocational Evaluators**		**Job Placement Specialists**		**Totals**	
Setting	n	%	n	%	n	%	n	%
Public	354	30.8	120	10.4	50	4.4	524	45.6
Nonprofit	139	12.1	115	10.0	92	8.0	346	30.1
Private for-profit	227	19.8	35	3.0	17	1.5	279	24.3
Totals	720	62.7	270	23.5	159	13.8	1149	100

Initially, the items of the 114-item RSI were categorized and grouped (but not labelled) according to the following areas of function:

1. Assessment (items 1-25)
2. Counseling principles (items 26-36)
3. Personal adjustment counseling (items 37-49)
4. Vocational adjustment counseling (items 50-65)
5. Job development/placement (items 66-81)
6. Case management (items 82-101)
7. Professional development (items 102-114)

Although this a priori classification served well for the initial analysis and selection of items for the RSI, it was deemed advisable to reclassify items. RSI items were grouped into empirically defined categories, according to practitioners' responses on the importance scale through the use of a hierarchical clustering technique. A cluster solution including 10 separate clusters was selected as an optimal grouping of items because it produced a manageable number of clusters (parsimony) and retained high similarity among the items within any one cluster (homogeneity). Clusters identified were as follows (with number of items in parenthesis)

1. Vocational counseling (30)
2. Assessment planning and interpretation (8)
3. Personal adjustment counseling (13)
4. Case management (17)
5. Job placement (9)
6. Group and behavioral techniques (8)
7. Professional and community involvement (5)
8. Consultation (9)

9. Job analysis (5)

10. Assessment administration (10)

3.2.6 Results

Table 3.2 presents the 114 items of the RSI categorized by the ten clusters listed in numerical order above. All items within each cluster are listed in rank order of importance for the total group of rehabilitation counsellors (n=720) participating in the primary study; respondents in job placement and vocational evaluation were not included. Of the 720 counsellors, 461 (64.0%) had a master's degree; 324 (49.2%) were in the public sector, 139 (19.3%) in the nonprofit sector, and 227 (31.5%) in the private for-profit sector. The mean level of importance assigned by all rehabilitation counsellors (the normative group) to each item is provided in the right column of the table. The original RSI item numbers appear before each of the 114 items in the tabular listing.

Importance scores (mean value assigned by all rehabilitation counsellors sampled) generally ranged from a low of 1.52 to a high of 3.58 (on a 5-point scale from 0 to 4). The median importance score was 2.78. According to guides in the instructions to respondents, skill ratings of 1 to 2 indicate that the competency has "little importance" in their job - only 15 items were rated so low; 59 items were rated between 2 and 3 ("moderate importance"); and 4 items were rated above 3 ("high importance," with 4 being the theoretical maximal level). No items on the RSI had a rating in the 0 to 1 range ("no importance").

TABLE 3.2 **RSI Clusters, Items, and Item Importance (Mean, SD) Leahy, Shapson & Wright (1987b)**

RSI Number and Item by Level of Competency Importance		*M*	*SD*
	Cluster 1: Vocational Counseling (n = 30)		
103.	Abide by ethical and legal considerations of case communication and recording (e.g., confidentiality).	3.58	0.70
1.	Assess the significance of clients' disabilities in consideration of medical, psychological, educational and familial status.	3.57	0.69
7.	Assess clients' readiness for gainful employment.	3.53	0.80
35.	Prepare with clients rehabilitation plans with mutually agreed upon interventions and goals.	3.52	0.69
56.	Discuss client's vocational plans when they appear unrealistic.	3.51	0.72
52.	Counsel clients to select jobs consistent with their abilities, interests and rehabilitation goals.	3.48	0.77
6.	Identify transferable work skills by analyzing client's work history and functional assets and limitations.	3.47	0.81
97.	Write case notes, summaries, and reports so that others can understand the case.	3.44	0.75
26.	Develop a therapeutic relationship characterized by empathy and positive regard for the client.	3.40	0.78
102.	Identify and comply with ethical and legal implications of client relationships.	3.34	0.86
96.	Compile and interpret client information to maintain a current case record.	3.33	0.79
33.	Identify social, economic and environmental forces that may adversely affect a client's motivation toward rehabilitation.	3.32	0.75
27.	Clarify for clients mutual expectations and the nature of the counseling relationship.	3.31	0.81
37.	Recognize psychological problems (e.g., depression, suicidal ideation) requiring consultation or referrals.	3.31	0.77
2.	Interview the client to verify accuracy of case information.	3.31	0.78
29.	Adjust counseling approaches or styles according to client cognitive and personality characteristics.	3.27	0.76
44.	Confront clients with observations about inconsistencies between their goals and their behavior.	3.24	0.76
57.	Develop mutually agreeable vocational counseling goals.	3.23	0.85
62.	Counsel with clients regarding desirable work behaviours to help them improve their employability.	3.23	0.85
58.	Discuss with clients labor market conditions which may influence the feasibility of entering certain occupations.	3.20	0.92
28.	Identify one's own biases and weaknesses which may affect the development of a healthy client relationship.	3.18	0.86
42.	Counsel clients to help them appreciate and emphasize their personal assets.	3.16	0.87
30.	Interpret to clients diagnostic information (e.g., tests, vocational and educational records, medical reports).	3.15	0.82
54.	Relate clients' stated interests and values to vocational choices.	3.15	0.82
50.	Review medical information with clients to determine vocational implications of their functional limitations.	3.14	0.92
51.	Counsel with clients regarding educational and vocational implications of test and interview information.	3.12	0.90
70.	Identify educational and training requirements for specific jobs.	3.02	0.98
76.	Determine the level of intervention necessary for job placement (e.g., job club, supported work, O.J.T.).	2.93	1.02
98.	Document all significant client vocational findings sufficient for legal testimony or records.	2.90	1.12
53.	Recommend occupational and/or educational materials for clients to explore vocational alternatives.	2.87	1.01

RSI Number and Item by Level of Competency Importance		*M*	*SD*
	Cluster 2: Assessment Planning and Interpretation (n = 8)		
25.	Make logical job, work area or adjustment training recommendation based on comprehensive client information.	3.09	0.96
24.	Match client needs with job reinforcers and client aptitudes with job requirements.	2.94	0.95
23.	Integrate assessment data to describe clients' residual capacities for purposes of rehabilitation planning.	2.78	1.14
19.	Use behavioral observations to make inferences about work personality characteristics and adjustment.	2.67	1.06
15.	Interpret test and/or work sample results to clients and others.	2.63	1.16
8.	Select evaluation instruments and techniques according to their appropriateness and usefulness for a particular client.	2.56	1.13
16.	Identify client work personality characteristics to be observed and rated on an actual job or simulated work situation.	2.53	1.13
17.	Utilize measurable terms to systematically describe and record client behavior.	2.25	1.20
	Cluster 3: Personal Adjustment Counseling (n = 13)		
4.	Determine appropriate community services for clients' stated needs.	3.13	0.86
38.	Counsel with clients to identify emotional reactions to disability.	3.06	0.86
32.	Employ counseling techniques (e.g., reflection, interpretation, summarization) to facilitate client self-exploration.	2.95	0.89
36.	Assist clients in terminating counseling in a positive manner, thus enhancing their ability to function independently.	2.92	0.96
39.	Assist clients in verbalizing specific behavioral goals for personal adjustment.	2.89	0.88
3.	Evaluate the client's social support system (family, friends and community relationships).	2.79	0.80
41.	Assist clients in modifying their lifestyles to accommodate functional limitations.	2.76	0.99
46.	Assist clients in understanding stress and in utilizing mechanisms for coping.	2.75	0.95
34.	Use assessment information to provide clients with insights into personal dynamics (e.g. denial or distortion).	2.71	0.95
43.	Provide information to help clients answer other individuals' questions about their disabilities.	2.67	1.02
40.	Explore clients' needs for individual, group or family counseling.	2.60	1.00
5.	Determine a clients' ability to perform independent living activities.	2.57	1.09
31.	Apply psychological and social theory to develop strategies for rehabilitation intervention.	2.57	0.95
	Cluster 4: Case Management (n = 17)		
89.	Collaborate with other providers so that services are coordinated, appropriate and timely.	3.18	0.81
90.	Consult with medical professionals regarding functional capacities, prognosis, and treatment plans for clients.	3.18	0.93
93.	State clearly the nature of client's problems for referral to service providers.	3.18	0.88
92.	Refer to clients to appropriate specialists and or for special services.	3.13	0.84
85.	Coordinate activities of all agencies involved in a rehabilitation plan.	3.08	1.03
87.	Report to referral sources regarding progress of cases.	3.00	0.98
84.	Provide information regarding your organization's programs to current and potential referral services.	2.98	1.03
94.	Select appropriate adjustment alternatives such as rehabilitation centers or educational programs.	2.96	0.96
110.	Interpret your organization's policy, laws, and regulations to clients and others.	2.94	0.95
58.	Identify and arrange for functional or skill remediation services for client's successful job placements.	2.87	1.02
114.	Obtain regular client feedback regarding satisfaction with services delivered and suggestions for improvement.	2.78	1.01
95.	Explain the services and limitations of various community resources to clients.	2.73	0.89
104.	Read professional literature related to business, labor markets, medicine and rehabilitation.	2.73	0.94

RSI Number and Item by Level of Competency Importance		*M*	*SD*
113.	Identify and challenge stereotypic views toward persons with disabilities.	2.62	1.09
77.	Understand the applications of current legislation affecting the employment of disabled individuals.	2.58	1.06
107.	Apply for principles of rehabilitation legislation to daily practice.	2.50	1.07
109.	Educate clients regarding their rights under federal and state laws.	2.47	1.03
	Cluster 5: Job Placement (n = 9)		
61.	Instruct clients in preparing for the job interview (e.g., job application, attire, interviewing skills).	3.12	1.00
66.	Apply labor market information influencing the tasks of locating, obtaining and progressing in employment.	3.06	1.05
69.	Inform clients of job openings suitable to their needs and abilities.	3.06	1.05
67.	Use local resources to assist with placement (e.g., employer contacts, colleagues, state job service).	3.02	1.12
60.	Instruct clients in methods of systematic job search skills.	2.99	1.06
59.	Use supportive counseling techniques to prepare clients for the stress of job hunting.	2.95	1.00
80.	Provide prospective employers with appropriate information on clients' work skills and abilities.	2.89	1.14
78.	Respond to employers' biases and concerns regarding hiring persons with disabilities.	2.83	1.15
65.	Monitor clients' post-employment adjustment to determine need for additional services.	2.69	1.14
	Cluster 6: Group and Behavioral Techniques (n = 8)		
63.	Develop acceptable client work behavior through the use of behavioral techniques.	2.47	1.08
88.	Monitor client progress using goal-attainment scaling or other rating systems.	2.38	1.18
47.	Counsel with a client's family to provide information and support positive coping behaviours.	2.38	1.04
45.	Use behavioral techniques such as shaping, rehearsal, modeling and contingency management.	2.33	1.06
86.	Describe Social Security regulations and procedures regarding disability determination and benefits.	2.06	1.14
64.	Conduct group activities and programs such as job clubs, vocational exploration groups or job-seeking skills groups.	2.00	1.33
48.	Counsel regarding sexual concerns related to the presence of a disability.	1.87	1.15
49.	Counsel with clients using group methods.	1.57	1.15
	Cluster 7: Professional and Community Involvement (n = 5)		
112.	Promote public awareness and legislative support of rehabilitation programs.	2.25	1.20
111.	Participant with advocacy groups to promote rehabilitation programs.	2.09	1.18
106.	Apply published research results to professional practice.	2.00	1.12
105.	Conduct a review of the rehabilitation literature on a given topic or case problem.	1.98	1.18
108.	Explain the development and philosophic foundations of rehabilitation to the general public.	1.96	1.21
	Cluster 8: Consultation (n = 9)		
99.	Make sound and timely financial decisions within the context of your work setting.	2.82	1.17
100.	Negotiate financial responsibilities with the referral source and/or sponsor for a client's rehabilitation.	2.56	1.22
101.	Market rehabilitation services to businesses and organizations.	2.43	1.29
91.	Understand insurance claims processing and professional responsibilities in workers' compensation.	2.36	1.31
79.	Negotiate with employers or labor union representatives to reinstate rehire an injured worker.	2.25	1.36
83.	Provide expert opinion or testimony regarding employability and rehabilitation feasibility.	2.08	1.36

RSI Number and Item by Level of Competency Importance		*M*	*SD*
81.	Provide consultation to employers regarding accessibility and affirmative action issues.	2.06	1.28
82.	Serve as a vocational expert to public agencies, law firms, and/or private businesses.	2.00	1.38
68.	Use computerized systems for job placement assistance.	1.85	1.26
	Cluster 9: Job Analysis (n = 5)		
73.	Recommend modifications of job tasks to accommodate a client's functional limitations.	2.73	1.10
75.	Utilize occupational information materials such as the D.O.T., O.O.H. and other publications.	2.48	1.19
71.	Analyze the tasks of a job utilizing standard D.O.L. methods.	2.33	1.25
74.	Apply knowledge of individual assistive devices and how they impact on job modification.	2.33	1.14
72.	Classify local jobs using D.O.T. and/or other classification systems.	2.15	1.33
	Cluster 10: Assessment Administration (n = 10)		
20.	Adapt evaluation tools and systems to meet special client needs.	1.93	1.37
10.	Utilize statistical concepts associated with assessment instrument (mean, percentile, standard score).	1.85	1.09
21.	Design work situations for observing specific client behaviours.	1.79	1.29
14.	Administer appropriate standardized tests and/or work samples.	1.77	1.34
12.	Employ newer applications in vocational assessment including computerized techniques.	1.77	1.22
9.	Design appropriate testing environments.	1.69	1.23
11.	Adhere to the American Psychological Association Test Standards and Restrictions (classes A, B, C).	1.56	1.35
13.	Evaluate standardized instruments with respect to validity, reliability, and appropriate	1.54	1.28
18.	norming.	1.52	1.28
22.	Utilize behavior observation scales and techniques (e.g., time sampling, point sampling). Develop local norms for assessment instruments and techniques.	1.11	1.22

3.3 Discussion

Wright, Leahy, and Shapson (1987) report that respondents in this study often reported benefits derived by simply being alerted to their own deficiencies. In a more positive vein they suggest the RSI can be used in several ways:

1. Practising rehabilitation counsellors may use the data from the study to gain insights into their own potentially important strengths and weaknesses.
2. Counselling supervisors can use the competency items as check list in systematic employee evaluation procedures.

3. In-service trainers can administer the RSI to staff for their input into the planning of training meetings.
4. University rehabilitation counsellor educators can review the competency basis for curriculum requirements and course content.
5. Research specialists in rehabilitation professional services will have a model for multi-faceted studies with appropriate instrumentation.

On these suggestions it seems clear that the RSI, or an appropriate version of such an instrument, could have potential across a wide range of situations including, establishment of professional standards, benchmarking in professional continuing education and guidelines for educational curricula preparation. Further potential is also evident for service provider organisations in recruitment and workforce planning. Overall there are several promising features of the instrument that suggest further testing of its generalizability is warranted and should be pursued especially in Australasia.

3.4 Chapter Summary

This chapter reviews the development of the Rehabilitation Skills Inventory (Leahy et al., 1987a, 1987b) and outlines the methodology of its development. Details of respondents (n=3614), the four phase items development, and instrument reliability and validity are provided. Full details of the final 114 item final instrument are provided and cluster descriptions and means and standard deviations are tabled. The chapter concludes with reasons to continue to investigate the universality of this current, or subsequently amended, instrument and the following chapter describes such a continuing investigation.

CHAPTER FOUR

CHAPTER 4: VALIDATION OF THE RSI FOR AUSTRALASIA

4.1 Chapter Overview

This chapter commences with a brief review of the salient issues associated with the development of the Rehabilitation Skills Inventory (RSI) by Leahy et al.(1987a, 1987b) and Wright et al. (1987). Comments by Hershenson (1989), following a visit to rehabilitation organisations in Australia, provide sound arguments to explore the utility of the RSI in Australasia. An exploratory pilot use of the RSI on a sample of New Zealand rehabilitation professionals (n=82) is subsequently reported as RSI (Amended I) (Biggs, Flett, & Voges, 1995; Biggs, Long, Flett, and Voges, 1994), providing evidence on this sample of a possible 7 component (64 item) amended solution. It is further argued that additional investigation of this instrument on a larger and more representative group of rehabilitation professionals should be both useful and substantiated. A subsequent adminstration of the RSI (Amended I) to three New Zealand groups and one Australian group of rehabilitation professionals (n=301) proceeded and is described in detail in this chapter. In contrast to the previous pilot administration, the results of this administration indicated a more parsimonious and robust four component solution. The four components, accounting for 48% of variance, were labelled as vocational counselling, personal counselling, professional practice, and case management. Descriptions of loading items and the general nature of the components are provided. It is argued that the instrument, the RSI (Amended II), is suitable for use by rehabilitation professionals in the Australasian region.

4.2 Validation of the RSI (Amended I) Pilot Instrument for Australasia.

Beardsley and Rubin (1988) note that most competency and skill research in the field of rehabilitation has tended to examine job tasks performed by the various specialists. This has occurred on the assumption that each specialty makes a unique contribution to the rehabilitation of persons with disabilities. In other words, the purpose of this type of role and function research was an examination of differences between specialties. By way of contrast, Beadsley and Rubin (1988) contend that similarities among direct service rehabilitation occupations have been examined almost exclusively from theoretical, logical or systems perspectives. By way of example, convergence and divergence discussions on rehabilitation counselling and vocational evaluation have examined professional boundary issues in the *process* of rehabilitation (Jones, 1978; McAlees, 1978; Sink & Porter, 1978; Wilkinson, 1978), and educational and training concerns in the development of emerging disciplines of job placement and job development have been examined (Crimando, 1982; Olshansky, 1977; Usdane & Salomone, 1977). McFarlane and DiPaola (1979) and Baker and Ellien (1979) have included the specialty of work adjustment as well as rehabilitation counselling and vocational evaluation in the discussion of professional boundary issues, and Reagles (1981) has aired the merger possibilities of the various professional bodies representing these varied disciplines.

Research directed toward isolating the knowledge base that is generic to occupational specialties in rehabilitation, has been limited. Sink et al. (1979) identified competencies shared by rehabilitation counsellors and vocational evaluators, and Willis (1984) examined selected knowledge areas shared by four rehabilitation occupations.

The development of the RSI was intended to address the competency base of vocational rehabilitation practitioners in all three major specialisations (rehabilitation counselling, vocational evaluation, and job placement) in a variety of employment settings (public, private nonprofit, and private for profit). Recognition that variations in occupational specialties and employment settings are the norm rather than the exception in rehabilitation practice is integral to the use of this instrument.

As perceptive and useful as the development of an instrument as the RSI might be, it has to be recognised that such an instrument was originally developed for use within the rehabilitation services of the United States. And although the United States has an established history in both service provision and rehabilitation education, it is instructive to an emerging profession in Australasia to recognise that there remains ongoing debate and disagreement in the field on a number of major issues. For example, agreement on the use of the most commonly used title of "rehabilitation counsellor" is by no means unanimous. Two very distinct approaches have emerged. One that contends that rehabilitation counselling is actually an extension of generic rehabilitation principles, knowledge, and techniques applied in rehabilitation settings (Thomas & Parker, 1981; Remley, 1993). Another that contends rehabilitation is a profession containing, among others, subspecialities of rehabilitation counselling, vocational evaluation, job placement, work adjustment, and rehabilitation administration (Linkowski & Szymanski, 1993; Reagles, 1981; Tarvydas & Leahy, 1993).

Clearly then, the use of such an instrument as the RSI in an Australasian context is highly desirable. Some emerging occupational issues have been explored among a variety of

rehabilitation professionals in New Zealand. Issues of burnout (Flett, Biggs & Alpass, 1992, 1993), coping strategies (Flett & Biggs, 1993), and occupational stress (Flett & Biggs, 1992; Flett, Biggs & Alpass, 1994) have been examined with a view to a more extensive review of such important issues. Core skills and competencies of rehabilitation professionals in Australasia is similarly, a domain currently unclear. The use of the RSI, if appropriate, might well assist to articulate these important skills and enable appropriate professional training and education strategies to be developed.

A compelling argument to explore the utility of the RSI in Australasia was provided by Hershenson (1989). Hershenson's focus in the use of the hybridized Survey of Rehabilitation Counselling Skills was to examine skills in the context of educational preparation of rehabilitation counsellors. He notes that rehabilitation counsellor education in Australia from 1974 has undergone rapid expansion similar to that experienced in the United States from 1954 to 1973 and that there are several similarities in curriculum development and professional practice. Given this, it would seem sensible to explore the appropriateness of an instrument such as the RSI to an Australasian context. Clearly such an instrument would need to possess robust attributes of reliability and validity and characteristics more socially and culturally appropriate to an Australasian environment. Such an amended instrument (perhaps, if possible, shorter as Hershenson remarks) might well be of substantial benefit in defining appropriate educational curricula, preparing individualised professional development programmes, and selecting and recruiting professionals in practice. The development of such an amended instrument for use with Australasian populations was subsequently undertaken and is described in this Chapter.

4.3 Method

4.3.1 Participants

The participants consisted of 82 Rehabilitation Coordinators (100% of the available N at data collection), employed by the Accident Rehabilitation and Compensation Insurance Corporation of New Zealand (ACC). Key functions of the Rehabilitation Coordinators include programme and service delivery coordination at primary, secondary, and tertiary stages in the rehabilitation process (n.b. the occupational category of rehabilitation coordinator has since been superseded by that of case manager with arguably similar responsibilities). The mean age of the sample was 39.4 years (SD=10.0), with an mean service tenure of 5.8 years (SD=4.9). Females represented 58.5% of the sample. Respondents with no tertiary qualification represented 40.3% of the sample, and of those with tertiary qualifications, only 6.1% possessed qualifications above a bachelor's degree. Only 8.5% of the respondents had worked in a rehabilitation setting before joining the Corporation while 56.1% had experience in the general area of human services (broadly defined to include such areas as nursing, teaching, social work, and occupations requiring people skills in general).

4.3.2 Measure

Rehabilitation Skills Inventory (RSI) (Wright, Leahy, & Shapson, 1987): This 114 item self-report instrument was originally developed both to identify the perceived importance (via a frequency rating), and the perceived attainment, of a range of tasks regularly conducted by rehabilitation professionals. This study restricts the use of the RSI to the perception of task

importance only (via the same frequency rating). The instrument produces a total score and scores on 10 sub-scales; Vocational Counselling, Assessment Planning and Interpretation, Personal Adjustment Counselling, Case Management, Job Placement, Group and Behavioral Techniques, Professional and Community Involvement, Consultation, Job Analysis, and Assessment Administration. Respondents were asked to rate each item on a 5-step frequency scale ("never" to "always") according to how often they routinely performed that task over a 12 month period. Full details of the instrument are provided in Chapter 3.

4.3.3 Background information

This included sex, age, education level, length of service in the corporation, length of service as a rehabilitation coordinator.

4.4 Procedure

The instrument was administered to the entire staff of rehabilitation coordinators of the Accident Compensation Corporation of New Zealand as part of a comprehensive review of the Corporation's rehabilitation branch and programmes. Full details of this review are provided elsewhere (Biggs & Voges, 1989). As part of the review each rehabilitation coordinator was visited and interviewed at the regional office of their employment. In all eighteen offices of the ACC throughout the country were visited. Following each individual interview the coordinator completed an individual response to the RSI which was retained by the researcher. The resultant RSI data by individual respondents (n=82) was collected by this process over a period of 6 weeks.

4.5 Expert Panel

To assist in the process of further validating the RSI (amended) for the Australasian environment, the amended instrument was referred to a panel of experts in a manner similar to that used by Leahy et al. (1987a, 1987b). The panel comprised several New Zealand based experts who were currently upper level managers of human service programmes in rehabilitation and disability services. A pre-requisite for selection was that each respondent possessed a minimum of 5 years experience within the last 10 years as a front line provider in the rehabilitation and disability field. Five of the experts were employed by the Accident Compensation Corporation, two were employed by Workbridge, and two were employed by the Department of Social Welfare. None of the experts were involved as respondents in the main data collection of the RSI (amended).

Following the derivation of the RSI (amended) as detailed earlier in the chapter, each of the experts were simultaneously provided with a listing of the 64 items of the RSI (amended) and asked to provide two responses for each of the items as follows:

In New Zealand this skill is important for:

Professionals in **my** agency YES ( ) NO ( )

Professionals in **other** agencies YES ( ) NO ( )

The response sheets were forwarded by mail to each of the experts after prior contact with the principal researcher had secured their agreement to participate in the research. The

responses of each expert were returned by mail all within a period of two weeks from mailout.

There were two expectations. The first was that this binary choice was expected to contrast the presumably narrower focus of the individual's own agency with the presumably broader requirements of all other agencies in the field. The second was that collectively the experts would rate the skills of the RSI (amended) as sufficiently important that retention of the items for future research would be indicated. The first expectation was largely met when experts indicated a higher overall skills need for all other agencies as opposed to the skills need required for the individuals employing agency alone (a total of 505 indications for industry importance to 430 indications of agency importance).

The second expectation was also largely met. Out of a total possible score of 576, representing each of the sixty four (64) skills being recognised as important for the individual expert respondent's agency, the panel provided a score of 430. Similarly out of the same possible total score of 576, the panel provided a score of 505 on skills recognised as important for the industry generally. The latter finding represented a universal importance ratio of 88% and was considered a reasonable level of expert panel validity to continue with the amended items in the next phase of the research. Full details of the expert panel responses are provided in Table 4.1.

TABLE 4.1 Expert Panel (n=9) importance rating of skill by employing agency and national importance.

	Items	Agency Importance	Industry Importance
Personal and group counselling			
38	Counsel to identify emotional reactions to disability	5	9
39	Assist a client to state specific behavioural goals for personal adjustment	5	8
40	Determine a client's need for individual, group, or family counselling	6	8
46	Assist a client in understanding and coping with stress	7	9
37	Recognise psychological problems which require consultations or referral	8	9
31	Apply psychological and social theories to develop intervention strategies	8	9
84	Provide information regarding your employers programmes to service providers and other parties	9	6
26	Develop a relationship with a client characterised by empathy and positive regard	9	9
114	Obtain regular client feedback regarding satisfaction with services and suggested improvements	9	8
113	Identify and question limiting stereotypes of people with disabilities	9	8
42	Counsel a client to appreciate and emphasise personal strengths	7	8
89	Collaborate with other providers so that services are coordinated, appropriate, and timely	9	7
112	Promote public awareness of rehabilitation programmes	8	7
59	Use supportive counselling techniques to prepare a client for the stress of job seeking	4	9
	Sub Total	*103*	*114*
Vocational counselling			
55	Discuss with a client job market conditions which may influence job seeking selection	7	8
54	Relate a client's stated interests and values to vocational choice	6	9
52	Counsel a client to select jobs consistent with ability, interests, and rehabilitation goals	7	8
70	Identify educational and training requirements for specific jobs	4	9
57	Develop mutually agreed vocational counselling goals	5	8
50	Review medical information to determine the vocational implications of any functional limitations	6	8
60	Instruct a client in job search skills	4	9
51	Discuss with a client the educational and vocational implications of test and interview information	7	8
58	Identify and arrange for the required training to maintain a client's successful job placement	7	8
76	Determine the level of intervention necessary for job placement	8	8
6	Identify transferable work skills by analysing a client's work history, functional assets, and limitations	4	7
	Sub Total	*65*	*82*

TABLE 4.1 Expert Panel (n=9) importance rating of skill by employing agency and national importance.

	Items	Agency Importance	Industry Importance
Case management			
3	Evaluate the client's social support system	7	9
1	Assess the significance of a client's disabilities (medical, psychological, educational, family status)	8	9
27	Clarify mutual expectations and the nature of the relationship with your client	9	9
93	Clearly state the nature of a client's problem when referring to service providers	6	7
2	Interview the client to verify the case information is correct	9	8
29	Adjust counselling approaches or styles according to the characteristics of the client	9	9
103	Abide by ethical and legal considerations of case communication and recording	9	9
4	Determine appropriate community services for a client's stated needs	8	7
5	Determine a client's ability to perform independent living activities	3	9
90	Consult with medical professionals regarding functional capacities, prognosis, and treatment plans	6	7
97	Write case notes, summaries and reports so that others can understand the case	9	8
87	Provide regular progress reports to the referring source	7	7
33	Identify social, economic, and environmental factors that may adversely affect client motivation	7	8
	Sub Total	*97*	*106*
Vocational assessment			
16	Identify client characteristics to be observed or rated in an actual or simulated job situation	3	8
24	Match client needs to job characteristics and client aptitudes to job requirements	7	8
19	Use behavioural observations to make decisions about a client adjustment to work	4	8
15	Interpret test and/or work sample results to clients and others	5	7
21	Design work situations for observing specific client behaviours	2	9
65	Monitor a client in employment to determine needs for additional services	4	8
12	Employ newer applications in vocational assessment including computer based techniques	2	8
23	Use assessment data to highlight a client's ability for the purposes of rehabilitation planning	7	8
	Sub Total	*34*	*64*

TABLE 4.1 Expert Panel (n=9) importance rating of skill by employing agency and national importance.

	Items	Agency Importance	Industry Importance
Job placement			
79	Negotiate with employers and/or union representatives to reinstate an injured worker	6	8
78	Actively seek to change employers' biases and concerns regarding hiring people with disabilities	8	9
66	Apply job market information to locating and securing employment for your client	4	9
62	Counsel a client regarding desirable work behaviours in order to improve employability	2	9
80	Provide prospective employers with appropriate information on a client's work skills and abilities	7	8
101	Actively promote rehabilitation services to businesses and organisations	7	8
67	Use local resources to assist with placement	8	8
	Sub Total	*42*	*59*
Professional practice			
106	Apply the results of published research to professional practice	8	8
104	Read professional literature relating to business, job markets, medicine, and rehabilitation	9	8
105	Conduct a review of the rehabilitation literature on a given topic or case problem	7	7
77	Understand the applications of current legislation for clients with disabilities and employment issues	9	9
95	Explain the services of various community resources to clients	9	8
107	Apply the principles of appropriate rehabilitation legislation to daily practice	9	8
94	Select appropriate rehabilitation or educational service providers	9	8
	Sub total	*60*	*56*
Rules and regulations			
110	Interpret the organisation's legislation, policy, and regulations to clients and others	8	4
86	Explain the organisation's regulations and procedures regarding income maintenance and other benefits	7	6
91	Understand claims processing within the organisation	7	7
109	Educate a client regarding his/her rights under the law	7	7
	Sub total	*29*	*24*
	TOTAL NUMBER OF RATED ITEMS	430	505
	TOTAL POSSIBLE RATINGS (9x64=576)	576	576

4.6 Results

Items with a mean frequency rating of 1.00 or less were excluded from the analysis. Such a rating indicated the respondent routinely performed this activity "rarely" or "never" and thus suggested the item concerned was simply not relevant or appropriate to the local context. The RSI item ratings were subject to a principal components analysis with varimax rotation. The number of components retained was determined by a combination of Cattell's Scree criterion (Cattell & Vogelmann, 1977) and an inspection of components with eigenvalues greater than 2.0. These were considered appropriately conservative criteria for determining the number of components to retain (Cliff, 1988; Zwick & Velicer, 1986). This technique isolated 7 components which accounted for 55.2% of the variance and which are summarised in Table 4.2. A comparison of the factor structures in order of factor loading between Wright et al. (1987) and this study is also shown in Table 4.2. The varimax rotated principal components analysis for the RSI items for this study is shown in Table 4.3 and it should be noted that there are some complex variables in the analysis. This can have the effect of making interpretation of factors more ambiguous but is not considered a major difficulty given the pilot nature of the study.

TABLE 4.2. Comparison of factors/clusters of RSI data

Leahy et al. (1987a, 1987b) Wright et al. (1987)	This Study
1. Vocational Counselling (30)	1. Personal Counselling (14)
2. Assessment and Planning (8)	2. Vocational Counselling (11)
3. Personal Adjustment Counselling (13)	3. Case Management (13)
4. Case management (17)	4. Vocational Assessment (8)
5. Job Placement (9)	5. Job Placement (7)
6. Group & Behavioral techniques (8)	6. Professional Practice (6)
7. Professional/Community Duty (5)	7. Rules and Regulations (4)
8. Consultation (9)	
9. Job Analysis (5)	
10. Assessment Administration (10)	
total items n=114	total items n=64
( ) denotes number of items per factor/cluster	

TABLE 4.3 Varimax rotated factor matrix of RSI items for Rehabilitation Coordinators (n=82). Loadings >.4

Items		Factors	1	2
Personal and group counselling				
38	Counsel to identify emotional reactions to disability		.69	
39	Assist a client to state specific behavioural goals for personal adjustment		.69	
40	Determine a client's need for individual, group, or family counselling		.67	
46	Assist a client in understanding and coping with stress		.65	
37	Recognise psychological problems which require consultations or referral		.63	
31	Apply psychological and social theories to develop intervention strategies		.62	
84	Provide information regarding your employers programmes to service providers and other parties		.61	
26	Develop a relationship with a client characterised by empathy and positive regard		.56	
114	Obtain regular client feedback regarding satisfaction with services and suggested improvements		.56	
113	Identify and question limiting stereotypes of people with disabilities		.54	
42	Counsel a client to appreciate and emphasise personal strengths		.53	.49
89	Collaborate with other providers so that services are coordinated, appropriate, and timely		.50	
112	Promote public awareness of rehabilitation programmes		.50	
59	Use supportive counselling techniques to prepare a client for the stress of job seeking		.45	.41
Vocational counselling				
55	Discuss with a client job market conditions which may influence job seeking selection			.74
54	Relate a client's stated interests and values to vocational choice			.68
52	Counsel a client to select jobs consistent with ability, interests, and rehabilitation goals			.66
70	Identify educational and training requirements for specific jobs			.57
57	Develop mutually agreed vocational counselling goals			.56
50	Review medical information to determine the vocational implications of any functional limitations			.56
60	Instruct a client in job search skills			.55
51	Discuss with a client the educational and vocational implications of test and interview information			.54
58	Identify and arrange for the required training to maintain a client's successful job placement			.52
76	Determine the level of intervention necessary for job placement			.51
6	Identify transferable work skills by analysing a client's work history, functional assets, and limitations			.50
Summary statistics				
Eigenvalue			15.7	5.3
Percentage of common variance			24.5	8.3

TABLE 4.3 Varimax rotated factor matrix of RSI items for Rehabilitation Coordinators (n=82). Loadings >.4

Items		Factors	3	4	1	2
Case management						
3	Evaluate the client's social support system		.77			
1	Assess the significance of a client's disabilities (medical, psychological, educational, family status)		.69			
27	Clarify mutual expectations and the nature of the relationship with your client		.69			
93	Clearly state the nature of a client's problem when referring to service providers		.66			
2	Interview the client to verify the case information is correct		.62			
29	Adjust counselling approaches or styles according to the characteristics of the client		.60		.44	
103	Abide by ethical and legal considerations of case communication and recording		.57			
4	Determine appropriate community services for a client's stated needs		.50			.44
5	Determine a client's ability to perform independent living activities		.49			
90	Consult with medical professionals regarding functional capacities, prognosis, and treatment plans		.48			
97	Write case notes, summaries and reports so that others can understand the case		.46			
87	Provide regular progress reports to the referring source		.46			
33	Identify social, economic, and environmental factors that may adversely affect client motivation		.41			
Vocational assessment						
16	Identify client characteristics to be observed or rated in an actual or simulated job situation			.66		
24	Match client needs to job characteristics and client aptitudes to job requirements			.65		
19	Use behavioural observations to make decisions about a client adjustment to work			.62		
15	Interpret test and/or work sample results to clients and others			.60		
21	Design work situations for observing specific client behaviours			.57		
65	Monitor a client in employment to determine needs for additional services			.55		
12	Employ newer applications in vocational assessment including computer based techniques			.53		
23	Use assessment data to highlight a client's ability for the purposes of rehabilitation planning			.52		
Summary statistics						
Eigenvalue			3.4	3.3		
Percentage of common variance			5.3	5.2		

TABLE 4.3 Varimax rotated factor matrix of RSI items for Rehabilitation Coordinators (n=82). Loadings >.4

Items		Factors	5	6	7	1	2
Job placement							
79	Negotiate with employers and/or union representatives to reinstate an injured worker		.69				
78	Actively seek to change employers' biases and concerns regarding hiring people with disabilities		.68				
66	Apply job market information to locating and securing employment for your client		.66				
62	Counsel a client regarding desirable work behaviours in order to improve employability		.63				.42
80	Provide prospective employers with appropriate information on a client's work skills and abilities		.63				
101	Actively promote rehabilitation services to businesses and organisations		.62				
67	Use local resources to assist with placement		.50				
Professional practice							
106	Apply the results of published research to professional practice			.72			
104	Read professional literature relating to business, job markets, medicine, and rehabilitation			.67			
105	Conduct a review of the rehabilitation literature on a given topic or case problem			.65			
77	Understand the applications of current legislation for clients with disabilities and employment issues			.53			
95	Explain the services of various community resources to clients			.49		.41	
107	Apply the principles of appropriate rehabilitation legislation to daily practice			.48			
94	Select appropriate rehabilitation or educational service providers			.47			
Rules and regulations							
110	Interpret the organisation's legislation, policy, and regulations to clients and others				.74		
86	Explain the organisation's regulations and procedures regarding income maintenance and other benefits				.71		
91	Understand claims processing within the organisation				.68		
109	Educate a client regarding his/her rights under the law				.45		
Summary statistics							
Eigenvalue			2.7	2.2	2.1		
Percentage of common variance			4.2	3.4	2.8		

4.7 Discussion

There are a number of methodological issues that need addressing in this pilot study. Firstly, although the sample of New Zealand Rehabilitation Coordinators represented the population of rehabilitation professionals in that organisation, it nonetheless can be construed as a small sample for a factor analytic procedure. The relatively modest ratio of cases to variables requires that the results of the principal component analysis be interpreted with some caution. The appropriate ratio of cases to variables is a topic of much debate in the research literature (e.g. Nunnally, 1978; Tabachnick & Fidell, 1989). Various ratios of subjects to variables have been proposed ranging from 2:1 to 20:1 (e.g. Comrey, 1988; Gorusch, 1983). More recently, Guadagnoli and Velicer (1988) suggest that these ratios of subjects to variables lack both empirical support and a theoretical rationale. On the basis of a Monte Carlo procedure they suggest that sample size as a function of variables was not an important factor in determining component stability. They argue that component saturation and absolute sample size are the most important factors. Given the relatively high level of saturation in the present study, and notwithstanding the clearly exploratory nature of the research and the requirement the findings be replicated, it seems reasonable to suggest that the data are a useful first step towards understanding the important dimensions of rehabilitation practitioner competencies in a local context. Further support for this view has been provided by the results of the expert panel which have been described previously in this chapter. It seems clear that the competencies examined and ranked by this expert panel not only have strong relevence in each respondents own agency, but have widespread application in the rehabilitation field generally. A more refined set of competencies are more likely to enhance both agency and industry applicability.

Replication of this research in the Australasian context through more extensive sampling is clearly indicated. It need also be acknowledged that the sample of respondents, although responsible as rehabilitation coordinators for general duties across the fields of rehabilitation counselling, vocational evaluation, and job placement, are only one occupational group in the rehabilitation profession in Australasia. Further research is planned to extend the study of the RSI to additional occupational categories in both New Zealand and Australia.

The research, albeit exploratory, provides findings in line with those of Wright et al. (1987) and Leahy et al. (1987a, 1987b). In particular, important skills areas that emerged in this research such as personal counselling, vocational counselling, case management, vocational assessment, and job placement were all seen by the respondents as skills required with some degree of frequency. These findings have several implications. Important competency areas, for instance, could serve as a useful guide for the development of future training initiatives. Additionally, individual rehabilitation practitioners could use such data to gain useful insights into the depth and breadth of their own professional competencies.

In the light of this preliminary data, further research on rehabilitation skills would appear both useful and substantiated. The extension of this study to a wider Australasian sample of rehabilitation practitioners should assist in establishing the appropriateness of the RSI (or amended equivalent) as a frame of reference for rehabilitation education, training, and professional development in the region. The remainder of this chapter describes further development of the RSI on such a wider sample of rehabilitation professionals.

4.8 Validation of the RSI (Amended II) for Australasia.

The development of the RSI (Amended I) Pilot Scale raised a number of methodological issues which have been discussed in Section 4.7. It was also noted that more extensive sampling was clearly indicated to test the applicability of the RSI (Amended I) to larger populations. In order to address these concerns, the RSI (Amended I) was administered to participants in four groups across New Zealand and Australia with the expectation that a further amendment might prove necessary. Full descriptions of each rehabilitation professional group sampled in New Zealand and Australia are provided in Chapter 7. The RSI items (n=64) were presented in the same order as the original 114 items of Leahy et al., with appropriate items deleted to fit the amended instrument.

The first group comprised the total workforce of rehabilitation coordinators of the Accident Compensation Corporation of New Zealand (n=115). The second group comprised the total workforce of field officers of the Multiple Sclerosis Society of New Zealand (n=26). The third group comprised the total workforce of placement coordinators and senior placement coordinators of Workbridge Inc. of New Zealand (n=105). The fourth group comprised a selection of human service workers of the Australian Commonwealth Rehabilitation Service in New South Wales, Tasmania, and South Australia (n=250). Final returns of 60, 24, and 70 were received from the ACC, MS Society, and Workbridge with a respective return rate of 52%, 93%, and 62%. This represented an overall return rate for the New Zealand sample of 63%. In the Australian sample, 155 responses were received from the CRS from 250 questionnaires dispatched representing a return rate of 62%.)

TABLE 4.4 Descriptive statistics for individual rehabilitation skills items. Means, standard deviations, and skewness (n=309).

Item	Mean	S.D.	Skewness
1. Assess the significance of clients disabilities into account medical, psychological, educational, and family status	3.55	.65	-1.49
2. Interview the client to verify that case information is accurate	3.60	.66	-1.81
3. Evaluate the client's social support system (family, friends and community relationships)	3.00	.90	-.64
4. Determine appropriate community services for a client's stated needs	3.18	.74	-.85
5. Determine a client's ability to perform independent living activities	2.58	1.14	-.41
6. Identify transferable work skills by analysing a client's work history and functional assets and limitations	3.09	1.03	-1.08
7. Employ newer applications in vocational assessment including computer based techniques	1.49	1.25	.28
8. Interpret test and/or work sample results to clients and others	1.93	1.21	-.17
9. Identify client work personality characteristics to be observed and rated on an actual job or simulated work situation	2.22	1.15	-.43
10. Use behavioral observations to make inferences about work personality characteristics and adjustment	2.32	1.09	-.39
11. Design work situations for observing specific client behaviours	1.47	1.11	.18
12. Use assessment data to highlight a client's ability for the purposes of rehabilitation planning	2.61	1.17	-.76
13. Match client needs to job characteristics and client aptitudes to job requirements	2.89	1.15	-1.15
14. Develop a relationship with a client characterised by empathy and positive regard	3.64	.69	-2.51
15. Clarify mutual expectations and the nature of the relationship with your client	3.62	.66	-2.06
16. Adjust counselling approaches or styles according to cognitive and personality characteristics of your client	3.48	.76	-1.59

TABLE 4.4 Descriptive statistics for individual rehabilitation skills items. Means, standard deviations, and skewness (n=309).

Item	Mean	S.D.	Skewness
17. Apply psychological and social theories to develop strategies for intervention	2.35	1.13	-.45
18. Identify social, economic and environmental factors that may adversely affect a client's motivation toward rehabilitation	3.18	.78	-1.04
19. Recognise psychological problems (e.g. depression, suicidal ideas) which require consultation or referrals	3.00	.83	-.59
20. Interact with a client to identify emotional reactions to disability	2.88	.94	-.72
21. Assist a client to state specific behavioural goals for personal adjustment	2.45	1.03	-.36
22. Determine a client's need for individual, group or family counseling	2.35	1.01	-.27
23. Counsel a client to help him/her appreciate and emphasise personal strengths	2.79	.94	-.65
24. Assist a client in understanding and coping with stress	2.49	.91	-.29
25. Review medical information with clients to determine vocational implications of their functional limitations	2.88	.98	-.73
26. Discuss with a client the educational and vocational implications of test and interview information	2.66	1.10	-.66
27. Counsel a client to select jobs consistent with his/her abilities, interests and rehabilitation goals	3.09	1.00	-1.00
28. Relate a client's stated interests and values to vocational choices	3.00	1.01	-.98
29. Discuss with a client job market conditions which may influence the opportunity to enter certain jobs	2.99	1.10	-.98
30. Develop mutually agreed vocational counseling goals	2.94	1.21	-1.07
31. Identify and arrange for the required training to maintain a client's successful job placement	2.81	1.06	-.97
32. Use supportive counseling techniques to prepare a client for the stress of job hunting	2.54	1.09	-.51

TABLE 4.4 **Descriptive statistics for individual rehabilitation skills items. Means, standard deviations, and skewness (n=309).**

Item	Mean	S.D.	Skewness
33. Instruct a client in job search skills	2.52	1.10	-.64
34. Counsel a client regarding desirable work behaviours in order to improve his/her employability	2.43	1.03	-.59
35. Monitor a client in employment to determine needs for additional services	2.27	1.07	-.75
36. Apply job market information to locating and securing employment for your client	2.54	1.20	-.72
37. Use local resources to assist with placement (e.g. employer contacts and colleagues)	3.09	1.07	-1.36
38. Identify educational and training requirements for specific jobs	2.84	1.08	-.98
39. Determine the level of intervention necessary for job placement (e.g. job club, supported employment, on-the-job training)	3.05	1.05	-1.34
40. Understand the applications of current legislation affecting the employment of disabled individuals	2.88	1.02	-.78
41. Actively seek to change employers' biases and concerns regarding hiring people with disabilities	2.69	1.10	-.53
42. Negotiate with employers or labor union representatives to reinstate rehire an injured worker	2.25	1.15	-.42
43. Provide prospective employers with appropriate information on a client's work skills and abilities	3.02	1.02	-1.12
44. Provide information regarding your organizations programs to service providers and other interested parties	3.13	.82	-.90
45. Describe Social Security regulations and procedures regarding disability determination and benefits	2.76	.92	-.54
46. Report to referral sources regarding progress of cases	2.65	1.09	-.75
47. Collaborate with other providers so that services are co-ordinated, appropriate and timely	3.13	.73	-.71

TABLE 4.4 **Descriptive statistics for individual rehabilitation skills items. Means, standard deviations, and skewness (n=309).**

Item	Mean	S.D.	Skewness
48. Consult with medical professionals regarding functional capacities, prognoses, and treatment plans for a client	2.98	1.01	-.93
49. Understand claims processing within your organization	2.26	1.22	-.70
50. Clearly state the nature of a client's problem with referring him/her to service providers	3.31	.81	-1.37
51. Select appropriate rehabilitation or educational service providers	3.13	.81	-1.16
52. Explain the services and limitations of various community resources to clients	3.01	.72	-.38
53. Write case notes summaries and reports so that others can understand the case	3.54	.75	-1.83
54. Actively promote rehabilitation services to businesses and organisations	2.68	1.02	-.67
55. Abide by ethical and legal considerations of case communication and recording (e.g. confidentiality)	3.89	.40	-4.48
56. Read professional literature relating to business, job markets, medicine and rehabilitation	2.81	.80	-.38
57. Conduct a review of the rehabilitation literature on a given topic or case problem	1.74	.97	.03
58. Apply the results of published research to professional practice	1.93	.92	-.27
59. Apply the principles of appropriate rehabilitation legislation to daily practice	3.08	.92	-.99
60. Educate a client regarding his/her rights under the law	2.59	.96	-.21
61. Interpret your organisations legislation, policy, and regulations to clients and others	3.12	.84	-.60
62. Promote public awareness of rehabilitation programs	2.69	.91	-.55
63. Identify and question limiting stereotypes of people with disabilities	2.83	.86	-.34
64. Obtain regular client feedback regarding satisfaction with delivered services and suggestions for improvement	2.66	.91	-.32

The overall population of CRS professional officers is in the order of 800. The sampling frame of 250 thus represents a 31% sample of the population. Thus data on the RSI (Amended I) scale was provided by a total of 301 respondents. Descriptive statistics for individual Rehabilitation Skills Items are presented in Table 4.4.

A number of the items were highly skewed ($p<.0001$) and were relatively ineffective at differentiating between respondents with 60-90% reporting using the skill "always". These items subsequently deleted from further analyses are as follows:

a) Item 1: Assess the significance of a clients disabilities taking into account medical, psychological, educational and family status

b) Item 2: Interview the client to verify that case information is accurate

c) Item 14: Develop a relationship with a client characterised by empathy and positive regard

d) Item 15: Clarify mutual expectations and the nature of the relationship with your client

e) Item 16: Adjust counselling approaches or styles according to cognitive and personality characteristics of your client

f) Item 53: Write case notes summaries and reports so that others can understand the case

g) Item 55: Abide by ethical and legal considerations of case communication and recording (e.g. confidentiality)

A number of the other Rehabilitation Skills items were relatively highly skewed. Tabachnik and Fidell (1989) argue however, that in a large sample (as in the present research) "...a variable with significant skewness...often does not deviate enough from normality to make a realistic difference in the analysis"(p.74). The remaining items were therefore included in subsequent analyses.

4.8 Principal Components Analysis: RSI (Amended II)

The 57 Rehabilitation Skills Items (as noted earlier, 7 items had been removed from the analysis) were subjected to a Principal Components Analysis. Prior to analysis, the variables were screened for evaluations of assumptions of statistical analysis. Following the suggestion of Tabachnick and Fidell (1989) that conventional but conservative alpha levels (e.g. $p < .001$) be used to evaluate the significance of skewness and kurtosis, transformations of the variables were deemed to be unnecessary. Thirteen cases with high Z scores on individual RSI items were found to be univariate outliers ($p<.001$) and were deleted from the analysis. Thirteen cases were identified through Mahalanobis distance as being multivariate outliers with $p < .001$ and were also deleted from the analysis. The intercorrelations between individual RSI items are presented in Appendix A. There were substantial numbers of correlations in excess of .30, suggesting that the matrix is factorable. Measures of sampling adequacy for individual items were generally adequate.

The factorability of the correlation matrix was further evaluated by means of the Kaiser-Meyer-Olkin measure of sampling adequacy which was .90 indicating that partial correlations are small and the matrix is therefore factorable. The Bartlett test of Sphericity was highly significant (8003.40, $p<.0001$) indicating that the correlation matrix was not an identity

matrix. Overall, these preliminary analyses indicated that the RSI items were amenable to factor analysis.

The statistical package, SPSS/PC (Norusis, 1988) was used to examine data and relationships among variables in both this analysis and all future analyses reported in this study. Using Principal Components as the extraction technique, a 4-factor solution was derived. This decision to retain 4-components was based on a combination of the Eigenvalues-greater-than-2 rule (used for the development of the RSI Amended I), the Scree plot (Cattell, 1988; Cattell & Vogelman, 1977), and the overall interpretability of the solution (Hammond, 1995). Following Comrey's (1988) guidelines, items loading at .5 or greater were retained for a conservative solution. Varimax rotation was employed due to its conceptual simplicity and ease of interpretation. The rotated factor loadings, eigenvalues, communalities and percent of variance accounted for by each component, are presented in Table 4.5.

For each principal component a mean total score was derived by summing the items loading on each component. Although this is a relatively simplistic method of deriving factor scores, it is considered adequate in many research circumstances (Tabachnik and Fidell, 1989). Ten of the items failed to load on any component and were discarded from further analysis.

TABLE 4.5 Component Loadings and Communalities for Principal Components Extraction and Varimax Rotation on R.S.I. Amended Items (N=224)

	Variables	Communality (h^2)	Component 1 (Vocational Counselling)	Component 2 (Personal Counselling)
29.	Discuss job market conditions	.72	.83	
38.	Identify training requirements	.68	.81	
27.	Counsel a client to select jobs	.68	.80	
28.	Relate a client's interests to vocational choices	.69	.80	
33.	Instruct a client in job search skills	.70	.79	
36.	Apply job market information	.65	.78	
39.	Determine intervention for job placement	.65	.78	
30.	Develop vocational counseling goals	.63	.77	
31.	Identify and arrange required training	.60	.75	
6.	Identify transferable work skills	.53	.70	
37.	Use local resources for job placement	.55	.70	
32.	Use supportive counseling techniques	.61	.68	
34.	Counsel a client regarding work behaviours	.62	.68	
13.	Match client needs to job	.50	.67	
43.	Provide employers with data on a client skills	.54	.62	
26.	Discuss educational and vocational implications	.47	.55	
35.	Monitor a client in employment	.41	.55	
7.	Employ applications in vocational assessment	.31	.54	
22.	Determine a client's need for counseling	.62		.76
20.	Interact with a client	.59		.73
24.	Assist a client in understanding stress	.57		.70
3.	Evaluate the client's social support system	.50		.69
17.	Apply psychological and social theories	.42		.64
21.	Assist a client to state behavioural goals	.49		.59
19.	Recognise psychological problems	.48		.57
4.	Determine appropriate community services	.34		.54
5.	Determine a client's independent living ability	.34		.52
23.	Counsel a client	.50		.52
18.	Identify social and economic factors	.41		.50
Eigenvalue			15.85	5.02
Cumulative % Variance Accounted for			27.8	36.6

TABLE 4.5 Component Loadings and Communalities for Principal Components Extraction and Varimax Rotation on R.S.I. Amended Items (N=224)

	Variables	Communality (h^2)	Component 3 (Professional Practice)	Component 4 (Case Management)
62.	Promote public awareness	.57	.70	
63.	Question limiting stereotypes	.52	.67	
64.	Obtain regular client feedback	.45	.63	
54.	Actively promote rehabilitation services	.50	.63	
56.	Read professional literature	.39	.61	
44.	Provide information on your organization	.45	.58	
41.	Seek to change employers' biases	.60	.57	
58.	Apply results of published research	.41	.56	
57.	Review rehabilitation literature	.42	.53	
59.	Apply principles of appropriate legislation	.51		.69
48.	Consult with medical professionals	.61		.64
61.	Interpret legislation, policy and regulations	.42		.61
50.	Clearly state the nature of a client's problem	.40		.58
60.	Educate a client regarding legal rights	.34		.52
49.	Understand claims processing	.35		.51
51.	Select appropriate providers	.38		.50
12.	Use assessment data	.41		.50
47.	Collaborate with other providers	.32		.50
Eigenvalue			3.95	2.55
Cumulative % Variance Accounted for			43.5	48.0

4.8.1 Component 1: Vocational Counselling

Component 1 with an eigenvalue of 15.85 accounts for 27.8% of the variance. The component comprises loadings from 18 items and is relatively broad in its skill scope. A common feature, however, is a focus on vocational activities in the general rehabilitation process and an emphasis on linkages with employers, work places, placement in a job, and the working environment in general. The loaded items typically describe a cluster of tasks that are integral to the process of vocational rehabilitation. They are, however, not the complete process of vocational rehabilitation which can include inter alia, interpersonal and intrapersonal issues, housing and transport issues, and medical stabilization. The emphasis on vocational issues together with the broader aspects of organisational coordination, and general counselling combine to lead this component to be labelled *Vocational Counselling*.

4.8.2 Component 2: Personal Counselling

Component 2 with an eigenvalue of 5.02 accounts for 8.8% of the variance. The component comprises loadings from 11 items and is somewhat more specific in its skill scope. The component emphasises personal interaction and client counselling. The items loading on this component clearly describe the counselling process on issues that are distinct, if not separate, from the vocational counselling process. The appropriate descriptor for this component is *Personal Counselling*.

4.8.3 Component 3: Professional Practice

Component 3 with an eigenvalue of 3.95 accounts for 6.9% of the variance. The component comprises loadings from 9 items and is again specific in its skill scope. The component emphasises a marketing and information set of responsibilities, as well as professional and organisational identity and responsibility. The items clearly describe the more corporate identity and responsibilities of the rehabilitation professional. An appropriate descriptor for this component is *Professional Practice.*

4.8.4 Component 4: Case Management

Component 4 with an eigenvalue of 2.55 accounts for 4.5% of the variance. The component comprises loadings from 9 items and is again more specific in its skill scope. The component emphasises the broad overview of policy and guidelines as well as the management process of the identification, coordination, and supply of the resources need for effective rehabilitation. The tems clearly describe the management of the rehabilitation process itself and the efficient and effective matching of needs to resources. The emphasis on this management process provides an appropriate descriptor of *Case Management.*

The development of the RSI (Amended II) has proceeded through a rigorous sequence of pilot administration, expert panel scrutiny, and subsequent amendment after collection of data from a larger and more representative group of rehabilitation professionals in the Australasian region. The RSI (Amended II) consists of four reliable dimensions of practitioner competency and is considered suitable for representing a respondent's perception of how often professional skills are utilised in the rehabilitation environment. Overall the

amended solution retains 47 items from the original Leahy et al. (1987b) scale and offers a four as opposed to 10 factor/component solution. The amended scale retains vocational counselling, personal (adjustment) counselling, and case management and introduces a new component of professional practice which, with 4 of its 9 items (54, 57, 58, 62) deriving from the five item "Professional and Community Involvement" factor of the original RSI, displays a strong conceptual link to the original factor.

4.9 Chapter Summary

This chapter commenced by briefly reviewing the environmental issues contingent on the development of the RSI by Leahy et al.(1987a, 1987b) and Wright et al. (1987). The research by Hershenson (1989), undertaken during a visit to rehabilitation organisations in Australia, provided compelling arguments to explore the utility of the RSI in Australasia. Subsequently the results of an exploratory pilot of the RSI's use on a sample of New Zealand rehabilitation professionals (n=82) was reported providing evidence of a possible 7 component (64 item) amended solution for this sample. It was argued that further exploration of this instrument on a larger and more representative group of rehabilitation professionals would be both useful and substantiated.

A subsequent administration of the RSI (Amended I) to three New Zealand groups and one Australian group of rehabilitation professionals (n=301) was described in detail. In contrast to the previous pilot administration, the results of this administration indicated a more parsimonious 4 component (47 item) solution. The four components, accounting for 48% of variance, were labelled as vocational counselling, personal counselling, professional practice,

and case management. Descriptions of loading items and the general nature of the components are provided.

The following chapter examines the assertion that appropriate levels of skill as a rehabilitation professional may buffer the occupational rigours of professional practice. Several measures commonly used to measure such occupational concerns and their relationship with skills will be discussed.

CHAPTER FIVE

5: Organisational Variables considered in this Study

CHAPTER 5: ORGANISATIONAL VARIABLES CONSIDERED IN THIS STUDY

5.1 Chapter Overview

The nature and extent of changes to the work environment generally and the rehabilitation services environment in particular, has ensured that rehabilitation services are generally provided in an organisational environment and that the individual service providers now function with or within larger cooperative groups. This has implications for such professionals, as in addition to a requirement for a range of professional rehabilitation skills, practitioners must now be cognisant of a number of attributes of organisational environments which can impact on the quality of their service delivery. This chapter then will review organisational variables such as commitment, job satisfaction and occupation stress which have been shown to be important in human services generally and rehabilitation working environments in particular.

5.2 Rehabilitation Services within large Organisations

Both the nature and the patterns of work have been affected by many factors in recent history. The speed associated with changes to the rehabilitation services environment over the last fifty years has demanded rapid adjustment on the part of all in the work arena. Technological, legislative, and individual skill changes have occupied a particular place of importance with other economic and social factors such as economic depressions and wars. The nature of work and the relationship of the individual to it have changed to the point that

an individual not only needs to have job skills but must also generally exercise those skills within an organisational environment.

The change to rehabilitation services from those essentially medical to a broader base has brought with it not only an emphasis on technological change and consequent flexible skill requirements, but also a focus on the difficulties of delivery of services within large organisations and the potential deleterious consequences for individuals within such organisations. What individuals bring to the work process includes their basic attributes in relation to behaviour within organisations, and this behaviour is expected to be affected by work environment factors such as occupational and organisational commitment, occupational stress, job satisfaction, and other organisational attributes.

Early theories of organisation emphasised these occupational and organisational variables as important in relation to worker behaviour. More recently Roessler and Rubin (1992) assert that appropriate skills and competencies may act as a buffer against the rigours of life as a rehabilitation professional, hence an examination of organizational and occupational dynamics in rehabilitation practice is extremely important because rehabilitation skills cannot function independently of organisational dynamics and structure. Biggs, Flett, & Voges (1995), for example, provide some support for this position with evidence of a inverse relationship between job tension and job competency in a sample of rehabilitation practitioners. More research is clearly indicated across a wider spectrum of occupational concerns to more fully understand these potentially important relationships.

Kelley and Satcher (1992) emphasise that further research on such issues is part of a significant human resource development challenge facing those involved in rehabilitation service provision. They argue that "...the effectiveness of rehabilitation services to persons with disabilities depends upon functional knowledge and effective skills of persons employed as providers of those services" (p.117). Rehabilitation services that function more effectively clearly do so for a number of different reasons. Kelley and Satcher argue that some of the important variables that "...have an impact on the productivity and effectiveness of personnel and , in turn, the agency..." (p.117) include factors such as job commitment, stress, satisfaction, and high rates of staff turnover. The rest of this chapter provides an overview of relevant research in these four areas and argues that they are important human resource development issues in any rehabilitation agency concerned with quality service provision.

5.3 Organisational Commitment

The issue of commitment continues to receive attention from researchers. An increasing focus in the last decade has seen a number of major reviews of this topic (Griffin & Bateman, 1986; Mathieu & Zajac, 1990; Meyer & Allen, 1991). Organisational commitment was defined succinctly by Mowday, Porter & Steers (1982 p.27) as "the relative strength of an individuals' identification with, and involvement in, an organisation" and much early influential research was based upon this concept of organisational commitment (Buchanan, 1974; Porter, Steers, Mowday & Boulian, 1974; Steers, 1977).

The construct of organizational commitment has received a great deal of attention. Morrow (1983) identified over 25 commitment-related constructs and measures and called for

future research to clarify the construct. This call has been answered most recently by Meyer and Allen (1984, 1991; Allen and Meyer, 1990) who have contributed by developing a model which distinguishes from the affective view developed by Porter and his colleagues (Mowday et al., 1982; Porter et al., 1974) and the continuance view developed by Becker (1960).

Increasingly there has been an awareness that commitment is in itself a complex and multifaceted construct. This has led to a broadening of the domain within which commitment has been studied. Meyer and Allen (1991) identify three themes in the definition of commitment which, simply put, suggest that individuals may remain in an organization because they want to, they need to, or they feel they ought to do so (respectively labelled affective, continuance, and normative commitment). Meyer, Allen & Smith (1993) also make the important distinction between commitment to the organization and commitment to the occupation, and demonstrate that these two types of commitment contribute independently to the prediction of work related activity and outcomes. In further extended domains, research has variously examined commitment to unions (e.g., Fullager & Barling, 1989; Gordon, Philpot, Burt, Thompson, & Spiller, 1980), employment (e.g., Jackson, Stafford, Banks, & Warr, 1983), professions (e.g. Aranya, Pollock, & Amernic, 1981; Morrow and Wirth, 1989), and careers (e.g. Arnold, 1990; Blau, 1985, 1988, 1989).

The three-component conceptualisation of Meyer and Allen (1991) has been the focus of continuing research. Hackett, Bycio, and Hausdorf (1994) examined the construct validity of the three-component model and found supporting evidence for the construct in samples of nurses and bus operators. Shouksmith (1994), in a study measuring organizational commitment in a large sample of health professionals (n=1121), suggests his findings strongly

support the affective and normative components and support, albeit less definitively, the continuance commitment. Whitener and Walz (1993) tested the three-component general hypotheses by using an exchange theory framework and found general support of the model. In the most compelling evidence to date in support of the three-component conceptualisation, Dunham, Grube, and Castaneda (1994) evaluated the construct definition, measurement, and validation of organization commitment over a series of 9 studies (n=2734). The results supported the existence of the three major organizational commitment dimensions proposed by Meyer and Allen (1991) and argue for future research to examine sub-dimensions of the underlying constructs.

On related issues Griffin and Bateman (1986) note that one of the more reliable consequences of low commitment appears to be turnover, with slightly less convincing evidence linking commitment to tardiness, absenteeism and on the job performance (Bateman and Strasser, 1984; Morris and Sherman, 1981). There is further evidence to suggest that organizational commitment may be an important buffer protecting against the deleterious effects of organizational change (e.g. Begley and Czajka, 1993).

5.4 Occupational Commitment

The argument that type of occupation may moderate the relationship between organizational commitment and its antecedents has its roots in the early organizational commitment literature. Becker (1960) proposed one of the earliest conceptual models of organizational commitment, the "side-bet" theory approach. This model suggests organizational commitment occurs when the employee is bonded to the organization through

a series of investments or side-bets, such as superannuation schemes, medical schemes, or shareholdings. Because of these investments the individual has too much to lose should s/he leave the organization. Becker (1960), however, further argues that occupational groups are subcultures with value systems of their own. Based on this, it can be expected that antecedents of commitment would affect commitment differently across occupational groups, because each occupational group has its own value system.

Ritzer and Trice (1969) argue that due to lack of meaningful job content, individuals in society's low status occupations (e.g. blue collar workers in general) are less likely to be committed to their occupations than individuals in occupations deemed more meaningful by society (e.g. doctors, lawyers). They concluded that:

"[Organizational commitment] arises from a realization by the individual that the occupation has little to which he can commit himself. In order to make his working life meaningful, an individual must commit himself to something. If the occupation is weak structurally, the organization remains as the major alternative to which the individual may commit himself" (p. 478).

How might the individual/organizational relationship vary across groups was examined by Weiner and Vardi (1980). They examined the relationships between commitment forms (job, career, organizational-calculative, organizational-normative) and work outcomes (performance, attachment, effort, satisfaction). They argue that the magnitude of the commitment-outcome relationships may vary across diverse occupational groups and work situations. A calculative, incentive oriented organizational setting such as a commission sales

position, is likely to be responsive to monetary rewards as a basic control mechanism. In other work situations, such as professional settings, the economic contract is less pronounced and normative considerations assume more importance in controlling work behaviour. Cohen (1992) in a meta-analysis of 98 studies of organizational commitment and its antecedent variables, found evidence to support this view, and in particular that personal antecedents (tenure, education, marital status, gender, and motivation) had more effect for employees in low status occupations than those in high status.

Meyer, Allen, and Smith (1993) argue that previous research relating to occupational commitment had tended to take a unidimensional perspective (e.g. Aranya et al., 1981, Blau, 1989, Morrow and Wirth, 1989) and, as with the early work on organisational commitment, has been typically conceptualised as an affective attachment to the organisation. They further argue it reasonable to expect that the previously developed three-component model of organisational commitment (Meyer & Allen, 1991) might also apply in the domain of occupational commitment and provide evidence (Meyer et al., 1993) that organisational and occupational commitment contribute independently to the prediction of important organisation relevant outcome variable (e.g. intention to quit, performance, citizenship).

As a final observation it should be noted that the terms, *occupation*, *profession*, and *career* are used somewhat interchangeably in the commitment literature. Meyer, Allen and Smith (1993) avoid the term career commitment because of ambiguity in the meaning of the term *career* which can be either a planned workforce entry to retirement concept or a more localised set of events. They favour the use of occupational commitment over professional commitment as they believe both professionals and non-professionals can experience

commitment to the work they do. In the development of their organisational and occupational commitment scales, however, they chose the term *professional* commitment as the pool of respondents were nurses and nursing students and who might reasonably judge their occupation a profession. This present study, involving several groups of rehabilitation professionals, followed a similar logic in the preparation of questionnaires. For purposes of analysis and subsequent comment, however, the terms *occupational* and *professional* commitment are regarded as interchangeable.

The preceding review of organisational and occupational committment research highlights a number of issues. The work of Meyer, Allen and Smith (1993) and others (Bar-Hayim & Berman, 1992; Somers, 1993) emphasise the importance of taking a multidimensional rather than a unidimensional approach to the measurement of committment. The relationship between committment and job turnover, intention to quit and other conceptually similar variables has been extensively documented (e.g. Cohen, 1992) but the relationship between committment and stress-related variables is less clear. Reichers (1985) reviews some 22 studies in which committment was treated as a dependent variable and notes that only 4 of those studies included measures of job stress as independent variables. Kelley and Satcher (1992) note that organisational life in rehabilitation agencies may impact on feelings of committment in a number of ways and suggest that these relationships should be investigated further. In one of the few studies focusing on rehabilitation professionals, Biggs, Flett, Voges, & Alpass (1995) found evidence suggesting that organisational commitment made a significant contribution to the prediction of both job satisfaction and feelings of distress in a group of New Zealand Rehabilitation Coordinators (N=82). These authors note

that "Further research may benefit from a more multidimensional approach to the study of committment."(p.45).

With this in mind, and following on from the work of Meyer et al., the research reported in this thesis adopts a multidimensional approach to the measurement of committment and considers firstly the linkages between stress-related variables and the experience of committment, and secondly how rehabilitation skills might impact on the stress-committment relationship.

5.5 Occupational Stress

The rehabilitation scene in many parts of the world has been one of rapid and often dramatic changes over the past decade. North American legislative changes, such as the Americans with Disabilities Act of 1990 and the Rehabilitation Act Amendments of 1992, have raised both the profile of and the demands placed on rehabilitation services (Owen, 1992), while developments in intervention technology have broadened the expectations placed on both services and service providers (Curl & Sheldon, 1992). Similarly in other parts of the world the impact on rehabilitation professionals of rapidly changing government legislation and economic policy in areas of health and social welfare has been noted (e.g., Biggs & Flett, 1992; Flett, Biggs, & Alpass, 1995; Jones, Fletcher, & Ibbetson, 1991).

Given such an uncertain and unpredictable work environment for rehabilitation professionals, it seems that a high priority for research on stress related issues as they affect such groups is needed. Despite the continued research interest in the causes and detrimental

effects of job stress in a range of contexts (e.g., Karasek & Theorell, 1990; Keita & Jones, 1990), there is less programmatic research which focuses specifically on stress and rehabilitation service provision. Wallis (1987) suggested that this reflects a more general issue in occupational psychology which is a lack of research on caring professions (people who meet the social, educational, and health needs of society).

The specific financial costs of stress related concerns and burnout in the rehabilitation professions are difficult to accurately quantify. However, given that more general estimates of the costs of stress to industry are considerable (e.g., Matteson & Ivancevich ,1987) estimated that the financial losses to organizations as a results of stress related problems is approximately $60 billion annually), the financial costs to the rehabilitation profession are likely to be high in terms of decreased productivity, increased absenteeism, and staff turnover (e.g., Jones et al., 1991; Riggar, Hansen, & Crimando, 1987).

One particular research focus has concerned the experience of stress-related burnout (Ursprung, 1986). Research on the problem of burnout and relevant signs, symptoms, causes, and coping strategies has been extensively reviewed elsewhere (e.g., Riggar, 1985). A recent review which attempts to provide a conceptual framework for furthering the understanding of burnout has noted that this is a very costly problem for the helping professions but its generalizability to industry is less clear (Cordes & Dougherty, 1993).

A number of studies of rehabilitation professionals have noted a relationship between burnout and personality variables such as job dissatisfaction and perceived role stress (e.g., Brookings, Bolton, Brown, & McEvoy, 1985; Florian & Zernicky-Shurka, 1986; Maslach

& Florian, 1988; Rimmerman, 1989), organizational withdrawal behavior (e.g., Riggar et al., 1987), and bureaucratization and limits on autonomy (e.g., Arches, 1991). A recent study by Marini, Pell, and Black (1992) drew attention to the problem of burnout in a sample of job coaches. The rate of turnover among job coaches is among the highest for any occupation in the United Sates. This reflects the importance of further describing and understanding the work stressors that contribute to burnout in the caring professions.

In attempting to understand the origins of burnout in rehabilitation professionals, it is useful to consider the views of Parker (1990) who suggested that rehabilitation professionals operate "...in a world of unremitting flux...they face decisions daily with outdated and conflicting information, and, too often, no information whatsoever" (p.165). Thus, the potential for the emergence of burnout and other stress related concerns in such an uncertain work environment is considerable. Roessler and Rubin (1992) also acknowledged the importance of burnout and delineated some additional factors that contributed to such feelings. These included quality/quantity concerns inherent with large caseloads, time pressures and competing job demands, and coping with the stressful decision making processes and ambiguity that is often a routine factor in rehabilitation work. Swanson (1987) described this working environment as one in which rehabilitation professionals are faced with "...ambiguity tension and closure tension, where the practitioner is continually faced with selecting the best alternative for a client from a vast array of possibilities (ambiguity) and an ever present array of half finished tasks (lack of closure)" (p.23). Other studies have also noted the negative effects of heavy workloads and administrative burdens (e.g., Jones et al., 1991; Zastrow, 1984). Similarly, research by Flett et al. (1992, 1993) indicated that both concurrent and subsequent levels of job burnout were associated with a broad constellation of negative job

related perceptions (such as job tension, stress, job related concerns, lack of job satisfaction and rewards).

While there are clearly methodological problems and ongoing conceptual debates in burnout research (Jackson, Schwab, & Schuler, 1986; Ursprung, 1986), the antecedents and consequences of stress related burnout should remain an important focus of the rehabilitation research agenda.

Ursprung (1986) highlighted the need for research in this area to consider issues of measurement, sampling, and design more closely. The problem of burnout remains a significant one for those involved in rehabilitation and is clearly linked with a range of negative outcomes, including exit from the profession (e.g., Riggar et al., 1987). The goal of research in this context should be to make rehabilitation practice good for the health and well-being of the rehabilitation practitioner, as the ultimate beneficiary would be the consumer of services (Jayaratne, Davis-Sacks, & Chess, 1991).

Roessler and Rubin (1992) noted several strategies for dealing with stress producing factors including the development of coping skills. The process of coping with stress has been extensively described in the research literature (e.g., Folkman & Lazarus, 1980, 1985; Lazarus & Folkman, 1984) and various types of coping strategies have been identified (e.g., Billings & Moos, 1984; Carver, Scheier, & Weintraub, 1989; Lazarus & Folkman, 1984). The beneficial effects of effective coping are widely acknowledged (Kessler, Price, & Wortman, 1985; Rodin & Salovey, 1989).

Research that specifically focuses on coping in rehabilitation professionals in somewhat sparse. Roessler and Rubin (1992) argued that teaching coping skills is an important strategy for helping to deal with the problem of rehabilitation counselor burnout. Some New Zealand research has considered coping in a heterogenous group of rehabilitation service providers (Flett & Biggs, 1993). These data suggest that certain types of coping (using restraint, planning, positive reappraisal, seeking social support for emotional reasons) are associated with higher levels of positive affect, life satisfaction, and job satisfaction. Mitchell and Kampfe (1990) explored the types of coping strategies used by occupational therapy interns. The authors emphasised the importance of considering coping in the attempt to understand the stressors associated with the transition from academic learning to a clinical setting (Kampfe & Mitchell, 1992; Mitchell & Kampfe, 1993).

The notion of coping is not without its limitations and its critics (Antonovsky, 1993; Flett & Biggs, 1993). But despite these limitations it is strongly contended that rehabilitation practitioner coping issues should remain firmly fixed on the research agenda. Roessler and Rubin (1992) noted that, "To retain their effectiveness, counselors must cope with many job related stressors..." (p. 15). This is true for all types of rehabilitation practitioners and, a more detailed empirical understanding of how individuals cope with job related stress is an essential step in the process of developing appropriate stress management interventions (Latack & Havlovic, 1992).

Roessler and Rubin (1992) also emphasised the importance of considering the organisational environment as a potentially important area for dealing with stress related concerns. If one accepts Pilling's (1991) claim that effective rehabilitation is about teamwork

then an understanding of the structural and organizational variables which affect the functioning of the team is essential. Poulton (1988) noted that, while understanding how an organization functions in structural terms is important, it is the interpersonal `glue' that holds an organization together that is often the most unpredictable and the hardest to quantify.

Ursprung (1986) drew attention to a number of issues at the organizational level that were seen as potentially important sources of burnout reduction. These included the clarification of roles, responsibilities and policies, and the development of more effective intraorganizational communication. Problems with organizational structure and communication have also been linked with burnout in other studies (e.g., Arches, 1991). Similarly, Roessler and Rubin (1992) emphasized the importance of communication and openness and the necessity for the development of intra-agency administrative practices that foster rather than hinder professional development. A recurring theme in the limited research in this context is the perception by rehabilitation professionals that the communication and administration processes within the employing agency are major `agency created' problems which contribute significantly to feelings of stress and dissatisfaction (Katz, Geckle, Goldstein, & Eichenmuller, 1990; Maslach & Florian, 1988). This theme is echoed in New Zealand research on rehabilitation workers (Flett & Biggs, 1992). Flett et al. (1995c) noted that some 35% of their sample of rehabilitation professionals reported intra-agency difficulties (including problems dealing with committees, dealing with intra-agency politics and personality clashes, a lack of organization, direction, and management within the employing agency), as major sources of stress and job dissatisfaction.

Similar findings have emerged from other studies (Jones et al., 1991; O'Driscoll & Schubert, 1988) and suggest that high levels of dissatisfaction with the administration and organizational communication practices of the employing rehabilitation agency are disturbingly common among rehabilitation workers. This appears to reflect a more general trend. Inkson and Patterson (1993), in a review of research on organizational behaviour in New Zealand, indicated that "... the frequency with which interpersonal relations and communication, two sources of stress, were cited as important problems within New Zealand organizations suggests that researchers could pay more attention to these and other problem areas." (p. 62). Consequently, organizational variables should be a focus of the rehabilitation research agenda. The research findings to date suggest that the development and maintenance of an organizational environment that encourages "...communication, openness, and trust" (Roessler & Rubin, 1992, p. 14), is an important and pressing concern facing rehabilitation agencies.

A number of studies of entry level rehabilitation professionals have identified a range of stress related concerns perceived by these groups. Kampfe and Mitchell (1992) found that interpersonal stressors associated with dealing with other staff were commonly reported by rehabilitation counselor interns. Yuen (1990) noted that beginning level occupational therapy students commonly reported unsatisfactory or difficult interpersonal relationships with supervisors (or other team members) as an important stress related concern. These interpersonal problems have been found in other studies of experienced rehabilitation professionals (Flett & Biggs, 1992; Marini et al., 1992).

The research findings to date also suggest a number of possible interventions at the organizational level. Flett et al. (1995c) reported that some 37% of their sample of rehabilitation professionals viewed a number of possible agency level managerial interventions as important strategies through which the stress of the job could be reduced. These included: clearer communication and direction within the agency, more effective management style, better job descriptions and duties, more information provision and better coordination and organization of services. These claims are reported in other studies (Jones et al., 1991; Katz et al., 1990). Burke (1993) noted the positive benefits associated with organizational level interventions to reduce workplace stressors.

Education and training initiatives are an important area in which effective interventions may occur. Relations between rehabilitation professional education and performance have been extensively researched and debated (e.g., Cook & Bolton, 1992; Syzmanski & Danek, 1992; Syzmanski & Parker, 1989a, 1989b) with the focus primarily being on level of education and case performance and client outcomes. A more recent study by Flett, Biggs, and Alpass (1994) found that participation in a professional inservice training course (focusing primarily on skills in accessing community and specialized services, and communication facilitation skills) also had a significant effect on levels of perceived occupational stress and positive affect. Additional recent findings suggest that professional competencies (as assessed by the Rehabilitation Skills Inventory) are inversely associated with the experience of job related tension (Biggs, Flett, & Voges, 1995). Opportunities for access to training and professional development are seen as important strategies for stress reduction (Flett & Biggs, 1992; Marini et al., 1992; Swanson, 1987).

In the final analysis, research points to important correlates of stress at both individual and organizational levels with implications for future research. Given that the ultimate goal is to meet, and even exceed, the expectations of consumers of rehabilitation services (Patterson & Marks, 1992), it is clear that a greater understanding of the stress related concerns of service providers can only positively influence overall professional practice in rehabilitation.

It seems clear from the preceding review of research on job stress that it is "...a rapidly expanding field characterized by conceptual and methodological debates and disagreements but at the same time a degree of underlying agreement about the important variables and their relationships..." (Flett, Biggs, & Alpass, 1995b, p.234). Some of these debates and distinctions are taken up in more detail in the next chapter. Clearly there is increasing research interest in stress related concerns relevant to the rehabilitation professional (Day & Chambers, 1991; Leahy, VanTol, Habeck, & Fabiano, 1990; Riggar, 1985) and there appears to be some consensus that burnout, coping, organisational support, and practitioner skills have relevance to an understanding of the nature, sources and effects of stress.

The research reported in this thesis attempts to move away from a narrow focus on issues of burnout and coping. The present study takes a multifaceted approach to the measurement of stress which is here conceptualised as responsibility pressure, quality concern, role conflict, job vs nonjob conflict, and workload (House, McMichael, Wells, Kaplan, & Landerman, 1979). These forms of job pressure can be seen as important precursors of a wide range of job related perceptions. Flett and Biggs (1992) showed that these forms of stress were related to job satisfaction and wellbeing in a small group of New Zealand

Vocational Placement officers. The present research extends these findings by considering the linkages between job stress and a range of job related perceptions (commitment, satisfaction, intention to quit) in a number of professional groups of rehabilitation practitioners. The nature and extent of the impact of practitioner skills on these relationships is also considered.

5.6 Job Satisfaction

Work is a dominant focus in most peoples lives. Not surprisingly, such a focused activity arouses powerful attitudes and emotions. Baron and Greenberg (1990) note that individuals can effortlessly describe their feelings, beliefs and attitudes towards their jobs, both negative and positive, and that in short, these responses are encompassed under the overarching term of job satisfaction. Job satisfaction is generally considered contextual and situation contingent. Recently, however, there has been a suggestion that job satisfaction is a dispositional attribute or stable trait. Such a view requires evidence of stability over time and such evidence is proffered by Schneider and Dachler (1978) who, in a study of managers and non-managers, found facets of job satisfaction that were reasonably stable over a 16 month period. Staw and Ross (1985) also found significant stability across 3 and 5 year time intervals even for those who had changed jobs and employers. In a study of monozygotic twins, Arvy, Bouchard, Segal & Abraham (1989) found a genetic component in job satisfaction, such that 30% of total variance in job satisfaction could be explained by a genetic component in twins reared apart.

Gutek and Winter (1992), however, suggest that the evidence for job satisfaction as a stable trait is less than convincing and argue that if job satisfaction is dispositional, then it should be unvaried even if people are asked to evaluate the job after cessation. They argue that consistency of job attitudes in longitudinal studies may be an artifact of the research method. For instance, results supporting the dispositional nature of job satisfaction could be due to an unmeasured response-shift bias. For example, prior to a change of job an employee rates their job satisfaction as average. A subsequent change in job expands their frame of reference and decides their current job rates as average and their last job to be below average. Thus over time the satisfaction rating remains the same for both jobs but in reality the actual levels were dissimilar. Gutek and Winter (1992) tested this proposition with data from two cross-sectional studies and one longitudinal study, found support for the proposition, and suggest the argument for job satisfaction as a dispositional trait over time is less than robust.

Despite the inconsistency of findings for the dispositional component of job satisfaction, there is some data that suggests that there is a general factor that predisposes individuals to be satisfied or dissatisfied with various aspects of their lives. Affective dispositions predispose individuals not only to be satisfied with their jobs but also to experience satisfaction in other aspects of their lives as well. In support of this position, Staw, Bell, and Clausen (1986) constructed a 17-item affective disposition scale that was administered in adolescence. Scores on the scale were a significant predictor of job satisfaction nearly 50 years later, even after controlling for objective differences in job conditions. Gutek and Winter (1992) also conclude that there are trait measures of emotions that are significantly related to employee job satisfaction. Overall there appears widespread agreement that, broadly stated, job satisfaction is an affective response to a job situation when

the individual compares reality to expectation (Cranny, Smith, & Stone, 1992), and that individuals can balance specific job related satisfactions and dissatisfactions to calculate a general degree of satisfaction (Loscocco and Roschelle, 1991).

The literature regarding job satisfaction is considerable. Locke (1983) notes that more than 3,350 studies on the topic had been published prior to 1983. Alpass (1994), however, contends there has been a lack of focus on the relationship between job satisfaction and the workplace environment. There is ample evidence however (e.g. Blegen, 1993; Packard, 1989), of strong correlations between job satisfaction and job stressors which suggest that job satisfaction is an important component in the stressor-strain model. Other links with job satisfaction include the role of organisational support (Kelley and Satcher, 1992), absenteeism (Scott & Taylor, 1985), turnover and intention to quit (Rosse & Hulin, 1985), and prosocial organisational behaviours such as volunteering, listening, and sensitivity to the needs of others (Smith, Organ & Near, 1983)

Within the field of human services, Glisson and Durick (1988) note that as such organisations tend to report lower levels of job satisfaction than other organisations, it becomes important to understand the factors that contribute to these lower levels. As job satisfaction and commitment play key roles in high staff turnover and levels of stress, the implications of understanding their etiology extends beyond concerns for the well-being of employees to include the quality of services and wellbeing of clients who receive the services.

Within the human service field of rehabilitation, and likening it to other "caring" professions, Wright and Terrian (1987) note that rehabilitation practitioners are rewarded for

their efforts by more than extrinsic reward. They suggest that in the professional role of providing rehabilitation services to disabled individuals, job satisfaction derives in part from feelings of professional competency resulting from the personal challenge and contribution to client success.

One of the foci of this current study is to examine in some detail such a suggestions by Wright and Terrian (1987) and Roessler and Rubin (1992) that job satisfaction might well be related to a feeling of professional competence in rehabilitation professionals. Biggs, Flett, Voges, and Alpass (1995) found a significant relationship between job satisfaction and feelings of stress associated with organisational conflict in a sample of New Zealand rehabilitation coordinators (N=82). In a similar vein, Alpass (1994), Loscocco and Roschelle (1991), and Roessler and Rubin (1992), further suggest that education is widely held to contribute to job satisfaction through raised expectations, and on these bases there appears sufficient evidence to include job satisfaction as one of the critical variables in this current examination of rehabilitation practitioner skills. The present research builds on the findings of Biggs et al. (1995) and considers firstly the linkages between stress-related variables and the experience of job satisfaction, and secondly how rehabilitation skills might impact on the stress-satisfaction relationship

5.7 Intention to quit

The notion of intention to quit (and related notions of turnover and employee withdrawal) have been extensively investigated in studies of commitment and job satisfaction (e.g. Cohen, 1992; Reichers, 1985). Meyer, Allen and Smith (1993) distinguish between intention to quit the organisation and intention to quit the profession which was acknowledged

earlier in this chapter as a useful distinction and is maintained in this thesis research. Information about such intentions, and the impact of stress and skills variables on them, is clearly of relevance to the rehabilitation profession and the employing rehabilitation organisation. Research by Marini, Pell and Black (1992) indicates that the rate of turnover among job coaches is among the highest for any occupation in the United States. Findings from the work of Riggar, Hansen, and Crimando (1987) highlight a similar problem of organisational withdrawal behavior among rehabilitation workers where an individual may remain in the organisation but performs at less than optimal levels and generally withdraws from organisational life as a response to stress. A range of other studies have linked intention to quit with burnout (Billingsley & Cross, 1991, Platt & Olsen, 1990) and job dissatisfaction (Billingsley & Cross, 1992; Cross & Billingsley, 1994).

Despite the relatively high levels of turnover among particular groups of rehabilitation practitioners in Australasia (e.g. On average, 25-35% of case managers in New Zealand's ACC leave the profession annually), there have been no systematic attempts to document levels of intention to quit among such groups. The present research considers firstly the linkages between stress-related variables and the experience of intention to quit both the organisation and the profession, and secondly, how rehabilitation skills might impact on the stress/intention-to-quit relationship. Documenting the nature and extent of the relationships between intent-to quit and other variables is an important first step in the development of mechanisms whereby the work environment might be modified to encourage 'intent to stay'.

5.7 Chapter Summary

The contention by Roessler and Rubin (1992) that skills and competencies may buffer the rigours of life as a rehabilitation professional prompts an examination of this assertion. Measures of commitment, stress and job satisfaction are used extensively in the occupational literature to gain an understanding of the environmental and interpersonal concerns that can characterise aspects of working life. This chapter examines these concepts in some depth and examines the research evidence for their use in the human service profession generally and in the rehabilitation professions particularly. The following chapter will then place these constructs within the framework of the research aims of this study.

CHAPTER SIX

CHAPTER 6: RESEARCH GOALS

6.1 Chapter Overview

This chapter will examine briefly the concepts of stressor-strain and the role of these concepts in present day organisational research. A number of theories of human stress are based on the view that behaviour is a function of characteristics of the person and characteristics of the environment. Several concepts associated with this model of the person-environment matching process will be reviewed. The concept of person-environment fit and its relationship with the Minnesota Theory of Work Adjustment will be examined. A suggested model for the research aims of this thesis will be outlined and the chapter will conclude with a series of research goals for this thesis.

6.2 Stressor-Strain Concepts

The human relations approach was a perspective which noted the importance of recognising psychological characteristics such as the needs of individuals for independence, affiliation, or stimulation (e.g Argyris, 1972; Hersberg, 1965; McGregor, 1960; Maslow, 1943). This approach emphasised the personal perspective, making concepts like satisfaction, motivation, interpersonal conflict, or leadership, key issues. A lack of congruence between forms of work and the level of the development of the individual was seen as predictive of work behaviours such as absenteeism, turnover, unionisation, and apathy. A major component of the human relations approach is matching the goal system of the individual, including skill acquisition, to the requirements of the organisation. This motivational approach has given rise

to a number of theories of need, instrumentality, goal-setting, equity, reinforcement, self-efficacy, and physiology.

General models of stress represent the stress cycle irrespective of the situation in which it arises or the nature of the stressor. A number of models, however, have been developed with organisational issues particularly in mind. A group of models which show considerable inter-relation include those of Ivancevich and Matterson (1980), Schuler (1981), Jick and Payne (1980), and Beehr and Franz (1987). These models deal with the stress process in full from antecedents to specific stresses at work and short and long-term psychological and behavioural outcomes. Further models by Levi (1981) and Frankenhauser et al. (1989), emphasise an interdisciplinary bio-psychosocial approach where self report and independent assessment of major variables are encouraged.

A final group of models come from research at the Institute for Social Research (ISR) at the University of Michigan. French, Caplan, and Harrison (1982) tested hypotheses regarding the effects of goodness of fit (person and environment) on risk factors for coronary heart disease. The ISR model include measurement of the work environment both subjectively, that is as perceived by the individual under study, and objectively, as assessed independently of that person's perceptions. The models also differentiate short term from long term consequences of stress labelling the former as responses and the letter as criteria of health and disease. Five elements are identified as comprising a causal sequence. Organisational characteristics lead to specific stressors and then to the perceptual and cognitive processes that appraise the threat. This then leads to the immediate psychological, physiological, and behaviourial responses and then finally to the ramifications of longer term

consequences for the individual and the organisation. The model includes the moderating and/or mediating potential of enduring properties of the person (demographic ,personality, and skills/competencies) and contextual properties (especially interpersonal) of the work situation.

None of the models bring us closer to a resolution on standard terminology in stress research. There remain obvious differences in descriptions - stress as external stimulus versus stress as response versus stress as a person-situation relationship. The models also differ in the length of the causal sequence that they describe both in terms of antecedents and consequences. Furthermore there is the issue of how stressful stimuli can themselves be best conceptualised; for example, as stressful life events or daily hassles.

The models, however, do have several points of convergence. As noted by Dunnette (1992) all of them reflect the concept of stress as involving a process that involves the same basic sequence, namely; a) the imposition of a damaging or taxing stimulus, b) a set of psychological responses triggered by that stimulus, and c) a more or less complex array of consequences in which the well-being of the individual is involved. The models are also in partial agreement about the ways in which the stress sequence is moderated. And that is with contextual factors that have to do mainly with the adequacy of resources, both material and psychological, and with the unique characteristics of the individual. Skills and competencies can usefully be considered a resource within the context of this concept.

6.3 Person-Environment Fit

A number of theories of human stress are based on the view that behaviour is a function of characteristics of the person and characteristics of the environment. An influential model of this person-environment matching process and one that has persisted over some time, is that of Holland (1959, 1973, 1987). Holland proposed that individuals develop a hierarchy of adjustive orientations or preferred modes for dealing with the environment. He used these same six orientations of realistic, investigative, artistic, social, enterprising, and conventional to also describe occupations or environments. The model depicts the orientations in hexagonal shape with adjacent types being more similar than those further away. In the model the degree of congruence between an individuals' main orientation (analogous to a personality construct) and that of their chosen occupation was believed to be predictive of job satisfaction and tenure.

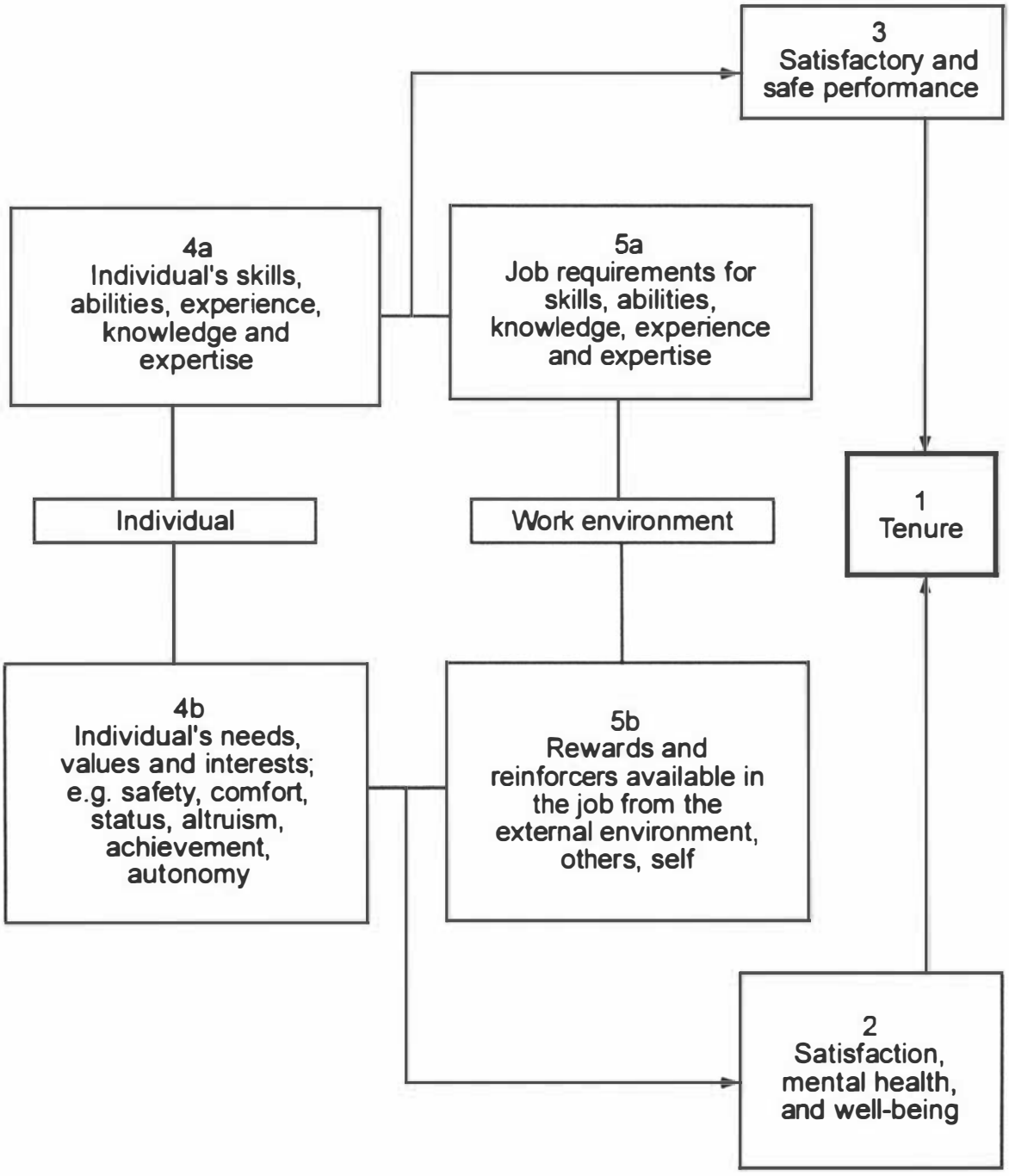
An important emphasis to the general person-environment fit model was provided by French, Rogers and Cobb (1974), who argued that environmental events were not to be regarded as universal stressors. Instead the stress values of events were regarded as dependent on the individual's perceptions of the environmental demands and their own capacity and motivation to meet them. The cognitive emphasis of this approach is consistent with the influential model of Lazarus (1966) and a definition of stress given by McGrath (1970) which identifies stress as a *perceived* substantial imbalance between demands and response capabilities which has in turn important perceived consequences. This approach rejects the idea that stressors alone are sufficient to account for the experience of stress and considers the perception of those stressors and their likely effects to be of prime importance.

The initial focus on psychological variables in the area of work adjustment was two fold. First, it assisted in developing psychometric measures in the areas of vocational choice and career selection of which Holland's work is an example. Second, it explored the less vocationally oriented areas of work motivation, employee morale, and worker productivity. A review of the literature on work adjustment by Scott et al. (1960), suggested a need for an integrating theory to ensure systematic ongoing investigation. Lofquist and Dawis (1969) and Dawis and Lofquist (1984) set out to achieve this and in the process produced over 30 technical monographs in the Minnesota Studies in Vocational Rehabilitation, considerable published papers and two books (Lofquist and Dawis, 1969; Dawis and Lofquist, 1984). The development of this theoretical model has been described (Hackett, Lent, & Greenhaus, 1991) as one of the three dominant approaches in vocational psychology from the 1970's; the others being Super's developmental theory, and the previously described Holland's typology.

6.4 Dawis and Lofquist Minnesota Theory of Work Adjustment

Consistent with person-environment fit theory, Dawis and Lofquist's theory of work adjustment proposes an interaction between the individual and the work environment. The key concepts involved are those of the personality, the work environment, and the correspondence between the individual and the environment. The indicators of this relationship are concepts of job satisfaction, job satisfactoriness, and tenure. Elements of the model are schematically represented in Figure 6.1

Figure 6.1 A diagrammatic representation of the Minnesota Theory of Work Adjustment. From Hesketh, B, & Adams, A. (1991). The Minnesota theory of work adjustment: A conceptual framework. In B. Hesketh & A. Adams (Eds.), Psychological perspectives on occupational health and rehabilitation. Marrickville, N.S.W.: Harcourt, Brace, Jovanovich.



6.4.1 Tenure (Box 1)

The overall effectiveness of work adjustment is manifested in tenure - the length of time individuals keep interacting with their work or other environments (Box 1 in Figure 6.1). This might apply to how long a person remains on a job, in a particular rehabilitation setting. Tenure is a function of the well-being and satisfaction of the person (Box 2) and how well and safely they are performing in the environment (Box 3).

6.4.2 Satisfaction, mental health and well-being (Box 2)

Where individuals perceive options for themselves, satisfaction and related feelings of mental health and well-being tend to be related to how long they remain in an environment. When options do not exist or are not perceived, satisfaction may be less predictive of tenure. Satisfaction is related to the extent to which an environment offers outlets for an individual's needs, interests and values (Rounds, 1990). It is also related to the compatibility between temperamental aspects of the individual (predispositions toward anxiety, depression, hostility, etc.) and the emotional demands that the job or environment makes.

6.4.3 Satisfactory and safe performance (Box 3)

Satisfactory performance is related to tenure since it affects decisions to promote, retain, refer on, transfer or release individuals in organisations or institutions. Satisfactory `performance' is related to the extent to which the person's performance capabilities and limitations in perceptual, cognitive, physical and social domains are matched by the

requirements and demands of the environment. This highlights the importance of assessment in the model - assessing what people do or do not know; what they can and cannot do, and what the environment demands of them.

6.4.4 The individual (Box 4a/4b)

Work adjustment theory was grounded in the study of individual differences, and hence the theory acknowledges the role of stable cognitive, behavioural and emotional dispositions. This is not to deny the importance of situational influences, nor the potential for change, but to understand the limitations that stable characteristics place on adaptation and change. There are two broad classes of individual difference variables relevant to work adjustment. One set relates to response capabilities such as skills, knowledge and abilities (perceptual, cognitive, social and physical), which are often related to education and experience (Box 4a). The other set covers dimensions of needs, interests, preferences, values, attitudes and temperamental factors (Box 4b).

6.4.5 The environment (Box 5a/5b)

There can be little point in understanding a person's capabilities without having a detailed understanding of the environment requirements and opportunities (Dawis, 1987a). Hence work adjustment theory describes the environment in terms of the skills, knowledge and abilities (perceptual, cognitive, social and physical), education and experiences that it requires of individuals (Box 5a) and the opportunities it has to offer individuals as motivational incentives (Box 5b).

The discussion to this point highlights the Minnesota Theory of Work Adjustment as a person-environment fit theory. Dawis (1987b), however, reminds us that it is in fact a person-environment interaction theory. The components of the theory that deal with the process of work adjustment highlight its role in understanding the interaction between people and their environments.

Although the early formulations of work adjustment theory focused primarily on describing people, their environments, and the consequences of a fit or misfit, recent developments have dealt more with the process of adjustment (Dawis 1987b). The dynamic component of work adjustment theory highlights what can be done when mismatches occur, outlining the processes that are used to reduce such unfortunate circumstances. These mismatches may be the result of poor selection, poor career planning, inappropriate job placements, or change brought about through accidents, sickness or altered requirements while in a job (caused, for example, through new technology, mergers, take-overs and re-structures). Mismatches could also occur as a result of differing individual levels of job staisfaction, commitment and intention to quit.

Modes of adjustment become important whenever mismatches occur. Rehabilitation offers a classic situation where the adjustment process is essential. Dawis (1987b) suggests that rehabilitation might be viewed as a form of problem solving, and that work adjustment theory can be used to delineate the problems.

Rehabilitation skills and competencies involve coming between the individual and the environment to help one or the other to change in order to achieve a better fit. Interventions

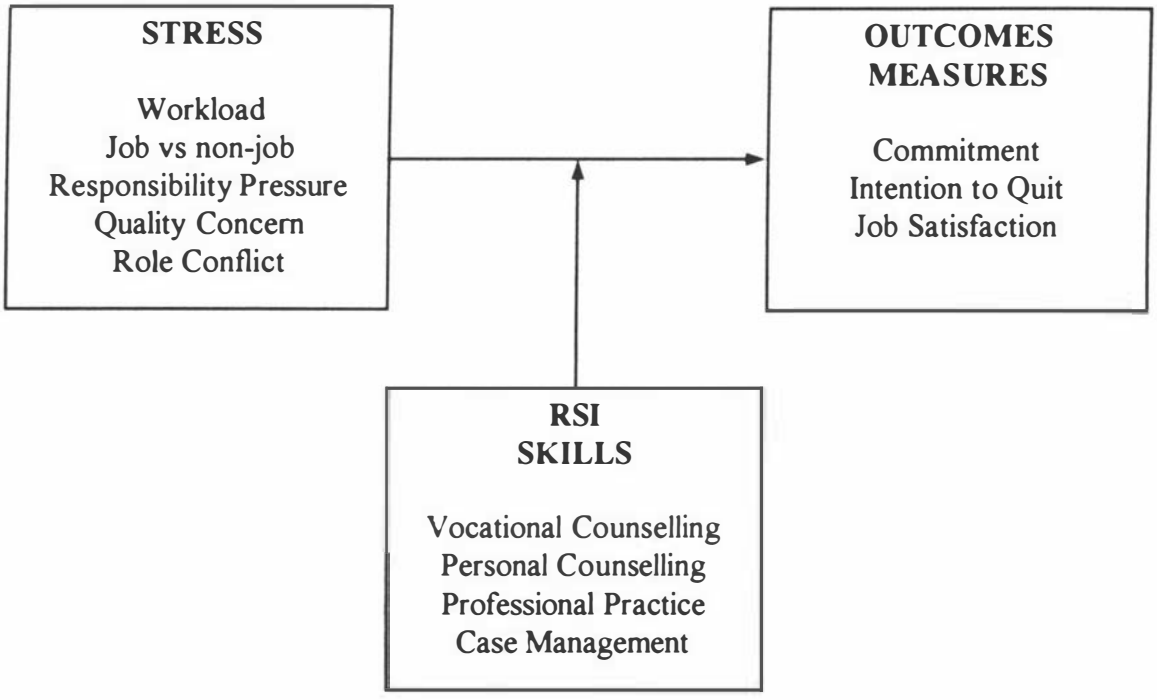
aimed at the individual can take the form of skills training, or modification of perceptions and attitudes. On the other side in the environment it usually involves some change to the organisational requirements or the reward structure and these are reflected in measures such as tenure and job satisfaction.

In summary, the work adjustment process involves matching the person's abilities and work-related needs, respectively, with the ability requirements and reinforcer system of the work environment. The match between the person's abilities and the ability requirements of the work environment determines satisfactoriness (i.e., the extent to which the person is able to perform the job). The match between the person's needs and the reinforcer system of the work environment determines the person's satisfaction with the job. As an additional consideration, Roessler and Rubin's (1992) assertion that skill levels may act as a buffer to the rigours of life as a rehabilitation professional, suggests that the process of work adjustment might include skills or competencies acting in a moderating capacity. This moderation could occur between several stressful considerations and such outcomes as, for example, job satisfaction, commitment, and turnover which in turn could be considered surrogate measures of the Minnesota Theory's concept of tenure.

Within the framework of the present thesis it is hypothesised that rehabilitation skills will act as an intervening variable between occupational concerns such as responsibility pressure, quality concerns, workload, job vs non-job conflict, and role conflict and a wide range of occupational outcomes. More specific hypotheses will evaluate the suggestion that these intervening variables moderate the impact of occupational concerns on occupational outcomes. Furthermore it is suggested that individual and organisational stressors occasioned

by the changing nature of the service environment are part of the ongoing need for work adjustment by the rehabilitation professional. Both the stressors and relevant skills and competencies should present main effects on outcome measures such as job satisfaction, commitment and turnover or intention to quit. Skills should also act as a buffer (interpreted from the statement of Roessler and Rubin, 1992, as a moderation effect) for these stressful stimuli such that tenure, and measures of the tenure concept such as job satisfaction, commitment and turnover, can be in part predicted by the interaction of these variables. A schematic representation outlining the relationships of the variables and their conceptual links which are tested in this thesis are shown in Figure 6.2

Figure 6.2 A schematic representation of a proposed model of interaction between stressful stimuli and surrogate measures of tenure



6.5 Research Goals

This present study seeks to examine the utility of the representation in Figure 6.2 while the previously developed and described RSI (Amended II) instrument (see Chapter 4) is planned for use as a measure of rehabilitation skills in the population under study. A discussion of stress variables and outcome variables has been provided in Chapter 5 and the literature reviewed.

The remainder of the thesis is conceptually presented in two parts. The first of these is the

validation of the Rehabilitation Skills Inventory and the application of this instrument for Australasian populations. This research and the subsequent amendment to the original scale is extensively discussed in previous chapters. The second part of the research is to examine proposed differences between each of the respondent groups on several variables that have been extensively used as occupational measures, and to examine the utility of the amended RSI instrument by examining the role skills play moderating the work adjustment process for rehabilitation professionals and how they interact in the different populations which utilised different combinations of rehabilitation skills. This section of research for this thesis can best be described under a series of research goals.

6.5.1 First research goal

The first research goal is to consider the relationships between job related stress (here conceptualised as workload, job vs non-job conflict, responsibility pressure, quality concern and role conflict) and outcomes across a range of occupational groups of rehabilitation professionals. If quality service provision is the ultimate goal of rehabilitation, then as Flett, Biggs & Alpass (1995d) argue "...a greater understanding of the professionals who provide services and the issues of stress and tension that concern them can only enhance work performance and positively influence methods of selection and training and overall professional practice in rehabilitation" (p.275). While previous research has indicated that stress related issues have significantly negative impacts on job perceptions in rehabilitation professionals (e.g. Clanton, Rude & Taylor, 1992; Finch and Krantz, 1991; Flett & Biggs, 1992; Flett, Biggs, & Alpass, 1992, 1993, 1994, 1995c), few studies have attempted a multidimensional approach incorporating several occupational measures and a consideration

of their impacts across diverse groups of rehabilitation professionals. Most previous research has concentrated on groups of North American rehabilitation professionals who operate in a markedly different professional and legislative environment from that found in both New Zealand and Australia. In summary then, the first research goal is to consider the relationship between job stress and outcomes in groups of Australasian rehabilitation professionals.

6.5.2 Second research goal

The second research goal is to examine the relationships between rehabilitation skills and outcomes across a range of occupational groups of rehabilitation professionals. Research reported elsewhere in this thesis (see Chapters 2 and 3) has focused on the identification of skills and competencies which are considered important in the practice of rehabilitation delivery and management. The goal here is to understand how such professional competencies might relate to salient issues of job perceptions. Previous research (e.g. Flett, Biggs & Alpass, 1995a) has shown that certain types of competencies are related to negative job perceptions. Such findings reflect the arguments proposed by Roessler and Rubin (1992) who claim that "...appropriate skills and competencies may indeed act as a buffer against the rigours of life as a rehabilitation professional" (Biggs, Flett & Voges, 1995 p.58). Additional research suggests that access to training and professional development whereby skills are enhanced, can have important stress reduction benefits (e.g. Flett, Biggs & Alpass, 1994). With this in mind the present study sought to further clarify the nature of the relationship between professional competencies and job related outcomes.

6.5.3 Third Research Goal

The third research goal is to examine the potential moderating and/or mediating effects of rehabilitation skills (as measured by the Rehabilitation Skills Inventory - Amended 2) on the relationship between occupational stress and the job related outcome measures of organisational commitment, occupational commitment, intention to quit, and job satisfaction. Previous empirical research evidence for a moderating effect of skills is limited, but as argued earlier in this Chapter, it seems reasonable to investigate the claim by Roessler and Rubin (1992) (which was not supported by data) for such a moderating effect.

In summary, the research goals specified above have important practical implications. As has been argued elsewhere (e.g Flett, Biggs & Alpass 1995d) the overall cost of stress related concerns to the rehabilitation profession is likely to be high in terms of decreased job satisfaction, increased turnover intentions, and reduced commitment. Research which attempts to quantify the nature and extent of these relationships can be seen as an important first step in positively influencing overall professional practice in rehabilitation.

6.6 Chapter Summary

This chapter commenced with a brief overview of the concepts of stressor-strain and the role of these concepts in present day organisational research. Several concepts associated with this model of the person-environment matching process have been reviewed and the concept of person-environment fit and its relationship with the Minnesota Theory of Work

Adjustment has been examined. A suggested model for the research aims of this thesis has been presented and the chapter concludes with a series of stated research goals for this thesis. The following chapter will outline the method used in the present investigation.

CHAPTER SEVEN

7: Method

CHAPTER 7: METHOD

7.1 Chapter Overview

This chapter describes the methods used to meet the research goals of the study. Previous research on which this study is based has generally taken the form of surveys using questionnaires and this study has followed that approach. The research goals were exploratory and some of the research instruments were newly developed. The questionnaire method enabled an economical sampling of the populations under study. A survey of a sample of human service workers in the disability and rehabilitation field was undertaken, and the balance of this chapter will describe the respondents, the chosen measures, and the procedure.

7.2 Respondents

There were four groups included in the survey. The first group comprised the total workforce of rehabilitation coordinators of the Accident Compensation Corporation of New Zealand (total=115, ACC). The second group comprised the total workforce of field officers of the Multiple Sclerosis Society of New Zealand (total=26, MS). The third group comprised the total workforce of placement coordinators and senior placement coordinators of Workbridge Inc. of New Zealand (total=105, WB). The fourth group comprised a selection of human service workers of the Australian Commonwealth Rehabilitation Service in the States of New South Wales, Tasmania, and South Australia (sample=250, CRS). Total completed returns were ACC (n=60), MS (n=24), WB (n=70), and CRS (n=155).

7.3 New Zealand Samples

The New Zealand samples described below were chosen on two counts. Firstly, all of the organisations have a national focus and are able to provide services throughout the country and this is considered desirable if generic professional skills are to be examined. Secondly, a coverage of both vocational and non-vocational rehabilitation services is necessary if the total services available under New Zealand rehabilitation and disability services legislation is to be examined. The groups selected operate to varying degrees across both those environments and are familiar with issues both common and divergent in those environments.

7.3.1 Group 1 - ACC rehabilitation coordinators

The Accident Rehabilitation and Compensation Insurance Corporation (ACC) is a Crown Agency charged with the administration of New Zealand's 24-hour, no fault accident insurance scheme. The ACC implements government policy in the areas of rehabilitation, the payment of accident related costs and contributes to its injury prevention initiatives. At the time of data collection, Rehabilitation Coordinators of the Accident Compensation Corporation represented the occupational level of professional rehabilitation expertise in the Corporation. The Coordinators were responsible directly for the development of rehabilitation plans and the liaison with injured clients, service providers and, when necessary, the earnings related compensation division of the Corporation. Coordinators are attached to all regional offices of the Corporation which provides comprehensive national coverage for accident related injuries in New Zealand.

7.3.2 Group 2 - MS field officers

The Multiple Sclerosis Society of New Zealand is a nationally focused organisation serving the community living needs of people with multiple sclerosis, their carers, and their families. The needs of the approximately 2,500 people with multiple sclerosis in New Zealand have recently been examined in some detail by Biggs and Veltman (1993). Community based services are provided nationwide by field officers of the Society operating through eighteen regional offices at which, at the data collection point for this research, 26 filed officers were employed. Biggs (1993) and Jones and Biggs (1993) have recently reviewed the professional requirements for occupants of these positions and concluded that many of the competencies required fall clearly within the skills base of other professionals working in the habilitation/rehabilitation environment. Biggs (1993) in particular notes that from an examination of field officer self reports, comprehensive job analyses, and consumer comments, there was a need for skills in service coordination, advocacy, critical cognitive ability, high levels of interpersonal and communication skills, and organisational ability.

The Society is representative of many other community based and disability based groups within the community such as, for example, the Asthma Foundation, National Heart Foundation, and the Parkinsons Society. As distinct from the larger State based organisations such as the ACC and Workbridge, such organisations cover a comprehensive range of impairing conditions and bring a specialty focus to their attention. The nature of multiple sclerosis in particular provides a challenging service response, as many of the attributes of the condition are commonly found in other disabling conditions. The front line service providers, the field officers, thus gain experience in community based settings in both the

specific issue of multiple sclerosis, and many of the attendant personal and environmental issues that are representative of other conditions. For this reason, as well as having a national organisational focus, it was decided to include field officers in the research.

7.3.2 Group 3 - Workbridge placement coordinators

Workbridge (Inc) is a specialist employment and training agency for people with disabilities. It is a national organisation with 28 regional offices and 120 staff. The majority of the staff are employed as placement coordinators and seek to offer professional help and experience in dealing with the needs of both employers and employees. Workbridge seeks to use existing community and industry infrastructures to best train and place intending workers.

Workbridge (Inc) is regarded as a national resource for people with disabilities who wish to engage in remunerative employment. Workbridge has forged working protocols with major agencies such as the ACC, the Regional Health Authorities, the New Zealand Employment Service, and the Special Education Service. It is a major assistive agency and is represented at a national level. Placement coordinators of Workbridge are as a matter of course increasingly involved in the process of vocational rehabilitation and their skills base and competency mix is a matter of current deliberation. It is highly desirable to include, placement coordinators of Workbridge in this current research.

7.4 Australian Sample

It was desirable that the Australian sample chosen display similar attributes to those of the New Zealand groups, namely; a national service focus, and experience across vocational and non-vocational rehabilitation settings. This was particularly important as the Australian workers' compensation systems vary both from State to State and from States to Territories. Each of these systems also have varying compensation and award structures, generally based on common law, which all differ from the no-fault comprehensive coverage of the workers compensation scheme in New Zealand. The Commonwealth Rehabilitation Service is possibly the only organisation that meets the selection criteria for this study, and on that basis was approached for its cooperation and the voluntary involvement of its staff in this research.

7.4.1 Group 4 - CRS professional officers

The Commonwealth Rehabilitation Service (CRS) is a nationwide, mostly publicly funded rehabilitation service specialising in vocational and social rehabilitation for people who have been disabled from birth or by illness or accident. It operates as a business unit of a larger Commonwealth Government Department, which at the time of data collection, was the Commonwealth Department of Community Services and Health. As well as receiving operational public funds, it operates in the commercial market for part of its income and this source of funds is in the order of 20% of overall income.

The service delivery staff of the CRS are all regionally based in accessible, walk in

offices often located in city and suburban shopping centres. All offices are easily accessible by public transport and have adequate car parking at hand. The principal service delivery staff are employed as professional officers. This appears to be an employment category that enables management a great deal of flexibility in adjusting the regional skill mix when, for example, a vacancy falls due and a different professional skill is now more at need than the prior one. In reality the occupational title covers a range of occupations that are of direct relevance to rehabilitation practice such as psychologists, rehabilitation counsellors, social workers, occupational therapists, physiotherapists, speech therapists, educators, and exercise physiologists.

Another potentially confusing title is that of case manager. The CRS have adopted a case management approach as a service model for regional delivery of services and this has been in operation since 1988. Case manager was an original designation for professionals of widely divergent background who undertook a standardised process of case management as a service model. Case manager was never formally adopted as an occupational classification in the manner that the later category of professional officer was. The end result, by way of occupational category example, might see a social worker, a psychologist, an occupational therapist or a rehabilitation counsellor employed in a CRS regional office under the official title of professional officer and operating a case management model of service delivery. The regional office thus benefits severally from a consistency in approach under the case management model, and the other professional skills and networks that are brought to the team by each individual's particular professional education and training.

Professional officers of the CRS are involved in the widest possible range of personal

and environmental issues that engage people with disabilities. By covering disabilities arising from birth, illness, and accident, and by covering the spectrum of full cost compensation in the workforce to independence in the home, the experience gained is considerable. It is expected that the competency base of the professional officers will reflect the demanding and universal nature of the services the CRS provides.

7.5 Measures

The questionnaires used in the main study are reproduced in Appendices B and C and comprise the following measures.

7.5.1 Demographic items

A number of general items were used to record the age, gender, ethnicity, educational level, employment status (full or part time), paid hours per week, income from employment, length of time with current employer, length of time in the disability and rehabilitation field, current job title, and additional professional job titles.

7.5.2 Occupational stress scale

This scale was adapted from the 12-item perceived occupational stress measure described in House, McMichael, Wells, Kaplan, & Landerman (1979). Four types of job stress or pressure were assessed, each by a three item index: (1) responsibility pressure - having too much responsibility and insufficient assistance; (2) quality concern - having concern about not

being able to do as good work as one could or should; (3) role conflict - receiving ambiguous and/or conflicting expectations/demands from others at work; and (4) job vs non job conflict - feeling that the job interferes with non-work (e.g, family) life. Respondents were asked to indicate how often each of the 12 items bothered them at work, on a 5 step frequency scale ranging from 0 ("not at all") to 4 ("nearly all the time").

The reliabilities of these job stress items are reasonably well documented. House et al. (1979) report reliabilities (Cronbach's alpha) over a range of 0.56 to 0.72 for subscales. Flett and Veale (1991) report a range of 0.42 to 0.67. For the purposes of the present study, a total stress score was calculated by summing across the 12 items (Cronbach's alpha = .84). This compares favourably with the alpha reliability of 0.86 calculated by a similar method and reported by Flett and Biggs (1992).

7.5.3 Rehabilitation skills inventory - as amended

A full description of the development of this amended scale is provided in Chapter 4. The amended scale was a validation of the original Rehabilitation Skills Inventory (RSI) (Wright et al., 1987a, 1987b) a multi-item self-report instrument originally developed both to identify the perceived importance, and the perceived attainment, of a range of tasks regularly conducted by rehabilitation professionals. The original instrument produces a total score and scores on 10 sub-scales; Vocational Counselling, Assessment Planning and Interpretation, Personal Adjustment Counselling, Case Management, Job Placement, Group and Behavioral Techniques, Professional and Community Involvement, Consultation, Job Analysis, and Assessment Administration. Respondents were asked to rate each item on a 5-

step frequency scale ("never" to "always") according to how often they routinely performed that task over a 12 month period. Full details of this original instrument and its development are provided in Chapter 3.

The amended instrument produced scores on 4 sub-scales; Vocational counselling, personal counselling, professional practice, and case management. Respondents using the amended instrument were asked to rate each item on a 5-step frequency scale ("never" to "always") according to how often they routinely performed that task over a 12 month period. This provided data on the perceived importance of the competency. Respondents were not asked to rate their competency attainment on the items as in the original study by Wright et al. (1987).

7.5.4 Job satisfaction

This scale was adapted from the job satisfaction scale originally developed by House (1974) and modified by House et al. (1979). The scale is a five item instrument which requires one response on each item from a choice of three. All items vary in their specific responses. Item one, for example, requires a response to the question "All in all, how satisfied would you say you are with your job?". Possible responses are "not at all satisfied" = 0, "somewhat satisfied" = 1, "very satisfied" = 2. Scores range from 0 to 10. The authors report an alpha reliability of 0.83.

7.5.5 Occupational commitment

This scale was adapted from the 18-item, 3-factor occupational commitment scale described in Meyer, Allen and Smith (1993). Commitment has been increasingly seen as a complex and multi-faceted construct and this scale measures Meyer and Allen's (1991) three component model. Three types of occupational commitment were assessed each by a six item index: (1) affective occupational commitment - an affective attachment to the occupational or profession; (2) continuance occupational commitment - the perceived cost associated with leaving the occupation or profession; and, (3) normative occupational commitment - a sense of obligation to remain with the occupation or profession. Responses were on a 7 point scale (1 = strongly disagree and 7 = strongly agree) and were averaged to yield composite commitment scores. Meyer, Allen and Smith (1993) report reliabilities (Cronbach's alpha) of .82, .74, and .83 for affective, continuance, and normative occupational commitment respectively.

7.5.6 Organisational commitment

The model of commitment by Meyer and Allen (1991) extends the concept of a three component model to organisational as well as occupational commitment. Whilst occupational commitment has been interchangeably referred to in the literature as commitment to a career or a profession, organisational commitment refers to the individual's commitment to the employing agent. Meyer, Allen and Smith (1993) provide evidence that organisational and occupational commitment are relatively independent constructs and that each contributes uniquely to the understanding of, and ability to predict, work behaviour. In this research three

types of organisational commitment were assessed each by a six item index: (1) affective organisational commitment - an affective attachment to the organisation; (2) continuance organisational commitment - the perceived cost associated with leaving the organisation; and, (3) normative organisational commitment - a sense of obligation to remain with the organisation. Responses were on a 7 point scale (1 = strongly disagree and 7 = strongly agree) and were averaged to yield composite commitment scores. Meyer, Allen and Smith (1993) report reliabilities (Cronbach's alpha) of .82, .76, and .80 for affective, continuance, and normative organisational commitment respectively.

7.5.7 Intention to quit

An intention-to-quit scale was developed by Meyer, Allen and Smith (1993) as part of the development of the more general three component commitment model. The model suggest that all three forms of commitment should be negatively associated with turnover. The intention-to-quit scale was developed for both intention to leave the occupation and intention to leave the organisation. Both scales consist of three items and responses were on a 7 point scale (1 = never/very unlikely to 7 = all the time/definitely). Meyer, Allen and Smith (1993) report reliabilities (Cronbach's alpha) of .83 for both measures.

7.6 Procedure

The questionnaires, accompanying letters, and methods of distribution and receipt of completed information was under the approval of the Massey University Human Ethics Committee. All relevant guidelines of the New Zealand Psychological Society were observed.

7.6.1 New Zealand samples

A similar procedure was used for each of the participating New Zealand samples. Prior to the dispatch of the questionnaire, formal approvals had been sought from senior managements of each of the organisations for their staff to be approached to participate in the research. The formal approvals were requested in writing and copies of these were enclosed as the first page after the cover sheet of each individual questionnaire (see Appendix D). Approval was also obtained for all staff occupying positions of field officer in the Multiple Sclerosis Society, rehabilitation coordinator in the ACC, and placement coordinator in Workbridge to be approached as potential respondents; in effect allowing access to the total population of these occupational categories within each organisation.

Each organisation was provided with a set of questionnaires sufficient for the potential number of respondents. Within each block each questionnaire was identified by a unique three digit code. A previously arranged contact person at the central office of each of the organisations allocated a pre-coded questionnaire to each individual respondent and forwarded this material either through existing internal mailing systems or through the post. The respondent received the questionnaire and two reply paid envelopes; one direct to the researcher and of a suitable size for the completed questionnaire, and another to the Department of Rehabilitation Studies secretary clearly marked for the enclosure of a consent form and preference for results of the research when available. As the consent form was bound in the questionnaire booklet with instructions to remove and forward separately, most were received in that manner in a separate envelope. The possibility existed, however, that a respondent might complete the form and omit to forward separately. To ensure

confidentiality, a practice was adopted to ensure the departmental secretary physically checked all returned mail, separated the consent forms if necessary and stored them in a different location, before passing the completed questionnaire to the researcher. These practices thus made it possible to track an individual response via the organisations contact person, and ensured the researcher was unaware of the respondents identity. Similarly by using the direct reply paid mailing system, the respondent was assured that the completed response would not be scrutinised by the employer either by accident or design.

A further benefit negotiated with the management of all three organisations, was an agreement for respondents to complete the questionnaire within work time. This was not formally stated in the accompanying documentation but was verbally addressed by line managers at each regional user site. Respondents were told to expect an uninterrupted completion time of approximately 40 minutes and asked to complete and dispatch individually without reference to group conferencing or collegial discussion.

Following dispatch of the questionnaires by the above procedure, a period of 5 weeks was set as the primary return stage. A general reminder notice was prepared by the researcher with a list of the coded questionnaires still outstanding by organisation and forwarded to the nominated organisational contact persons, these reminders were then forwarded to individuals via their internal list. A copy of the general reminder notice is provided at Appendix E. A further period of three weeks was allowed for final responses to arrive from this reminder process after which data coding proceeded. Final returns of 60, 24, and 70 were received from the ACC, MS Society, and Workbridge with a respective return rate of 52%, 93%, and 62%. This represented an overall return rate for the New Zealand

sample of 63%.

7.6.2 Australian sample

The population of professional officers within the Commonwealth Rehabilitation Service was estimated in the order of 800 persons across approximately 150 regional locations at the time of data collection. The national manager of the CRS based in Canberra was approached by the researcher seeking permission to include a sample of professional officers in the study. Permission was given on the understanding that not all regional offices would be in a position to participate due to variable work loads and staff shortages. Additionally it would be up to the various State administrations as to whether they agreed for the research to proceed or otherwise. The researcher was provided with a contact person (the Regional Manager of the CRS in the State of Tasmania) who would be in the best position to judge which regional offices might best be able to participate in the research and which State administrations may be favourable to the research. Approvals ultimately were received from the States of South Australia, New South Wales, and Tasmania and from various regional units within those States. In all, the available sample was in the order of 250 professional officers.

A similar but slightly varying procedure of that used for the New Zealand data collection was adopted for the Australian collection. A master copy of the questionnaire was provided to the Tasmanian contact person who arranged for its reproduction, individual coding and dispatch to each participating regional office. Distribution occurred at a similar time to distribution in New Zealand. Completed returns were then forwarded back to the contact

officer who separated the consent form from the completed questionnaire. A follow up reminder was subsequently issued from the Tasmanian office for a total return procedure time of 8 weeks, similar to the New Zealand collection time. Responses received to that point were mailed to the researcher at Massey University. In all 155 responses were received from the CRS from 250 questionnaires dispatched representing a return rate of 62%. The overall population of CRS professional officers is in the order of 800. The sampling frame of 250 thus represents a 31% sample of the population.

7.6.3 Combined samples

In all, a total of 500 questionnaires were distributed in simultaneous mailouts. The questionnaire to New Zealand respondents is included at Appendix B, the Questionnaire to Australian respondents which had slight variations in the demographics section to better describe Australian conditions, is included at Appendix C. Supportive letters from executives of the New Zealand based organisations were included in the appropriate questionnaires. These are included at Appendix D, as is a copy of the Massey University Ethics Committee approval for the research. The general reminder notice is provided at Appendix E.

7.7 Chapter Summary

In summary, this process over a period of 8 weeks resulted in total completed returns by organisation of 60 (ACC), 24 (MS), 70 (Workbridge), and 155 (CRS). These represented return rates of 52%, 93%, 67%, and 62% respectively. These individual response rates and the overall response rate of 62% are considered satisfactory for research survey procedures of this type.

8: Results

8: Results

CHAPTER 8: RESULTS

8.1 Chapter Overview

This chapter initially presents descriptive statistics of the demographic variables used in the study and examines differences between groups on these variables. Descriptive statistics and group differences on additional variables employed in the study are then provided in sequence as follows: RSI factor scores, job stress sub-scales, and outcome measures of commitment, intention to quit, and job satisfaction. Finally, to assess the contribution of independent variables to outcome measures, a series of hierarchical regression analyses are reported. Data screening for accuracy of data entry, missing values, fit between variable distributions, and assumptions of multivariate analyses are discussed as required within each of the following sections of this chapter.

8.2 Demographic Variables: Descriptive Statistics

Descriptive statistics for demographic variables are presented in Table 8.1 and Table 8.2 separately for each rehabilitation professional group. As indicated in the Tables: there was a predominance of women in each group (60-100%); most respondents were European (72-95%); the level of education was relatively high with most respondents reporting some type of post-high school educational qualification; with the exception of the Multiple Sclerosis group, most respondents worked full time for an average of 35-40 hours per week of contracted paid work; average age ranged from approximately 35 years (SD = 8.3 years) in the Commonwealth Rehabilitation service Group to 50 years (SD = 7.0 years) in the Multiple

Sclerosis Group; respondents had been with their current employer for between M = 2.8 years, (SD = 2.8 (CRS group)) and M = 4.2 years, (SD = 3.8 (MS group)) and; All 4 groups had been working in the disability or rehabilitation professional field for an average of 7 years.

Respondents provided the current job title under which they believed they were employed and these are shown by group in Table 8.3. The ACC group displayed the greatest homogeneity with all respondents having a job title of rehabilitation coordinator. Within the CRS, approximately 90% of respondents were either case managers (21%), rehabilitation counsellors (43%) or professional officers (26%). Approximately 71% of the Multiple Sclerosis sample were field officers. 89% of the Workbridge sample were either placement coordinators (60%) or team leaders (29%).

Respondents were also asked to nominate another professional title that they may have gained through education or training that could be used in the rehabilitation/disability/human service occupations, but was not the one under which they were currently employed. This information is detailed in Table 8.4 and reveals a wide range of occupational titles (n=30) prominent among which are occupational therapists (17%), psychologists (9%), registered nurses (9%), social workers (7%), primary teachers (4%), and physiotherapists (3%). However, 20 of the 30 occupational categories were nominated by single individuals and this would seem to indicate that these occupations should not point to any particular trend.

TABLE 8.1 Summary of Biographical Information (Gender, Ethnicity, Job Status, Educational Qualifications).

	Number of Respondents				Precentage of Respondents			
	CRS	MS	WB	ACC	CRS	MS	WB	ACC
Gender								
Females	122	24	43	42	78.7	100.0	61.4	70.0
Males	33	-	27	18	21.3	-	38.6	30.0
Ethnicity								
NZ Maori Descent	-	-	6	1	-	-	8.6	1.7
NZ European Descent	-	23	52	44	-	95.8	74.3	73.3
NZ Pacific Island Descent	-	-	1	2	-	-	1.4	3.3
Aust. European Descent	112	-	-	-	72.3	-	-	-
Aust. Asian Descent	5	-	-	-	3.2	-	-	-
Permanent Resident	32	1	10	10	20.6	4.2	14.3	16.7
Other	4	-	1	3	2.6	-	1.4	5.0
Missing	2	-	-	-	1.3	-	-	-
Job Status								
Full time	138	7	68	57	89.0	29.2	97.1	95.0
Part time	17	17	2	3	11.0	70.8	2.9	5.0
Education Qualifications								
1 No School Qualification	-	2	9	2	-	8.3	12.9	3.3
2 School Certificate	-	4	8	-	-	16.7	11.4	-
3 Higher School Cert	-	6	9	5	-	25.0	12.9	8.3
4 Completed Cert or Dip (Polytech/TAFE)	1	2	12	7	.6	8.3	17.1	11.7
5 Completed UG Dip/Degree (College/University)	133	8	29	43	85.8	33.3	41.4	71.7
6 Completed University Masters	14	1	3	2	9.0	4.2	4.3	3.3
7 Completed PhD or equivalent	1	-	-	1	.6	-	-	1.7
Missing	6	1	-	-	3.9	4.2	-	-

By evaluating Educational Qualifications as an Interval Scale, the overall group Mean = 4.58, S.D. = 1.14.

Means and S.D's by individual groups are as follows:

	CRS	MS	WB	ACC
Mean	5.1	3.6	3.8	4.7
S.D.	.34	1.5	1.5	.99

TABLE 8.2 **Summary of Biographical Information (hours worked per week, income, years with current employer, years in rehab and disability fields, age, number of workplace colleagues).**

		CRS (n=155)	MS (n=24)	WB (n=70)	ACC (n=60)
Hours worked per week	Mean	35.9	26.3	38.3	37.9
	S.D.	4.8	10.2	3.1	7.4
Income per annum ($,000)	Mean	36.1	16.3	34.9	32.0
	S.D.	6.6	8.7	4.6	5.4
Years with current employer	Mean	2.9	4.3	3.3	3.3
	S.D.	2.9	3.9	2.8	3.1
Years in disability/ rehabilitation fields	Mean	7.2	7.0	7.0	6.9
	S.D.	6.5	4.5	6.2	5.2
Age in years	Mean	35.9	50.0	44.3	38.8
	S.D.	8.4	7.0	9.1	9.4
No. of workplace colleagues	Mean	5.9	2.1	3.9	3.7
	S.D.	3.2	1.9	1.4	2.0

TABLE 8.3 **Current Job Titles by Group**

Group	Title	No. Cases	Percentage
CRS	Case Manager	32	20.6
	Rehabilitation Counsellor	67	43.2
	Professional Officer	40	25.8
	Social Worker	5	3.2
	Occupational Therapist	9	5.8
	Missing	2	1.3
MS	Field Officer	17	70.8
	Community Social Worker	6	25.0
	Community Resource Worker	1	4.2
WB	Placement Coordinator	42	60.0
	Team Leader	20	28.6
	Rehabilitation Coordinator	8	11.4
ACC	Rehabilitation Coordinator	60	100.0

TABLE 8.4 Additional Job Titles: All Groups

Job Titles	No. Cases	Percentage
Occupational Therapist	53	17.2
Psychologist	29	9.4
Registered Nurse	28	9.1
Social Worker	23	7.4
Primary Teacher	11	3.6
Physiotherapist	8	2.6
Special Needs Teacher	5	1.6
Rehabilitation Counsellor	3	1.0
Counsellor	3	1.0
Speech Pathologist	2	.6
Vision Rehabilitation Teacher	1	.3
Dietician	1	.3
Tutor	1	.3
Hearing Tutor	1	.3
Pre-School Teacher	1	.3
Anglican Priest	1	.3
Psychopaedic Nurse	1	.3
Human Resource Manager	1	.3
Drug and Alcohol Counsellor	1	.3
Personnel Consultant	1	.3
School Dental Nurse	1	.3
Sales Communicator	1	.3
Workshop Assessor	1	.3
Dental Assistant	1	.3
Vocational Counsellor	1	.3
Health Administrator	1	.3
Orthoptist	1	.3
Sports Masseur	1	.3
Careers Counsellor	1	.3
Clinical Hypnotherapist	1	.3

8.3 Demographic Variables: Differences between Groups

A series of analyses were conducted to assess between groups differences in demographic variables. A oneway ANOVA indicated a significant difference between groups in hours worked per week, $F(3,303)=17.8$, $p<.0001$. Scheffe's test indicated that the Multiple

Sclerosis group worked significantly fewer hours ($p<.05$) than the other 3 groups which is not surprising given the predominance of part-timers in the Multiple Sclerosis group (see Table 8.2).

A oneway ANOVA indicated a significant difference between groups in age, $F(3, 306)=28.2$, $p<.0001$. Scheffe's test indicated that: a) the Commonwealth Rehabilitation Service sample was significantly younger ($p<.05$) than the Multiple Sclerosis group and the Workbridge group; b) the ACC sample was significantly younger ($p<.05$) than the Multiple Sclerosis group and the Workbridge group.

A series of oneway ANOVA's indicated that there was no significant difference between groups in number of years with current employer, $F(3,307)=1.64$, $p=.18$, and no significant difference between groups in number of years in the rehabilitation profession, $F(3,305)=.03$, $p=.99$.

A oneway ANOVA indicated a significant difference between groups in levels of education, $F(3, 301)=39.4$, $p<.0001$. Scheffe's test indicated that: a) the Commonwealth Rehabilitation Service group reported significantly higher levels of education ($p<.05$) than the other 3 groups, and; b) the ACC group reported significantly higher levels of education ($p<.05$) than the Workbridge and Multiple Sclerosis groups.

A oneway ANOVA indicated a significant difference between groups in the number of colleagues that the respondent reported were employed at their place of work performing similar work, $F(3, 305)=24.3$, $p<.0001$. Scheffe's test indicated that: a) the Commonwealth

Rehabilitation Service group had significantly greater number of colleagues at their place of work performing similar work ($p<.05$), than the other three professional groups, and; b) the Multiple Sclerosis group reported significantly fewer colleagues ($p<.05$) than the other three groups.

Between-groups comparisons on income were made more difficult by the fact that the CRS group (being Australian) had an income in $AUD while the remaining 3 groups were New Zealand groups. While a multiplication factor could be applied to the CRS income data in an attempt to make it more comparable with the other three groups, an appropriate level for this multiplication factor was difficult to determine and somewhat arbitrary (given the relative instability of currency exchange rates). The most parsimonious solution was deemed to be one whereby the mean income levels were presented for all four groups (see Table 8.2) and the differences in income between the New Zealand groups (and excluding CRS) were analysed. A oneway ANOVA indicated a significant difference in income between the three New Zealand groups, $F(2,138)=81.9$, $p<.0001$. Scheffe's test indicated that: a) the Multiple Sclerosis group reported significantly lower income ($p<.05$) than the other 2 groups (which is not surprising given the high proportion of part timers in this group) and, b) the income levels for the Workbridge group were significantly higher ($p<.05$) than the other 2 groups.

The descriptive analyses shows all groups are predominantly caucasian females who, with the exception of the Multiple Sclerosis group, predominantly work full time. Statistical tests to confirm these known attributes were judged redundant. An overall summary of the significant differences by groups on the remaining demographic variables is provided in Table 8.5

TABLE 8.5 Significant Group Differences on Demographic Variables

Demographic Variables	Group Differences
CRS	
Educational Qualifications	Higher than MS, WB, and ACC
Hours Worked per Week	Higher than MS. No other group difference
Income per Annum	Not compared with other groups
Years with Employer	No group difference
Years in Disability Field	No group difference
Age in Years	Lower than MS and WB
No. of workplace peers	Higher than MS, WB, and ACC
MS	
Educational Qualifications	Lower than CRS and ACC
Hours Worked per Week	Lower than CRS, WB, and ACC
Income per Annum	Lower than WB and ACC
Years with Employer	No group difference
Years in Disability Field	No group difference
Age in Years	Higher than CRS and ACC
No. of workplace peers	Lower than CRS, WB, and ACC
WB	
Educational Qualifications	Lower than CRS and ACC
Hours Worked per Week	Higher than MS. No other group difference
Income per Annum	Higher than MS and ACC
Years with Employer	No group difference
Years in Disability Field	No group difference
Age in Years	Higher than CRS and ACC
No. of workplace peers	Lower than CRS. Higher than MS
ACC	
Educational Qualifications	Lower than CRS. Higher than MS and WB
Hours Worked per Week	Higher than MS. No other group difference
Income per Annum	Lower than WB. Higher than MS
Years with Employer	No group difference
Years in Disability Field	No group difference
Age in Years	Higher than CRS. Lower than MS and WB
No. of workplace peers	Lower than CRS. Higher than MS

8.4 RSI Factors: Descriptive Statistics

Descriptive statistics (means, SD's) and reliabilities (Cronbach's alpha) for the RSI factor scores (Vocational Counselling, Personal Counselling, Professional Practice, Case Management) are presented in Table 8.6. The reliabilities (ranging from .78 to .95) were considered acceptable by standard psychometric criteria (Nunnally, 1977). The mean scores on the RSI subscales were all greater than 2.0 which, according to other researchers (Biggs, Flett & Voges, 1995; Leahy, Shapson & Wright, 1987a), denotes at least a moderate frequency of occurrence of that particular set of skills or competencies.

TABLE 8.6 Descriptive Statistics for the R.S.I. Factors (n=309)

RSI Factors	Mean	SD	Skewness	Alpha reliability
Vocational Counselling	2.78	.84	-1.22	.95
Personal Counselling	2.75	.65	-.66	.87
Professional Practice	2.58	.59	-.24	.85
Case Management	2.99	.58	-.83	.78

A square root transform was applied to the Personal Counselling and Case Management scores to reduce the effects of significant negative skewness. A log10 transform was applied to the Vocational Counselling factor to reduce highly significant skewness in this variable. Although it may be argued that interpretability of analyses is sometimes made more difficult by utilising transformed variables, Tabachnick and Fidell (1989) argue that overall the results of the analysis are nearly always drastically improved by data transformation. In

the present research the transforms of the RSI factors had the added advantage of removing univariate outliers. Although these transformed variables were used in subsequent analyses, in order to maintain clarity and aid interpretability the untransformed means are presented where necessary in data tables.

Descriptive statistics (means, SD's) for the RSI factor scores (Vocational Counselling, Personal Counselling, Professional Practice, and Case Management) are presented separately for each professional group (CRS, Multiple Sclerosis Society, WorkBridge, ACC) in Table 8.7.

TABLE 8.7 **Descriptive Statistics (Means, SD's) for RSI Factor Scores across 4 Professional Groups: Commonwealth Rehabilitation Service (CRS), Multiple Sclerosis Society (MS), Workbridge (WB), and Accident Compensation Corporation (ACC).**

RSI Factor	Groups							
	CRS		MS		WB		ACC	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Vocational Counselling	2.95	.78	.94	.79	3.24	.54	2.61	.74
Personal Counselling	2.98	.45	2.95	.55	2.37	.66	2.73	.68
Professional Practice	2.52	.51	2.47	.81	2.94	.51	2.53	.65
Case Management	3.08	.43	2.62	.82	2.70	.57	3.33	.43
	(n=155)		(n=24)		(n=70)		(n=60)	

8.5 RSI Factors: Differences between Groups

As indicated in Table 8.7 there are some marked differences and a series of oneway ANOVA's were calculated to assess these between-groups differences. Scheffe's test, a conservative a posteriori test of between groups differences, was utilised to determine the nature of the differences between groups. Scheffe's test was selected as it is the most conservative of the post-hoc multiple comparison tests and is therefore likely to reduce the Type I error rate.

There were significant differences between groups on Vocational Counselling, $F(3,265)=53.3$, $p<.0001$. Scheffe's test indicated that: the Multiple Sclerosis group scored significantly lower than the other three groups on this variable ($p<.05$); the Workbridge group scored significantly higher than the other three groups ($p<.05$); and, the Commonwealth Rehabilitation Service group scored significantly higher than Accident Compensation Corporation group on this variable.

There was a significant difference between groups on Personal Counselling, $F(3,273)=17.2$, $p<.0001$. Scheffe's test indicated that Workbridge scored significantly lower than the other three groups on this variable ($p<.05$).

There was a significant difference between groups on Professional Practice, $F(3,263)=8.2$, $p<.0001$. Scheffe's test indicated that Workbridge scored significantly higher than the other three groups on this variable ($p<.05$).

There were significant differences between groups on Case Management, $F(3,246)=17.4$, $p<.0001$. Scheffe's test indicated that: the Accident Compensation Corporation group scored significantly higher than the other three groups on this variable ($p<.05$); and, the Commonwealth Rehabilitation Service group scored significantly higher than the Multiple Sclerosis and Workbridge groups. An overall summary of the significant differences by groups on factors is provided as Table 8.8.

TABLE 8.8 Significant Group Differences on RSI Factors

Groups and Factors	Group Differences
CRS	
Vocational Counselling	Higher than ACC
Personal Counselling	Higher than WB. No other group difference
Professional Practice	Lower than WB. No other group difference
Case Management	Higher than WB and MS. Lower than ACC
MS	
Vocational Counselling	Lower than CRS, WB, and ACC
Personal Counselling	Higher than WB. No other group difference
Professional Practice	Lower than WB. No other group difference
Case Management	Lower than CRS and ACC.
WB	
Vocational Counselling	Higher than CRS, MS, and ACC
Personal Counselling	Lower than CRS, MS, and ACC
Professional Practice	Higher than CRS, MS, and ACC
Case Management	Lower than CRS and ACC
ACC	
Vocational Counselling	Higher than MS. Lower than CRS and WB (Highest)
Personal Counselling	Higher than WB. No other group difference
Professional Practice	Lower than WB. No other group difference
Case Management	Higher than CRS, MS, and WB

8.6 Job Stress Sub-Scales: Descriptive Statistics

Descriptive statistics (means, SD's, skewness) for the Job Stress Subscales (Responsibility Pressure, Quality Concern, Role Conflict, Job vs Nonjob Conflict, Workload) along with reliabilities (Cronbach's alpha) are presented in Table 8.9. The subscale reliabilities (ranging from .50 to .75) were considered somewhat low. Given that each subscale was relatively short (3 items) and an item level analysis indicated that the subscale reliabilities were not able to be improved by item deletion, the reliabilities were deemed to be acceptable for the purposes of the present study.

TABLE 8.9 Descriptive Statistics for the Job Stress Sub-Scales

Job Stress Sub-Scales	Mean	SD	Skewness	Alpha reliability
Responsibility Pressure	1.65	.71	-.01	.50
Quality Concern	1.74	.74	.25	.64
Role Conflict	1.47	.74	.42	.67
Job vs Nonjob Conflict	.81	.68	.84	.57
Workload	2.86	.72	-.27	.75

A square root transformation was applied to the Job vs Non Job Conflict variable to reduce significant positive skewness in this variable. After this transformation three univariate outliers on this measure were removed. In line with the arguments presented earlier for the RSI subscales, this transformed variable was utilised in subsequent analyses but untransformed

mean scores for this variable are presented in data tables as necessary to maintain clarity and interpretability.

Descriptive statistics (means, SD's) for the job stress subscales (Responsibility Pressure, Quality Concern, Role Conflict, Job vs Nonjob Conflict, Workload) are presented separately for each professional group (CRS, Multiple Sclerosis Society, WorkBridge, ACC) in Table 8.10.

TABLE 8.10 **Descriptive Statistics (Means, SD's) for Job Stress Sub-Scales across 4 Professional Groups: Commonwealth Rehabilitation Service (CRS), Multiple Sclerosis Society (MS), Workbridge (WB), and Accident Compensation Corporation (ACC).**

Job Stress Sub-Scales	Groups							
	CRS		MS		WB		ACC	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Responsibility Pressure	1.65	.71	1.62	.64	1.50	.78	1.97	.70
Quality Concern	1.66	.68	1.32	.59	1.65	.79	2.22	.68
Role Conflict	1.43	.66	1.25	.74	1.48	.85	1.66	.77
Job vs Nonjob Conflict	.84	.66	1.04	.85	.57	.60	.91	.66
Workload	2.86	.65	2.40	.67	2.89	.78	3.02	.75
	(n=155)		(n=24)		(n=70)		(n=60)	

8.7 Job Stress Sub-Scales: Differences between Groups

As indicated in the Table there are some marked differences and a series of oneway ANOVA's were calculated to assess these between-groups differences. Scheffe's test was selected as it is the most conservative of the post-hoc multiple comparison tests and is therefore likely to reduce the Type I error rate.

There were significant differences between groups on Responsibility Pressure $F(3,300)=6.08$, $p<.001$. Scheffe's test indicated that the ACC group scored significantly higher than the other three groups on this variable ($p<.05$) indicating that responsibility pressures were perceived to be highest in this group.

There were significant differences between groups on Quality Concern $F(3,300)=13.34$, $p<.001$. Scheffe's test indicated that the ACC group scored significantly higher than the other three groups on this variable ($p<.05$) indicating that quality concern pressures were perceived to be highest in this group.

There were no significant differences between groups on Role Conflict.

There were significant differences between groups on Job vs Nonjob Conflict $F(3,300)=4.63$, $p<.01$. Scheffe's test indicated that the Workbridge group scored significantly lower than the other three groups on this variable ($p<.05$) indicating that job vs nonjob conflict were perceived to be lowest in this group.

There were significant differences between groups on Workload $F(3,304)=4.40$, $p<.01$. Scheffe's test indicated that the Multiple Sclerosis group scored significantly lower than the other three groups on this variable ($p<.05$) indicating that workload was perceived to be lowest in this group. An overall summary of the significant differences by groups on job stress sub-scales is provided in Table 8.11.

TABLE 8.11 Significant Group Differences on Job Stress Sub-Scales

Groups and Factors	Group Differences
CRS	
Responsibility Pressure	Lower than ACC. No other group difference
Quality Concern	Lower than ACC. No other group difference
Role Conflict	No group differences
Job vs Nonjob Conflict	Higher than WB. No other group difference
Workload	Higher than MS. No other group difference
MS	
Responsibility Pressure	Lower than ACC. No other group difference
Quality Concern	Lower than ACC. No other group difference
Role Conflict	No group differences
Job vs Nonjob Conflict	Higher than WB. No other group difference
Workload	Lower than CRS, WB, and ACC
WB	
Responsibility Pressure	Lower than ACC. No other group difference
Quality Concern	Lower than ACC. No other group difference
Role Conflict	No group differences
Job vs Nonjob Conflict	Lower than CRS, MS, and ACC
Workload	Higher than MS. No other group difference
ACC	
Responsibility Pressure	Higher then CRS, MS, and WB
Quality Concern	Higher than CRS, MS, and WB
Role Conflict	No group differences
Job vs Nonjob Conflict	Higher than WB. No other group difference
Workload	Higher than MS. No other group difference

8.8 Outcome Measures: Descriptive Statistics

Descriptive statistics (means, SD's, skewness), along with reliabilities (Cronbach's alpha) for the outcome measures (commitment, intention to quit, job satisfaction) are presented in Table 8.12 for the sample as a whole. The reliabilities (Cronbach's alpha) for these measures (ranging from .78 to .85) were judged to be acceptable by standard psychometric criteria.

TABLE 8.12 **Descriptive Statistics for outcome measures (commitment, intention to quit, job satisfaction)**

Outcome Measures	Mean	SD	Skewness	Alpha reliability
Affective Occupational Commitment	5.85	.94	-1.16	.77
Continuance Occupational Commitment	3.82	1.40	.06	.82
Normative Occupational Commitment	2.86	1.30	.80	.80
Affective Organisational Commitment	4.06	1.33	-.23	.82
Continuance Organisational Commitment	3.56	1.34	-.13	.82
Normative Organisational Commitment	3.43	1.28	.21	.81
Intention to Quit Occupation	2.97	1.54	.67	.85
Intention to Quit Organisation	3.35	1.58	.51	.84
Total Job satisfaction	7.67	2.25	-1.05	.80

A square root transform was applied to the Job Satisfaction, Intent to Quit the Profession, Intent to Quit the Organization, and Normative Occupational Commitment measures to reduce the effects of significant positive skewness. A log10 transform was

applied to the Affective Occupational Commitment measure to reduce highly significant skewness in this variable. As is the case elsewhere in this thesis, the transforms of these outcome variables had the added advantage of removing univariate outliers. Although these transformed variables were used in subsequent analyses, in order to maintain clarity and aid interpretability, the untransformed means are presented where necessary in data tables. Descriptive statistics (means, SD's) for the outcome measures are presented separately for each professional group (CRS, MS, WB, ACC) in Table 8.13.

TABLE 8.13 **Descriptive Statistics (Means, SD's) for Outcome Measures (commitment, intention to quit, job satisfaction) across 4 Professional Groups: Commonwealth Rehabilitation Service (CRS), Multiple Sclerosis Society (MS), Workbridge (WB), and Accident Compensation Corporation (ACC).**

Outcome Measures	Groups							
	CRS		MS		WB		ACC	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Affective Occ. Commitment	5.73	1.00	6.04	.77	6.00	.81	5.93	.92
Continuance Occ. Commitment	4.06	1.42	3.44	1.39	3.36	1.28	3.87	1.37
Normative Occ. Commitment	2.57	1.19	4.15	1.66	2.83	1.17	3.13	1.22
Intention to Quit Occ.	2.83	1.47	2.47	1.53	3.20	1.68	3.26	1.49
Affective Org. Commitment	3.74	1.23	4.97	1.01	4.38	1.33	3.93	1.46
Continuance Org. Commitment	3.74	1.26	3.51	1.58	3.26	1.32	3.48	1.42
Normative Org. Commitment	3.28	1.23	4.65	1.11	3.42	1.21	3.34	1.29
Intention to Quit Org.	3.32	1.55	2.63	1.53	3.24	1.62	3.82	1.54
Total Job Satisfaction	8.03	2.09	8.38	1.28	7.92	2.06	6.15	2.54
	(n=155)		(n=24)		(n=70)		(n=60)	

8.9 Outcome Measures: Differences between Groups

As indicated in the Table there are some marked differences and a series of oneway ANOVA's were calculated to assess these between-groups differences. There was a significant difference between groups on Continuance Occupational Commitment, $F(3,302)=4.59$, $p<.01$. Scheffe's test indicated that the CRS group scored significantly higher than the Workbridge group on this variable ($p<.05$).

There were significant differences between groups on Normative Occupational Commitment, $F(3,302)=12.21$, $p<.0001$. Scheffe's test indicated that the Multiple Sclerosis group scored significantly higher than the other three groups on this variable ($p<.05$), and that the CRS group scored significantly lower than the ACC group ($p<.05$).

There was a significant difference between groups on Normative Organisational Commitment, $F(3,300)=8.66$, $p<.0001$. Scheffe's test indicated that the Multiple Sclerosis group scored significantly higher than the other three groups on this variable ($p<.05$).

There was a significant difference between groups on Intention to Quit the Organisation, $F(3,301)=3.68$, $p<.05$. Scheffe's test indicated that the ACC group scored significantly higher than the Multiple Sclerosis group on this variable ($p<.05$).

There was a significant difference between groups on Total Job Satisfaction, $F(3,283)=11.59$, $p<.0001$. Scheffe's test indicated that the ACC group scored significantly lower than the other three groups on this variable ($p<.05$).

There were no significant differences between groups on affective occupational commitment, continuance organisational commitment, and intention to quit occupation. An overall summary of the significant differences by groups on factors is provided as Table 8.14.

TABLE 8.14 Significant Group Differences on Outcome Measures

Outcome Measures	Group Differences
CRS	
Affective Occ. Commitment	No group difference
Continuance Occ. Commitment	Higher than WB. No other group difference
Normative Occ. Commitment	Lower than MS and ACC
Affective Org. Commitment	Lower than MS and WB
Continuance Org. Commitment	No group difference
Normative Org. Commitment	Lower than MS. No other group difference
Intention to Quit Occ.	No group difference
Intention to Quit Org.	MS and ACC difference only
Total Job Satisfaction	Higher than ACC. No other group difference

TABLE 8.14 Significant group differences on Outcome Measures

Outcome Measures	Group Differences
MS	
Affective Occ. Commitment	No group difference
Continuance Occ. Commitment	CRS and WB difference only
Normative Occ. Commitment	Higher than CRS, WB and ACC
Affective Org. Commitment	Higher than CRS and ACC
Continuance Org. Commitment	No group difference
Normative Org. Commitment	Higher than CRS, WB, and ACC
Intention to Quit Occ.	No group difference
Intention to Quit Org.	Lower than ACC. No other group difference
Total Job Satisfaction	Higher than ACC. No other group difference
WB	
Affective Occ. Commitment	No group difference
Continuance Occ. Commitment	Lower than CRS. No other group difference
Normative Occ. Commitment	Lower than MS
Affective Org. Commitment	Higher than CRS
Continuance Org. Commitment	No group differences
Normative Org. Commitment	Lower than MS. No other group differences
Intention to Quit Occ.	No group difference
Intention to Quit Org.	MS and ACC difference only
Total Job Satisfaction	Higher than ACC. No other group difference
ACC	
Affective Occ. Commitment	No group difference
Continuance Occ. Commitment	CRS and WB difference only
Normative Occ. Commitment	Higher than CRS. Lower than MS
Affective Org. Commitment	Lower than MS
Continuance Org. Commitment	No group difference
Normative Org. Commitment	Lower than MS. No other group difference
Intention to Quit Occ.	No group difference
Intention to Quit Org.	Higher than MS
Total Job Satisfaction	Lower than CRS, MS, and WB

8.10 Relationships between Demographic and Outcome Variables

A series of analyses were conducted to examine the relationships between demographic variables and the outcome measures in this study (job satisfaction; intention to quit the organization/the profession; affective, normative and continuance commitment to the occupation/the organization). The purpose of these analyses (following the example provided by Vincent, 1994) was to determine which demographic variables might act as confounding variables in subsequent regression analyses involving the outcome measures. Demographic variables which were shown to have a significant relationship with outcome measures were then used as control variables in hierarchical regression analyses reported later.

Gender differences and job status (full-time vs part-time) differences in outcome measures were examined by a series of t-tests. In all instances where t-tests were performed, an F test of sample variances was carried out for each comparison, and if the probability of F was >.05 then it was assumed that the sample variances were equal and t statistics based on pooled variance estimates were used. If the probability of F was <.05 then it was assumed that the sample variances were unequal and t statistics based on separate variance estimates were used (Biggs, Flett, Voges & Alpass, 1995).

There was a significant gender difference in normative organisational commitment, $t(299)=2.31$, $p=.02$. Females reported significantly higher levels of normative organisational commitment (M = 3.5, SD = 1.2) than did males (M = 3.1, SD = 1.2). There were no other significant sex differences on outcome variables. There were significant job status (full-time/part-time) differences in normative occupational commitment, $t(301)=3.06$, $p=.002$, and

normative organisational commitment, $t(299)=2.26$, $p=.02$. Part-timers reported significantly higher levels of normative occupational commitment (M = 3.4, SD = 1.5) than did full-timers (M = 2.7, SD = 1.2). Part-timers also reported significantly higher levels of normative organisational commitment (M = 3.8, SD = 1.3) than did full-timers (M = 3.3, SD = 1.2). There were no other significant job-status differences on outcome variables.

The relationships between age, time in the job, time in the profession, educational qualifications, income, hours worked per week, number of colleagues doing similar work, and outcome measures were examined by means of correlations (Pearson r's). The results of these analyses are presented in Table 8.15.

As indicated in the Table, hours worked per week, and number of workplace colleagues were not significantly associated with any of the outcome variables. Older respondents reported significantly higher levels of affective and normative occupational commitment, along with higher levels of affective organisational commitment. In a similar vein, respondents who reported longer length of service with current employer also reported significantly higher levels of affective and continuance occupational commitment, along with higher levels of affective organisational commitment. Higher levels of education were significantly associated with lower levels of affective and normative organisational commitment. Longer levels of service in the rehabilitation field were significantly associated with higher levels of continuance occupational commitment. Higher income was significantly associated with higher levels of continuance occupational commitment and with lower levels of normative occupational commitment.

Table 8.15 **Correlations of Demographic Measures (educational qualifications, hours worked per week, income, time in the job, time in the profession, age, number of workplace colleagues) with outcome measures (commitment, intention to quit, job satisfaction) (N=301).**

	Demographic Measures						
Variables	Educat Quals	Hours per week	Income per annum	Time with current employer	Time in profession	No. of workplace colleagues	Age
Affective occupational commitment	-.04	-.03	-.02	.14*	.11	.02	.16**
Continuance occupational commitment	.06	-.01	.13*	.12*	.19**	.01	.04
Normative occupational commitment	-.10	.02	-.12*	.10	.07	.02	.20**
Affective organisational commitment	-.17**	-.01	-.03	.14*	.07	-.03	.15*
Continuance organisational commitment	.06	.09	.06	.12	.09	.10	-.07
Normative organisational commitment	-.12*	-.02	-.11	-.06	-.05	.02	.03
Intention to quit occupation	.10	.01	.05	.01	-.06	.01	-.09
Intention to quit organisation	-.00	.03	.00	-.04	-.10	.02	-.09
Total job satisfaction	-.06	-.09	.04	-.05	.00	-.03	.02

*p<.05 **p<.01

8.11 Relationships between Occupational Stress, RSI Skills and Outcomes, and the Moderating Effects of Rehabilitation Skills

Hierarchical regression analyses were used to assess the contribution of independent variables (e.g. relevant demographic characteristics, job stress (role conflict, quality concern, responsibility pressure, workload, job vs non-job conflict), rehabilitation skills (vocational rehabilitation, counselling, case management, professional practice) to outcome variables (Job satisfaction, intention to quit the organisation/profession, affective, normative and continuance commitment to the occupation/organization. This particular type of regression analysis was used because the researcher controls the entry of blocks of variables and is thus able to assess the proportion of variance attributable to blocks of variables after variance due to other IV's or blocks of IV's is accounted for (Alpass, 1994; Tabachnik and Fidell, 1989). Similar types of analyses involving other samples of rehabilitation service providers have been reported elsewhere in the literature (e.g. Flett, Biggs, & Alpass, 1995a, 1995b)

Prior to analysis, the variables were screened for evaluations of assumptions of statistical analysis. As has been described earlier some transforms were applied to some of the IV's, skills and outcome variables to reduce the effects of significant skewness (see p9, p13 and p17 for descriptions of transforms applied to relevant, skills, stresses, and outcome measures respectively). Two cases were identified through Mahalanobis distance as being multivariate outliers with $p<.001$ and were deleted from the analyses. Gender and job status (full time/part time) were dichotomised as such binary coding provides interpretable mean differences as regression coefficients (Jaccard, Turissi & Wan, 1990). For the purposes of regression analysis, group membership (CRS, MS, Workbridge, ACC) was dummy coded.

This is a process of re-categorisation where a categorical variable is turned into a set of dichotomous variables. When this set of 2 level variables are entered in regression, the variance due to the original categorical variable is analysed and the effects of these new dichotomous components can be examined (Alpass, 1994). For the purposes of the present study, group membership was dummy coded as follows: CRS vs Others (Variable 1); CRS and MS vs Others (Variable 2); ACC vs Others (Variable 3). The pattern of significance for these variables indicate which groups differ significantly from each other on the relevant dependant variable. Given the consistent pattern of differences between the groups on the outcome variables (as described previously in this chapter) it was deemed necessary to include group membership as a set of dummy variables in the regression analysis in order to control for any effects group membership per se might have on the relationships between stress and outcomes. In each regression, the effects of relevant demographic variables (which were identified in the analyses reported in section 8.10 of this chapter), and dummy-coded group membership, were estimated in the first step.

8.11.1 Job satisfaction

Hierarchical regression analysis was used to evaluate the contribution of each block of variables in explaining job satisfaction. The effects of job stress and rehabilitation skills variables were estimated after controlling for demographic variables and group membership. Having controlled for main effects in this way, the question of stress x skills interaction effects was then addressed. Interaction effects were estimated after controlling for demographic variables, group membership, stress and skills main effects. For each interaction term, a vector formed by calculating the cross product of the variables deviation scores was

added at this step (Baron & Kenny, 1986). The results are presented in Table 8.16. The standardised beta coefficients for each variable within the blocks are reported. Total variance explained by each step of the regression is provided (R^2 and adjusted R^2) along with the added variance explained by each block of variables while controlling for previous blocks (R^2_{change}).

TABLE 8.16 Hierarchical multiple regression of demographic variables, job stress sub-scale scores, and R.S.I. factors on job satisfaction showing standardised regression coefficient, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	.05	.02	-.04
Variable 2	.01	-.00	.08
Variable 3	.27***	.13	.13
Stress, Skills			
Workload		.01	-.02
Job vs. non-job		.22***	.20**
Responsibility pressure		-.02	-.02
Quality concern		.43***	.39***
Role conflict		.02	.08
Vocational counselling		-.11	-.08
Personal counselling		.08	.08
Professional practice		-.13	-.15*
Case management		-.01	-.06
Stress x Skills [Note 1] [a] No significant interaction			
R	.31***	.67***	.68***
Total R^2	.09	.45	.47
Adjusted R^2	.08	.42	.39
R^2 change	.09	.35***	.03

*p<.05 **p<.01 ***p<.001

[Note 1] [a] The stress x skills interaction terms were calculated across the total number of variables. Only those interaction terms that were significant were both added to the regression models to test their significance as moderators in the regression model and reported in Table 8.16 to Table 8.24

At step 1, the set of dummy variables representing group membership accounted for 8% (adjusted R^2) in job satisfaction, $F(3,229)=8.37$, $p<.0001$. After step 2, with the addition of the 5 stress variables and the 4 rehabilitation skills variables, total variance explained in job satisfaction was 42% (adjusted R^2), $F(12,220)=14.77$, $p<.0001$. The stress and skills variables accounted for 34% of the unique variance in job satisfaction when controlling for group membership. The R^2_{change} when entering the stress and skills variables after the group membership dummy variables was significant, $F(12,220)=15.33$, $p<.0001$. After step three, with the interaction terms added to the model, the R^2_{change} was not significant, $F(32,200)=.55$, $p=.93$.

By examining the beta coefficients at each step it is possible to observe the effects of individual variables on the dependent variable within each block of variables and the extent to which the addition of subsequent steps alters these effects. After Step 1 the overall regression was significant and, as noted in earlier univariate analysis, this was due to the ACC group reporting significantly lower levels of job satisfaction. After Step 2 the significant stress variables in the model were job vs non-job and quality concern. There were no significant skills main effects. The initial significant effects of group membership appear to be partially mediated through the stress and skills variables (indicated by the decline of the Variable 3 coefficient from .27 to .13). Consequently the impact of group membership on job satisfaction seems to occur to the extent that there are group differences in both stress and skill levels. After Step 3 the overall regression model was significant but there appears to be no evidence of a moderation effect. None of the interaction terms were significant and are therefore not reported in Table 8.16. The effects of skills on job satisfaction do not appear to vary with differing levels of stress. As indicated in Table 8.16 one of the skills

variables (professional practice) which was initially non significant after Step 2 became significant on Step 3. Although the magnitude of the change between Step 2 and Step 3 is not great (as indicated by the change in the coefficient from -.13 to -.15) this may be evidence of a suppression effect. Although there is much debate about suppressor variables in multiple regression (e.g. Smith, Ager, & Williams, 1992), one common definition of suppression is as follows: "...predictor variance is partitioned into two parts: variance shared with the criterion (valid variance), and variance which is independent of the criterion (error). A second predictor can contribute to the regression directly by explaining valid variance, or indirectly by accounting for error in the first predictor. In the latter case, the second predictor is functioning as a suppressor. It contributes to the regression equation by removing error and hence by enhancing the ability of the first predictor to explain criterion variance" (Smith et al., p21). In this analysis, therefore, the significant relationship between professional practice and job satisfaction must be interpreted with caution.

8.11.2 Intention to quit the organisation

Hierarchical regression analysis was used to evaluate the contribution of each block of variables in explaining intention to quit the organisation. The procedure used here was a repeat of that described previously in 8.11.1 for job satisfaction. For purposes of brevity the same procedures were adopted for regression on each of the ensuing outcome measures namely; intention to quit the profession, affective occupational commitment, continuance occupational commitment, normative occupational commitment, affective organisational commitment, continuance organisational commitment, and normative organisational commitment. The results of the analysis on intention to quit the organisation are presented

in Table 8.17. The standardised beta coefficients for each variable within the blocks are reported. Total variance explained by each step of the regression is provided (R^2 and adjusted R^2) along with the added variance explained by each block of variables while controlling for previous blocks (R^2_{change}).

TABLE 8.17 Hierarchical multiple regression of demographic variables, job stress sub-scale scores, and R.S.I. factors on intention to quit organisation showing standardised regression coefficients, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	1	2	3
Demographics			
Variable 1	-.24	-.34*	-.36*
Variable 2	.28	.35	.33
Variable 3	.12	.07	.09
Stress, skills			
Workload		-.01	.02
Job vs. non-job		.19**	.15*
Responsibility pressure		.04	.02
Quality concern		.40***	.38***
Role conflict		-.14*	-.05
Vocational counselling		-.11	-.13
Personal counselling		-.04	-.03
Professional practice		-.13	-.14
Case management		.18*	.16
Stress x skills			
Vocational counselling x quality concern			-.21*
Case management x role conflict			.24*
R	.19*	.55***	.59***
Total R^2	.03	.30	.35
Adjusted R^2	.02	.26	.25
R^2 change	.03	.26***	.05

*p<.05 **p<.01 ***p<.001

At Step 1, the set of dummy variables representing group membership accounted for 2% (adjusted R^2) in intention to quit the organisation, $F(3,243)=2.91$, $p<.05$. After Step 2,

with the addition of the 5 stress variables and the 4 rehabilitation skills variables, total variance explained in intention to quit the organisation was 26% (adjusted R^2), $F(12,234)=8.26$, $p<.0001$. The stress and skills variables accounted for 24% of the unique variance in intention to quit the organisation when controlling for group membership. The R^2_{change} when entering the stress and skills variables after the group membership dummy variables was significant, $F(12,234)=9.73$, $p<.0001$. After Step 3, with the interaction terms added to the model the R^2_{change} was not significant, $F(32,214)=.82$, $p=.68$.

As previously stated, by examining the beta coefficients at each step it is possible to observe the effects of individual variables on the dependent variable within each block of variables and the extent to which the addition of subsequent steps alters these effects. At Step 1 the overall regression was significant but none of the individual variables representing group membership were significant. On subsequent steps Variable 1 (CRS vs Others) became significant which suggests some type of suppression effect as described above. This is contrary to univariate analysis which indicated that the ACC group was significantly different from the MS group. The reason for this ambiguity is unclear. After Step 2 the significant stress variables in the model were job vs non-job, quality concern, and role conflict. There was also a significant skills main effect for case management. After Step 3 the overall regression model was significant with the main effects of role conflict and case management, previously significant at Step 2, not now contributing significantly to the model. This suggests that the effects of role conflict and case management may be partially mediated by the interaction terms entered on Step 3 of the model. Given that there was a significant case management x role conflict interaction at Step 3 it may be the case that the respective main effects are mediated by the interaction term. It must also be noted that the initial significant

effects of job vs non-job stress appear to be partially mediated by the stress x skills interaction terms (indicated by the decline in the regression coefficient from .19 at Step 2 to .15 at Step 3). As noted in Table 8.17 the addition of the interaction terms did not significantly improve prediction of intention to quit the organisation. This means that in the model overall there is no evidence to suggest that skills moderate the effect of stress on intention to quit the organisation.

8.11.3 Intention to quit the profession

Hierarchical regression analysis was used to evaluate the contribution of each block of variables in explaining intention to quit the profession. The procedure used here, as explained in 8.11.2, was a repeat of that fully described previously in 8.11.1 for job satisfaction. The results of the analysis on intention to quit the profession are presented in Table 8.18. The standardised beta coefficients for each variable within the blocks are reported. Total variance explained by each step of the regression is provided (R^2 and adjusted R^2) along with the added variance explained by each block of variables while controlling for previous blocks (R^2_{change}).

At Step 1, the set of dummy variables representing group membership accounted for 3% (adjusted R^2) in intention to quit the profession, $F(3,244)=3.37$, $p<.05$. After Step 2, with the addition of the 5 stress variables and the 4 rehabilitation skills variables, total variance explained in intention to quit the profession was 19% (adjusted R^2), $F(12,235)=5.74$, $p<.0001$. The stress and skills variables accounted for 16% of the unique variance in intention to quit the profession when controlling for group membership. The R^2_{change} when entering the stress

and skills variables after the group membership dummy variables was significant, $F(12,235)=6.31$, $p<.0001$. After Step 3, with the interaction terms added to the model the R^2_{change} was not significant, $F(32,215)=2.70$, $p=6.3$.

At Step 1 the overall regression was significant and this appears to be due to group differences in intention to quit the profession. However this significant effect disappears on subsequent steps in the model suggesting that it may be mediated by other variables in the model. This finding, i.e. of an initially significant group difference, did not appear in univariate analysis and the reason for this ambiguity is unclear.

TABLE 8.18 Hierarchical multiple regression of demographic variables, job stress sub-scale scores, and R.S.I. factors on intention to quit profession showing standardised regression coefficients, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	-.22	-.29	-.19
Variable 2	.40*	.50	.34
Variable 3	-.03	-.11	-.07
Stress, skills			
Workload		-.03	.01
Job vs. non-job		.17*	.15*
Responsibility pressure		.02	.00
Quality concern		.18*	.17
Role conflict		.02	.07
Vocational counselling		-.10	-.15
Personal counselling		.04	.08
Professional practice		-.26***	-.24**
Case management		.05	.04
Stress x skills			
Vocational counselling x quality concern			-.20*
Case management x role conflict			.26*
Professional practice x quality concern			-.30*
R	.20*	.48***	.54***
Total R^2	.04	.23	.29
Adjusted R^2	.03	.19	.18
R^2 change	.04	.19***	.06

*p<.05 **p<.01 ***p<.001

After Step 2 the stress and skills main effects significantly improved prediction of intention to quit the profession. Important individual effects include job vs no-job stress, quality concern, and professional practice. Job vs no-job stress and quality concern appear to be important stressors in the rehabilitation environment and this is reflected in their significant relationships with job satisfaction, intention to quit the organisation, and intention

to quit the profession. The salience of quality concern may well reflect the fact that current rehabilitation environments operate under conditions of increasing workloads and decreasing resources and other studies have highlighted the negative consequences of such work environments (e.g. Flett et al. 1995a, 1995b).

After Step 3 the addition of the interaction terms did not significantly improve prediction of intention to quit the profession although the overall model was still significant. There was weak evidence to suggest that quality concern may be partially mediated by the interaction terms (indicated by the decline in the regression coefficient from .18 at Step 2 to .17 at Step 3).

8.11.4 Affective occupational commitment

Hierarchical regression analysis was used to evaluate the contribution of each block of variables in explaining affective occupational commitment. The procedure used here, as explained in 8.11.2, was a repeat of that fully described previously in 8.11.1 for job satisfaction. The results of the analysis on affective occupational commitment are presented in Table 8.19.

At Step 1, the set of dummy variables representing group membership accounted for 0% (adjusted R^2) in affective occupational commitment, $F(5,240)=1.017$, and was not significant. After Step 2, with the addition of the 5 stress variables and the 4 rehabilitation skills variables, total variance explained in affective occupational commitment was 18% (adjusted R^2), $F(14,231)=4.75$, $p<.0001$. The stress and skills variables accounted for 18%

of the unique variance in affective occupational commitment when controlling for group membership. The R^2_{change} when entering the stress and skills variables after the group membership dummy variables was significant, $F(14,231)=6.70$, $p<.0001$. After Step 3, with the interaction terms added to the model the R^2_{change} was not significant, $F(34,211)=1.26$, $p=.21$.

At Step 1 the overall regression was not significant. After Step 2 one demographic variable (years with current employer) and stress and skills main effects significantly improved prediction of affective occupational commitment. Important individual effects include job vs non-job stress, quality concern and professional practice. As noted previously in regard to relationships with job satisfaction, intention to quit the organisation, and intention to quit the profession, and now in this discussion of affective occupational commitment, job vs non-job stress and quality concern continue to suggest their importance as stressors in the rehabilitation environment.

TABLE 8.19 Hierarchical multiple regression of demographic variables, job stress sub-scale scores and R.S.I. factors on affective occupational commitment showing standardised regression coefficients, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	1	2	3
Demographics			
Variable 1	-.08	-.15	-.04
Variable 2	.07	.12	-.00
Variable 3	-.07	-.13	-.09
Age	-.07	-.00	-.03
Years with current employer	-.08	-.13*	-.11
Stress, skills			
Workload		-.01	-.01
Job vs. non-job		.14*	.08
Responsibility pressure		.01	-.00
Quality concern		.16*	.17
Role conflict		.10	.13
Vocational counselling		-.11	-.07
Personal counselling		.11	.06
Professional practice		-.27***	-.23**
Case management		.02	.06
Stress x skills			
Vocational Counselling x job vs. non job			-.20*
Professional practice x workload			.23*
R	.14	.47***	.55***
Total R^2	.02	.22	.31
Adjusted R^2	.00	.18	.19
R^2 change	.02	.20***	.08

*p<.05 **p<.01 ***p<.001

After Step 3 the addition of the interaction terms did not significantly improve prediction of affective occupational commitment although the overall model was still significant. The main effects of years with current employer, job vs non-job stress, and quality concern, significant at Step 2, ceased to be so after Step 3 suggesting that the effects

of these variables may be partially mediated by the interaction terms entered at Step 3 of the model.

8.11.5 Continuance occupational commitment

Hierarchical regression analysis was used to evaluate the contribution of each block of variables in explaining continuance occupational commitment. The procedure used here, as explained in 8.11.2, was a repeat of that fully described previously in 8.11.1 for job satisfaction. The results of the analysis on continuance occupational commitment are presented in Table 8.20.

At step 1, the set of dummy variables representing group membership accounted for 5% (adjusted R^2) in continuance occupational commitment, $F(6,229)=3.08$, $p<.001$. After step 2, with the addition of the 5 stress variables and the 4 rehabilitation skills variables, total variance explained in continuance occupational commitment was 12% (adjusted R^2), $F(15,220)=3.06$, $p<.001$. The stress and skills variables accounted for 7% of the unique variance in continuance occupational commitment when controlling for group membership. The R^2_{change} when entering the stress and skills variables after the group membership dummy variables was significant, $F(15,220)=2.89$, $p<.01$. After step three, with the interaction terms added to the model the R^2_{change} was not significant, $F(35,200)=1.09$, $p=.36$.

At Step 1 the overall regression was significant and this appears to be due to a demographic variable of years in the rehabilitation field. This significant effect reduces in Step 2 (indicated by the decline in the regression coefficient from .15 in Step 1 to .14 in Step

2) and becomes non significant in Step 3 suggesting that it may be mediated by other variables in the model.

TABLE 8.20 Hierarchical multiple regression of demographic variables, job stress sub-scale scores and R.S.I. factors on continuance occupational commitment showing standardised regression coefficients, R, R2, adjusted R2 and R2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	-.08	-.14	-.08
Variable 2	-.12	.02	-.03
Variable 3	.14	.08	.01
Income	.05	.07	.04
Years with current employer	.11	.10	.11
Years in rehab field	.15$^{\bullet}$	.14$^{\bullet}$	.16
Stress, skills			
Workload		.01	.01
Job vs. non-job		.12	.21
Responsibility pressure		-.16$^{\bullet}$	-.14
Quality concern		-.02	.01
Role conflict		.27$^{\bullet\bullet\bullet}$	.15
Vocational counselling		.02	-.06
Personal counselling		-.05	-.02
Professional practice		-.12	-.11
Case management		-.06	-.05
Stress x skills			
Vocational Counselling x role conflict			-.24$^{\bullet}$
Personal counselling x workload			-.19$^{\bullet}$
R	.27$^{\bullet\bullet}$	.42$^{\bullet\bullet\bullet}$	.50$^{\bullet\bullet}$
Total R^2	.07	.17	.25
Adjusted R^2	.05	.12	.12
R^2 change	.07	.10$^{\bullet\bullet}$	.08

$^{\bullet}p<.05$ $^{\bullet\bullet}p<.01$ $^{\bullet\bullet\bullet}p<.001$

After Step 2 the stress main effects of responsibility pressure and role conflict significantly improved prediction of continuance occupational commitment. After Step 3 the overall regression model remained significant but the main effects of years in the rehabilitation field, responsibility pressure, and role conflict, all previously significant at Step 2, not now contributing significantly to the model. This suggests that the effects of these variables may be partially mediated by the effects of the interaction terms entered on Step 3 of the model.

8.11.6 Normative occupational commitment

Hierarchical regression analysis was used to evaluate the contribution of each block of variables in explaining normative occupational commitment. The procedure used here, as explained in 8.11.2, was a repeat of that fully described previously in 8.11.1 for job satisfaction. The results of the analysis on normative occupational commitment are presented in Table 8.21.

At step 1, the set of dummy variables representing group membership accounted for 8% (adjusted R^2) in normative occupational commitment, $F(6,230)=4.51$, $p<.001$. After step 2, with the addition of the 5 stress variables and the 4 rehabilitation skills variables, total variance explained in normative occupational commitment was 14% (adjusted R^2), $F(15,221)=3.60$, $p<.0001$. The stress and skills variables accounted for 6% of the unique variance in normative occupational commitment when controlling for group membership. The R^2_{change} when entering the stress and skills variables after the group membership dummy

variables was significant, $F(15,221)=2.79$, $p<.01$. After step three, with the interaction terms added to the model the R^2_{change} was not significant, $F(35,201)=1.03$, $p=.43$.

At Step 1 the overall regression was significant. This appears to be due to group differences in normative occupational commitment and this significant effect continues on subsequent steps. At Step 2 the model is not improved by the addition of the stress and skills main effects. At Step 3 the addition of the interaction terms did not significantly improve prediction of normative occupational commitment.

TABLE 8.21 Hierarchical multiple regression of demographic variables, job stress subscale scores and R.S.I. factors on normative occupational commitment showing standardised regression coefficient, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	.64**	.62**	.64**
Variable 2	-.61**	-.49*	-.44
Variable 3	.19*	.10	.04
Age	.12	.08	.09
Income	.10	.03	.08
Job status	.07	.04	.08
Stress, skills			
Workload		-.08	-.09
Job vs. non-job		-.06	.02
Responsibility pressure		.01	.01
Quality concern		-.05	-.04
Role conflict		.14	.05
Vocational counselling		.13	.12
Personal counselling		-.15	-.14
Professional practice		.18	.16
Case management		-.12	-.13
Stress x skills			
Case management x role conflict			-.25*
Professional practice x workload			-.22*
R	.32**	.44***	.52***
Total R^2	.11	.20	.27
Adjusted R^2	.08	.14	.14
R^2 change	.11	.09**	.07

*p<.05 **p<.01 ***p<.001

8.11.7 Affective organisational commitment

Hierarchical regression analysis was used to evaluate the contribution of each block of variables in explaining affective organisational commitment. The procedure used here, as explained in 8.11.2, was a repeat of that fully described previously in 8.11.1 for job satisfaction. The results of the analysis on affective organisational are presented in Table 8.22.

At step 1, the set of dummy variables representing group membership accounted for 3% (adjusted R^2) in affective organisational commitment, $F(6,238)=2.39$, $p<.05$. After step 2, with the addition of the 5 stress variables and the 4 rehabilitation skills variables, total variance explained in affective organisational commitment was 17% (adjusted R^2), $F(15,229)=4.28$, $p<.0001$. The stress and skills variables accounted for 14% of the unique variance in affective organisational commitment when controlling for group membership. The R^2_{change} when entering the stress and skills variables after the group membership dummy variables was significant, $F(15,229)=5.29$, $p<.0001$. After step three, with the interaction terms added to the model the R^2_{change} was not significant, $F(35,209)=.92$, $p=.56$.

At Step 1 the overall regression was significant. At Step 2 the addition of the stress and skill main effects improved the predictive ability of the model significantly. There were 2 main effects (quality concern and professional practice) remaining significant at Steps 2 and 3. The addition of the interaction terms at Step 3 did not improve prediction of affective organisational commitment.

TABLE 8.22 Hierarchical multiple regression of demographic variables, job stress subscale scores and R.S.I. factors on affective organisational commitment showing standardised regression coefficient, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	.25	.23	.43*
Variable 2	-.07	.03	-.15
Variable 3	-.13	-.16	-.15
Age	.00	-.03	-.05
Years with current employer	.07	.10	.08
Educational quals	-.08	.10	-.06
Stress, skills			
Workload		-.04	.01
Job vs. non-job		-.11	-.11
Responsibility pressure		.06	.06
Quality concern		-.28***	-.32***
Role conflict		.07	.07
Vocational counselling		.21	.22
Personal counselling		-.07	-.05
Professional practice		.19*	.22**
Case management		-.14	-.08
Stress x skills			
Personal counselling x quality concern			-.24*
Personal counselling x role conflict			.25*
Case management x role conflict			-.29*
R	.24*	.47***	.53***
Total R^2	.06	.22	.28
Adjusted R^2	.03	.17	.16
R^2 change	.06	.16***	.06

*p<.05 **p<.01 ***p<.001

8.11.8 Continuance organisational commitment

Hierarchical regression analysis was used to evaluate the contribution of each block of variables in explaining affective organisational commitment. The procedure used here, as explained in 8.11.2, was a repeat of that fully described previously in 8.11.1 for job satisfaction. The results of the analysis on continuance organisational commitment are presented in Table 8.23.

At step 1, the set of dummy variables representing group membership accounted for 0% (adjusted R^2) in continuance organisational commitment, $F(3,244)=1.55$, and was not significant. After step 2, with the addition of the 5 stress variables and the 4 rehabilitation skills variables, total variance explained in continuance organisational commitment was 13% (adjusted R^2), $F(12,235)=4.17$, $p<.0001$. The stress and skills variables accounted for 13% of the unique variance in continuance organisational commitment when controlling for group membership. The R^2_{change} when entering the stress and skills variables after the group membership dummy variables was significant, $F(12,235)=4.97$, $p<.0001$. After step three, with the interaction terms added to the model the R^2_{change} was not significant, $F(32,215)=1.16$, $p=.29$.

At Step 1 the regression was significant. At Step 2 with the addition of the stress main effects prediction of the model was significantly improved. Job vs non-job pressure was a significant main effect at both Steps 2 and 3 of the model while role conflict was significant at Step 2 but became non significant at Step 3 indicating that its effect may be mediated by

the interaction terms. The addition of the interaction terms at Step 3 did not significantly improve prediction of continuance organisational commitment.

TABLE 8.23 Hierarchical multiple regression of demographic variables, job stress sub-scale scores and R.S.I. factors on continuance organisational commitment showing standardised regression coefficients, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	-.02	-.11	-.21
Variable 2	-.14	.02	.13
Variable 3	.05	-.06	-.12
Stress, skills			
Workload		.02	.02
Job vs. non-job		.29***	.38***
Responsibility pressure		-.08	-.07
Quality concern		.06	.07
Role conflict		.15*	.06
Vocational counselling		.01	-.05
Personal counselling		.07	.06
Professional practice		-.09	-.09
Case management		-.08	-.11
Stress x skills			
Vocational counselling x responsibility pressure			.19*
Personal counselling x quality concern			.22*
R	.14	.42***	.51***
Total R2	.02	.18	.26
Adjusted R2	.01	.13	.15
R2 change	.02	.16***	.08

*p<.05 **p<.01 ***p<.001

8.11.9 Normative organisational commitment

Hierarchical regression analysis was used to evaluate the contribution of each block of variables in explaining normative organisational commitment. The procedure used here, as explained in 8.11.2, was a repeat of that fully described previously in 8.11.1 for job satisfaction. The results of the analysis on affective organisational are presented in Table 8.24.

At step 1, the set of dummy variables representing group membership accounted for 5% (adjusted R^2) in normative organisational commitment, $F(5,240)=3.54$, $p<.01$. After step 2, with the addition of the 5 stress variables and the 4 rehabilitation skills variables, total variance explained in normative organisational commitment was 9% (adjusted R^2), $F(12,220)=14.77$, $p<.0001$. The stress and skills variables accounted for 4% of the unique variance in normative organisational commitment when controlling for group membership. The R^2_{change} when entering the stress and skills variables after the group membership dummy variables was significant, $F(14,231)=2.34$, $p<.05$. After step three, with the interaction terms added to the model the R^2_{change} was not significant, $F(34,211)=.77$, $p=.74$.

At Step 1 the regression was significant due in the main to group differences in normative organisational commitment. After Step 2 the introduction of the stress and skills main effects significantly improved the models prediction. Quality concern was a significant main effect at both Steps 2 and 3 in the model while role conflict was significant at Step 2 but became non significant suggesting the effects of role conflict were mediated by the

interaction terms. The introduction of the interaction terms at Step 3 did not significantly improve prediction.

TABLE 8.24 Hierarchical multiple regression of demographic variables, job stress sub-scale scores and R.S.I. factors on normative organisational commitment showing standardised regression coefficient, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	.60***	.54**	.51**
Variable 2	-.56**	-.42	-.35
Variable 3	.00	-.04	-.08
Sex	-.11	-.11	.11
Job status	-.02	-.03	.03
Stress, skills			
Workload		-.07	-.08
Job vs. non-job		-.06	-.02
Responsibility pressure		-.01	-.01
Quality concern		-.21*	-.19*
Role conflict		.18*	.12
Vocational counselling		.15	.14
Personal counselling		-.07	-.06
Professional practice		.09	.09
Case management		-.12	-.10
Stress x skills			
Case management x role conflict			-.31*
R	.26**	.38***	.45*
Total R^2	.07	.15	.20
Adjusted R^2	.05	.09	.08
R^2 change	.07	.08*	.06

*p<.05 **p<.01 ***p<.001

8.12 Relationships between occupational stress and outcomes: The Mediating effects of rehabilitation skills

The regression analyses presented in the preceding sections of this chapter addressed the question of whether rehabilitation practitioner skills could be seen as moderating or 'buffering' the effects of job related stressors on outcomes including job satisfaction, committment, and intention to quit. These analyses clearly demonstrated that although there were a number of significant stress and skills main effects, there was no convincing evidence of a moderating effect of skills (given the constraints of this type of data analysis methodology which are considered in more detail in the final chapter of this thesis).

The analyses reported in this section of the thesis consider the question of whether rehabilitation practitioner skills mediate the relationship between stress and job-related outcomes. Baron and Kenny (1986) emphasise the importance of distinguishing between moderating and mediating relationships and, although there is considerable debate about the nature of mediating effects and how best to test for them (James and Brett 1984), the present research adopts the parsimonious approach described in Vincent (1994).

To illustrate the principles involved, the following sets of relationships may be considered:

1. Stress ----------> Outcomes
2. Stress ----------> Skills ----------> Outcomes

We expect stress to have an effect on outcomes. If the strength of this relationship is reduced when skills are introduced into the model then the assumption is that stress is affecting outcomes through transmission of influence from stress to outcomes by the mediator which is skills.

The mediated regression analyses are presented in Tables 8.25 to 8.33. As described earlier in this chapter (section 8.11) appropriate screening and assumption testing analyses were conducted. Relevant control variables were entered on step one of each analysis, stress main effects on step two, and skills main effects on step three. Although the effects of some of the demographic and control variables are themselves mediated by stress and skills variables, these effects have been commented upon in detail in the moderated regression analyses presented earlier in this chapter. The primary focus of commentary in this section is on the extent to which skills appear to mediate the effects of stress on outcomes. Within each table of results, the standardised beta coefficients for each variable within the blocks are reported. Total variance explained by each step of the regression is provided (R^2 and adjusted R^2) along with the added variance explained by each block of variables while controlling for previous blocks (R^2_{change}).

8.12.1 Job satisfaction

The results for the 'job satisfaction' analysis are presented in Table 8.25. After step 3 the full model accounted for some 41% (adjusted R^2) of the variance in job satisfaction, $F(12, 219)=14.72$, $p<.0001$. Job vs non-job stress and quality concerns emerged as significant main effects in the full model. There is very weak evidence to suggest that the effects of

job vs non-job stress on satisfaction may be partially channelled through skills variables (indicated by the decline in the coefficient from .23 to .22). Taken as a whole, the results indicate that while there are some stress main effects on job satisfaction, there is little compelling evidence to suggest that skills variables exert a mediating effect on the relationship between stress and satisfaction.

8.12.2 Intention to quit the organisation

The results for the 'intent to quit the organisation' analysis are presented in Table 8.26. After step 3 the full model accounted for some 26% (adjusted R^2) of the variance in intention to quit the organisation, $F(12, 233)=8.30$, $p<.0001$. Job vs non-job stress, quality concerns, and case management skills emerged as significant main effects in the full model. The role conflict variable, which was initially non-significant on step 2, became significant after step 3. Although the magnitude of the change between step 2 and step 3 is not great (as indicated by the change in the coefficient from -.12 to -.15) this may be evidence of a suppression effect (which has been described earlier pp.179). There is some evidence to suggest that the effects of job vs non-job stress on intention to quit the organisation may be partially channelled through skills variables (indicated by the decline in the job/nonjob coefficient from .23 to .20). Taken as a whole, the results indicate that there are some stress and skills main effects on intention to quit the organisation. There is some evidence to suggest that skills variables exert a mediating effect on the relationship between job vs nonjob stress and intention to quit the organisation.

8.12.3 Intention to quit the profession

The results for the 'intent to quit the profession' analysis are presented in Table 8.27. After step 3 the full model accounted for some 19% (adjusted R^2) of the variance in intention to quit the profession, $F(12, 234)=5.78$, $p<.0001$. Job vs non-job stress, quality concerns, and professional practice skills emerged as significant main effects in the full model. There is some evidence to suggest that the effects of job vs non-job stress on intention to quit the profession may be partially channelled through skills variables (indicated by the decline in the job/nonjob coefficient from .21 to .18 between Steps 2 and 3). Taken as a whole, the results indicate that there are some stress and skills main effects on intention to quit the profession. There is some evidence to suggest that skills variables exert a mediating effect on the relationship between job vs nonjob stress and intention to quit the profession.

8.12.4 Affective occupational commitment

The results for the 'affective occupational committment' analysis are presented in Table 8.28. After step 3 the full model accounted for some 17% (adjusted R^2) of the variance in affective occupational committment, $F(13, 231)=5.13$, $p<.0001$. Professional practice skills emerged as the significant main effect in the full model. The main effects of job vs non job stress and quality concern were approaching significance ($p=.053$ and $p=.051$ respectively). There is some evidence to suggest that the effects of job vs non-job stress on affective occupational committment may be partially channelled through skills variables (indicated by the decline in the job/nonjob stress coefficient from .16 to .14 between Steps 2 and 3). Taken as a whole, the results indicate that there are primarily skills main effects on affective

occupational committment. There is some evidence that skills variables exert a mediating effect on the relationship between job vs nonjob stress and affective occupational committment.

8.12.5 Continuance occupational commitment

The results for the 'continuance occupational committment' analysis are presented in Table 8.29. After step 3 the full model accounted for some 12% (adjusted R^2) of the variance in continuance occupational committment, $F(15, 219)=3.09$, $p<.001$. Responsibility pressure and role conflict emerged as significant stress main effects in the full model while there were no significant main effects for skills. Taken as a whole, the results indicate that there are primarily stress main effects on continuance occupational committment. There was no evidence to suggest that skills variables exert a mediating effect on the relationship between stress and continuance occupational committment.

8.12.6 Normative occupational commitment

The results for the 'normative occupational committment' analysis are presented in Table 8.30. After step 3 the full model accounted for some 15% (adjusted R^2) of the variance in normative occupational committment, $F(15, 220)=3.73$, $p<.0001$. Role conflict and professional practice emerged as significant stress and skills main effects respectively in the full model. The results for role conflict are ambiguous and may reflect a suppression effect. There was no evidence to suggest that skills variables exert a mediating effect on the relationship between stress and normative occupational committment.

8.12.7 Affective organisational commitment

The results for the 'affective organisational committment' analysis are presented in Table 8.31. After step 3 the full model accounted for some 17% (adjusted R^2) of the variance in affective organisational committment, $F(15, 224)=4.28$, $p<.0001$. Quality concern emerged as the significant stress main effect while vocational counselling and professional practice were significant skills main effects in the full model. There is some evidence to suggest that the effects of job vs non-job stress on affective organisational committment may be partially channelled through skills variables (indicated by the decline in the job/nonjob stress coefficient from .16 to .12 between Steps 2 and 3). Taken as a whole, the results indicate that there are some stress and skills main effects on affective organisational committment. There is some evidence to suggest that skills variables exert a mediating effect on the relationship between job vs nonjob stress and affective organisational committment.

8.12.8 Continuance organisational commitment

The results for the 'continuance organisational committment' analysis are presented in Table 8.32. After step 3 the full model accounted for some 14% (adjusted R^2) of the variance in continuance organisational committment, $F(12, 234)=4.24$, $p<.0001$. Job vs non job stress and role conflict emerged as the significant stress main effects. There were no significant skills main effects and no evidence to suggest that skills variables exert a mediating effect on the relationship between stress and continuance organisational committment.

8.12.9 Normative organisational commitment

The results for the 'normative organisational committment' analysis are presented in Table 8.33. After step 3 the full model accounted for some 9% (adjusted R^2) of the variance in normative organisational committment, $F(14, 230)=2.82$, $p<.001$. Quality concern and role conflict emerged as the significant stress main effects. There were no significant skills main effects and no evidence to suggest that skills variables exert a mediating effect on the relationship between stress and normative organisational committment.

TABLE 8.25 Hierarchical multiple regression of demographic variables, job stress subscale scores, and R.S.I. factors on job satisfaction showing standardised regression coefficient, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	.05	-.06	.02
Variable 2	.01	.09	-.00
Variable 3	.27***	.12	.13
Stress			
Workload		.00	.01
Job vs. non-job		.23***	.22**
Responsibility pressure		-.03	-.02
Quality concern		.43***	.42***
Role conflict		.04	.02
Skills			
Vocational counselling			-.10
Personal counselling			.08
Professional practice			-.13
Case management			-.01
R	.31	.65***	.67***
Total R^2	.09	.42	.44
Adjusted R^2	.08	.40	.41
R^2 change	.09	.32***	.02

*p<.05 **p<.01 ***p<.001

TABLE 8.26 **Hierarchical multiple regression of demographic variables, job stress subscale scores, and R.S.I. factors on intention to quit organisation showing standardised regression coefficients, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).**

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	-.24	-.33*	-.33*
Variable 2	.29	.34**	.35
Variable 3	.11	-.03	.06
Stress			
Workload		-.05	-.02
Job vs. non-job		.23**	.20*
Responsibility pressure		.00	.03
Quality concern		.41***	.41***
Role conflict		-.12	-.15*
Skills			
Vocational counselling			-.12
Personal counselling			-.03
Professional practice			-.12
Case management			.18**
R	.19*	.50***	.55***
Total R^2	.03	.25	.30
Adjusted R^2	.02	.23	.26
R^2 change	.03*	.22***	.04**

*p<.05 **p<.01 ***p<.001

TABLE 8.27 Hierarchical multiple regression of demographic variables, job stress subscale scores, and R.S.I. factors on intention to quit profession showing standardised regression coefficients, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	-.21	-.31*	-.29
Variable 2	.40*	.51**	.50
Variable 3	-.03	-.11	-.11
Stress			
Workload		-.08	-.03
Job vs. non-job		.21**	.18*
Responsibility pressure		-.02	.01
Quality concern		.20*	.18*
Role conflict		.03	.01
Skills			
Vocational counselling			-.10
Personal counselling			.05
Professional practice			-.26**
Case management			.05
R	.20*	.40***	.48***
Total R^2	.04	.16	.23
Adjusted R^2	.03	.13	.19
R^2 change	.04*	.11***	.07***

*p<.05 **p<.01 ***p<.001

TABLE 8.28 Hierarchical multiple regression of demographic variables, job stress subscale scores and R.S.I. factors on affective occupational commitment showing standardised regression coefficients, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	-.07	-.17	-.15
Variable 2	.07	.16	.12
Variable 3	-.06	-.13	-.12
Age	-.07	-.04	.00
Years with current employer	-.07	-.11	-.13*
Stress			
Workload		-.05	.00
Job vs. non-job		.16*	.14
Responsibility pressure		-.02	.02
Quality concern		.18*	.15
Role conflict		.11	.10
Skills			
Vocational counselling			-.11
Personal counselling			.11
Professional practice			-.27***
Case management			.01
R	.14	.37***	.47***
Total R^2	.02	.14	.22
Adjusted R^2	.00	.10	.17
R^2 change	.02	.12***	.08***

*p<.05 **p<.01 ***p<.001

TABLE 8.29 Hierarchical multiple regression of demographic variables, job stress subscale scores and R.S.I. factors on continuance occupational commitment showing standardised regression coefficients, R, R2, adjusted R2 and R2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	-.08	-.11	-.14
Variable 2	-.12	-.09	.02
Variable 3	.14	.17*	.08
Income	.05	.06	.07
Years with current employer	.11	.09	.04
Years in rehab field	.14	.14*	.14
Stress			
Workload		.01	.02
Job vs. non-job		.11	.11
Responsibility pressure		-.15*	-.15*
Quality concern		-.02	-.02
Role conflict		.28***	.28***
Skills			
Vocational counselling			.02
Personal counselling			-.05
Professional practice			-.10
Case management			-.06
R	.27**	.41***	.42**
Total R^2	.07	.17	.17
Adjusted R^2	.05	.12	.12
R^2 change	.07**	.09***	.00

*p<.05 **p<.01 ***p<.001

TABLE 8.30 **Hierarchical multiple regression of demographic variables, job stress subscale scores and R.S.I. factors on normative occupational commitment showing standardised regression coefficient, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).**

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	.64**	.63**	.60**
Variable 2	-.62**	-.64**	-.49*
Variable 3	.20*	.23*	.11
Age	.12	.13	.09
Income	.07	.06	.04
Job status	.10	.08	.03
Stress			
Workload		.01	-.05
Job vs. non-job		-.10	-.08
Responsibility pressure		.05	.02
Quality concern		-.08	-.06
Role conflict		.13	.15*
Skills			
Vocational counselling			.14
Personal counselling			-.16
Professional practice			.18*
Case management			-.12
R	.33**	.35**	.45***
Total R^2	.11	.12	.20
Adjusted R^2	.08	.08	.15
R^2 change	.11***	.01	.08***

*p<.05 **p<.01 ***p<.001

TABLE 8.31 Hierarchical multiple regression of demographic variables, job stress sub-scale scores and R.S.I. factors on affective organisational commitment showing standardised regression coefficient, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	.28	.37*	.29
Variable 2	-.08	-.17	-.02
Variable 3	-.13	-.05	-.15
Age	-.00	.00	-.03
Years with current employer	.08	.10	.11
Educational quals	-.04	-.00	-.06
Stress			
Workload		.03	-.01
Job vs. non-job		-.16*	-.12
Responsibility pressure		.04	.04
Quality concern		-.31***	-.29**
Role conflict		.03	.06
Skills			
Vocational counselling			.19*
Personal counselling			-.06
Professional practice			.17*
Case management			-.14
R	.22	.40***	.47**
Total R^2	.05	.16	.22
Adjusted R^2	.02	.12	.17
R^2 change	.05	.11***	.06**

*p<.05 **p<.01 ***p<.001

TABLE 8.32 Hierarchical multiple regression of demographic variables, job stress sub-scale scores and R.S.I. factors on continuance organisational commitment showing standardised regression coefficients, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	-.02	-.12	-.11
Variable 2	.14	-.04	.01
Variable 3	.06	.02	-.05
Stress			
Workload		.03	.03
Job vs. non-job		.28***	.28***
Responsibility pressure		-.07	-.07
Quality concern		.05	.05
Role conflict		.15*	.15*
Skills			
Vocational counselling			.02
Personal counselling			.00
Professional practice			-.09
Case management			-.08
R	.14	.41***	.42***
Total R2	.02	.17	.18
Adjusted R2	.01	.14	.13
R2 change	.02	.15***	.00

*p<.05 **p<.01 ***p<.001

TABLE 8.33 **Hierarchical multiple regression of demographic variables, job stress subscale scores and R.S.I. factors on normative organisational commitment showing standardised regression coefficient, R, R^2, adjusted R^2 and R^2 change for all subjects (N=301).**

	Steps		
Predictors	**1**	**2**	**3**
Demographics			
Variable 1	.60***	.61***	.54**
Variable 2	-.56**	-.58**	-.42
Variable 3	.00	-.07	-.03
Sex	-.10	-.12	-.11
Job status	-.02	-.03	-.03
Stress			
Workload		-.03	-.06
Job vs. non-job		-.09	-.06
Responsibility pressure		-.02	-.01
Quality concern		-.22*	-.22*
Role conflict		.16*	.18*
Skills			
Vocational counselling			.14
Personal counselling			-.08
Professional practice			.09
Case management			-.11
R	.26**	.34**	.38***
Total R^2	.07	.11	.14
Adjusted R^2	.05	.07	.09
R^2 change	.07**	.05*	.03

*p<.05 **p<.01 ***p<.001

8.13 Chapter Summary

This chapter presented descriptive statistics for the demographic variables utilised in this research and examined differences between groups on these variables. There was a predominance of women in each group of rehabilitation professionals. Most respondents were European with relatively high levels of education who worked on average 35-40 hours per week. Most respondents were relatively experienced having worked in the rehabilitation field for an average of 7 years. There were a number of differences between groups in age (the MS and WB groups were significantly older), hours worked per week (the MS group worked for the least number of hours per week), and levels of education (the CRS group reported higher levels of education that the other 3 groups).

Descriptive statistics and analyses of group differences on RSI scales, job stress measures, and outcome measures (job satisfaction, intention to quit, commitment) have been presented in sequence. With regard to the RSI scores, there were marked group differences in all four measures (vocational counselling skills, personal counselling, professional practice, and case management) with the differences generally reflecting the professional orientations of the rehabilitation organisations as described in Chapter 1 (e.g. Workbridge with its primary emphasis on vocational rehabilitation scored highest on vocational rehabilitation skills while ACC and CRS scored higher than the other groups on case management skills).

With regard to job stress variables, the ACC group scored highest on responsibility pressure and quality concern while the WB group scored lowest on job vs non-job conflict and the MS group (with its predominance of part timers) scored lowest on workload stress.

There were a range of group differences on outcome measures but an overall pattern was less clear and these differences are summarised in Table 8.14.

In order to assess the contribution of independent variables (job stress measures) to outcome measures (satisfaction, commitment, intent to quit) and to evaluate the potential moderating effects of rehabilitation practitioner skills, a series of hierarchical regression analyses were undertaken and are reported in Tables 8.16 to 8.24. While in all cases the overall regression models were significant, there was no clear or compelling evidence to suggest that rehabilitation practitioner skills might moderate the effects of stress on outcomes. In order to address the question of whether skills might mediate the relationship between stress and outcomes a further series of hierarchical regression analyses were conducted and are summarised in Tables 8.25 to 8.33. Here a number of significant main effects emerged (e.g. job vs non-job conflict was a significant predictor for 4 of the 9 outcome measures while quality concern was significant for 6 of the 9 outcome measures) while, among the skills variables, professional practice skills tended to be the most consistent predictor of outcomes. There was some evidence that skills mediated the effects of stress for the following outcomes: intention to quit the organisation/profession, affective occupational commitment and affective organisational commitment.

The following chapter attempts to integrate these findings into a broader picture of research on stress and rehabilitation practitioner competencies. Similarities and differences between the findings reported herein and previous research in the area are highlighted and discussed along with the implications of the findings for future research and theory. Limitations of the present research findings are acknowledged and future research directions are specified.

CHAPTER NINE

CHAPTER 9: DISCUSSION

9.1 Validation of the Rehabilitation Skills Inventory

As has been reported in Chapter 2, the development of rehabilitation skills measures have taken place over a period of time and over a wide range of specialisations. As has also been noted, a major emphasis of this research has been on the profession of rehabilitation counselling. One of the most recent developments of a measure in this area was the Rehabilitation Skills Inventory (Leahy et al., 1987a,1987b). Again full details of the development of this measure have been provided in Chapter 3. The decision to further investigate this measure and examine its potential for validation in Australasian settings was made for several reasons. First, rehabilitation services in both Australia and New Zealand have similar periods of matching development and are both characterised by relatively recent emphasis on both technical/professional skills and coordination/management skills in the rehabilitation process. These emphases presume skills in these dimensions, and these skills are either not necessarily present, or may exist in an unstructured manner with unspecified interactions. Second, recent legislative and social changes have resulted in a number of re-structures of the health and social welfare systems of both countries and the creation of a climate of rapid organisational change. Not only is this problematical for the consumer of rehabilitation services, it is challenging for the rehabilitation professional who must acquire and maintain skills in the rehabilitation process and skills in organisational dynamics. Third, there has been a history in the rehabilitation services of both countries to provide resources for direct service programmes, but not necessarily for the education and training of the professionals who are to coordinate and manage these programmes. Recent trends indicate

a number of tertiary based training programmes are attempting to meet these training needs (e.g. a graduate program in rehabilitation counselling at the University of Sydney and programmes in rehabilitation studies at Massey and Victoria Universities), but lack a practice-based, commonly agreed set of core skills to assist the development of consistent curricula and educational standards.

If such a measure could be developed to take account of these compelling issues in both Australia and New Zealand, for example by utilisation of the RSI as a management tool, then the potential exists for better targeted education and training, better professional development and occupational mobility, and potentially more satisfied service consumers. The research experience of rehabilitation professionals in the international community is a valuable source of information in the development of such a measure. Accepting that many measures will be socially and culturally bound to the researchers' living environment, it is also likely that some measures will be transferable and viewed as core professional skills across societies.

The Rehabilitation Skills Inventory (Leahy et al. 1987a, 1987b) provided a valid and reliable measure developed on a population of rehabilitation professionals in a well established profession. Hershenson's (1989) comments that the emerging profession of rehabilitation counselling in Australia was comparable to the earlier development in the United States, suggested it was appropriate and timely to validate this measure on populations of rehabilitation professionals in Australasia.

The Rehabilitation Skills Inventory was chosen over other measures of practitioner skills and competencies for utilisation in this thesis research for a number of reasons (described in Chapter 2). Compared to other measures, the item pool from which the RSI was constructed was the most extensively developed, refined and validated. Danek et al. (1987) noted that, prior to the development of the RSI, research in this area was limited by "...the lack of a standardized questionnaire on professional competencies. In most instances, researchers have developed their own unique instruments to assess the competencies for a particular specialisation" (p.87). The RSI was the first attempt to comprehensively investigate a range of specialisations in a range of settings via a nationwide survey and was thus deemed the best measure for this thesis research which similarly compared across specializations and to an extent across countries (New Zealand and Australia).

The exploratory pilot investigation of the RSI in a New Zealand sample is described fully in Chapter 4. The first administration to a group of New Zealand rehabilitation professionals isolated 7 skills components (personal counselling, vocational counselling, case management, vocational assessment, job placement, professional practice, rules and regulations). A comparison of this factor structure with the structure of the original scale (Leahy et al., 1987b) reveals similarities in several areas namely; personal counselling, vocational counselling, case management, vocational assessment, and job placement. Leahy et al. noted these to be important competencies across a range of specialisations. Two further factors identified in the pilot instrument, namely; professional practice and rules and regulations have a number of shared items with assessment administration, consultation, and professional/community duty of the original scale (see Table 4.1). Many of the original RSI items, appear to reflect skills that are not utilised by the Australasian sample and did not load

clearly on any component. This could reflect the differing legislative and administrative requirements of each country concerning the delivery of rehabilitation services. The factors that emerged from this pilot study were named by the researcher with the most meaningful descriptor for the range of items loading on the factor. Some of these items, as stated above, do come from factors labelled in the original research by Wright, Leahy and colleagues as assessment administration, consultation, and professional/community duty. There is much debate in the factor analysis literature about the process of applying descriptive labels/names to factors. Tabachnik and Fidell (1989) note that "A good [analysis] 'makes sense'...there is no criterion beyond interpretability against which to test a solution..."(p.598). They further suggest that the process of attempting to characterize a factor "...by assigning it a name or a label [is] a process that involves art as well as science"(p.640). The naming of each component of the 7 component solution that emerged from the pilot study occurred after extensive deliberations attempting to understand the underlying dimension that unified the group of variables loading on each component.

The results of this exploratory administration were consistent with the findings of Wright et al. (1987) and Leahy et al. (1987b) and sufficiently encouraging to proceed to further validate the use of the instrument on an extended Australasian population. This was particularly important for two reasons. In the first instance, the limitations of the pilot administration were the relatively modest ratio of cases to variables required that the results of the principal component analysis be interpreted with some caution. Although argument can be sustained that there is much debate about appropriate ratios of cases to variables (e.g. Nunnally, 1978; Tabachnick & Fidell, 1989), and that component saturation and absolute sample size are more important factors (e.g. Guadagnoli & Velicer, 1988), it was still

considered important to attempt to replicate such findings with a larger sample. In the second instance, strong evidence in support of individual item validation was provided by the New Zealand Expert Panel who, as previously reported in Chapter 4, provided a high universal importance ratio for the 64 Item Amended RSI. Leahy et al. (1987) also describes use of an expert panel as part of the development methodology of the original RSI and argues that content validity of the items can be presumed, at least to an extent, from these expert panel ratings. The fact that the Australasian Expert Panel showed high levels of agreement regarding the importance of the reduced set of competencies (both in their individual agencies and for the local rehabilitation scene in general) lends some support to the presumption of content validity of the items in the context of rehabilitation in Australasia.

The administration of the RSI (Amended I) instrument to a further sample was undertaken as part of the research for this thesis. Four groups of rehabilitation professionals from Australasia (n=309) completed the RSI (Amended I) and full details of these results are presented in Chapter 4. A subsequent principal components analysis revealed a four component solution. The four components (N=47 items and referred to as RSI (Amended II)) were labelled vocational counselling, personal counselling, professional practice, and case management. Two components of job placement, and rules and regulations, present in the RSI (Amended I) were not present in the RSI (Amended II). Four of the 7 items (numbered 34, 36, 37, 43 in Table 4.6) of the job placement component of the RSI (Amended I) were subsumed in the more generic vocational counselling component of the RSI (Amended II). Similarly, 3 of the 4 items of the rules and regulations component of the RSI (Amended I) (numbered 49, 60, 61 in Table 4.6) , were included in the more global case management component of RSI (Amended II).

There are a number of similarities and differences between the findings of the research reported in this thesis and those reported in Leahy et al. (1987b) concerning the RSI. Leahy et al. noted that 5 out of the 10 competency areas (50%) in the original RSI were considered important across all 3 specialisations (vocational evaluators, job placement specialists, and rehabilitation counsellors). By the same importance criterion Biggs, Flett and Voges (1995) noted that 4 of the same 10 competency areas were performed with some degree of frequency by a New Zealand group of Rehabilitation Coordinators.

After extensive further development of the RSI (which has been reported in this thesis), 4 competency areas emerged as being most relevant to the local practice of rehabilitation. Three of these 4 competency areas (75%) were considered important across all 4 rehabilitation specialisations investigated (Commonwealth Rehabilitation Service, Multiple Sclerosis Society, WorkBridge, and Accident Compensation Corporation). The Field Officers of the MS Society were the only specialisation to uniquely rate the competency area of vocational counselling as being relatively unimportant/irrelevant to their work which is perhaps not surprising given the nature of their client population and their focus on disability management and related needs. A total of 15 of 16 possible mean ratings of competency (4 competency areas x 4 specialisations) in the present research were greater than 2.00 denoting at least a moderate frequency of occurrence of that particular set of skills. This suggests that the research reported in this thesis has succeeded in its attempt to develop and refine the Rehabilitation Skills Inventory in order to identify a common core of competencies which are relevant to local rehabilitation specialisations. Three of these four competencies (vocational counselling, personal counselling, case management) are reported by Leahy et al. (1987b) as

having a high profile of importance across North American rehabilitation specialisations as noted previously.

9.2 First research goal

The first research goal was to consider the relationship between job related stress (here conceptualised as workload, job vs non-job conflict, responsibility pressure, quality concern, and role conflict) and outcomes across a range of occupational groups of rehabilitation professionals.

As previously noted, on demographic measures overall a pattern emerged of the Australian CRS group as a group better educated, young (younger than two others), and with more workplace colleagues. Of the New Zealand groups, the MS group differed significantly from the others in being older, relatively less well educated, having the lowest number of workplace colleagues, and, because of greater numbers of part timers, lowest levels of income and hours worked per week.

This study has found support for the impact of several stressors on outcome measures of commitment, intention to quit and job satisfaction. The most consistently significant stress variable was quality concern which impacted significantly on job satisfaction, intention to quit the occupation, intention to quit the organisation, affective occupational commitment, affective organisational commitment, and normative organisational commitment. Job vs non-job stress was also a significant predictor on the outcome variables of job satisfaction, intention to quit the occupation, intention to quit the organisation, and continuance organisational commitment.

To a lesser extent, role conflict significantly predicted intention to quit the organisation, continuance occupational commitment, continuance organisational commitment, and normative organisational commitment. Responsibility pressure significantly predicted only continuance occupational commitment whilst workload was a non-significant predictor across all outcome measures.

Surprisingly in this research workload appeared to be the least significant concern in regard to the outcome measures. Given what was known concerning the high workloads of at least two of the groups (Biggs, 1993; Biggs & Voges, 1989), it would have been expected that this measure would be a significant predictor of several of the outcome measures. Supporting evidence from Flett et al. (1995c) in a content analysis of open-ended qualitative responses from New Zealand rehabilitation service providers (n=52), found that workload issues generally were ranked ahead of other categories of work stressors such as interpersonal issues, intra-agency difficulties, and government policy/bureaucracy issues. Given this evidence the lack of relationship between workload issues and outcome measures in this research is unclear and problematic. It is possible that the items measuring the concept of workload in the House et al. (1979) scale, normed originally on blue-collar workers and used in this study, do not accurately describe the concept of "workload" for the professional occupations in rehabilitation services even though all groups in this study reported higher means (analogous to an overall shift in respondent reply from "sometimes' to "fairly often") than the House et al. (1979) population of non-supervisory blue collar workers.

It is also possible that the lack of relationship (between workload and outcomes) may partly reflect the standard regression approach employed here. Workload and quality concern

were highly correlated with each other as well as being correlated (to varying degrees) with the outcome variables. As Tabachnik and Fidell (1989) in such instances note "...it is possible for a variable *[like workload]* to appear unimportant in the solution when it actually is highly correlated with the DV *[outcomes]*." (p.143). (italics inserted by writer). In such circumstances where the IV's are correlated, the unique contribution of a particular IV may be non-significant despite a substantial correlation with the DV. This may have influenced the observed relationship between workload and outcomes. Future research may focus on these relationships in more detail e.g. it may also be the case that workload has an effect on outcomes through its influence on quality concerns (i.e. quality concern may mediate the relationship between workload and outcomes).

The relatively consistent relationships of quality concern and job vs non-job conflict with outcome measures generally was instructive. As quality concern is conceptualised as a concern about not being able to do as good work as one could or should, the significance of this concern could well be linked to events such as, for example, increasing consumer choice in rehabilitation services and hence competition among service providers, and consistently downward trends in public funds available to rehabilitation services and restricted access to consumers. The Accident Rehabilitation and Compensation Insurance Corporation Act (1992), for example, restricted access to funds for vocational training by removing a discretionary clause and limiting re-training periods generally to one year. Similarly the feeling that the job interferes with nonwork (e.g. family) life as defined by job vs non-job conflict, may have much to do with similar events.

There is evidence as noted above that a concept of workload is important as a potential stressor for rehabilitation service providers, but this importance was not noted in this present research. Current measures of job stress, such as ones used in this study, may not be achieving acceptable levels of validity and reliability. This is a concern that extends beyond the individual workload variable to the wider issue of the measure's appropriateness. In an application of the same measures on a group of rehabilitation service providers (n=52), Flett et al. (1995c) raised the question as to whether the instrument used was in fact an appropriate measure of occupational stress and noted that Dewe (1989, 1991) has emphasized the importance of developing new and refined stress items which reflect occupationally relevant and individually meaningful concerns of individuals. They further suggested that future research "... might consider the development of a Rehabilitation Job Stress Inventory which more adequately captures events that are significant and important in the work of a rehabilitation practitioner" (p.80).

In short, and noting a caution by Jackson et al. (1986) that one must be aware of proceeding down well-worn trails in stress research such that much new data but little new knowledge is produced, future research might usefully seek to develop a Rehabilitation Job Stress Inventory that more adequately captures events that are significant and important in such occupations. Such a development could seek to adopt a more multifaceted approach to stress and outcomes, much in the manner that this present research sets out to establish, and thus move on from the well-worn trail of a traditional focus on burnout in rehabilitation workers (e.g. Ursprung, 1988). Any proposed Inventory could usefully be investigated along similar lines as the development of the Rehabilitation Skills Inventory (original and Amended

II, as described in this research) and the Rehabilitation Job Satisfaction Inventory (Wright & Terrian, 1987) incorporating similar practitioner and expert panel input.

9.3 Second research goal

The second research goal was to examine the relationships between rehabilitation skills and outcomes across a range of occupational groups of rehabilitation professionals. Rehabilitation skills were conceptualised as the set of skills detailed in the Rehabilitation Skills Inventory (Amended II). The 57 item scale uses a four component solution of skills in vocational counselling, personal counselling, professional practice, and case management, and is fully described in Chapter 4.

The results of this research show that among the skills variables professional practice was the most consistent predictor of outcomes being a significant predictor for intention to quit the profession, affective occupational commitment, normative occupational commitment, and affective organisational commitment. Of the other skills, case management significantly predicted intention to quit the organisation, and vocational counselling significantly predicted affective organisational commitment. Personal counselling was not a significant predictor of any outcome measure.

It is possibly prudent to comment at this point, before proceeding to more detailed discussion, that given the cross-sectional nature of the data, the extent and nature of causal

relationships is uncertain. Nevertheless a number of tentative speculations regarding the meaning of the observed relationships is possible.

In examining the items that make up the professional practice variable, it is possible to discern two different emphases. The first of these are professional practice items that are externally focused such as "promoting public awareness of disability" "question limiting stereotypes regarding disability", and "seek to change employer biases". These items may address entrenched negative societal attitudes that the individual rehabilitation professional can at best exert a minimal influence over. Vash (1981) for example suggests that much of the handicaps that disabled persons experience are imposed by either the human made parts of the physical environment and/or social customs, values, attitudes, and expectations. She further suggests that attitudes are often determined by what qualities are deemed important in certain cultures and to what extent they are found lacking in certain groups. Among those qualities are an overvaluation of rational intellect, an overvaluation of physique, an undervaluation of spirituality and attitudes of blame the victim and an insistence on mourning of loss. The continual frustration of trying to deal with these issues may be reflected in the impact on commitment to the job and intent to quit the profession. It may also reflect a gap in current training curricula in marketing management to provide rehabilitation professionals with the information to adequately address these issues in their everyday interactions with consumers, employers and the general public.

The second emphasis of professional practice items are more internally focused such as "reviewing rehabilitation literature", "applying results of published research", and "reading professional literature". If one views the training of rehabilitation specialisms in New Zealand

in terms of a scientist-practitioner model (e.g. Galassi, Brooks, Stoltz & Trexler, 1986) then its fair to say that the development of the various rehabilitation specialisms (particularly in NZ) have focused more at the practitioner end of the scientist-practitioner continuum. As a consequence, skills in how to critically evaluate research findings and how to incorporate significant research findings into models of best practice are very likely to be lacking in these groups. So, simply put, being called upon to do something that you are not that well trained for is likely to impact negatively on job related perceptions (as found in this research). This is a problem (i.e. how to incorporate a research perspective into training and professional activity) that has been noted in other 'helping' professions e.g. counselling, social work, occupational therapy. For example Betz (1986) argues that counselling psychologists are 'too near' the practitioner end of the scientist-practitioner model and hence have problems with the process of research and evaluation. She argues for greater involvement in research as part of training. There is also evidence to suggest that having skills in research related areas impacts positively on job perceptions. Sturgess and Fleming (1994) found that occupational therapists with postgraduate training (an Honours degree) reported greater confidence with research related activity and higher satisfaction both with their current jobs and with occupational therapy as a career. Simons (1991) describes the development of a programme to increase research expertise in hospital social workers. The programme was designed to "...increase staff awareness of empirical practice techniques and to reduce staff anxiety about their ability to consume and produce research" (p.118). The author provides an impressionistic account suggesting the program went some way toward achieving this goal.

The combined effect of the above (i.e. dealing with negative societal attitudes perhaps when not appropriately trained to do so, and coping with research related activity when not

appropriately trained) may 'explain' the consistent linkages between professional practice skills and outcomes but future research is needed to verify this and explore the linkages in more detail.

The linkage between case management skills and intent to quit the organisation may reflect some employer context effects. The ACC in New Zealand for example have undergone several major re-structures leading up to the adoption of a comprehensive and nationwide case management style of operation from March 1995. Although data for this research was collected prior to March 1995, the employer had signalled that the occupational category of rehabilitation coordinator was unlikely to persist and that clerical staff were to be offered the opportunity to upgrade their skills to compete with rehabilitation coordinators for the new positions of case managers. This set of events could well have been interpreted by existing rehabilitation coordinators (the respondents in this research) as a situation where the employer lacked both understanding of the skills exercised in their current role, and overvalued the potential future contribution of case managers from administration backgrounds. In Australia the CRS had from 1988 implemented a case management approach for all professional staff irrespective of their professional discipline (typically social worker, psychologist, occupational therapist etc). As a consequence of both this, and the parallel creation of a generic occupational category of professional officer under which all other professional categories were subsumed, professional development support was seen to be reduced for individual disciplines and boosted for activities broadly described as case management (Tipping, 1991).

The meaning of the relationship between vocational counselling skills and affective organisational commitment is not entirely apparent. The vocational counselling items are very clear-cut and well circumscribed activities and it may be that such precision is appreciated. Certainly both the content and the process of vocational counselling are more immediate and focused than many other activities in the rehabilitation process and in the case of three organisations (ACC, Workbridge, and CRS) are the dominant emphases. This clear cut dimension of vocational counselling combined with an overall organisational concern with client vocational goals and objectives perhaps results in less ambiguity tension amongst staff and this in turn correlates positively with affective commitment to the organisation.

On the basis of the available data the meaning of the lack of relationship between personal counselling and outcome measures is unclear. Taken as a whole it seems that skills differentially impact on job outcomes.. Which particular skills exert what level of impact and under what circumstances are issues future research needs to explore in more detail.

It is however important to speculate as to how skills might exert an effect on outcomes. One possible interpretive framework is that of self-efficacy. Bandura (1977) has used the term to explain how a person develops an expectation of efficacy, that is, a belief that one possesses skills and can use them in a particular situation. Self efficacy beliefs are proposed to influence individual's choice of activity, the amount of effort expended and the persistence in performance of behaviours such that "...perceived self efficacy is concerned with judgements of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p.122). In short if people believe they have the ability to successfully complete a given behaviour, then they are more likely to engage in that

behaviour. Research in university settings has linked strength of self efficacy variously with performance of academic tasks generally (Landino & Owen, 1988), and with gender differences in academic task performance (Schoen & Winocur, 1988; Vasil, 1992). Further an investigation of self efficacy among graduate psychology students similarly found positive relationships between self efficacy and the research training environment, and self efficacy and research productivity (Phillips & Russell, 1994). As graduate study in psychology is conducted from a scientist-practitioner model and has been criticized, as noted earlier in this chapter, as being more practitioner than scientist (Betz, 1986) this result demonstrates the utility of the concept of self-efficacy in the adoption of new behaviours.

In this framework it could be conceptualised that skills feed into a sense of self efficacy and that sense of self efficacy makes the world seem more manageable or controllable which reduces negative job related perceptions. Conversely, as argued earlier, being called upon to do something that you are not that well trained for is likely to impact negatively on job related perceptions (as found in this research).

9.4 Third research goal

The third research goal was to examine the potential moderating and/or mediating effects of rehabilitation skills (as measured by the Rehabilitation Skills Inventory - Amended II) on the relationship between occupational stress and the job related outcome measures of organisational commitment, occupational commitment, intention to quit, and job satisfaction.

The moderator/mediator distinction in social psychological research is an important one. Baron and Kenny (1986) contend that it is not at all uncommon for researchers to use the terms moderator and mediator interchangeably and thus it becomes important to differentiate between these two often-confused functions of third variables.

The model proposed for this research (see Chapter 6) suggested that in a process of work adjustment, matching occurs between the person's abilities and work related needs respectively and the ability requirements and reinforcer system of the work environment with the match of two (person's abilities and environment ability requirements) determining the level of satisfactoriness, and the matching of the remaining two determining the level of the person's satisfaction with the job. In addition there was an assertion by Roessler and Rubin (1992) that skill levels may act as a buffer to the rigours of life as a rehabilitation professional. As the term "buffer" in social psychological research is often used interchangeably with "moderator", it was considered reasonable to first investigate the moderating properties of rehabilitation skills in this research. Although the results demonstrated several significant stress and skills main effects, there was no convincing evidence of a moderating effect of skills as a third variable in the relation between stress predictor variables and job related outcomes. The model was then tested to assess the potential effects of rehabilitation skills as a mediator.

In general terms a given variable may be said to function as a mediator to the extent that it accounts for the relation between a predictor and a criterion. The model assumes a simplistic three variable system such that there are two causal paths feeding into the outcome variable. If a significant reduction in the strength of the direct relationship between predictor

and criterion variables can be shown to occur with the intervention of a third variable, then a mediating effect is established. Using this approach this research showed evidence that rehabilitation skills mediated the effects of stress on the following outcomes: intention to quit the organisation, intention to quit the profession, affective occupational commitment, and affective organisational commitment.

The approach used to test for mediating effects in this research was a 'broad brush' approach in which it can be determined that skills (as a block of variables) either did or did not show a mediating effect. Mediation effects for each individual skill on each individual stress variable were not tested in this instance but future research might usefully investigate these relationships.

These findings are important for several reasons. First, the data support the essential elements of the Work Adjustment model in that rehabilitation skills are shown to be an important variable in intention to quit both the organisation and the profession - direct measures of tenure in the Dawis and Lofquist (1984) theory of work adjustment.

Second, the result that rehabilitation skills mediated the effects of stress on both affective organisational and occupational commitment is instructive. The use in this research of Meyer and Allen's (1991) three-component model of organisational commitment which was subsequently extended to a three-component model for occupational commitment (Meyer, Allen & Smith, 1993) has provided an opportunity to examine separate elements of the commitment concept. These models acknowledge and incorporate the developing view that commitment is a complex and multifaceted construct and attempt to provide a

multidimensional conceptualisation of commitment that can be applied across traditionally studied domains (e.g. occupations, organisations, unions).

In this research rehabilitation skills significantly mediated the effects of stress on affective measures of organisational and occupational commitment but not other forms of commitment. Meyer and Allen (1991), although not overtly specifying such, describe the development of the three forms of commitment as somewhat sequential in nature. Essentially employees with a strong affective commitment remain with the organisation because they want to, those with a strong continuance commitment remain because they need to, and those with a strong normative commitment remain because they feel they ought to. A similar argument applies for occupational (or professional) commitment. Thus, using work experience as an example of a well researched and strongly identified antecedent of affective organisational commitment, employees whose experiences within the organisation are consistent with their expectations and whose basic needs are satisfied, tend to develop a stronger affective attachment to the organisation than do those whose experiences are less satisfying. Continuance commitment then presumably develops as employees recognise that they have accumulated investments or "side-bets" (Becker, 1960) that would be lost if they were to leave the organisation. Finally and sequentially, normative commitment develops as a result of socialisation experiences that emphasise the appropriateness of remaining loyal to one's employer (e.g. Weiner, 1982) or through the receipt of benefits that create in the employee a sense of obligation to reciprocate (Scholl, 1981).

The issue of why skills might mediate the relationship between stress and affective commitment but not on continuance and normative commitment warrants further comment.

Several authors note the emotional aspect of affective commitment. Kanter (1968) describes cohesion commitment as the "...the attachment of an individual's fund of affectivity and emotion to the group" (p.507). Buchanan (1974) conceptualised commitment as a "...partisan, affective attachment to the goals and values of the organisation, to one's role in relation to those goals and values..." (p.533). In contrast, affect plays a minimal role in other forms of commitment which are generally classified under themes of perceived costs and obligations and seen as incorporating more rational and logical approaches (Meyer & Allen, 1987). One possible interpretation may be that stress ratings and affective commitment ratings are both feelings-based assessments about the job (c.f. continuance and normative ratings which are more cognitive judgements) and given that, may be more unstable and subject to external influences. Thus if a person feels stressed about the job, and has some skills, then that feeling of stress will have less impact about wishing to be in the job (affective commitment). On the other hand there is no reason to suppose that skill level will necessarily mediate as strongly the extent to which feelings of stress will have an impact on how a person thinks about the job (continuance and normative occupational commitment) particularly, as has been argued earlier, as those thoughts take longer to establish and are presumably more stable assessments about the job and less resistant to change.

It is perhaps also not surprising that this research did find outcome measures of affective organisational commitment significant but not continuance and normative commitment given that there were no significant differences between groups on years with current employer and average durations of employment were low (a range from 2.9 years to 4.3 years). It may be the case that a longer duration of employment might be required to note effects on the later developing continuance and normative organisational commitment.

Similarly there were no significant differences between groups on years in the disability or rehabilitation fields with the average duration somewhat longer (approximately 7 years for all groups). One could surmise that this duration may have been sufficient to observe instances of continuance and normative occupational commitment as, for example, that found by Meyer, Allen, and Smith (1993) in repeated measures one year apart with students in a four year nursing programme. That such instances were not found could well reflect two issues. First, the emerging state of the rehabilitation profession in both New Zealand and Australia has not yet reached a point where a unique professional identity is evident. In fact the very reality of employing practitioners who have been trained for example as psychologists, social workers, speech therapists, and occupational therapists (see Table 8.4 for a listing of the wide range of job titles (n=30) constituting this present research sample), and employing them in generic occupational categories such as case managers and professional officers may well ensure that a unique professional identity may either never emerge or emerge as a professional adaptation of the "rehabilitation generalist" as described by Chinnery (1991, p.446). Second, the measure of the number of years employed in the disability or rehabilitation field may well be a poor surrogate measure of occupational commitment as a result of the lack of professional identity just discussed. Possibly a more accurate measure of occupational commitment would follow from questions addressed to the respondents' perceived original professional qualifications in, for example, psychology, social work, or speech therapy.

This research as noted also showed evidence that rehabilitation skills mediated the effects of stress on intention to quit the organisation and intention to quit the profession.

Previous reference has been made in this chapter to the notion of self-efficacy and its relationship with skills. One could speculate that if a person has skills, then that person could build up a sense of career self efficacy based on successful performance accomplishments and vicarious learning such that in the face of job stress, the person can maintain a sense that the job is manageable and controllable. As a consequence the stress burden doesn't accumulate to the point that a decision is made to exit the job or the profession. Future research would be useful in further examining such linkages.

With regard to the other major outcome measure of job satisfaction, rehabilitation skills were not observed as a mediator of stress. Given that there were relatively few main effects of stress on job satisfaction (as noted, significant main effects were for quality concern and job vs non-job stress) then the potential for these results to be able to show a skills mediation effect is much reduced. Locke (1983) comments that job satisfaction reflects the individual's cognitive responses to the job or aspects of the job and may be highly situational. Kelley and Satcher (1992) also note that although the constructs of job satisfaction and organisational commitment are related, commitment is generally considered to be the more stable over time. In this regard this research found skills did mediate stress on outcomes for one form of commitment (affective) only. On the basis of the available data then this finding is unclear and further research is indicated to explore these relationships in more detail.

9.5 General Limitations: Methodology

Some comment on general limitations of the validation study of the RSI is warranted. It should be noted that the generalizability of the present results of the RSI (Amended II) validation is influenced by the very nature of a validation research method which limits access to previous research use of the instrument. The use of a self report design is arguably limiting however there are arguments (e.g. Flett, 1986) suggesting that there is no other way to measure inherently subjective experiences like stress, commitment, satisfaction, and intent to quit other than through self report type methodologies. In that sense, self report (as a methodological strategy) is not a limitation per se. For example there are arguments made about self reports of subjective experiences that people either don't know what they feel, or they deceive themselves (Andrews & Withey, 1976). On the notion of the former, that if people don't know/or can't evaluate what they feel, then one might expect significant missing data for items in the questionnaire (the opportunity was clearly given in the questionnaire instructions to skip or omit any items a respondent might wish to). There was in fact very little missing data. On the latter, the idea that respondents might deceive themselves in the way they answer questionnaires is rationally untenable as the respondent would become simultaneously both the victim of deceit and the agent of deception.

In this regard the issue of response sets such as social desirability associated with self-report measures deserves consideration. In the present study assurances of confidentiality and anonymity were given in order to reduce the incentives for socially desirable responding. Additionally there is some debate over whether social desirability is problematical in this type of research. McCrae and Costa (1993) argue that many of the standard measures of social

desirability responding (Such as the Crowne-Marlowe scale) can be more accurately construed as measures of self esteem and that the practice of 'correcting' for social desirability responding is in fact unnecessary.

The reliance on mailed questionnaires however is a potential limitation. Mail surveys are generally designed on the basis of parsimony and simplicity of response and seek quantitative data over qualitative comment. As a consequence the complexity and subtleness of some issues pertaining to rehabilitation skills may be underestimated. There are also potential errors associated with memory recall as respondents were asked to rate skills on the basis of how often they had done these activities over the past 12 months. This could lead to memory problems in the estimates of frequencies of skill performance. Future research could perhaps look at some sort of daily diary methodology to reduce this averaging/estimating effect and/or look at supervisor and or colleague ratings as a means of convergent validity on individual ratings of skill frequency.

Lastly there are potential sources of bias in both response acquiescence and deviation. The former, sometimes referred to as 'yea-saying/nay-saying' (Anastasi, 1992) is more of a problem in 'yes or true' vs 'no or false' type rating scales. The Likert type rating scales used in this present research suggest that this bias is minimised. The latter is described as a tendency to give unusual or uncommon responses (Anastasi, 1992). An examination of the individual item distributions in this research suggested deviation was not occurring and as an additional check univariate outliers were removed from subsequent analysis.

9.6 General Limitations: Research design

An overall general limitation is imposed by the use of a cross-sectional research design. The data from such a design represents a limited cross-sectional "snapshot" of the experiences of the participants and as such the underlying causal relationships are uncertain. Other writers have drawn attention to the problem of common method variance (Brief & Atieh, 1987), however recent evidence from Spector (1987) found little evidence of common method variance among well developed self-report measures of industrial/organisational type measures and suggests that a number of properly developed instruments (such as the measures of stress and outcomes employed in this study) are relatively resistant to the methods variance problem.

This research has additionally examined skill variables in the potential roles of moderator or mediator. In the mediator role, for example, this research has assumed a linear, additive set of causal relations but it is possible that relations between stress, skills, and outcomes are likely to be reciprocal. There may also be circumstances where a particular variable may be both a mediator and a moderator within a single set of functional relations (c/f James & Brett, 1984). Notwithstanding this, Baron and Kenny (1984) claim there are conceptual implications for failing to appreciate the moderator-mediator distinction giving rise to "...missed opportunities to probe more deeply into the nature of causal mechanisms and integrate seemingly irreconcilable theoretical positions" (p.1173). More statistically sophisticated tests of moderation and mediation effects were considered beyond the scope of this present research.

Future research, however, could arguably focus on a longitudinal research design with a well specified causal model and the use of more elaborate analysis techniques such as the LISREL (Jöreskog & Sörbom, 1984) approach to more clearly specify causal relationships, feedback loop effects, and unspecified indirect effects.

9.7 The Validation process and issues arising

As has been noted, Thomas (1987) has argued that the landmark study of Muthard and Salomone (1969) provided valuable findings in competency based research that remain relevant today and that the differences found since then are "...interesting but certainly not earth shattering" (p.76). He suggested that researchers dedicate their efforts towards more substantive and topical issues such as how to promote the integration of persons with disabilities into society at large, how to better facilitate adjustment to disability, and how to harness technological advances within the rehabilitation process. Similar contemporary statements by Thomas (1993) are directed at perceived methodological weaknesses in attempts to examine role and function parameters in the credentialing and accreditation process for rehabilitation counsellors (Linkowski et al., 1993) and counselling education programmes. However, while Thomas's (1987, 1993) arguments may have some validity within the environment of the United States where the rehabilitation counselling profession has formal links to the early 1900's, Biggs and Flett (1995) have suggested that there are several reasons why role and competency research remain important.

First, Roessler and Rubin (1992) argue that skills and competencies can act as a buffer for coping with the stress associated with rehabilitation work, and some evidence is available

to support that contention (e.g. Biggs, Flett & Voges, 1995; Flett, Biggs & Alpass, 1994). The research reported in this thesis did not show a buffering or moderating effect of skills but clearly demonstrated some important mediating effects.

Second, Danek et al. (1987) comment on the blurring of traditional roles that can occur in emerging professional fields such as rehabilitation, whereby rehabilitation counselling, for example, is seen either as a sub-set of generic counselling on one hand, or a sub-set of a broader profession of "rehabilitation". Chinnery (1991) notes a movement towards the birth of a "rehabilitationist" who has "...an elementary understanding of everything" (p.446). Both argue for clearer sets of role definitions based on competencies in order to avoid both a process of deskilling and debilitating consequences of role strain.

Third, skills and competencies in rehabilitation are not exercised in isolation and are increasingly organisationally based thus requiring complementary skills in human organisation dynamics. With greater emphasis on inter-organisational and inter-occupational mobility, it is logical to seek to identify core transferable skills in the manner that the RSI seeks to do as they well may be the core curricula of education and training programmes to be supplemented further by professional development activities.

The validation of the RSI (Amended II) on four professional groups in Australasia has resulted in an instrument potentially suitable for a range of uses in developing educational and training curricula, professional development, and the establishment of service standards by professional associations and funding agencies. If the instrument represents core competencies for the profession, then the process of preparing education and training

programmes for variable benchmarks including minimum standards can become more efficient and effective. As has been noted previously, Hershenson (1989) provides a compelling argument to explore the utility of the RSI in Australasia when he noted that rehabilitation counsellor education in Australia from 1974 had undergone rapid expansion similar to that experienced in the United States from 1954 to 1973 and that there are several similarities in curriculum development and professional practice. The need for such an instrument to possess robust attributes of reliability and validity, and characteristics more socially and culturally appropriate to an Australasian environment, has been recognised in this research and in the validation of the amended RSI.

9.8 Debate on role and competency research in rehabilitation

General limitations to role and competency research have been expressed by Thomas (1987, 1993) and Emener (1993). This present research however, in noting these comments, also notes the distinction between an established and an emerging profession and the importance of gaining an understanding of essential competencies in that developmental process to ensure resources are not dedicated to inappropriate or irrelevant competencies. The distinction is considered sufficiently important for an emerging profession to have at least the equivalent of what Thomas (1987) would concede as a landmark study before moving on to other research foci. This present research does not, of course, purport to establish a landmark, but in the absence of any other research on rehabilitation competencies in the Australasian region, must at least be considered a starting point.

Given the positioning of this present research in the emerging profession of rehabilitation counselling in Australasia, it is important to note that in the skills/competencies research to date the concepts of importance, attainment and preparedness have been articulated in competency research. Danek et al. (1987) argue that "...measuring the attainment of rehabilitation competencies, in addition to determining what competencies are important, is crucial for determining the minimum training needed for rehabilitation training in the various specializations and settings..." (p.89). The development of the original RSI (Leahy et al. 1987a, 1987b) consequently utilised both a self-report importance rating and a self-report attainment rating. Later research on rehabilitation counselling credentialing (Szymanski, Leahy, & Linkowski (1993) used a similar self-report measure of importance rating as well as a measure of perceived preparedness; preparedness being defined as "...the degree to which a respondent (certified rehabilitation counselor) felt prepared in the knowledge area as a result of education or training." (p.46). Whilst the concepts of attainment and preparedness appear similar they are not an exact match and are possibly best interpreted in the light of Janikowski's (1990) following comments on skills and competencies.

Wright et al. (1987) also argue that "...it is a mistake to equate 'importance' (as others have done) with the time spent in performing the task, or with its frequency. Many trivial tasks with little or no impact on client success can consume much of the practitioners work hours" (p.110). This research, although employing the concept of task frequency, does not equate frequency with performance, but rather was intent on ascertaining what it is that rehabilitation practitioners in New Zealand and Australia actually do. Having established this fundamental body of knowledge the next set of steps can be taken to examine such concepts of importance, attainment, preparedness, and other important variables such as counsellor

affective characteristics (discussed further in this chapter). An important future direction could also consider differences in skills/competency measurement strategies e.g. self-ratings, peer and supervisor ratings, and service consumer ratings.

More general limitations of role and competency research have been noted by Janikowski (1990). He suggests that part of the issue generating debate is attributable to the loose manner in which competency has been defined. More specifically, the terms function and competency appear to have been used interchangeably. Noting that Klemp (1980) defined a competency as being a generic knowledge, skill, trait, selfschema, or motive that is assumed to be causally related to effective behaviour, he suggests that competencies "...ought to refer to the underlying characteristics of a person which account for, in part, successful performance of job function" (p.186). Berven (1987) further suggests that competencies can be conceptualised as existing in three domains: knowledge (what one knows), skill (what one can do), and affective (personal characteristics such as attitudes, values, beliefs, selfschema, or motive).

More specifically Janikowski (1990) argues that the lack of distinction between function and competency is important because it results in studies which tends to replicate earlier research and adds little new knowledge to the field. He suggests that the two most popular research approaches, self report and task analyses, identify "competencies" virtually identical to previously defined rehabilitation job functions and do not describe the characteristics of people performing the job. Overall he suggests there is a redundancy to much of the role and competency research undertaken.

If this is true, then what may be required is a comprehensive and systematic research programme to examine the knowledge, skills, and personal characteristics of rehabilitation professionals which enable them to function effectively. Janikowski (1990) suggests a series of strategies whereby groups of outstanding and average rehabilitation professionals are assessed as such on a number of output measures in relation to their positions (e.g. efficiency of case closure, proficiency in selection of services, client satisfaction) and peer and supervisor assessments sought. Having determined by these measures into which group (outstanding or average) the professionals fall, both groups are then examined to determine what they are doing on the job and how they are doing it. Interviews are then conducted on a critical incident technique (Flanagan, 1954) in order to ascertain what the professional thinks the job entails as well as their actions thoughts and feelings they have shown in connection with distinct behavioural events. A typed transcript of the interview can then be analysed to generate hypotheses about characteristics which differentiate between the two groups. The next step in the process is to find or develop instruments which measure the hypothesised competencies. One of the possible ways to do this would is a programme simulation technique which has been reported to measure rehabilitation practitioner skills such as clinical problem-solving (Berven, 1985) and interviewing (Hodge, Payne & Wheeler, 1978). The final step in the process is to validate such instruments developed on further groups of rehabilitation professionals who have been rated for job success.

This suggested approach by Janikowski (1990) is interesting and the distinction made between competencies and functions relevant. However if current role and competency research is analogous to function research, then by Berven's (1987) definition, function, as a combination of skill and knowledge, only requires affective characteristics to become a

measure of competency. On that basis an instrument such the RSI might only need to be accompanied by the appropriate affective measures to fully describe a level of competency. There are several studies that have examined affective measures such as counsellor personality characteristics (Kunce, Thoreson, & Parker, 1975), "case manager" vs "therapist" personality comparisons (Kunce and Angelone, 1990) and personality characteristics and working style (Tedder, 1987). A more recent study (Matkin, Bauer, & Nickles, 1993) examined the personality characteristics (vocational preference, work values) of rehabilitation counsellors across 8 employment settings and reported significantly different responses from sex and employment setting. Clearly there is evidence to suggest that affective variables do have a part to play in the overall examination of competencies in rehabilitation settings. Therefore an appropriate goal of future research might be to examine such a model of competency (skills and affect) by the use of the RSI (Amended II) in Australasia in conjunction with a set of affective measures to examine whether the predictive ability of the RSI instrument is improved.

9.9 Future directions: RSI, stress, skills, outcomes

The development of the Rehabilitation Skills Inventory (Amended II) can be seen as a useful first step in its potential use in such previously noted domains as the development of educational and training curricula, professional development, and establishment of service standards by professional associations and funding bodies. The development of the amended scale utilised measures of content validity in the forms of expert panel ratings and factor analysis data. Future research to determine psychometric stability should seek to determine levels of criterion validity by correlation with 'objective' measures of performance, and

convergent validity by correlation with, for example, other measures of skill or supervisor ratings of skill. It would be desirable also to examine discriminant validity inasmuch as the instrument accurately classifies respondents into high and low performers. As noted earlier this will however involve an extension of the scale from its present measure of frequency (i.e. how often the particular skill is employed), and the utilization of more 'objective' measures of performance such as those described by Janikowski (1990).

Such developments furthermore, could occur either in line with the previously discussed model proposed by Janikowski (1990) or, as argued previously in this thesis, in combination with the selection of appropriate and complementary affective measures to fully describe a level of competency in rehabilitation skills. Either or both of these approaches could usefully be the focus of future research.

Significant relationships were found in this research between job related stress and outcomes. Quality concern and job vs non-job variables were consistently significant over a range of outcome measures, but a variable of workload appeared to be the least significant concern in regard to outcome measures. Given, as previously discussed, that there was separate evidence of at least two of the groups experiencing high workloads two suggestions were advanced. First that perhaps the concept of workload (normed on blue collar workers) as used in the House et al. (1979) does not accurately fit the perception of 'workload' of the rehabilitation professionals used in this study. Second that the lack of relationship may partly reflect the standard regression approach employed in this study in that it is possible for an independent variable to appear unimportant in the solution when it is actually highly correlated with the dependant variable.

Given there is sufficient evidence to suggest that a heavy workload can act as a stressor generally (e.g. Jones et al., 1991; Zastrow, 1984), and in rehabilitation settings in particular (e.g. Flett et al., 1992, 1993; Swanson, 1987), efforts should be made to clarify whether the non-significance of workload to outcomes in this research reflects an issue of perception of workload, or a reflection of the standard regression approach, or both. Future research should seek to accurately map the dimensions of the workload concept for this emerging professional group, and once mapped, establish the nature of the relationship of this revised workload concept with other well established measures of stress.

This research has provided some support for the notion of skills mediating the effects of stress on outcomes. There is, however, an implicit assumption that a person is free and able to use such skills as they possess. However this may not always be the case and it is possible that rehabilitation professionals with perceived high skill levels may be practising in an environment where limited opportunities exist to exercise all of their skills. In such a situation individuals may experience frustrations of role insufficiency or opportunity stress which in turn may impact on job related perceptions. This would present a reverse notion to that taken in this research, whereby stress could be perceived to mediate the effects of skill levels on outcomes. Future research could usefully examine the relationships between stress, skills, and outcome measures in such environments where the individual perceives both stress and a shortfall in skills, and additionally in such environments where the individual perceives both low stress and an under-utilization of existing high level skills.

Previous discussion in this research on the concept of commitment has highlighted the important of this variable in the context of stress and skills. Findings in this research are

broadly supported by previous research. For example, Biggs et al. (1995) report that organisational commitment made a significant prediction of both job satisfaction and feelings of distress in a sample of rehabilitation coordinators (n=82). Additionally the use of the three component commitment scale (Meyer & Allen, 1991) in this research highlighted the utility of such a concept for a sample of rehabilitation professionals and supports findings in a larger sample of New Zealand health professionals (n=1121) indicating the utility of distinguishing affective, continuance, and normative forms of commitment (Shouksmith, 1994).

It has been noted and discussed previously that differences found between affective commitment and both continuance and normative commitment may reflect a difference between emotive considerations (affective commitment) and more rational and logical considerations (continuance and normative commitment). Comments have also been made on the presumably sequential order of commitment development, from affective to normative, in the model proposed by Meyer and Allen (1993). Presumably also the model applies both to organisational and to occupational commitment. Although the available evidence suggests that the three component, sequential model is a useful one more research is indicated. Future research should address both the strength and direction of the affective-rational dimensions of the three components, and examine whether there is in fact a sequential development of the various forms of commitment.

It is timely to note that there are several other variables that have the potential to affect a stress-outcome relationship but were considered, by research design, methodology, and focus, beyond the scope and purpose of this research. Such variables for example include the stress-buffering effects of social support (e.g. Maxwell, Flett, & Colhoun, 1989;

1990) and psychological/organisational climate (e.g. Alpass, 1994). In addition Kelley and Satcher (1992) have recently argued specifically in rehabilitation environments that 'organisational support' potentially buffers the effects of job stress and facilitates job satisfaction, tenure and productivity and note "...how the properties of (organisational) support influence organisational life in rehabilitation agencies deserves exploration in rehabilitation research" (p.121). This call for specific research in undoubtedly welcome as would calls for research across several variables in the stress-outcome relationship.

Finally, as briefly noted earlier, future research could engage in more complex modelling of the relationships between the various outcome measures via a longitudinal study and a well specified causal model and the use of more elaborate analysis techniques such as the LISREL (Jöreskog & Sörbom, 1984) in order for causal sequences, feedback loop effects, and unspecified indirect effects to be more fully understood.

9.10 Concluding remarks

This research , unlike any other to date, has comprehensively examined rehabilitation skills and modelled the relationships between stress, skills and outcomes in a systematic multifaceted manner. Previous studies have variously considered specific stressors such as occupational stress (e.g. Flett and Biggs, 1992), narrowly conceptualised job outcomes such as burnout (e.g. Ursprung 1986), intent to quit (Riggar et al., 1987), and the effects of skills on outcomes in specific populations (e.g. Biggs, Flett & Voges, 1995). This research arguably provides a more complete picture and sets the stage for future work on issues that may affect stress, skills and outcomes. In particular, having a clearer notion of what

rehabilitation professionals 'do' initiates a framework for the development of individual and organisational strategies, such as those argued by Kelley and Satcher (1992), which can be aimed at helping them 'do' it more effectively.

The findings and discussions within this research have highlighted the relatively atheoretical nature of overall research to date in the area of stress, skills and outcomes in rehabilitation professionals. Future developments should concentrate on theorising more clearly the nature of the relationships between these variables of interest. Bandura's (1977) self-efficacy theory was proposed as one potential mechanism for understanding the linkages between stress, skill, and outcomes.

Finally one may also argue for the potential empowering effects of rehabilitation professionals both being equipped with accurate and detailed knowledge about stress related concerns, and with appropriate levels of skill. This can only but increase the likelihood of developing and advancing a valued identity in an emerging profession, and expanding research activity and best practice in the rehabilitation and disability field. If the final outcome of such research efforts is a situation in which the consumer receives services that are timely, appropriate, and contemporary, then that clearly represents a state of affairs to be highly coveted.

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APPENDIX A

Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Assess the significance of clients disabilities																
2. Interview the client	.49**															
3. Evaluate the client's social support system	.54**	.39**														
4. Determine appropriate community services	.45**	.34**	.53**													
5. Determine a client's independent living ability	.36**	.26**	.47**	.45**												
6. Identify transferable work skills	.24**	.29**	.18*	.22*	.13											
7. Employ applications in vocational assessment	.12	.11	.06	.07	.06	.48										
8. Interpret test and/or work sample results	.25**	.18*	.21*	.17*	.19*	.44**	.53**									
9. Identify client work personality characteristics	.22*	.30**	.18*	.15	.21*	.45**	.36**	.44**								
10. Use behavioral observations	.31**	.31**	.21*	.18*	.27**	.43**	.29**	.45**	.61**							
11. Design work situations	.23**	.27**	.21*	.20*	.22**	.32**	.28**	.48**	.64**	.61**						
12. Use assessment data	.32**	.25**	.30**	.19*	.19*	.23**	.11	.44**	.32**	.38**	.31**					
13. Match client needs to job	.23**	.28**	.12	.20*	.10	.64**	.42**	.42**	.49**	.47**	.45**	.31**				
14. Develop a relationship with a client	.36**	.39**	.22**	.32**	.23**	.29**	.12	.22*	.24**	.27**	.22**	.23**	.26**			
15. Clarify mutual expectations	.20*	.41**	.09	.17*	.04	.22*	.13	.12	.16	.25**	.17*	.13	.17*	.52**		
16. Adjust counselling approaches	.31**	.28**	.33**	.23**	.09	.14	.05	.20*	.17*	.26**	.20*	.23**	.28**	.25**	.28**	

* $p < .01$ ** $p < .001$

APPENDIX A
Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17. Apply psychological and social theories	.26**	.12	.35**	.29**	.13	.16	.13	.28**	.11	.26**	.18*	.17*	.16	.30**	.25**	.57**
18. Identify social & economic factors	.37**	.25**	.36**	.37**	.19*	.21*	.05	.23**	.22*	.35**	.19*	.30**	.24**	.31**	.31**	.41**
19. Recognise psychological problems	.37**	.27**	.32**	.30**	.19*	.30**	.15	.33**	.21*	.33**	.23**	.33**	.32**	.25**	.25**	.46**
20. Interact with a client	.48**	.36**	.42**	.38**	.31**	.23**	.15	.29**	.21*	.31**	.25**	.31**	.29**	.45**	.30**	.38**
21. Assist a client to state behavioural goals	.32**	.28**	.39**	.31**	.26**	.27**	.28**	.34**	.29**	.35**	.39**	.22*	.33**	.32**	.28**	.39**
22. Determine a client's need for counseling	.33**	.25**	.51**	.40**	.37**	.17*	.07	.29**	.11	.25**	.24**	.28**	.16	.25**	.17	.41**
23. Counsel a client	.30**	.24**	.25**	.26**	.14	.35**	.25**	.27**	.21*	.39**	.32**	.13	.37**	.28**	.22*	.35**
24. Assist a client in understanding stress	.30**	.25**	.43**	.37**	.25**	.24**	.17*	.23**	.18*	.33**	.28**	.16	.19*	.28**	.19*	.43**
25. Review medical information	.35**	.37**	.29**	.30**	.25**	.28**	.16	.37**	.28**	.38**	.31**	.45**	.28**	.26**	.25**	.32**
26. Discuss educational & vocational implications	.23**	.27**	.20*	.21*	.08	.39**	.29**	.48**	.34**	.37**	.38**	.44**	.28**	.26**	.25**	.32**
27. Counsel a client to select jobs	.23**	.28**	.13	.15	.003	.60**	.42**	.39**	.38**	.41**	.35**	.27**	.56**	.26**	.25**	.25**
28. Relate a client's interests to vocational choices	.23**	.28**	.13	.15	.004	.60**	.46**	.40**	.39**	.39**	.26**	.26**	.57**	.24**	.23**	.30**
29. Discuss job market conditions	.20*	.22*	.07	.20*	-.03	.61**	.48**	.30**	.30**	.34**	.21*	.20*	.53**	.24**	.25**	.24**
30. Develop vocational counseling goals	.18*	.21*	.07	.17*	.07	.51**	.42**	.30**	.30**	.34**	.21*	.20*	.47**	.22**	.27**	.27**
31. Identify and arrange required training	.10	.21*	.07	.17*	.07	.50**	.34**	.34**	.43*	.41**	.42**	.19*	.51**	.26**	.26**	.24**
32. Use supportive counseling techniques	.25**	.20*	.15	.24**	.08	.50**	.43**	.37**	.38**	.39**	.36**	.14	.46**	.31**	.23**	.33**

* $p < .01$ ** $p < .001$

APPENDIX A
Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
33. Instruct a client in job search skills	.09	.18*	.02	.14	.004	.57**	.47**	.34**	.47**	.38**	.31**	.04	.50**	.23**	.22**	.21*
34. Counsel a client regarding work behaviours	.12	.23**	.09	.14	.07	.47**	.40**	.41**	.46**	.49**	.40**	.11	.45**	.15	.22*	.23**
35. Monitor a client in employment	.19*	.39**	.12	.16	.17*	.37**	.28**	.34**	.46**	.48**	.40**	.30**	.41**	.27**	.22*	.24**
36. Apply job market information	.06	.24**	.002	.11	.02	.55**	.42**	.35**	.39**	.37**	.31**	.18*	.55**	.25**	.22*	.15
37. Use local resources for job placement	.14	.32**	.02	.10	.05	.42**	.34**	.28**	.39**	.43**	.39**	.23**	.49**	.26**	.29**	.19*
38. Identify training requirements	.15	.21*	.08	.13	.02	.52**	.48**	.34**	.41**	.38**	.33**	.17*	.54**	.21*	.23**	.22**
39. Determine intervention for job placement	.19*	.32**	.07	.18*	.08	.48**	.38**	.33**	.42**	.38**	.32**	.21*	.49**	.27**	.34**	.21*
40. Understand the current legislation	.01	.12	.04	.02	-.03	.34**	.31**	.32**	.35**	.40**	.29**	.14	.36**	.10	.16	.19*
41. Seek to change employers' biases	.03	.15	-.03	.11	.08	.37**	.29**	.19*	.35**	.28**	.33**	.04	.34**	.12	.17*	.11
42. Negotiate with employers to rehire a worker	.18*	.17*	.09	.05	.13	.21*	.04	.26**	.22*	.25**	.21*	.31**	.22*	.10	.16	.19*
43. Provide employers with data on a client skills	.21*	.35**	.09	.14	.14	.47**	.29**	.35**	.55**	.49**	.41**	.28**	.59**	.30**	.25**	.26**
44. Provide information on your organization	.05	.18*	.02	.10	.17*	.28**	.14	.09	.36**	.33**	.29**	.08	.35**	.10	.08	.14
45. Describe Social Security regulations	.17	.15	.12	.16	.06	.16	.09	.16	.12	.23**	.14	.15	.09	.06	.12	.12
46. Report to referral sources	.18*	.32**	.10	.17*	.26**	.26**	.23**	.29**	.49**	.43**	.41**	.20*	.48**	.28**	.12	.19*
47. Collaborate with other providers	.14	.26**	.06	.10	.11	.13	.07	.20*	.15	.24**	.15	.17	.22*	.16	.21*	.26**
48. Consult with medical professionals	.35**	.31**	.29**	.23**	.22**	.02	-.003	.32**	.20*	.36**	.15	.47**	.45	.20*	.17*	.34**

* $p < .01$ ** $p < .001$

APPENDIX A
Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
49. Understand claims processing	.19*	.14	.17	.12	.19*	-.06	.0003	.01	.06	.05	-.0006	.15	-.03	.07	.04	.18*
50. Clearly state the nature of a client's problem	.25**	.24**	.29**	.24**	.28**	.11	-.03	.14	.16	.25**	.08	.39**	.07	.16	.13	.23**
51. Select appropriate providers	.19*	.11	.12	.19*	.12	.24**	.13	.19*	.16	.24**	.15	.21*	.24**	.19*	.19*	.22*
52. Explain the services of community resources	.27**	.21*	.22**	.42**	.25**	.30**	.13	.23**	.24**	.23**	.23**	.21*	.26**	.21*	.11	.25**
53. Write case notes summaries and reports	.31**	.32**	.18*	.13	.12	.19*	-.02	.19*	.21*	.33**	.20*	.39**	.18*	.26**	.24**	.27**
54. Actively promote rehabilitation services	.10	.15	.09	.15	.13	.13	.06	.14	.28**	.23**	.19*	.22**	.21*	.07	.01	.17*
55. Abide by ethical and legal considerations	.16	.23**	.04	.03	-.005	.25**	.13	.17*	.13	.20*	.14	.22*	.22*	.19*	.15	.08
56. Read professional literature	.04	.13	.09	.08	.03	.11	.02	-.03	.08	.14	.11	-.06	.03	.11	.08	.05
57. Review rehabilitation literature	.13	.12	.17*	.18*	.12	.18*	.17*	.27**	.18*	.16	.16	.17*	.05	.12	.10	.18*
58. Apply results of published research	.08	.10	.21*	.27**	.18*	.08	.14	.18*	.11	.21*	.21*	.12	.11	.17*	.10**	.25**
59. Apply principles of appropriate legislation	.23**	.13	.16	.16	.08	.03	.07	.27**	.13	.25**	.12	.40**	.08	.14	.23**	.25**
60. Educate a client regarding legal rights	.06	.02	.05	.11	.10	.09	.04	.13	.07	.20*	.13	.15	.07	.10	.13	.15
61. Interpret legislation, policy, & regulations	.08	-.008	-.05	.04	.02	.11	.07	.09	.05	.13	.05	.18*	.01	.06	.24**	.09
62. Promote public awareness	.14	.13	.09	.22*	.24**	.19*	.12	.08	.29**	.26**	.19*	.18*	.19*	.15	.08	.17*
63. Question limiting stereotypes	.10	.14	.02	.13	.11	.29**	.25**	.12	.26**	.27**	.20*	-.06	.24**	.19*	.19*	.13
64. Obtain regular client feedback	.10	.11	.06	.21*	.18*	.25**	.24**	.13	.21*	.26**	.16	-.08	.20*	.14	.09	.12

* $p < .01$ ** $p < .001$

APPENDIX A
Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
17. Apply psychological and social theories																
18. Identify social & economic factors	.47**															
19. Recognise psychological problems	.48**	.59**														
20. Interact with a client	.46**	.52**	.61**													
21. Assist a client to state behavioural goals	.43**	.38**	.48**	.58**												
22. Determine a client's need for counseling	.50**	.36**	.47**	.56**	.54**											
23. Counsel a client	.45**	.37**	.40**	.49**	.52**	.47**										
24. Assist a client in understanding stress	.53**	.33**	.43**	.51**	.52**	.58**	.69**									
25. Review medical information	.29**	.40**	.45**	.35**	.39**	.34**	.38**	.39								
26. Discuss educational & vocational implications	.29**	.35**	.41**	.29**	.40**	.22**	.37**	.27**	.57**							
27. Counsel a client to select jobs	.15	.28**	.36**	.27**	.35**	.16	.46**	.29**	.39**	.55**						
28. Relate a client's interests to vocational choices	.19*	.26**	.38**	.26**	.36**	.18*	.41**	.26**	.36**	.59**	.75**					
29. Discuss job market conditions	.16	.21*	.34**	.20*	.34**	.11	.40**	.28**	.36**	.51**	.74**	.80**				
30. Develop vocational counseling goals	.25**	.27**	.38**	.24**	.36**	.16	.41**	.28**	.41**	.54**	.66**	.74**	.75**			
31. Identify and arrange required training	.18*	.22*	.39**	.25**	.35**	.16	.37**	.25**	.34**	.46**	.61**	.61**	.61**	.65**		
32. Use supportive counseling techniques	.40**	.30**	.38**	.42**	.51**	.30**	.55**	.49**	.36**	.46**	.59**	.57**	.59**	.61**	.62**	

* $p < .01$ ** $p < .001$

APPENDIX A
Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33. Instruct a client in job search skills	.21*	.17*	.32**	.24**	.38**	.12	.45**	.34**	.26**	.42**	.62**	.66**	.74**	.65**	.67**	.71**
34. Counsel a client regarding work behaviours	.28**	.20*	.35**	.30**	.43**	.29**	.50**	.47**	.36**	.48**	.54**	.57**	.61**	.55**	.57**	.69**
35. Monitor a client in employment	.11	.19*	.36**	.36**	.32**	.16	.34**	.30**	.35**	.36**	.48**	.43**	.37**	.37**	.44**	.41**
36. Apply job market information	.12	.11	.26**	.17*	.28**	.09	.38**	.22*	.26**	.40**	.60**	.62**	.68**	.56**	.57**	.52**
37. Use local resources for job placement	.11	.18*	.26**	.17*	.23**	.06	.38**	.23**	.38**	.43**	.55**	.50**	.53**	.50**	.63**	.48**
38. Identify training requirements	.25**	.21*	.38**	.21*	.41**	.19*	.45*	.34**	.33**	.49**	.64**	.72**	.69**	.69**	.66**	.65**
39. Determine intervention for job placement	.13	.30**	.30**	.22*	.29**	.10	.35**	.20*	.39**	.47**	.64**	.66**	.67**	.68**	.64**	.61**
40. Understand the current legislation	.16	.20*	.23**	.04	.22*	.01	.29**	.24**	.24**	.32**	.39**	.40**	.43**	.39**	.34**	.40**
41. Seek to change employers' biases	.05	.01	.14	.10	.28**	.002	.33**	.24**	.19*	.27**	.37**	.35**	.43**	.37**	.43**	.44**
42. Negotiate with employers to rehire a worker	.08	.21*	.22*	.17*	.21*	.16	.12	.14	.41**	.34**	.20*	.21*	.19*	.29**	.23**	.28**
43. Provide employers with data on client skills	.10	.20*	.29**	.26**	.33**	.13	.36**	.22**	.37**	.39**	.52**	.54**	.52**	.48**	.52**	.53**
44. Provide information on your organization	-.02	.07	.13	.02	.14	.004	.18*	.15	.21*	.21*	.28**	.28**	.27**	.22**	.35**	.29**
45. Describe Social Security regulations	.09	.17*	.17*	.11	.15	.15	.13	.15	.25**	.23**	.13	.10	.15	.18*	.21*	.19*
46. Report to referral sources	.06	.18*	.20*	.26**	.29**	.18*	.30**	.25**	.30**	.22*	.21*	.32**	.27**	.19*	.36**	.33**
47. Collaborate with other providers	.14	.27**	.18*	.13	.22*	.13	.14	.11	.23**	.21*	.13	.18*	.13	.14	.16	.12
48. Consult with medical professionals	.29**	.40**	.32**	.34**	.27**	.37**	.17*	.28**	.50**	.32**	.16	.20*	.08	.14	.11	.16

APPENDIX A
Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
49. Understand claims processing	.12	.21*	.04	.11	.15	.19*	-.003	.11	.20*	.10	-.05	-.03	-.03	-.03	-.09	.05
50. Clearly state the nature of a client's problem	.12	.33**	.22**	.22**	.17*	.25**	.15	.17*	.29**	.21*	.15	.17*	.13	.13	.12	.08
51. Select appropriate providers	.15	.35**	.32**	.21*	.31**	.20*	.30**	.21*	.33**	.35**	.34**	.33**	.32**	.31**	.33**	.31**
52. Explain the services of community resources	.15	.37**	.35**	.27**	.31**	.34**	.31**	.31**	.32**	.38**	.29**	.33**	.38**	.32**	.30**	.33**
53. Write case notes summaries and reports	.11	.28**	.25**	.27**	.20*	.19*	.14	.19*	.38**	.36**	.29**	.28**	.24**	.28**	.23**	.26**
54. Actively promote rehabilitation services	.07	.13	.13	.12	.18*	.13	.09	.15	.26**	.22**	.20*	.19*	.22*	.18*	.21*	.28**
55. Abide by ethical and legal considerations	.02	.08	.13	.08	.19*	.04	.20*	.06	.26**	.21*	.26**	.24**	.24**	.28**	.22**	.17*
56. Read professional literature	.08	.04	.09	-.006	.14	.04	.08	.14	.10	.06	.03	.01	.09	.04	.08	.09
57. Review rehabilitation literature	.23**	.18*	.17*	.12	.19*	.17*	.10	.20*	.24**	.23**	.12	.12	.14	.20*	.10	.22*
58. Apply results of published research	.35**	.20*	.22*	.15	.31**	.24**	.19*	.31**	.22**	.16	.10	.11	.11	.16	.14	.24**
59. Apply principles of appropriate legislation	.22*	.40**	.21*	.17*	.22*	.17*	.13	.20*	.38**	.22*	.08	.15	.11	.13	.12	.14
60. Educate a client regarding legal rights	.12	.16	.11	.07	.15	.15	.15	.16	.27**	.18*	.14	.16	.16	.16	.11	.12
61. Interpret legislation, policy, and regulations	.04	.25**	.09	.01	.11	.01	.10	.03	.18*	.20*	.16	.13	.21*	.18*	.09	.06
62. Promote public awareness	.10	.20*	.11	.11	.22**	.14	.19*	.24**	.22*	.14	.18*	.18*	.21*	.19*	.12	.23**
63. Question limiting stereotypes	.11	.12	.14	.14	.29**	.08	.31**	.22*	.04	.15	.23**	.24**	.29**	.26**	.20*	.30**
64. Obtain regular client feedback	.10	.07	.05	.06	.28**	.14	.22*	.26**	.04	.06	.19*	.13	.23**	.20*	.17*	.25**

APPENDIX A
Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
33. Instruct a client in job search skills																
34. Counsel a client regarding work behaviours	.74**															
35. Monitor a client in employment	.45**	.46**														
36. Apply job market information	.69**	.58**	.51**													
37. Use local resources for job placement	.52**	.53**	.52**	.61**												
38. Identify training requirements	.72**	.67**	.49**	.70**	.63**											
39. Determine intervention for job placement	.64**	.58**	.42**	.59**	.66**	.73**										
40. Understand the current legislation	.42**	.40**	.35**	.42**	.49**	.47**	.46**									
41. Seek to change employers' biases	.50**	.47**	.51**	.56**	.49**	.45**	.42**	.49**								
42. Negotiate with employers to rehire a worker	.20*	.21*	.27**	.18*	.29**	.23**	.34**	.22*	.30**							
43. Provide employers with data on client skills	.58**	.53**	.59**	.61**	.59**	.55**	.62**	.43**	.53**	.41**						
44. Provide information on your organization	.37**	.32**	.44**	.31**	.43**	.38**	.35**	.35**	.43**	.23**	.54**					
45. Describe Social Security regulations	.22**	.22**	.12	.16	.22*	.20*	.20*	.19*	.18*	.30**	.19*	.26**				
46. Report to referral sources	.35**	.37**	.37**	.37**	.39**	.30**	.29**	.23**	.30**	.28**	.55**	.35**	.05			
47. Collaborate with other providers	.16	.14	.15	.16	.31**	.17*	.26**	.21*	.14	.33**	.27**	.32**	.31**	.33**		
48. Consult with medical professionals	.03	.13	.20*	.01	.18*	.14	.21*	.12	-.08	.38**	.19*	.06	.22**	.31**	.42**	

APPENDIX A
Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49. Understand claims processing	-.06	-.03	.05	-.07	.05	-.006	-.009	.08	.0005	.25**	.003	.07	.22*	.17*	.27**	.38**
50. Clearly state the nature of a client's problem	.05	.04	.18*	.06	.20*	.09	.16	.17	.05	.21*	.23**	.17*	.25**	.18*	.28**	.50**
51. Select appropriate providers	.24**	.23**	.22**	.20*	.39**	.32**	.40**	.37**	.29**	.27**	.37**	.33**	.27**	.17*	.35**	.30**
52. Explain the services of community resources	.32**	.34**	.26**	.25**	.32**	.30**	.34**	.30**	.26**	.20*	.31**	.39**	.38**	.23**	.31**	.23**
53. Write case notes summaries and reports	.18*	.18*	.25**	.17*	.29**	.25**	.31**	.13	.05	.37**	.34**	.14	.15	.18*	.25**	.48**
54. Actively promote rehabilitation services	.21*	.17*	.32**	.23**	.36**	.20*	.20*	.34**	.41**	.43**	.37**	.44**	.18*	.35**	.28**	.27**
55. Abide by ethical and legal considerations	.22*	.13	.29**	.26**	.28**	.24**	.27**	.18*	.29**	.22*	.28**	.19*	.15	.18*	.18*	.20*
56. Read professional literature	.09	.05	.10	.09	.08	.04	.01	.29**	.26**	.11	.12	.24**	.06	.05	.12	-.10
57. Review rehabilitation literature	.14	.16	.13	.14	.11	.11	.10	.26**	.30**	.29**	.14	.20*	.19*	.11	.25**	.15
58. Apply results of published research	.13	.16	.16	.13	.12	.14	.03	.24**	.33**	.19*	.15	.23**	.11	.11	.23**	.16
59. Apply principles of appropriate legislation	.06	.05	.13	.03	.16	.10	.17*	.27**	.04	.28**	.12	.08	.21*	.22*	.32**	.51**
60. Educate a client regarding legal rights	.14	.17	.14	.15	.16	.09	.10	.23**	. 19*	.23**	.10	.13	.25**	.11	.24**	.29**
61. Interpret legislation, policy, & regulations	.13	.04	.09	.10	.15	.11*	.22*	.31**	.13	.17*	.11	.11	.20*	-.01	.23**	.20*
62. Promote public awareness	.21*	.16	.29**	.20*	.25**	.18*	.17*	.34**	.39**	.29**	.34**	.43**	.19*	.28**	.28**	.15
63. Question limiting stereotypes	.35**	.35**	.32**	.32**	.23**	.33**	.19*	.37**	.53**	.11	.33**	.37**	.15	.25**	.17*	-.03
64. Obtain regular client feedback	.29**	.26**	.29**	.28**	.22**	.20*	.15	.31**	.36**	.08	.30**	.34**	.15	.22*	.21*	-.01

APPENDIX A
Simple Pearson r Inter-Correlations Between Rehabilitation Skills Inventory (Amended I) items (n = 309)

	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
49. Understand claims processing																
50. Clearly state the nature of a client's problem	.35**															
51. Select appropriate providers	.29**	.43**														
52. Explain the services of community resources	.19*	.33**	.51**													
53. Write case notes summaries and reports	.12	.36**	.25**	.21*												
54. Actively promote rehabilitation services	.36**	.28**	.33**	.28**	.24**											
55. Abide by ethical and legal considerations	.01	.24**	.18*	.14	.36**	.19*										
56. Read professional literature	.11	.01	.21*	.14	-.03	.31**	.11									
57. Review rehabilitation literature	.35**	.15	.30**	.27**	.12	.38**	.07	.46**								
58. Apply results of published research	.25**	.20*	.23**	.21*	.06	.35**	.11	.42**	.57**							
59. Apply principles of appropriate legislation	.36**	.36**	.28**	.23**	.35**	.22*	.24**	.10	.28**	.24**						
60. Educate a client regarding legal rights	.22**	.23**	.24**	.23**	.16	.21*	.16	.16	.32**	.31**	.45**					
61. Interpret legislation, policy, & regulations	.28**	.30**	.41**	.28**	.18*	.21*	.19*	.08	.27**	.16	.38**	.49**				
62. Promote public awareness	.30**	.21*	.37**	.36**	.13	.63**	.11	.36**	.41**	.34**	.29**	.29**	.37**			
63. Question limiting stereotypes	.13	.10	.35**	.34**	.02	.29**	.08	.29**	.36**	.34**	.10	.29**	.30**	.52**		
64. Obtain regular client feedback	.08	.09	.26**	.34**	.03	.27**	.09	.26**	.36**	.23**	.13	.24**	.25**	.44**	.54**	

Skills and Competencies of Human Service Workers: Focus on Disability and Rehabilitation Environments

Research Project

APPENDIX B

INFORMATION SHEET

Researchers from Massey University are conducting research on the skills and competencies that may be necessary and/or desirable in the field of disability and rehabilitation. The principal researcher is Herbert Biggs who is a Senior Lecturer in Rehabilitation Studies at Massey University.

WHAT IS THE PRESENT STUDY ABOUT?

The present study will involve investigating the responses from front-line human service professionals who have a focus in providing service to persons who have a disability. The services can range from specific counselling to service coordination or simply for appropriate advice and referral. Staff from several national organisations are taking part in the study. The research has the formal approval of the Massey University Human Ethics Committee.

WHAT YOU WILL BE ASKED TO DO

You will be asked to respond to a single questionnaire in which your views on aspects of the skills and competencies you believe are part of your job. You will also be asked for your views on some aspects of yourself and your work environment such as commitment, job stress, and job satisfaction.

YOUR RIGHTS AS A PARTICIPANT

All participants:

* have the right to contact the principal researcher at any time during the research to discuss any aspects of the study
* have the right to refuse to answer any question, or withdraw from the study at any time
* provide information on the understanding that it is completely in confidence to the researchers, to be used only for the purposes of the research
* have the right to receive information about the results of the study on its completion

ADDRESS OF PRINCIPAL RESEARCHER

Herbert Biggs
Senior Lecturer
Rehabilitation Studies
Massey University
Private Bag
Palmerston North NZ

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Fax: 06/350-5653
email: H.C.Biggs@massey.ac.nz

Skills and Competencies of Human Service Workers: Focus on Disability and Rehabilitation Environments

Please read the following instructions carefully

This questionnaire will take about 40 minutes to complete. We would like you to find a time when you will not be disturbed, and to answer all the questions in one sitting. Please do this at the earliest convenient time for you after receiving the questionnaire.

You should not write your name on this questionnaire. We have put a code number of the first page to provide an identification. Please remember that all the information that you give us is confidential and will be used only for the purposes of this study.

Please try to answer all the questions and be careful not to miss any pages. It is important that you give your own answers to the questions. Therefore, we would ask that you do not discuss the questions with others.

How do I return the completed questionnaire?

When you have finished please place the questionnaire in the envelope provided and post. You do not need to put a stamp on it. Please read the separate instructions for the consent form on the following page.

APPENDIX B

☐☐☐

Nov. 93

CONSENT FORM

I _____ (full name) agree to take part in the study described in the introduction to this questionnaire.

The nature and purpose of this study have been explained to my satisfaction.

- I understand the questions concern statements about skills and competencies and more global questions about commitment, job stress, and job satisfaction.
- I understand that my responses are confidential.
- I understand that I can skip any question that I wish to.
- I understand that I can withdraw from the study at any time.
- I understand that I can get feedback of the results of this study by filling in my name and address below.
- I understand that I may be invited to participate in a follow up study within the next 12 months. I am aware that I am not obliged to participate in that study.
- I understand that the researchers conducting this study unequivocally guarantee that this sheet with my name on it will be kept in a secure place and that my name will not be linked with my questionnaire answers by any person.

_____ (signature) _____ date

"I would like some feedback about the results of this study"

Please tick one Yes ☐

No ☐

Please print your name and address below.

Name: _____

Address: _____

_____

_____

If you wish to detach this sheet personally, please remove and place in the enclosed smaller envelope marked [consent form]. Seal the envelope and include it with your completed questionnaire in the larger envelope provided for return to the researchers.

Nov. 93

First we would like some general background.

Remember that the information you give us is confidential. Please circle where appropriate.

What is your year of birth? _____

Are you? Female 1
Male 2

What ethnic group do you belong to?

New Zealander of Maori descent 1
New Zealander of European 2
New Zealander of Pacific Island 3
Permanent Resident 4
Other 5

What is your highest educational qualification?

No School Qualification 1
School Certificate passes 2
School Qualifications, University Entrance and above 3
Completed Polytechnic Certificate or Diploma 4
Completed College or University Undergraduate
Certificate, Diploma, or Degree 5
Completed University Masters Degree 6
PhD or Equivalent 7

What is your current employment status?

Employed full time 1
Employed part time 2

How many paid hours of work are you on average contracted for per week?

.....hours

What is your present gross annual income? (excluding your partner's salary and/or benefits. Do not include income from unrelated jobs or other sources).

$.....

How long have your been with your current employer?

..... years ..... months

How long have you worked in the disability & rehabilitation field?

..... years ..... months

How many people doing similar jobs to yours are employed at your place of work (include yourself)? .....

What is your current job title?

. . . . . .

Do you have another professional job title that you have gained through education or training that you could use in other rehabilitation/disability/ human service occupations? (e.g. psychologist, speech therapist etc.). Please state the job title

Title . . . . . .

Below are a number of statements that describe activities which may be undertaken by human service professionals who focus on working with a person who has a disability.

Indicate how often you have done this activity in the past 12 months by circling the appropriate number.

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes frequently always

Assess the significance of a client's disabilities taking into account medical, psychological, educational and family status	0 1 2 3 4	☐
Interview the client to verify that case information is accurate	0 1 2 3 4	☐
Evaluate the client's social support system (family, friends and community relationships)	0 1 2 3 4	☐
Determine appropriate community services for a client's stated needs .	0 1 2 3 4	☐
Determine a client's ability to perform independent living activities . . .	0 1 2 3 4	☐
Identify transferable work skills by analysing a client's work history and functional assets and limitations	0 1 2 3 4	☐
Employ newer applications in vocational assessment including computer based techniques	0 1 2 3 4	☐
Interpret test and/or work sample results to clients and others	0 1 2 3 4	☐
Identify client characteristics to be observed and rated in an actual job or simulated job situation	0 1 2 3 4	☐
Use behavioural observations to make decisions about a client's adjustment to work	0 1 2 3 4	☐
Design work situations for observing specific clients behaviours	0 1 2 3 4	☐
Use assessment data to highlight a client's ability for the purposes of rehabilitation planning	0 1 2 3 4	☐
Match client needs to job characteristics and client aptitudes to job requirements	0 1 2 3 4	☐
Develop a relationship with a client characterised by empathy and positive regard	0 1 2 3 4	☐
Clarify mutual expectations and the nature of the relationship with your client	0 1 2 3 4	☐

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes frequently always

Adjust counseling approaches or styles according to the cognitive and personality characteristics of your client	0 1 2 3 4	☐
Apply psychological and social theories to develop strategies for intervention	0 1 2 3 4	☐
Identify social, economic and environmental factors that may adversely affect a client's motivation toward rehabilitation	0 1 2 3 4	☐
Recognise psychological problems (e.g. depression, suicidal ideas) which require consultation or referrals	0 1 2 3 4	☐
Interact with a client to identify emotional reactions to disability	0 1 2 3 4	☐
Assist a client to state specific behavioural goals for personal adjustment	0 1 2 3 4	☐
Determine a client's need for individual, group or family counseling . .	0 1 2 3 4	☐
Counsel a client to help him/her appreciate and emphasise personal strengths	0 1 2 3 4	☐
Assist a client in understanding and coping with stress	0 1 2 3 4	☐
Review medical information with a client to determine the vocational implications of any functional limitations	0 1 2 3 4	☐
Discuss with a client the educational and vocational implications of test and interview information	0 1 2 3 4	☐
Counsel a client to select jobs consistent with his/her abilities, interests and rehabilitation goals	0 1 2 3 4	☐
Relate a client's stated interests and values to vocational choices	0 1 2 3 4	☐
Discuss with a client job market conditions which may influence the opportunity to enter certain jobs	0 1 2 3 4	☐
Develop mutually agreed vocational counseling goals	0 1 2 3 4	☐
Identify and arrange for the required training to maintain a client's successful job placement	0 1 2 3 4	☐
Use supportive counseling techniques to prepare a client for the stress of job hunting	0 1 2 3 4	☐
Instruct a client in job search skills	0 1 2 3 4	☐

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes frequently always

Counsel a client regarding desirable work behaviours in order to improve his/her employability	0 1 2 3 4	☐
Monitor a client in employment to determine needs for additional services	0 1 2 3 4	☐
Apply job market information to locating and securing employment for your client	0 1 2 3 4	☐
Use local resources to assist with placement (e.g. employer contacts and colleagues)	0 1 2 3 4	☐
Identify educational and training requirements for specific jobs	0 1 2 3 4	☐
Determine the level of intervention necessary for job placement (e.g. job club, supported employment, on-the-job training)	0 1 2 3 4	☐
Understand the applications of current legislation affecting the employment opportunities for people with disabilities	0 1 2 3 4	☐
Actively seek to change employers' biases and concerns regarding hiring people with disabilities	0 1 2 3 4	☐
Negotiate with employers and/or union representatives to reinstate an injured worker	0 1 2 3 4	☐
Provide prospective employers with appropriate information on a client's work skills and abilities	0 1 2 3 4	☐
Provide information regarding your organizations programs to service providers and other interested parties	0 1 2 3 4	☐
Explain regulations and procedures regarding income maintenance and other benefits	0 1 2 3 4	☐
Provide regular progress reports to the referring agency	0 1 2 3 4	☐
Collaborate with other providers so that services are co-ordinated, appropriate and timely	0 1 2 3 4	☐
Consult with medical professionals regarding functional capacities, prognoses, and treatment plans for a client	0 1 2 3 4	☐
Understand claims processing within your organization	0 1 2 3 4	☐
Clearly state the nature of a client's problem when referring him/her to service providers	0 1 2 3 4	☐

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes frequently always

Select appropriate rehabilitation or educational service providers	0 1 2 3 4	☐
Explain the services of various community resources to clients	0 1 2 3 4	☐
Write case notes, summaries and reports so that others can understand the case	0 1 2 3 4	☐
Actively promote rehabilitation services to businesses and organisations	0 1 2 3 4	☐
Abide by ethical and legal considerations of case communication and recording (e.g. confidentiality)	0 1 2 3 4	☐
Read professional literature relating to business, job markets, medicine and rehabilitation	0 1 2 3 4	☐
Conduct a review of the rehabilitation literature on a given topic or case problem	0 1 2 3 4	☐
Apply the results of published research to professional practice	0 1 2 3 4	☐
Apply the principles of appropriate rehabilitation legislation to daily practice	0 1 2 3 4	☐
Educate a client regarding his/her rights under the law	0 1 2 3 4	☐
Interpret your organisations legislation, policy, and regulations to clients and others	0 1 2 3 4	☐
Promote public awareness of rehabilitation programs	0 1 2 3 4	☐
Identify and question limiting stereotypes of people with disabilities	0 1 2 3 4	☐
Obtain regular client feedback regarding satisfaction with delivered services and suggestions for improvement	0 1 2 3 4	☐

What other skills are you required to have in your position.
Please state.

. . . . .	0 1 2 3 4	☐
. . . . .	0 1 2 3 4	☐
. . . . .	0 1 2 3 4	☐

(Use back of this page if more room is needed)

APPENDIX B

Below are a number of statements that relate to some aspects of the work that you do now.

For each of the following areas of your job indicate how you feel about that by circling the appropriate number.

0	1	2	3	4
not at all	rarely	sometimes	rather often	nearly all the time

Feeling that you have too much responsibility for the work of others	0 1 2 3 4	☐
Having to do or decide things where mistakes could be quite costly	0 1 2 3 4	☐
Not having enough help or equipment to get the job done well	0 1 2 3 4	☐
Thinking that the *amount* of work you have to do may interfere with how well it gets done	0 1 2 3 4	☐
Feeling that you have to do things that are against your better judgement	0 1 2 3 4	☐
Feeling unable to influence your immediate supervisor's decisions and actions that affect you	0 1 2 3 4	☐
Thinking that you'll not be able to meet the conflicting demands of the various people that you work with	0 1 2 3 4	☐
Not knowing what the people you work with expect of you	0 1 2 3 4	☐
Having to deal with or satisfy too many people	0 1 2 3 4	☐
Feeling that your job tends to interfere with your family life	0 1 2 3 4	☐
Being asked to work overtime when you don't want to	0 1 2 3 4	☐
Feeling trapped in a job that you don't like but can't get out of	0 1 2 3 4	☐

APPENDIX B

Please respond to the following statements by circling the appropriate number.

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes fairly often very often

How often does your job require you to work very fast . . . . . 0 1 2 3 4 ☐

How often does your job require you to work very hard (physically or mentally) . . . . . 0 1 2 3 4 ☐

How often does your job leave you with little time to get everything done . . . . . 0 1 2 3 4 ☐

The following statements describe further aspects of your working environment. Please respond in the framework of your current job by circling the appropriate number.

All in all, how satisfied would you say you are with your job?

Not at all satisfied 1
Somewhat satisfied 2
Very satisfied . . . . . 3 ☐

If you were free to go into any job you wanted, what would your choice be?

Would prefer some other job
to the type of job you have now 1
Would want to retire and not work at all 2
Would want the job you have now . . . . . 3 ☐

Knowing what you know now, if you had to decide all over again whether you would take the job you now have, what would you decide?

Decide definitely not to take the job 1
Have some second thoughts 2
Decide without hesitation to take the job . . . . . 3 ☐

In general, how well would you say your job measures up to the sort of job you wanted when you took it?

Not very much like it 1
Somewhat like it 2
Very much like it . . . . . 3 ☐

If a good friend of yours told you s/he was interested in working in a job like yours for your employer, what would you advise?

Advise against it 1
Have doubts about recommending it 2
Strongly recommend it . . . . . 3 ☐

APPENDIX B

Circle the number which best describes how you see yourself in your work.

Happy	0	1	2	3	4	5	6	7	Sad	☐
Successful	0	1	2	3	4	5	6	7	Unsuccessful	☐
Important	0	1	2	3	4	5	6	7	Unimportant	☐
Doing my best	0	1	2	3	4	5	6	7	Not doing my best	☐

APPENDIX B

The following set of statements ask you your feelings about your current working situation.

Please circle the appropriate response.

1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7
strongly disagree **strongly agree**

Human service is important to my self-image	1 2 3 4 5 6 7	☐
I regret having entered the human service profession	1 2 3 4 5 6 7	☐
I am proud to be in the human service profession	1 2 3 4 5 6 7	☐
I dislike being a human service professional	1 2 3 4 5 6 7	☐
I do not identify with the human service profession	1 2 3 4 5 6 7	☐
I am enthusiastic about human service professional	1 2 3 4 5 6 7	☐
I have put too much into the human services profession to consider changing now	1 2 3 4 5 6 7	☐
Changing professions now would be difficult for me to do	1 2 3 4 5 6 7	☐
Too much of my life would be disrupted if I were to change my profession	1 2 3 4 5 6 7	☐
It would be costly for me to change my profession now	1 2 3 4 5 6 7	☐
There are no pressures to keep me from changing professions	1 2 3 4 5 6 7	☐
Changing professions now would require considerable personal sacrifice	1 2 3 4 5 6 7	☐
I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time .	1 2 3 4 5 6 7	☐
I do not feel any obligation to remain in the human service profession .	1 2 3 4 5 6 7	☐
I feel a responsibility to the human service profession to continue in it .	1 2 3 4 5 6 7	☐
Even if it were to my advantage, I do not feel that it would be right to leave human service now	1 2 3 4 5 6 7	☐
I would feel guilty if I left human service	1 2 3 4 5 6 7	☐
I am in human service because of a sense of loyalty to it	1 2 3 4 5 6 7	☐
I would be very happy to spend the rest of my career with this organization	1 2 3 4 5 6 7	☐

APPENDIX B

	1 -------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7	
	strongly disagree	**strongly agree**
I really feel as if this organization's problems are my own	1 2 3 4 5 6 7	☐
I do not feel a strong sense of "belonging" to my organization	1 2 3 4 5 6 7	☐
I do not feel "emotionally attached" to this organization	1 2 3 4 5 6 7	☐
I do not feel like "part of the family" at my organization	1 2 3 4 5 6 7	☐
This organization has a great deal of personal meaning for me	1 2 3 4 5 6 7	☐
Right now, staying with my organization is a matter of necessity as much as desire	1 2 3 4 5 6 7	☐
It would be very hard for me to leave my organization right now, even if I wanted to	1 2 3 4 5 6 7	☐
Too much of my life would be disrupted if I decided I wanted to leave my organization now	1 2 3 4 5 6 7	☐
I feel that I have too few options to consider leaving this organization	1 2 3 4 5 6 7	☐
If I had not already put so much of myself into this organization, I might consider working elsewhere	1 2 3 4 5 6 7	☐
One of the few negative consequences of leaving this organization would be the scarcity of available alternatives	1 2 3 4 5 6 7	☐
I do not feel any obligation to remain with my current employer	1 2 3 4 5 6 7	☐
Even if it were to my advantage, I do not feel it would be right to leave my organization now	1 2 3 4 5 6 7	☐
I would feel guilty if I left my organization now	1 2 3 4 5 6 7	☐
This organization deserves my loyalty	1 2 3 4 5 6 7	☐
I would not leave my organization right now because I have a sense of obligation to the people in it	1 2 3 4 5 6 7	☐
I owe a great deal to my organization	1 2 3 4 5 6 7	☐

Nov. 93

The following responses relate to your intentions with regard to your occupation and your current employer.

Please circle the appropriate response as described.

1 ---— 2 ------ 3 —— 4 —— 5 ——- 6 ------ 7
never **all the time**
very unlikely **definitely**

How frequently do you think about leaving your current employer . . . . . 1 2 3 4 5 6 7 ☐

How likely is it that you would search for a job in another organisation . . . . . 1 2 3 4 5 6 7 ☐

How likely is it that you will actually leave the organisation within the next year . . . . . 1 2 3 4 5 6 7 ☐

How frequently do you think about leaving your current profession . . . . . 1 2 3 4 5 6 7 ☐

How likely is it that you would search for a job in another profession . . . . . 1 2 3 4 5 6 7 ☐

How likely is it that you will actually leave the profession within the next year . . . . . 1 2 3 4 5 6 7 ☐

Would you like feedback on the results of this study. Please circle as appropriate.

Yes 1

No 2 ☐

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE. PLEASE CHECK THAT YOU HAVE ANSWERED ALL QUESTIONS AND RETURN IT PROMPTLY USING THE INSTRUCTIONS PROVIDED.

Skills and Competencies of Human Service Workers: Focus on Disability and Rehabilitation Environments

Research Project

INFORMATION SHEET

Researchers from Massey University are conducting research on the skills and competencies that may to be necessary and/or desirable in the field of disability and rehabilitation. The principal researcher is Herbert Biggs who is a Senior Lecturer in Rehabilitation Studies at Massey University.

WHAT IS THE PRESENT STUDY ABOUT?

The present study will involve investigating the responses from front-line human service professionals who have a focus in providing service to persons who have a disability. The services can range from specific counselling to service coordination or simply for appropriate advice and referral. As well as CRS personnel, staff from several national organisations in New Zealand are taking part in the study. The research has the formal approval of the Massey University Human Ethics Committee.

WHAT YOU WILL BE ASKED TO DO

You will be asked to respond to a single questionnaire in which your views on aspects of the skills and competencies you believe are part of your job. You will also be asked for your views on some aspects of youself and your work environment such as commitment, job stress, and job satisfaction.

YOUR RIGHTS AS A PARTICIPANT

All participants:

* have the right to contact the principal researcher at any time during the research to discuss any aspects of the study
* have the right to refuse to answer any question, or withdraw from the study at any time
* provide information on the understanding that it is completely in confidence to the researchers, to be used only for the purposes of the research
* have the right to receive information about the results of the study on its completion

APPENDIX C

NOTES ON PRINCIPAL RESEARCHER AND MASSEY UNIVERSITY

A number of CRS staff may be acquainted with Bert Biggs who worked for the CRS from the mid 70's to the late 80's in Hobart, Launceston, Rockhampton, and Brisbane. Bert was one of 15 Commonwealth staff who were selected for the CRS sponsored Inaugural Certificate in Vocational Rehabilitation Counselling training program at the NSW College of Paramedical Studies in 1975. This course, the forerunner of the programs now offered by the University of Sydney, Cumberland Campus, produced several graduates who have current careers with the CRS namely, Mary Hawkins (NSW), Josephine Dowsett (SA), Bronte Earl (SA), Mike Ryan (Tas) and Brad Davison (NSW).

Whilst working with the CRS, Bert gained an Honours Degree in Psychology from the University of Queensland. He was awarded an ANZAC Fellowship in 1989 and subsequently visited New Zealand to examine health and welfare services. At the completion of his Fellowship period he was invited to undertake a comprehensive evaluation of the rehabilitation functions of the New Zealand Accident Compensation Corporation. He left the CRS to undertake this consultancy. Since 1990 he has been a Senior Lecturer in Psychology and Rehabilitation Studies at Massey University, Palmerston North, New Zealand where he is involved in undergraduate and graduate teaching, national training, and rehabilitation research. He is currently completing his PhD in psychology.

Massey University has offered an undergraduate Certificate in Rehabilitation Studies since 1983. A graduate Diploma commenced in 1989, and Masters and PhD programs commenced from 1992. Future plans include a Masters degree in rehabilitation counselling and an increased undergraduate profile. Massey University is the largest provider of University distance education in the Country with over 22,000 students enroled in this mode in 1993. All courses in rehabilitation, with the exception of the Doctoral program, are offered in both on-Campus and distance modes. Massey has a well established reputation for its education programs in the Pacific and a growing reputation in Asia and Australia. Enquiries from intending students are always welcomed.

ADDRESS OF PRINCIPAL RESEARCHER

Herbert Biggs
Senior Lecturer
Rehabilitation Studies
Massey University
Private Bag
Palmerston North
NEW ZEALAND

Ph: 0011 64 6 356-9099
Fax: 0011 64 6 350-5653
email: H.C.Biggs@massey.ac.nz

Skills and Competencies of Human Service Workers: Focus on Disability and Rehabilitation Environments

Please read the following instructions carefully

This questionnaire will take about 40 minutes to complete. We would like you to find a time when you will not be disturbed, and to answer all the questions in one sitting. Please do this at the earliest convenient time for you after receiving the questionnaire.

You should not write your name on this questionnaire. We have put a code number of the first page to provide an identification. Please remember that all the information that you give us is confidential and will be used only for the purposes of this study.

Please try to answer all the questions and be careful not to miss any pages. It is important that you give your own answers to the questions. Therefore, we would ask that you do not discuss the questions with others.

How do I return the completed questionnaire?

When you have finished please place the questionnaire in the envelope provided and post. You do not need to put a stamp on it. Please read the separate instructions for the consent form on the following page.

Nov. 93

CONSENT FORM

I _____ (full name) agree to take part in the study described in the introduction to this questionnaire.

The nature and purpose of this study have been explained to my satisfaction.

- I understand the questions concern statements about skills and competencies and more global questions about commitment, job stress, and job satisfaction.
- I understand that my responses are confidential.
- I understand that I can skip any question that I wish to.
- I understand that I can withdraw from the study at any time.
- I understand that I can get feedback of the results of this study by filling in my name and address below.
- I understand that I may be invited to participate in a follow up study within the next 12 months. I am aware that I am not obliged to participate in that study.
- I understand that the researchers conducting this study unequivocally guarantee that this sheet with my name on it will be kept in a secure place and that my name will not be linked with my questionnaire answers by any person.

_____ (signature) _____ date

"I would like some feedback about the results of this study"

Please tick one Yes ☐

No ☐

Please print your name and address below.

Name: _____

Address: _____

_____

_____

If you wish to detach this sheet personally, please remove and place in the enclosed smaller envelope marked [consent form]. Seal the envelope and include it with your completed questionnaire in the larger envelope provided for return to the researchers.

Nov. 93

First we would like some general background.

Remember that the information you give us is confidential. Please circle where appropriate.

What is your year of birth? _____

Are you? Female 1
Male 2

How would you describe yourself?

Australian of Aborigine or Torres Straight Island descent 10
Australian of European descent 11
Australian of Asian descent 12
Permanent resident 13
Other 14

What is your highest educational qualification?

No School Qualification 1
Completed equivalent 4 years High School 2
Completed higher School Certificate or Matriculation 3
Completed TAFE Certificate or Diploma 4
Completed Undergraduate Degree or equivalent at University or CAE 5
Completed University Master's Degree 6
PhD or equivalent 7

What is your current employment status?

Employed full time 1
Employed part time 2

How many paid hours of work are you on average contracted for per week?

..... hours

What is your present gross annual income? (excluding your partner's salary and/or benefits. Do not include income from unrelated jobs or other sources).

$.....

How long have your been with your current employer?

..... years ..... months

How long have you worked in the disability & rehabilitation field?

..... years ..... months

How many people doing similar jobs to yours are employed at your place of work (include yourself)? .....

What is your current job title?

. . . . . .

Do you have another professional job title that you have gained through education or training that you could use in other rehabilitation/disability/ human service occupations? (e.g. psychologist, speech therapist etc.). Please state the job title

Title . . . . . .

Below are a number of statements that describe activities which may be undertaken by human service professionals who focus on working with a person who has a disability.

Indicate how often you have done this activity in the past 12 months by circling the appropriate number.

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes frequently always

Assess the significance of a client's disabilities taking into account medical, psychological, educational and family status	0 1 2 3 4	☐
Interview the client to verify that case information is accurate	0 1 2 3 4	☐
Evaluate the client's social support system (family, friends and community relationships)	0 1 2 3 4	☐
Determine appropriate community services for a client's stated needs .	0 1 2 3 4	☐
Determine a client's ability to perform independent living activities . . .	0 1 2 3 4	☐
Identify transferable work skills by analysing a client's work history and functional assets and limitations	0 1 2 3 4	☐
Employ newer applications in vocational assessment including computer based techniques	0 1 2 3 4	☐
Interpret test and/or work sample results to clients and others	0 1 2 3 4	☐
Identify client characteristics to be observed and rated in an actual job or simulated job situation	0 1 2 3 4	☐
Use behavioural observations to make decisions about a client's adjustment to work	0 1 2 3 4	☐
Design work situations for observing specific clients behaviours	0 1 2 3 4	☐
Use assessment data to highlight a client's ability for the purposes of rehabilitation planning	0 1 2 3 4	☐
Match client needs to job characteristics and client aptitudes to job requirements	0 1 2 3 4	☐
Develop a relationship with a client characterised by empathy and positive regard	0 1 2 3 4	☐
Clarify mutual expectations and the nature of the relationship with your client	0 1 2 3 4	☐

APPENDIX C

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes frequently always

Adjust counseling approaches or styles according to the cognitive and personality characteristics of your client	0 1 2 3 4	☐
Apply psychological and social theories to develop strategies for intervention	0 1 2 3 4	☐
Identify social, economic and environmental factors that may adversely affect a client's motivation toward rehabilitation	0 1 2 3 4	☐
Recognise psychological problems (e.g. depression, suicidal ideas) which require consultation or referrals	0 1 2 3 4	☐
Interact with a client to identify emotional reactions to disability	0 1 2 3 4	☐
Assist a client to state specific behavioural goals for personal adjustment	0 1 2 3 4	☐
Determine a client's need for individual, group or family counseling . .	0 1 2 3 4	☐
Counsel a client to help him/her appreciate and emphasise personal strengths	0 1 2 3 4	☐
Assist a client in understanding and coping with stress	0 1 2 3 4	☐
Review medical information with a client to determine the vocational implications of any functional limitations	0 1 2 3 4	☐
Discuss with a client the educational and vocational implications of test and interview information	0 1 2 3 4	☐
Counsel a client to select jobs consistent with his/her abilities, interests and rehabilitation goals	0 1 2 3 4	☐
Relate a client's stated interests and values to vocational choices	0 1 2 3 4	☐
Discuss with a client job market conditions which may influence the opportunity to enter certain jobs	0 1 2 3 4	☐
Develop mutually agreed vocational counseling goals	0 1 2 3 4	☐
Identify and arrange for the required training to maintain a client's successful job placement	0 1 2 3 4	☐
Use supportive counseling techniques to prepare a client for the stress of job hunting	0 1 2 3 4	☐
Instruct a client in job search skills	0 1 2 3 4	☐

APPENDIX C

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes frequently always

Counsel a client regarding desirable work behaviours in order to improve his/her employability	0 1 2 3 4	☐
Monitor a client in employment to determine needs for additional services	0 1 2 3 4	☐
Apply job market information to locating and securing employment for your client	0 1 2 3 4	☐
Use local resources to assist with placement (e.g. employer contacts and colleagues)	0 1 2 3 4	☐
Identify educational and training requirements for specific jobs	0 1 2 3 4	☐
Determine the level of intervention necessary for job placement (e.g. job club, supported employment, on-the-job training)	0 1 2 3 4	☐
Understand the applications of current legislation affecting the employment opportunities for people with disabilities	0 1 2 3 4	☐
Actively seek to change employers' biases and concerns regarding hiring people with disabilities	0 1 2 3 4	☐
Negotiate with employers and/or union representatives to reinstate an injured worker	0 1 2 3 4	☐
Provide prospective employers with appropriate information on a client's work skills and abilities	0 1 2 3 4	☐
Provide information regarding your organizations programs to service providers and other interested parties	0 1 2 3 4	☐
Explain regulations and procedures regarding income maintenance and other benefits	0 1 2 3 4	☐
Provide regular progress reports to the referring agency	0 1 2 3 4	☐
Collaborate with other providers so that services are co-ordinated, appropriate and timely	0 1 2 3 4	☐
Consult with medical professionals regarding functional capacities, prognoses, and treatment plans for a client	0 1 2 3 4	☐
Understand claims processing within your organization	0 1 2 3 4	☐
Clearly state the nature of a client's problem when referring him/her to service providers	0 1 2 3 4	☐

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes frequently always

Select appropriate rehabilitation or educational service providers	0 1 2 3 4	☐
Explain the services of various community resources to clients	0 1 2 3 4	☐
Write case notes, summaries and reports so that others can understand the case	0 1 2 3 4	☐
Actively promote rehabilitation services to businesses and organisations	0 1 2 3 4	☐
Abide by ethical and legal considerations of case communication and recording (e.g. confidentiality)	0 1 2 3 4	☐
Read professional literature relating to business, job markets, medicine and rehabilitation	0 1 2 3 4	☐
Conduct a review of the rehabilitation literature on a given topic or case problem	0 1 2 3 4	☐
Apply the results of published research to professional practice	0 1 2 3 4	☐
Apply the principles of appropriate rehabilitation legislation to daily practice	0 1 2 3 4	☐
Educate a client regarding his/her rights under the law	0 1 2 3 4	☐
Interpret your organisations legislation, policy, and regulations to clients and others	0 1 2 3 4	☐
Promote public awareness of rehabilitation programs	0 1 2 3 4	☐
Identify and question limiting stereotypes of people with disabilities	0 1 2 3 4	☐
Obtain regular client feedback regarding satisfaction with delivered services and suggestions for improvement	0 1 2 3 4	☐
What other skills are you required to have in your position. Please state.		
. . . . .	0 1 2 3 4	☐
. . . . .	0 1 2 3 4	☐
. . . . .	0 1 2 3 4	☐

(Use back of this page if more room is needed)

APPENDIX C

Below are a number of statements that relate to some aspects of the work that you do now.

For each of the following areas of your job indicate how you feel about that by circling the appropriate number.

0	1	2	3	4
not at all	rarely	sometimes	rather often	nearly all the time

Feeling that you have too much responsibility for the work of others	0 1 2 3 4	☐
Having to do or decide things where mistakes could be quite costly	0 1 2 3 4	☐
Not having enough help or equipment to get the job done well	0 1 2 3 4	☐
Thinking that the *amount* of work you have to do may interfere with how well it gets done	0 1 2 3 4	☐
Feeling that you have to do things that are against your better judgement	0 1 2 3 4	☐
Feeling unable to influence your immediate supervisor's decisions and actions that affect you	0 1 2 3 4	☐
Thinking that you'll not be able to meet the conflicting demands of the various people that you work with	0 1 2 3 4	☐
Not knowing what the people you work with expect of you	0 1 2 3 4	☐
Having to deal with or satisfy too many people	0 1 2 3 4	☐
Feeling that your job tends to interfere with your family life	0 1 2 3 4	☐
Being asked to work overtime when you don't want to	0 1 2 3 4	☐
Feeling trapped in a job that you don't like but can't get out of	0 1 2 3 4	☐

APPENDIX C

Please respond to the following statements by circling the appropriate number.

0 ---------- 1 ---------- 2 ---------- 3 ---------- 4
never rarely sometimes fairly often very often

How often does your job require you to work very fast . . . . . 0 1 2 3 4 ☐

How often does your job require you to work very hard (physically or mentally) . . . . . 0 1 2 3 4 ☐

How often does your job leave you with little time to get everything done . . . . . 0 1 2 3 4 ☐

The following statements describe further aspects of your working environment. Please respond in the framework of your current job by circling the appropriate number.

All in all, how satisfied would you say you are with your job?

Not at all satisfied 1
Somewhat satisfied 2
Very satisfied . . . . . 3 ☐

If you were free to go into any job you wanted, what would your choice be?

Would prefer some other job
to the type of job you have now 1
Would want to retire and not work at all 2
Would want the job you have now . . . . . 3 ☐

Knowing what you know now, if you had to decide all over again whether you would take the job you now have, what would you decide?

Decide definitely not to take the job 1
Have some second thoughts 2
Decide without hesitation to take the job . . . . . 3 ☐

In general, how well would you say your job measures up to the sort of job you wanted when you took it?

Not very much like it 1
Somewhat like it 2
Very much like it . . . . . 3 ☐

If a good friend of yours told you s/he was interested in working in a job like yours for your employer, what would you advise?

Advise against it 1
Have doubts about recommending it 2
Strongly recommend it . . . . . 3 ☐

APPENDIX C

Circle the number which best describes how you see yourself in your work.

Happy	0	1	2	3	4	5	6	7	Sad
Successful	0	1	2	3	4	5	6	7	Unsuccessful
Important	0	1	2	3	4	5	6	7	Unimportant
Doing my best	0	1	2	3	4	5	6	7	Not doing my best

APPENDIX C

The following set of statements ask you your feelings about your current working situation.

Please circle the appropriate response.

1 ------- 2 -------- 3 -------- 4 -------- 5 -------- 6 -------- 7
strongly disagree **strongly agree**

Human service is important to my self-image	1 2 3 4 5 6 7	☐
I regret having entered the human service profession	1 2 3 4 5 6 7	☐
I am proud to be in the human service profession	1 2 3 4 5 6 7	☐
I dislike being a human service professional	1 2 3 4 5 6 7	☐
I do not identify with the human service profession	1 2 3 4 5 6 7	☐
I am enthusiastic about human service professional	1 2 3 4 5 6 7	☐
I have put too much into the human services profession to consider changing now	1 2 3 4 5 6 7	☐
Changing professions now would be difficult for me to do	1 2 3 4 5 6 7	☐
Too much of my life would be disrupted if I were to change my profession	1 2 3 4 5 6 7	☐
It would be costly for me to change my profession now	1 2 3 4 5 6 7	☐
There are no pressures to keep me from changing professions	1 2 3 4 5 6 7	☐
Changing professions now would require considerable personal sacrifice	1 2 3 4 5 6 7	☐
I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time .	1 2 3 4 5 6 7	☐
I do not feel any obligation to remain in the human service profession .	1 2 3 4 5 6 7	☐
I feel a responsibility to the human service profession to continue in it .	1 2 3 4 5 6 7	☐
Even if it were to my advantage, I do not feel that it would be right to leave human service now	1 2 3 4 5 6 7	☐
I would feel guilty if I left human service	1 2 3 4 5 6 7	☐
I am in human service because of a sense of loyalty to it	1 2 3 4 5 6 7	☐
I would be very happy to spend the rest of my career with this organization	1 2 3 4 5 6 7	☐

APPENDIX C

	1 strongly disagree	2	3	4	5	6	7 strongly agree	
I really feel as if this organization's problems are my own	1	2	3	4	5	6	7	☐
I do not feel a strong sense of "belonging" to my organization	1	2	3	4	5	6	7	☐
I do not feel "emotionally attached" to this organization	1	2	3	4	5	6	7	☐
I do not feel like "part of the family" at my organization	1	2	3	4	5	6	7	☐
This organization has a great deal of personal meaning for me	1	2	3	4	5	6	7	☐
Right now, staying with my organization is a matter of necessity as much as desire	1	2	3	4	5	6	7	☐
It would be very hard for me to leave my organization right now, even if I wanted to	1	2	3	4	5	6	7	☐
Too much of my life would be disrupted if I decided I wanted to leave my organization now	1	2	3	4	5	6	7	☐
I feel that I have too few options to consider leaving this organization	1	2	3	4	5	6	7	☐
If I had not already put so much of myself into this organization, I might consider working elsewhere	1	2	3	4	5	6	7	☐
One of the few negative consequences of leaving this organization would be the scarcity of available alternatives	1	2	3	4	5	6	7	☐
I do not feel any obligation to remain with my current employer	1	2	3	4	5	6	7	☐
Even if it were to my advantage, I do not feel it would be right to leave my organization now	1	2	3	4	5	6	7	☐
I would feel guilty if I left my organization now	1	2	3	4	5	6	7	☐
This organization deserves my loyalty	1	2	3	4	5	6	7	☐
I would not leave my organization right now because I have a sense of obligation to the people in it	1	2	3	4	5	6	7	☐
I owe a great deal to my organization	1	2	3	4	5	6	7	☐

Nov. 93

The following responses relate to your intentions with regard to your occupation and your current employer.

Please circle the appropriate response as described.

1 ——-- 2 ------- 3 ——-- 4 ——— 5 ------- 6 -------- 7
never **all the time**
very unlikely **definitely**

How frequently do you think about leaving your current employer . . . . . 1 2 3 4 5 6 7 ☐

How likely is it that you would search for a job in another organisation . . . . . 1 2 3 4 5 6 7 ☐

How likely is it that you will actually leave the organisation within the next year . . . . . 1 2 3 4 5 6 7 ☐

How frequently do you think about leaving your current profession . . . . . 1 2 3 4 5 6 7 ☐

How likely is it that you would search for a job in another profession . . . . . 1 2 3 4 5 6 7 ☐

How likely is it that you will actually leave the profession within the next year . . . . . 1 2 3 4 5 6 7 ☐

Would you like feedback on the results of this study. Please tick.

Yes 1

No 2 ☐

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE. PLEASE CHECK THAT YOU HAVE ANSWERED ALL QUESTIONS AND RETURN IT PROMPTLY USING THE INSTRUCTIONS PROVIDED.

APPENDIX D

MASSEY
UNIVERSITY

Private Bag
Palmerston North
New Zealand
Telephone 0-6-356 9099
Facsimile 0-6-350 5603

RESEARCH
OFFICE

1 December 1992

Mr H Biggs
PSYCHOLOGY

Dear Mr Biggs

re: Application "An investigation of rehabilitation skills and competencies important to rehabilitation practitioners in New Zealand" (HEC 92/132)

Thank you for your application which was discussed at the Human Ethics committee meeting on Friday 27 November 1992.

The committee recommends that you identify yourself as the researcher at the beginning of the Information Sheet.

The committee is satisfied that all the ethical issues have been addressed and the application is approved.

Yours sincerely

PHILIP J DEWE
Acting Chairperson
for Human Ethics Committee

c.c. Dr N Long
Professor S LaGrow

APPENDIX D

12th October 1993

Mr Bert Biggs
Psychology Department
Massey University
PALMERSTON NORTH

Dear Bert

I am writing to confirm Ms Lauretta Alessi's approval for you to send the questionnaire to ACC rehabilitation staff. There is obviously no compulsion in them filling it out.

It has been suggested that you may wish to send the questionnaire to a rehabilitation professional other than ACC staff in order to have a more genuine competency model.

The Corporation's approval is conditional upon any comments identifying it or its staff being subject to scrutiny and amendment. If this is causes concern, please ring me.

Yours sincerely

Bert Driessen
ACTING GENERAL MANAGER, OPERATIONS

ACCIDENT REHABILITATION & COMPENSATION
INSURANCE CORPORATION

HEAD OFFICE, SHAMROCK HOUSE, 81 83 MOLESWORTH STREET
PO BOX 242 WELLINGTON NEW ZEALAND TELEPHONE FACSIMILE

WORKBRIDGE

Jobs and Training for People with Disabilities

APPENDIX D

To: All Staff, Workbridge Centres

From: John Meeuwsen

Date: 19 November 1993

Subject: RESEARCH ON CORE SKILLS NEEDED BY WORKBRIDGE STAFF

Mr Bert Biggs, Senior Lecturer in Rehabilitation Studies at Massey University has requested that I cooperate in research aimed at more clearly defining the skills needed by "human service professionals working with people who have a disability" in New Zealand. He advises me that completion of the questionnaire that accompanies this letter would take approximately 40 minutes. I would be grateful if you would assist in this research by responding as requested as soon as you reasonably can.

I am hopeful that this research will complement our active support for the establishment of an Industry Training Organisation. Its findings may also help clarify our own training needs from the perspective of those who actually do the work. In short I am hopeful that we will get an adequate return on the investment of our time.

Thank you for supporting this initiative.

John Meeuwsen.

JOHN MEEUWSEN
Executive Director

APPENDIX D

Multiple Sclerosis Society
of New Zealand Inc.

7th Floor
Rossmore House
123 Molesworth Street
P.O. Box 2627, Wellington

Telephone: (04) 499 4677
Facsimile: (04) 499 4675

29:10:93.

Phone: 06 877 88-28.

Mr. Herbert C. Biggs.
Faculty of Social Sciences.
Massey University.
Private Bag.
PALMERSTON NORTH.

Dear Bert,

I apologise for length of time it has taken me to produce this letter, but it is a sign of the times when the failure of ones computer (new) reduces you to almost total helplessness.
My apologies!

I confirm that a recent meeting of the Advisory & Research Committee of the Multiple Sclerosis Society of NZ agreed to the following;

1. That we would be happy for you carry out investigations/surveys with and about Multiple Sclerosis to further your Academic Vocation.

2. That we would be happy for you to undertake investigations/surveys in conjunctions with Field Officers from the Regional Societies.

3. It is understood that no funding is required from the MS Society of NZ or from the Regional Societies.

4. That, you should carry out any investigations/surveys directly with the various Regional Societies.

5. We would like to hear of your progress and when finished, to see the results of your investigations/surveys.

Bert, I think that about covers your requirement, during the next few days we will advise the Regions of your intentions, mind you I see no reason why you cannot proceed when ready.
All the very best with your project.
In the meantime,
Kindest regards.

Hamish Thomson

APPENDIX E

MASSEY
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Telephone +64-6-350 5184
Facsimile +64-6-350 5653

FACULTY OF
SOCIAL SCIENCES

DEPARTMENT OF
PSYCHOLOGY

REHABILITATION
STUDIES SECTION

14 January 1994

Dear Respondent

Re: Questionnaire on Human Service Skills

In early December 1993 you would have received in the mail a questionnaire relating to the above with several attachments including a letter of explanation of the Project from myself.

I appreciate that if you had intended to complete and return the questionnaire, it may have been easily overlooked in the rush of the festive season.

At the time of writing this note, I haven't recorded your response as being returned.

With research of this nature, the greater the number of responses received and analyzed the more valid are the conclusions drawn. Your response is valued and will be used in the analysis if you can complete and return before the end of January.

If you are able to complete and return the questionnaire within the next fortnight I would be most grateful. The majority of respondents to date have indicated they would like feedback on the research which from my point of view is most gratifying.

If your response is in the mail and our letters cross please accept my thanks in advance, otherwise I look forward to receiving the completed questionnaire in the near future.

Thank you for participating in the research.

Sincerely

Herbert C Biggs
Senior Lecturer
Rehabilitation Studies
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