REPORT OF GRADUATE INTERNSHIP
AND EVALUATION OF PSYCHOLOGY SERVICES
AT THE
WORK SKILLS EVALUATION PROGRAM

By

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An internship report and research project submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Education

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Abstract

This is a report of an eight-week graduate internship with the psychological services group of the Work Skills Evaluation Program (WSEP) at the General Hospital. WSEP provides vocational assessment services primarily for injured workers referred by the Worker's Compensation Commission (WCC). Part One describes the internship setting, outlines assessment activities, discusses observations and impressions, and suggests improvements to assessment policy and practice. Part Two presents an evaluation of the psychology services at WSEP, conducted to find out whether clients felt the services helped them achieve vocational rehabilitation. Interview data from a random sample of clients referred to WSEP in 1993 were analysed using a qualitative research approach. While the majority of clients abandoned rehabilitation, most felt the assessments performed by psychologists at WSEP accurately predicted their academic abilities and career interests. Decisions to quit rehabilitation or to pursue it at a slower pace were closely associated with other factors such as pain management, age, and psychological distress. The findings suggest that success in rehabilitation can be enhanced by changes in the individual through skills training, assertiveness training, and through environmental adjustments that may eliminate or reduce barriers to specific training and employment. Recommendations are made for ongoing assessments and interventions to better support injured workers in training and employment, and for research aimed at improving assessment instruments and policies.

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Acknowledgments

I wish to acknowledge the staff of the Work Skills Evaluation Program, and the Director, Ms. Donna Reimer, M.A. (Psychology), for accepting me as a member of the psychology team during the internship and for their unfailing courtesy and helpfulness. Special acknowledgment goes to Dr. Ed. Drodge, Assistant Professor, Faculty of Education, Memorial University of Newfoundland, whose assistance was invaluable during the internship and in writing this report.

Introduction

From June 24, 1996 to August 16, 1996, I completed an eight-week graduate internship with the psychological services group in the Work Skills Evaluation Program (WSEP) at the General Hospital. WSEP is a division of the hospital's Psychology Department. The internship was an opportunity to improve my skills in test administration and interpretation, counselling, program evaluation, and to broaden my experiences by working with professionals from several disciplines. The focus of my experience as an educator is developmental, which emphasizes human growth and development in counselling and assessment. An internship in a hospital setting offered the opportunity to observe and participate in vocational assessment and career counselling that focussed on adults and applied a clinical rather than a developmental approach to vocational evaluation.

WSEP is a vocational assessment service. It provides psychological assessment, functional capacity evaluation, analysis of social supports, and vocational consultation for adults who acquire mid-career disabilities because of work related injuries. I was attached to the psychology unit that administers psychological tests and inventories to determine cognitive levels, learning problems, training potential, aptitudes and interests. During my internship, I evaluated the unit's effectiveness in helping clients' achieve the objective of vocational rehabilitation. The evaluation project, undertaken to satisfy the research component of my internship, attempts to measure the unit's success by examining the relationship between recommendations for retraining and employment and the subsequent vocational behaviour of persons who received assessment services.

Part one: Report of Graduate Internship at The Work Skills Evaluation Program

Description of Internship Setting

WSEP was established in 1981 to provide assessment services for clients with special vocational needs. The typical client is an injured worker referred to the program by the Workers' Compensation Commission (WCC) for assessment of physical, learning, personal and other factors that affect employment and daily living activities. Other referral agencies include Human Resource Development Canada (HRDC), the Rehabilitation Division of the Department of Social Services, lawyers, physicians, and insurance companies. Costs are billed to the referring agency.

WSEP's objective is to help individual clients and their sponsors develop vocational plans that reflect clients' physical and intellectual capabilities and personal characteristics. The program uses a multidisciplinary medical model approach. Occupational therapists, psychologists, psychological assistants and social workers provide the primary services of psychological assessment, functional capacity evaluation, and vocational counselling. This core group has access to other health services available through the hospital, such as speech pathology and dietetics.

Clients may register for one or more of the primary services, but most come for a complete work skills evaluation involving all assessment services. I was affiliated with the psychological services group, which provides assessments of cognitive level, learning

problems, training potential, aptitude and interests. Psychologists use the results of these assessments in vocational counselling to help clients identify suitable career paths.

Work skills' evaluation is the first step in the vocational rehabilitation of injured workers referred to the program by WCC. WSEP's role in the process includes identifying appropriate rehabilitation objectives and the services needed to achieve them. Vocational assessment and counselling are viewed as a separate component of rehabilitation. WSEP staff is not involved with the client after vocational assessments are completed.

Supervision

The internship was supervised by a university supervisor and a field supervisor. The university supervisor was Dr. Ed Drodge, Assistant Professor, Faculty of Education, Memorial University of Newfoundland. Ms. Donna Reimer, M.A. (Psychology), the Director of Chronic Pain Management Centre and WSEP, was the field supervisor. She controlled access to available learning opportunities and based her selections on a standard policy for assigning work to psychological assistants. The policy, adapted for the internship, is presented graphically in Figure 1.1. Additional supervision was provided as appropriate by various members of the Department of Psychology, since part of my internship was spent observing other programs in the Psychology Department to obtain a general knowledge of the variety of roles and services performed by clinical psychologists at the Centre.

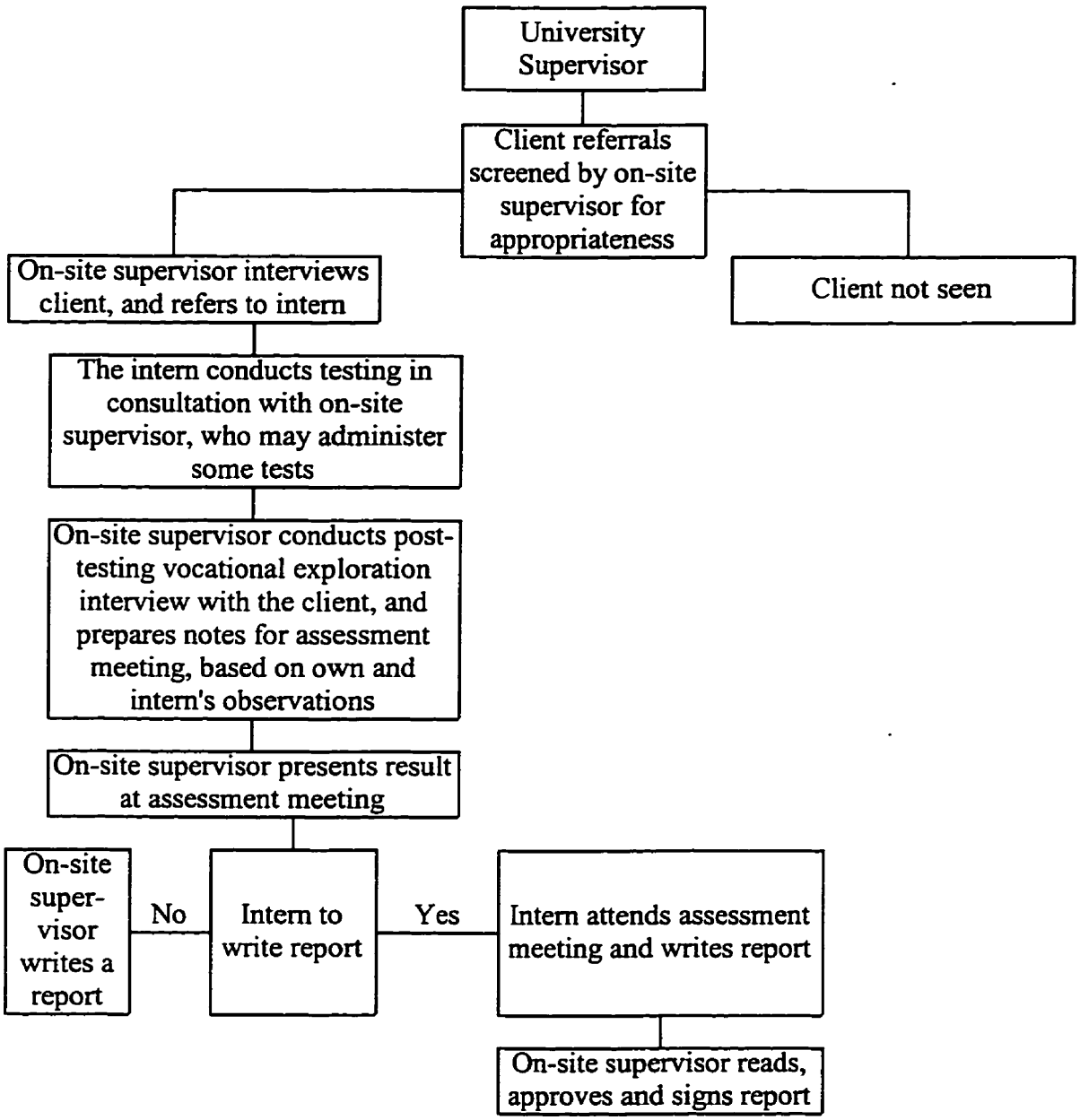

Figure 1.1 Supervision Flow Chart

Internship Learning Plan

Five learning objectives were identified in the internship proposal, and activities to enable achievement of the objectives were associated with each objective. The objectives and associated activities are shown below, and are followed by a description and discussion of activities performed or observed during the internship. The discussion is intended to provide descriptive information from which the reader can form a reasonable opinion of the extent to which stated objectives were achieved during the internship.

Objectives and Activities

General Objective 1.

To gain greater knowledge and experience in individual career counselling.

Activities

1. Observe the field supervisor in career counselling sessions with at least two clients, from the initial interview to the final patient feedback.
2. Discuss and review each observed session with the field supervisor.

General Objective 2.

To gain experience with the instruments used in vocational assessment.

Activities

1. Become familiar with instruments used by WSEP to assess intelligence, academic achievement, aptitude, and interest.
2. Discuss test materials and administration procedures with the field supervisor or psychological assistant.
3. Accept a weekly assignment of one client to whom I will administer psychological instruments as outlined by the field supervisor.
4. Review test results with the field supervisor and discuss how test results should be interpreted and incorporated into a report and recommendations.
5. Prepare a psychological report on at least two clients integrating data obtained from psychometric tests I administered.

General Objective 3.

To participate and gain supervised experience in consulting with other health care professionals involved with the client.

Activities

1. Review relevant reports written by other health care professionals.
2. Observe team meetings concerning the clients to whom I administered psychological tests.
3. Participate in the team meetings about clients for whom I prepared a full psychological report.

General Objective 4.

To become more familiar with the various programs offered by the Psychology Department at the Leonard A. Miller Centre.

Activities

1. Review the services provided by the Psychology Department at the Miller Centre with the Director of Psychology, Dr. Olga Heath.
2. Interview psychologists participating in various programs, such as The Chronic Pain Management Centre, Adult Rehabilitation, The Eating Disorders Group, and Geriatric Outpatients.
3. Observe psychologists working in these settings.

General Objective 5.

To evaluate WSEP to determine its success at predicting an appropriate educational level for career training.

Activities

1. Obtain the "Work Skills Training Recommendations Follow-Up" questionnaire used in evaluating WSEP.
2. Use the questionnaire to obtain data from former clients of WSEP.
3. Analyze the data collected from the Program participants.
4. Review the literature on the ability of psychological assessments to predict educational success accurately.

5. Report and discuss the results of the evaluation with professionals in the Work Skills Program and with the university supervisor.

Discussion

The first week of my internship was an orientation. I studied test manuals and practiced the administration of instruments used by WSEP to evaluate intelligence, academic achievement, aptitude, and interest. I also shadowed the professional activities of a psychological assistant and observed specific techniques used in administering tests to clients who suffer from chronic pain. During the second week I functioned as a member of the assessment team. I observed intake sessions, administered and scored psychological tests, made behavioural observations, wrote reports, and participated in team meetings that reviewed assessments and formulated recommendations. This section describes my participation in these activities and my reflections about them, and provides a brief account of my observations of the work of psychologists in other clinical areas.

Intake Interview

Generally, clients are referred to WSEP by a third party, usually WCC, and assigned to a staff psychologist. Before meeting the client for the first time, the psychologist reviews information about the client provided by the referring agency and usually has access to the client's medical records through the hospital. The client's first

contact with the Program is at an intake interview with the staff psychologist. The purpose of this interview is to gather information from the client and to inform the client about the services provided by WSEP.

Although the interview appears loosely structured and free-flowing, the interviewing psychologist follows a standard format that corresponds to the elements of a "background questionnaire" outlined in Nathan & Hill (1992):

1. Bio data (name, address, telephone, age, marital status, etc.)
2. Education and career details
3. Aspects of education, training, and career enjoyed/disliked
4. Aspects of education and training good/poor at
5. Occupations of family, partner
6. Occupations considered
7. Hobbies and interests
8. Description of current situation (injury)

In the second phase of the intake interview, the psychologist explains the purpose of each assessment procedure scheduled for the client and who will do them, and describes the tests they will be asked to complete, their purpose, the counselling procedure, and the team consultation process.

Although clients are given an opportunity to comment and ask questions during the intake interview, most are passive participants. There is no explicit effort to solicit responses that might reveal feelings of anxiety about the assessment or the referring

agency. Often, these feelings were just below the surface and emerged later, usually during the testing process.

At the conclusion of the intake interview, clients are asked to sign standard forms consenting to participate in WSEP and authorizing release of the final report to the referring agency (Appendix A). The request for blanket authorization to release information from assessment and counselling sessions to the referring agency could be problematic for the assessment process. Clients had no idea what information the assessments would produce, or how it could be used by the referring agency. Injured workers in particular were generally suspicious about the motives of WCC and were uncertain about their relationship with WSEP. They felt WSEP and WCC were connected in some way, and the apprehension was not effectively dispelled during the intake interview or at any other stage of work skills evaluation process. Nathan and Hill (1992) point out that, "In such a potentially threatening referral situation, it will be hard, if not impossible, to establish the trust necessary for open and effective career counselling" (p.43).

Information gathered during the intake interview is later combined with information from medical records and the referring source, behavioural observations during testing and counselling, test results, and the outcome from a vocational counselling session. These five areas of information are the bases for the psychologist's conclusions and recommendations to the client and referring agency.

Test Administration and Scoring

Beginning in the second week, the largest proportion of my time was spent administering and scoring tests. Although WSEP had a large collection of test instruments, the following were used most frequently:

1. Wechsler Adult Intelligence Scale - Revised (WAIS-R)
2. Wide Range Achievement Test - Revised (WRAT-3)
3. Tests of Adult Basic Education (TABE, form 6, level M)
4. Canadian Adult Achievement Test (CAAT)
5. Career Ability Placement Survey (CAPS)
6. Differential Aptitude Test - Canadian Edition (DAT)
7. Safran Interest Inventory (Safran)
8. Interest Determination, Exploration and Assessment System (IDEAS)
9. Reading Free Vocational Interest Inventory (Reading Free)

The normal test battery consisted of the WAIS-R, the WRAT-3, portions of the TABE, portions of the CAPS, portions of the DAT, the Safran, and the IDEAS. If academic achievement was beyond that measured by the TABE, portions of the CAAT were administered. The Reading Free Vocational Interest Inventory was administered to non readers in place of the Safran and the IDEAS.

Testing focused on the areas of intelligence, academic achievement, aptitude, and interests. Test results were used by the counsellor primarily to help the clients understand

their employment skills, interests and preparation. Personality and attitude tests are rarely administered at WSEP.

The combination of intellectual and academic testing appeared to give an adequate picture of ability for upgrading or post-secondary training. The Safran and Reading Free inventories used to measure vocational interests and preferences were not appropriate for the population targeted by WSEP. Nevertheless, the profiles of vocational interests in the final report were described in relation to the norms used in the Safran and Reading Free Manual.

Safran was designed for students in Grade 9 through first year university (Safran, 1985). Reading Free was normed on populations of borderline to intellectually challenged individuals in trade school and used a picture-preference format that required no reading and little or no verbal response. The pictures used in Reading Free were drawn from descriptions of job titles contained in the "Guide to Jobs for the Mentally Retarded" (Pornicky and Presnall, 1976). WSEP clients are mature adult workers seeking a new career. The use of interest inventories designed and normed for less mature populations aroused negative feelings in some clients. Some complained that the language and content of the tests did not respect their life experiences and maturity. One remarked that he felt he was being asked "what do you want to be when you grow up?" Such feelings likely affected the performance of some clients and undermined the accuracy of the results.

Most clients were not voluntary participants in WSEP, but were referred by the WCC. Some exhibited anxiety about the outcome of the assessment, and worried that their benefits might be reduced or canceled if WSEP found they could work in a particular occupation. Others were skeptical that such a determination could be made based primarily on the results of pencil and paper tests. The process was particularly stressful for clients who were suffering from chronic pain and uncertain about their own ability to work in any job.

Researchers have found that many individuals who present chronic physical symptoms, like most WSEP clients, also exhibit disturbances of cognition, affect, and behaviour (Bradley, Prokop, Gentry, Vanderheide, and Prieto, 1981). Dunn and Safford (1967) also report significant negative correlations between psychological stress and performance on intelligence tests, and between test anxiety and performance on intelligence tests. Injured workers at WSEP typically present symptoms of psychological or physical distress. Because of the potential affects of these symptoms on test results, vocational evaluation should routinely include an assessment of psychological status including depression, stress, anxiety and self-esteem (Stewart, Peacock, Parsons, and Johnson, 1984).

Currently, WSEP assesses psychological status only in cases where clients' exhibit extreme physical and audible signs of distress such as trembling and shortness of breath. One client I tested seemed so distressed by the process that I requested permission to administer Beck's Depression (BDI) and Beck's Anxiety (BAI)

Inventories. The results confirm that the client suffered from depression and severe anxiety. However, there is no formal process to relate measurements and observations of psychological distress to performance on tests that attempt to measure intelligence, achievement, aptitude and interests. The data was recorded in the psychological report, but was not discussed in the team meeting or referenced in the final recommendations.

Testing adults who suffered chronic pain presented a new experience for me. Clients were closely monitored for changes in their comfort level that might adversely affect assessment results. They were offered physical aids such as adjustable chairs, foot stools, Obus Forme cushions, slant boards, and pencil grips to assist them during the testing process. Usually clients refused the aids when first offered and had to be encouraged to try them out. Once they did, most clients found the tools helpful and continued to use them throughout the testing process. Clients typically wanted to finish the testing as soon as possible and tried to work through their increasing discomfort. Usually, the test administrator had to insist on rest breaks to maintain a reasonable level of comfort for the client and to ensure the relative accuracy of test results.

Clinical Observation

WSEP uses clinical observations to obtain information about a client's spontaneous behaviour in the test situation. Clients are not observed in more natural settings, such as home or work, so there was no baseline to compare behaviour in the clinical setting with behaviour in more natural surroundings.

The observation methods practiced at WSEP provide a record of observed behaviours and the examiner's general impressions, but they are not suited to obtaining quantifiable data. WSEP does not have standard guidelines for the systematic observation and assessment of behaviours. There is no classification, sequencing, definitions, check list, protocol or any other guide that would add consistency to clinical observations and increase their accuracy. Tests are administered by psychological assistants. They are expected to note behaviours that may be relevant to the interpretation of test results or to the overall assessment of a client's vocational fitness. Their clinical observations are written up by the assistant or the supervising psychologist and included as general observations in the final report. However, there is no formal procedure for reporting how the observations are used in interpreting test results and in counselling, or how anxieties and other stressors that may have been observed could affect test results.

When I administered tests, I was responsible for observing and recording behaviour during the testing sessions. The period of observation was usually too short to identify specific behaviour for closer observation. Consequently, only global behaviour that had a relatively high frequency could be observed, such as aggression, attention, and sociability. In my observations, I made anecdotal records of anything that seemed noteworthy to me, but paid particular attention to specific categories that I considered appropriate, such as: attitude toward testing, rapport, conversation, passivity or aggressiveness, stress, anxiety, cooperativeness, work habits, attention and concentration, self-esteem, physical comfort, fine and gross motor skills, and possible vision and hearing

problems. Since observation time was limited, I usually recorded descriptive statements of behaviours as they occurred and kept interpretative statements to a minimum. However, in some instances behaviours were so dominant or frequent that they allowed for inferential statements about factors controlling the behaviour. For example, a client exhibited extreme physical trembling and sighed heavily during testing and I concluded she was experiencing stress or anxiety. Subsequent testing, using the BAI, confirmed my observations. All my written observations were accepted by the field supervisor and included in the final report under the heading "General Observations." An example of a general observation that I wrote is exhibited in Appendix B.

Vocational Counselling

I did not observe a career counselling session. Counselling typically occurs in a one-on-one setting, and the Field Supervisor felt that the presence of another person might inhibit rapport and reduce the level of confidentiality the client needed to process personal information and make personal decisions. However, I discussed the counselling practices and procedures with my Field Supervisor and wrote a complete psychological report for one client, in consultation with the supervisor, that summarized information from the counselling session and made relevant recommendations.

The purpose of the vocational counselling session is to promote a client's personal awareness of strengths and weaknesses in relation to the world of work, and to help generate ideas about employment options. Each session involves only a client and the

psychologist (counsellor), and is uninterrupted by any other activity. Clients are responsible for decision making, and the counsellor is responsible for facilitating the process. While the responsibilities of client and counsellor are not explicitly outlined, the guidance given in face-to-face counselling is aimed at helping clients make informed career-related decisions.

In the initial phase, test results are reviewed and discussed to help clients understand what they would like to do by examining their interests, and what they may be able to do by examining their aptitudes, skills and qualifications. The counsellor also takes time to explore information from the clients' direct work experiences and is alert to things they find satisfying and rewarding. Clients may also be helped to examine perceived blocks to employment opportunities. For example, an injured client will typically want to discuss the injury and the extent to which it may limit future options. Generally, clients are encouraged to keep a broad perspective about job possibilities before narrowing down the choices.

In the second phase, the clients are directed to relevant information about occupations. Clients are responsible for investigating career, education and training options, exploring job opportunities, and beginning the process of integrating that information with their enhanced understanding of personal strengths and weaknesses. The primary source of information about careers is the career library at WSEP. Clients also have access to the CHOICES program, a job data base that describes the education, abilities, aptitudes, and interests of individuals working in various careers in Canada.

The final phase is another one-on-one session in which each client is helped to relate the occupational information as objectively as possible to his or her self-assessment. Clients are encouraged to evaluate their ideas in terms of realism, entry requirement, lifestyle, family relationships and other issues that may help clarify their level of confidence in the suitability of an occupation. Clients are then encouraged to think about the steps they need to take to prepare for successful participation in the selected occupations, such as upgrading basic education, direct job training, further education, physical evaluation, personal counselling, and improving job search skills.

Team Meeting and Exit Interview

The team meeting is the final assessment activity in the work skills evaluation of WSEP clients. Since most clients are referred for a complete work skills evaluation, the team assigned to a case usually includes a psychologist, psychological assistant, social worker, and an occupational therapist. The psychologist is responsible for psychometric testing and vocational counselling, the social worker looks at social supports available to clients in their pursuit of occupational goals, and the occupational therapist evaluates their physical capabilities.

The goal of the team meeting is to review assessment results and reach agreement on vocational recommendations. The meeting is chaired by one of the team members assigned to the case. Team members make oral presentations of their findings and that is followed by a general discussion aimed at reaching agreement on suitable vocational

recommendations. While the meeting itself is informal, the approach provides a broad range of information that is helpful in formulating a plan of action for presentation to the client and the referring agency.

The meeting of the assessment team is immediately followed by an exit interview with the client, who may be accompanied by a representative from the referring agency. All team members participate in the exit interview. They summarize the results of assessments performed in their respective areas, and the chair presents the recommendations and an action plan agreed to in the preceding team meeting. The recommendations usually support employment options, including vocational training, physical therapy or ergonomic supports, and job placement. Part of the process in the exit interview is to encourage the client to maintain momentum toward finding suitable employment. In rare instances, where an injury or other impairment clearly constitutes a major employment disability, the team may conclude that employment is not appropriate for the client at the time of the assessment.

Report Writing

Following the team meeting, each discipline prepares a written report. The final report consists of the compiled reports and an attached cover sheet containing the recommendations agreed to at the team meeting. A copy of the final report is sent to the referring agency with the client's permission. However, the client is given a copy of the report only if he or she requests it, presumably because the findings and

included in the report were discussed with the client during the exit session at the team meeting.

The psychological report is part of the final report. The format and some of the generic content of the psychological report are generated from a computer template (see Appendix C). I completed the first three sections of the template. The first section recorded behavioural observations, the second listed the tests I had administered to the client, and the third gave the scores the client achieved and included a standard description of each test administered. For all but one client, the supervising psychologist completed the section entitled "Conclusions and Recommendations" that included information from the vocational counselling session and appropriate recommendations made at the team meeting. The behavioural observations I recorded were included verbatim in the report. Interpretation of the test result was discussed with the psychologists and the information written in the report reflected my analysis.

As noted earlier, many factors can influence test scores and have to be considered in their interpretation. Chronic pain symptoms, concern about compensation benefits, and reactions to the test instruments were commonly observed at WSEP. Psychologists who interpreted test results and used the information in counselling did not directly observe client behaviour during testing, but relied on my recorded observations or, more usually, the observations of a psychological assistant. This separation of responsibilities for data collection and data interpretation in relation to behavioural observations

increases the potential for error in clinical prediction, especially if there are no systematic classification and detailed definitions of the behaviour to be observed.

Observation of Other Psychological Services

I was able to observe psychologists working in other divisions of the Psychology Department at the General Hospital. This provided me with a broader knowledge of clinical psychological services in a hospital setting. Educators refer students who need to be assessed for psychological disorders to hospital-based clinical programs, and it was helpful to understand more about the process that occurs after a referral is accepted.

I shadowed a psychologist during rounds who worked in the rehabilitation and injured workers' program. Rounds were typically meetings of hospital professionals working with the patients - physicians, physiotherapists, recreational therapists, occupational therapists, nurses, social workers, and psychologists. Hospital professionals presented and discussed findings from their work with patients and recommendations for patient care were based on their collective findings. I spent some time with another psychologist working in the area of eating disorders and discussed her work in individual and group counselling of patients diagnosed with bulimia and anorexia.

Program Evaluation

Finally, I conducted an evaluation of WSEP based on a questionnaire developed by WSEP and administered to former clients. A description of the evaluation and analysis of the data are presented in Part Two.

Issues in the Practice of Vocational Assessment

Almost all WSEP clients are injured workers who are chosen by WCC for rehabilitation intervention. The vocational rehabilitation services funded by WCC follow a traditional sequence of assessment, training and job placement. Assessment services are purchased from WSEP and include recommending the outcomes to be achieved through rehabilitation and identifying which services are needed to achieve those outcomes. Decisions that follow from those assessment activities shape the injured worker's path in the rehabilitation process.

In light of the important decisions that follow from vocational assessment, a thorough review of assessment practices in vocational rehabilitation would be helpful to all parties. The intent of this section is to ask some questions about commonly used approaches, and point to alternative ways of thinking about vocational assessment that may improve assessment procedures.

Client Selection and Participation

WCC's role in vocational rehabilitation raises potentially troublesome questions about how and why individuals are selected for rehabilitation services, including vocational assessment and counselling. Is there a link between claims adjustment and rehabilitation? Are selections based on an objective diagnosis, time away from work, or some other criteria? What tests are used? Are injured workers compelled to accept rehabilitation services? The answers to these questions are not immediately obvious. It is apparent, however, that many injured workers feel compelled to accept rehabilitation services and believe it is a no win proposition for them. In their view the process will inevitably lead to lower wages if they get a job or reduced benefits if they are not successfully rehabilitated. Psychologists and other professionals involved in vocational assessment should be concerned about this perception. Vocational assessment is a stressful experience for injured workers even in favourable circumstances. Anxiety, alienation and financial worry intensify symptoms of stress and may generate inaccurate results from the assessment procedures.

Several American states have eliminated mandatory referral for rehabilitation, and others have introduced incentives to encourage voluntary participation in rehabilitation activities. In California, for example, injured workers choose to participate in rehabilitation and decide when to start, and Minnesota uses a system of incentives for workers and employers based on whether a worker returns to employment (Berkowitz and Berkowitz, 1991).

Whether or not referrals are mandatory, vocational evaluation programs, such as WSEP, can increase the value of the assessment experience by making clients more active participants in assessment activities. Vash (1984) proposed that clients have access to all evaluation data and become equal-status collaborates in the evaluation process. The instrument Vash recommended was a Know Thyself Manual which would be given directly to the client and include test results and professionals' comments and interpretation. The Chicago Jewish Vocational Service designed a client-centred evaluation service in which clients are responsible for developing their own evaluation plans and participate as members of the evaluation team. Compared to more traditional assessment methods, participants in such client-centred programs have a better knowledge of personal attributes in relation to vocational choice, and are more confident in vocational decision making (Farley, Bolton, and Parkerson, 1992).

Accountability

A related issue has to do with an appropriate code of ethics for psychologists and other professionals involved in vocational rehabilitation services that are funded by third parties. Berkowitz and Berkowitz (1991) suggest there is a need for an inquiry into an appropriate code of ethics for professionals who are retained by workers' compensation agencies or other insurers to provide rehabilitation services. They ask two questions:

Is there a responsibility to the profession that transcends the question of

who is paying the bills? Should one expect objective findings from a rehabilitation professional, regardless of who retains the professional? Murphy and Hagner (1986) say that evaluators should be more accountable to clients regarding the specific purpose of the assessment, the recommendations, and the rights of individuals undergoing assessment. There is, at a minimum, need for procedures that reassure sometimes skeptical clients that assessment activities and recommendations are not influenced, directly or indirectly, by the funding agency. To that end, guidelines for practise in vocational assessment and counselling should include the following:

1. Client readiness for vocational assessment should be carefully considered. If clients show symptoms of stress, appear indifferent, or seem reluctant to get involved in rehabilitation, psychologists should delay assessments and explore procedures that may help the client become more willing and effective participants in the assessment process.

2. Before assessment, clients should be provided a written statement giving the reasons for the evaluation, identifying the individuals and agencies who may see the report, describing how the information will be used for decision making, and spelling out what the clients' rights are in developing and approving the final recommendations (Murphy and Hagner, 1986; Sattler, 1992).

3. During the evaluation, clients should have access to their test results, including the psychologist's interpretations and comments.

4. Clients should give informed consent for the release of assessment information to third parties. Informed consent implies that clients should understand

what is in the report and how agencies and individuals who want the information may use it. Additionally, clients should understand that they can maintain vocational counselling confidentiality despite the fact that the service might be paid for by an outside agency. As Nathan and Hill (1992) point out, the outside agency must respect the client's right to such privacy.

Assessment, Training, Placement Paradigm

The practice of assessment in vocational rehabilitation is limited by the traditional view of rehabilitation as a linear process that starts with assessment, moves to training, and ends in job placement. Bond and Dietzen (1993) question the validity of assessment processes that stop before job placement:

> Both the context - occurring in artificial settings under artificial conditions - and the timing - occurring before the client has begun real work - make the conventional prediction task a virtual impossibility. We have asked too much of our vocational assessment procedures. (p. 79)

Proponents of supported employment (SE) view assessment as an ongoing process that links together the various elements of rehabilitation, and occurs intensively after a client is placed in a job. For injured workers and other clients with disabilities, assessments should be repeated over time to identify both changes in the individual and adjustments that may be needed to eliminate barriers to training and employment. Using information from ongoing assessments, appropriate changes may be possible in the training or work

environments, or rehabilitation plans may be modified to enhance the prospect for successful and satisfying employment outcomes.

Validity of Vocational Interests Inventories

The vocational assessment of injured workers has generally suffered from a lack of interest inventories specifically designed for mature workers who acquire mid-career disabilities. The technical capacity exists to replace existing instruments or to make them more sensitive to the target population, but it is unrealistic to expect that customized interest inventories will be available very soon. It may be possible to improve the validity of existing inventories by ensuring that reading levels do not interfere with test performance, reducing test anxiety, and eliminating items that may be biassed against the target group.

Psychologists should be cautious in using instruments that are not designed or modified for the target population. Clients should be informed up front about the limitations of the tests, detailed notes should be kept when the client is taking the test, and "doubts concerning the reliability or validity of test results should be clearly stated in the report" (Sattler, p. 764).

Use of Clinical Observations

By definition, injured workers are referred to WSEP for vocational assessment because they have difficulty performing one or more tasks related to their former

employment or in daily living. For example, visible and audible signals of pain are often observed during evaluation activities, including guarded movement, awkward gait, spasms and shortness of breath. Feelings of distress such as anxiety, depression and alienation are also factors in work place injury, and may precipitate or maintain chronic pain behaviour following a relatively minor injury. Professionals involved in vocational assessment are also aware that vocational assessment can be a stressful experience for injured workers and can aggravate pain symptoms.

Evaluators should observe, record and report all behaviour, including chronic pain symptoms, that may affect the results from an assessment procedure. The following guidelines suggested by Sattler (1992) for reducing error in observation is especially relevant to observing injured workers in assessment situations:

> Reliability can be increased by having clear and precise definitions of behaviours, systematic and precise rules governing the observations, well-trained observers, and observation periods that are not excessively long. (p. 519)

He also advises professional observers to periodically compare their results with those of other trained observers or to standard criterion recordings to check reliability.

Psychologists at WSEP are cautious about inferring a link between pain symptoms and test results in specific cases for a variety of reasons. Chronic pain is not well understood, even by the medical profession, and is difficult to diagnose. It can be learned behaviour and that has led to commonly held biases against chronic pain sufferers.

Observations of chronic pain can increase the perception of disability and reduce the evaluator's appraisal of appropriate vocational options. Finally, there is a lack of professional literature to guide vocational evaluators in working with chronic pain clients (Costello, 1984).

Sattler (1992) advises caution in making inferences from observations if the sources of information are inconsistent, but if there are consistent findings from several sources, psychologists should not be reluctant to make inferences about the effects of observed behaviours on test results. In particular, they should be alert to the possibility that chronic pain symptoms obscure feelings of anxiety, depression and alienation. Clients who exhibit chronic pain behaviours should be routinely evaluated for symptoms of psychological distress. If the evaluations produce positive results, psychologists should relate that information to the clients' performance in assessment activities.

Summary

Part One describes my graduate internship with the psychological services group in WSEP at the Leonard A. Millar Centre of the St. John's General Hospital. The placement was beneficial to me. I met most of the objectives presented in my internship proposal, gained valuable experiences in assessing clients in a clinical setting, worked with other professionals as part of an assessment team, and sharpened my awareness of the diverse areas of psychological practice and the resources available in the community.

WSEP uses three approaches in vocational assessment; they are, interviewing, paper-and-pencil abilities and interests tests and counselling, and personal assessments involving social workers and occupational therapists. My internship concentrated on testing and counselling activities that comprise the practice of psychologists employed in the program.

During the internship, I gleaned a number of impressions about the adequacy of approaches used in assessing injured workers, which is the principal client population for WSEP. These include the need for (a) interest inventories that more closely match the characteristics of the client population, (b) more general use of standardized instruments to screen clients for symptoms of psychological distress commonly associated with workplace injury, (c) training and standard protocols for observing and interpreting behaviours in the client population, and (d) a more client centred approach to vocational evaluation. In a more general context, I formed the impression that a review of the relationship between workers' compensation and vocational rehabilitation, especially in the areas of client selection and reporting, would increase the value of the rehabilitation experience for injured workers. Finally, a change in the traditional rehabilitation model of assessment, training, and job placement seems overdue. The process should be integrated and co-ordinated by ongoing assessments that incorporate analysis of client needs and preferences both in relation to changes in the individual and to adjustments that may be needed in the individual's environment.

Part Two: Evaluation of Psychology Services at The Work Skills Evaluation Program

Introduction

The purpose of the research component of my internship is to examine the relationship between recommendation for retraining and employment made by the psychology unit at WSEP and the subsequent vocational behaviour of persons who received vocational rehabilitation services in 1993.

Traditionally, vocational rehabilitation programs measure their success by the number of clients who are rehabilitated. Clients are considered rehabilitated if they are suitably employed for a reasonable period of time after receiving vocational rehabilitation services (Gibbs, 1990). However, this is an inadequate model for analyzing the effects of the recommendations made by the psychology unit of WSEP on the subsequent vocational behaviour of its clients. The recommendations of the psychology unit for training and career placement are based on assessments of personal variables, including intelligence, aptitudes and interests, and on information about the client's physical disabilities. While these individual variables have value in identifying suitable areas for vocational training and employment, they are not a sound basis for predicting or measuring success in achieving training and employment goals for adults who acquire disabilities in mid career. For this special population, external factors are powerful influences in shaping their labor market experiences. For example, location, transportation, and the availability of rehabilitation services, which may not have been

significant factors before the onset of a disability, may now present major obstacles to an injured worker's effort to get back into the workforce. Therefore, any attempt to measure success in achieving retraining and employment goals needs to be sensitive to the impact of forces in the physical and social environment.

This study examines the success of injured workers in retraining and employment within the context of client identified environmental predictors. Its purpose is to provide information to the psychology unit of WSEP about the success of their clients in achieving training and employment goals. The study assists in understanding the complex physical and social phenomena that impact on the vocational and learning behaviour of injured workers. Evidence of the power of contextual variables on adult learners with disabilities has implications, too, for understanding the contextual variables that bear on the educational development of children and youth with disabilities in the school system.

Interpretive Framework

The purpose of a vocational assessment is to make predictions concerning ability to work, potential vocational objectives, and training needed for employment (Gellman, 1980). Both vocational theorists and practitioners endorse some form of developmental perspective in their attempts to explain and predict vocational behaviour. Vocational assessments as practiced in the school system generally fit into a theoretical framework that emphasize the longitudinal quality of growth and development. "Vocational

development is seen as one aspect of the individual's total development, and is understood as a relatively continuous process" (Gimenes, 1990, p. 21).

Vocational development theories have value in understanding the normative patterns of behaviour experienced by mentally and physically healthy individuals over the course of a lifetime, but offer little insight into the vocational behaviour of persons with disabilities. Marut and Bullis (1985) studied a deaf population and found little congruence between evaluation recommendations and the actual employment outcomes achieved. Cook (1978) examined the predictive validity of evaluations conducted by a vocational rehabilitation facility and found no relationship between recommendations and eventual outcomes. More recently, Caston and Watson (1990) found no relationship between the evaluator's prognosis and the rehabilitation outcome at a state Bureau of Vocational Rehabilitation.

Psychologists at WSEP utilize vocational adjustment theories in their assessment and counselling of clients. Adjustment theories are designed specifically for individuals with disabilities, and focus on work adjustment to compensate for the impact of disability on work personality and work competencies. It translates into vocational assessments and counselling that focus on personal variables, adjustment to a disability, and career guidance based on occupational limitations (Cottone & Emener, 1990).

Traditionally, vocational adjustment and vocational development were both viewed as expressions of intraindividual variables. However, advances in both fields view the vocational development of individuals with disabilities as a function of both

intraindividual and environmental variables. Faimon, Hester, Decelles, and Gaddis (1987) studied the characteristics of individuals with long-term disability claims who returned to work and found the following variables to be significant: types of financial support received, level of education, percentage of wage replacement, pre-disability occupation, type of disability, type of pre-disability employer group, sex, age, population density of area of residence, and marital status. Lam, Bose, and Geist (1989) found "unemployed rehabilitation clients to have the highest incidence of attorney representation, the highest number of months of unemployment prior to rehabilitation referral, the lowest rated transferable skills, and the lowest post-injury residual capacity" (p. 306).

Dobren (1994) combined elements of both development and adjustment theories to conceptualize an ecologically-oriented model for the vocational rehabilitation of people with acquired mid-career disabilities. Contextual level variables involved in an injured worker's general vocational development, such as physical, economic, social, and rehabilitation systems variables, are considered in addition to individual level variables, such as education, work history, and intelligence variables, which are assessed in a clinical setting.

I agree with the proponents of an ecologically-oriented approach to vocational rehabilitation that assessment of people who acquire disabilities in mid-career should include contextual variables deemed to be significant for a particular client. In some cases, the contextual variables may be more important than personal variables in

understanding the vocational behaviour of injured workers. This study goes beyond consideration of personal variable to examine client-identified contextual variables and the clients' reactions to them. Such information might be used to help identify significant contextual variables during the process of vocational assessment and counselling, and to develop interventions to ameliorate their effects on the clients' vocational behaviour.

Data Collection

The study was based on the following data collection activities: telephone interviews with former clients of WSEP, review of the psychological and team recommendations for the interview subjects, and observations of the assessment process involved in vocational counselling at WSEP.

The interview questionnaire was developed by WSEP for use in program evaluation, and was designed to elicit narrative responses from former clients about their experiences in following through with recommended academic upgrading and vocational retraining, and in finding employment in the area in which they had retrained. A copy of the questionnaire is in Appendix D. I conducted the interviews by telephone during my internship at WSEP. They were taped with the consent of the participants and the data collected was transcribed to print medium. A sample-transcribed interview is shown in Appendix E. During the course of the interviews I kept a record of my own thoughts about the interpretation and organization of the data being collected.

Participants

Twenty-five (25) persons who were clients of WSEP in 1993 were chosen at random to form a pool of potential interview subjects. Seven (7) of the persons in the interview pool could not be located. Of the eighteen (18) who were contacted, seventeen (17) agreed to take part in the evaluation and one (1) declined. Copies of the two consent forms used in the study are reproduced in Appendix F.

The interview subjects are typical of the program's clientele. At the time of their acceptance into the program, they were clients of WCC who had sustained disabling injuries on the job or in related activities. Fourteen of them had been referred to WSEP for full team assessments that included assessments and recommendations by social workers, occupational therapists, and psychologists. Three were referred for vocational testing and counselling only.

Methods

Since the objective of WSEP is vocational rehabilitation, any attempt to evaluate its success requires some method of analysing the benefits to the persons who received vocational evaluation services. A simple, straightforward approach would be to quantify success by the number of persons who followed through with WSEP's recommendations and found suitable employment. Initially, the psychology group within WSEP, who requested the evaluation, wanted a quantitative analysis of the data. I was convinced from a review of the literature, and as a result of my own orientation to developmental

counselling, that such an approach would not adequately account for environmental factors that impact significantly on the vocational behaviour of injured workers. Some of the most difficult problems experienced by workers with disabilities are not of their own making or the consequence of inherent traits, but are imposed on them by perverse facilities, technologies, activities and attitudes in their environment. In my view, a qualitative form of inquiry would be more open to such environmental factors and to the perceptions and feelings of clients about their experiences at WSEP and their subsequent rehabilitation efforts.

The methodology followed in this study is that of grounded theory (Glaser & Strauss, 1967). Grounded theory is a method of qualitative analysis that allows a theoretical explanation of phenomenon to emerge inductively while simultaneously grounding the account in empirical observations or data (Magnotto, 1996). A major premise of grounded theory is that the physical and social environments have a great bearing on human behaviour (Martin & Turner, 1986; Pettigrew, 1990). It facilitates the use of concepts that are close to the lived experiences of people, and encourages accounts of people's thoughts from their points of view (Hultgren, 1993).

These characteristics of grounded theory fit with the interpretive orientation of this evaluation project. It develops a context-based description and explanation of vocational rehabilitation phenomenons, rather than focus on quantifiable concerns and cause-and-effect explanations. A number of theoretical approaches to vocational rehabilitation, in particular Dobren's ecologically oriented model of individual and

contextual variables (Dobren, 1994), emphasize the critical nature of context variables in shaping the rehabilitation outcomes of injured workers. Recognition of the power of contextual variables on behaviour also accords with my background and experiences in developmental counselling. The use of grounded theory allows for the inclusion of this key element in the study.

Heidegger (1962) believed that an individual must have a practical sense of the domain or context within which a phenomenon is situated in order to develop understanding. He termed this "fore-having." I participated directly in the work of WSEP during my internship. The foreknowledge I gleaned from direct involvement, observation and inquiry assisted my understanding of the accounts given by the participants in the evaluation study. Grounded theory methodology allowed for the use of such contextual knowledge in the interpretation of data.

The aim of this study was to investigate success in achieving retraining and employment goals by examining all factors deemed to be significant to each client, as well as the client's feelings about them and reactions to them. Ultimately, it is the clients' belief as to the success or failure of vocational recommendations made to them that is being studied (Wiersma, 1995). I approached the evaluation project through modified analytic induction. That is, I began with a "specific research problem or question and attempt[ed] to cover all cases of the phenomenon under study to arrive at a comprehensive, descriptive model" (Wiersma, 1995, 219). The question I initially posed was: "What factors are key in the success or failure of psychology recommendations in

the Work Skills Evaluation Program?" An initial answer to this question was hypothesized with the first interview results, and modified as more information was obtained during the study.

The process of data analysis began with the first interview and changed with each succeeding interview until a satisfactory, universal explanation was obtained of the data under study (Wiersma, 1995). After each interview I reflected on the conversations, noted key issues and looked for recurring issues. I began to develop a conceptual map or diagram of the categories as I continued to interview and analyze data (Strauss, 1987). Upon rereading, some data were combined into larger categories with different issues within these categories. For example, recurrent issues developed in client interviews around requirements for sitting in post-secondary programs, lifting equipment and books, and the difficulty in coping with chronic pain. These issues were all housed under a category entitled "health variables." This method of data analysis is termed the constant comparative method of analysis (Glaser & Strauss, 1967).

Toward the end of the data collection I began working on the final analysis. The categories began to take on the property of emerging themes. A core category was developed, from which all other categories stemmed (Strauss, 1987). The core category was "factors in WSEP vocational rehabilitation outcomes." The remaining categories were housed under this major category and included health, lack of support, income and employment concerns, WCC affiliation, and psychosocial issues. In turn, these categories were divided into issues both external and internal to the client. As the data was analysed

and discussed, recommendations emerged for modifying WSEP assessment services to bring about greater success in vocational rehabilitation.

Finally, I developed a conceptual model of the contextual variables involved in the vocational rehabilitation of persons referred to WSEP. The model, which is presented graphically in Figure 2.1, was adapted from Dobren's ecologically-oriented conceptual model of vocational rehabilitation of people with acquired mid-career disabilities, and reflects the contextual variables identified by clients of WSEP who participated in the evaluation project.

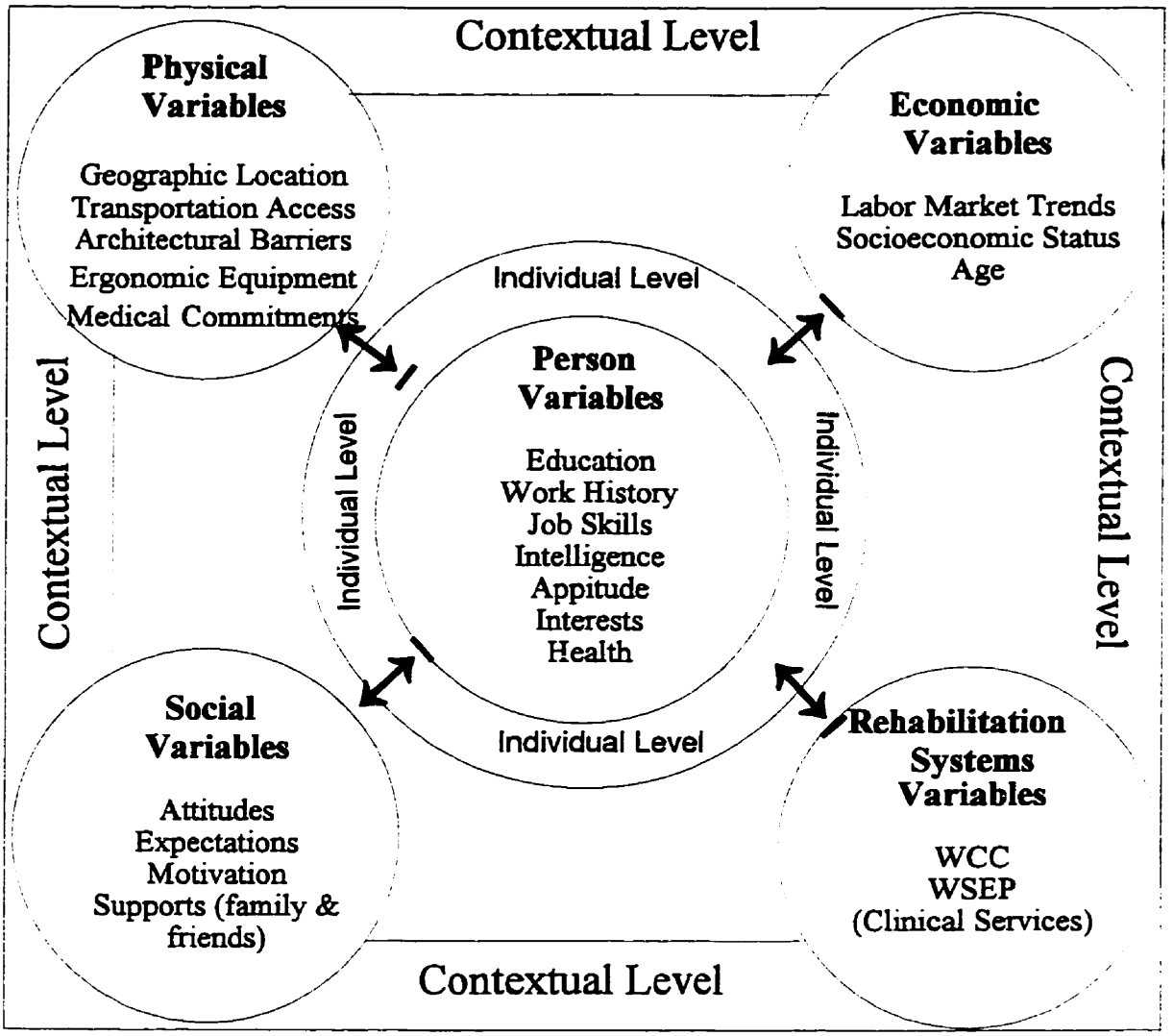

Figure 2.1 An ecologically oriented model of contextual variables involved in the vocational rehabilitation of persons referred to WSEP (Dobren, 1994).

Limitations

Evaluating the success of the retraining recommendations in the work skills evaluation reports of injured workers is a difficult task because there are so many intervening variables. Although the study identifies some variables, a more comprehensive evaluation that considers all aspects of the rehabilitation system is needed to determine with certainty the specific causes of rehabilitation outcomes. The study involves the vocational behaviour of a particular population of adults who acquired disabilities in mid-career as a result of work place injuries, and findings cannot be generalized to other groups with disabilities or to the population at large. Finally, the results have direct value only in assessing the benefit of vocational rehabilitation recommendations made by the psychology unit of WSEP.

Results

The seventeen (17) participants in the evaluation project were working before the onset of their disabilities and their acceptance into the program. Therefore, an appropriate measure of the program's success would be whether the services improved the chances that these people would regain employment.

The specific services considered in this study are the recommendations of the psychology unit for academic upgrading and vocational retraining. These services are particularly significant for clients who were considered unfit to return to their old jobs because of their acquired disabilities. The recommendations evolved out of the assess-

ment of personal variables such as education, work skills, job history, intelligence, aptitudes, and interests, and vocational counselling related to occupational limitations. The assumption was that if the vocational assets and limitations of injured workers were properly assessed and they were equipped with appropriate skills, they would find a suitable place in the work force.

The seventeen (17) participants in this study were assessed in 1993. One (1) of them was deemed to be unfit for employment and was not recommended for either upgrading or retraining. Another had a dominant arm injury and, although considered physically fit to work, could not settle on a new career choice and was recommended for more intensive personal and vocational counselling. The other participants were considered fit to work, but were prevented by their disabilities from returning to their former jobs. Therefore, all were recommended for vocational retraining following vocational assessments and counselling. Eleven (11) of them were also recommended for academic upgrading to meet entry requirements for training in their targeted occupation.

Figure 2.2 shows the rehabilitation outcomes for participants in the study three years after they received vocational assessment and counselling services. Four (4) persons had completed vocational retraining programs and had found related employment, two (2) had dropped out before starting their academic upgrading programs and received compensation settlements from WCC, five (5) others dropped out at the retraining level and were unemployed, the person who needed more services had not continued counselling and had abandoned efforts to be rehabilitated, and four (4) were still in the

retraining process, although two (2) of them had switched to programs that had not been recommended.

As noted earlier, the goal of the Works Skills Evaluation Program is vocational rehabilitation. Therefore, the success of clients in retraining and employment is an appropriate measure of the program's success. On this purely quantitative basis, the program's success was marginal. Of the seventeen (17) persons who participated in this study, one (1) could not be rehabilitated, four (4) were rehabilitated, four (4) others, including two who had switched programs, were still in the rehabilitation process, and eight (8) had withdrawn at various stages from the effort to acquire new skills and new jobs.

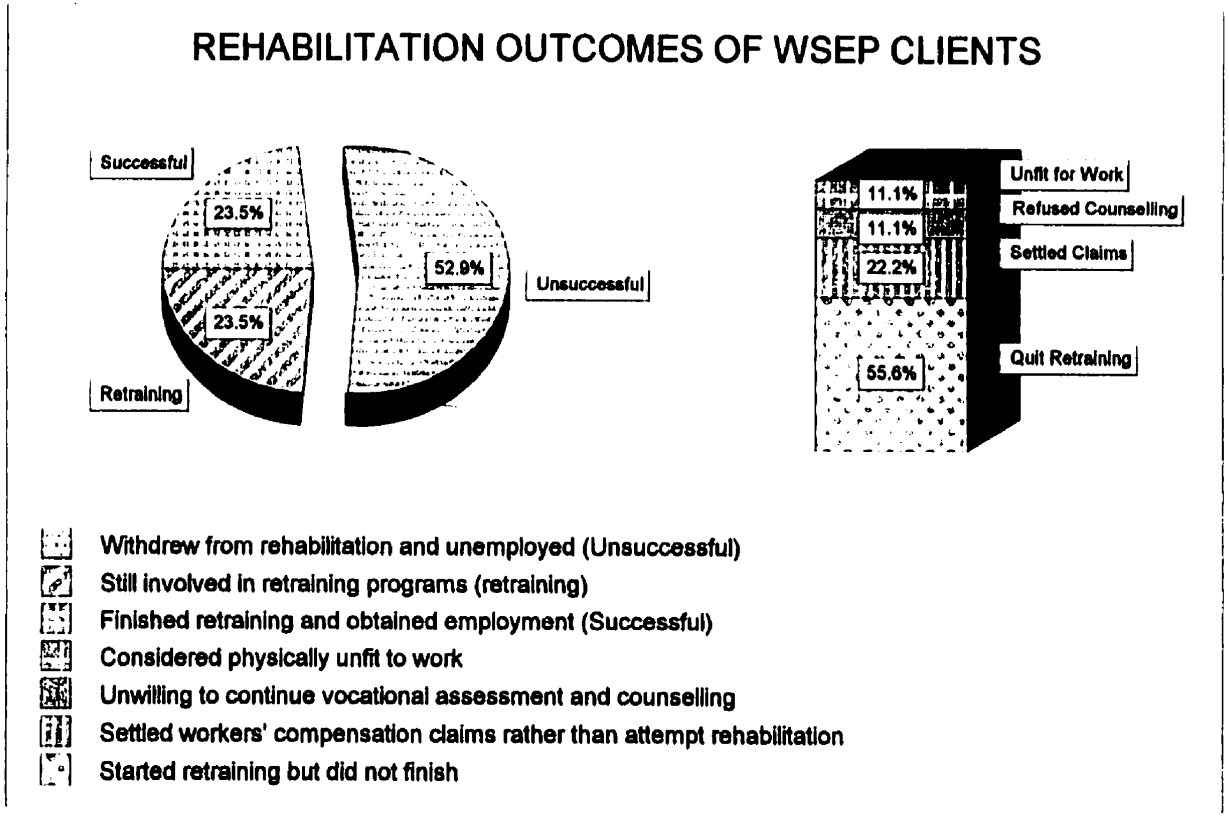

Figure 2.2

Rehabilitation outcomes of WSEP clients threes years after receiving vocational assessment and counselling services

While the vocational rehabilitation effort of the seventeen participants in the evaluation study was only marginally successful, one cannot conclude that the assessments of cognitive ability and aptitude or the vocational counselling activities of the psychology unit at WSEP were flawed. Participants who had settled on occupational objectives during the process of assessment and counselling were generally satisfied that the recommendations matched their aptitude and interests, although some were concerned about being able to find work and maintain their income level in the occupations that had been targeted for them. During the course of lengthy interviews, none of the participants felt that the upgrading and retraining programs recommended were academically difficult. All did well in the programs or were doing well right up to the time they decided to drop out. It is apparent from these observations that the performance of clients in completing retraining and in finding suitable employment is not an adequate basis for evaluating psychological services or understanding the vocational behaviour of individuals with acquired mid-career disabilities.

It is clear from the interviews with participants in the evaluation project that environmental influences and issues related to health and psychological well-being were significant factors in their decisions to withdraw from the rehabilitation program. The variables shown in Figure 2.1 are representative of those that emerged from the interview data. They include health problems, ability to cope with chronic pain, lack of ergonomic equipment needed to attend training institutions, potential changes in income levels, prospects for employment in the targeted occupation, attitudes and expectations of others, concern about the agenda of the Worker Compensation Commission, suspicion that the

WSEP was an extension of WCC, and the injured worker's own assertiveness, attitude, and motivation.

Any evaluation of vocational services calls for an examination of the behaviour of individuals within the context of the environment in which they live and work. This study attempted to identify and categorize significant environmental and personal variables from statements and descriptions that emerged with some regularity during interviews with former clients of WSEP.

Health Related Variables

Pain was a common theme in the interviews with clients who attempted vocational rehabilitation, and was usually the most significant factor in the decisions of some clients to abandon the rehabilitation effort. During their involvement in vocational retraining at post-secondary institutions, individuals found that sitting for long periods of time, lifting textbooks and equipment, and pursuing studies full-time were factors that increased their pain, sometimes to intolerable levels. Ergonomic set-ups that could have increased their comfort level were often not provided or provided too late, and the organization of instructional activities usually did not allow for the frequent breaks, self-pacing of work, and freedom of movement that could have helped pain sufferers to cope with their disabilities.

According to WSEP, 10 of the 16 clients (62.5%) who were recommended for vocational retraining needed ergonomic set-ups. Client one needed an ergonomic work station to maximize sitting tolerance and encourage proper positioning, and client two

required a low back Obus Forme cushion, seat and lumbar roll, as well as an ergonomic set-up to participate in retraining or sedentary employment. A low back Obus Forme cushion was recommended for client seven, an ergonomic set-up for client eight, and an ergonomic work station for client 10. Client 12 needed an Obus Forme for comfort in sitting and an adjustable height chair for training activities. Client 13 required an ergonomic set-up to participate in training or sedentary employment, and client 19 needed an ergonomic workstation for study and work. Clients 20 and 23 needed a high back Obus Forme and cervical roll for comfort and support, and an ergonomic set-up in work or training situations.

The recommendations for ergonomic supports were largely ignored by WCC. None of the 10 clients received the recommended aids when they began their studies, and only two of them eventually got the support they needed. Client 10 received the ergonomic set-up she needed in the second year of her post-secondary program, and client 20 was just about finished when he was fitted with the supports the occupational therapists had recommended. Client 23 refused ergonomic devices because she "did not want to be stuck out." Three were promised, but never received, the devices recommended for them; three had no response from WCC; and one, Client 12, was refused help to purchase the ergonomic devises WSEP had prescribed:

> No, they didn't give me anything. The doctor recommended an ergonomic chair - multilevel chair - but Workers Comp said nah. . . . You go down to their meetings down at Workers Comp and everybody got a beautiful

> ergonomic chair and they haven't got a back injury. Yet, when you got a back injury they say, nah, you don't need it. Funny isn't it?

The structure of post-secondary programs - a great deal of sitting, infrequent breaks, and a fast pace - increased the discomfort and stress experienced by pain sufferers. Client one, who dropped out of her program in a private college, reported that sitting was a problem, and that she had only a 10 minute break in an instructional day that ran from 9:00 a.m. to 4:00 p.m. because the college had structured the course to cater to the majority of the students who preferred a 4-day week. In describing his post-secondary experience, Client 24 said, "I was crippling myself just sitting." Others echoed Client 12's sardonic observation , "You weren't shown any favouritism," about the lack of sensitivity to the needs of chronic pain sufferers.

Carrying a heavy load of textbooks around a post-secondary campus and from class to class was another major problem for some clients. Client 10 said in her interview:

> In my assessment I had done in St. John's, whatever, I wasn't supposed to be lifting any more than 10 pounds, and this kind of thing, right. While I was going to school every morning, I was going to school . . . I was carrying 25-30 pounds of books. . . . I mean, it's absolutely ridiculous. You know what a campus is like. I mean this one in here is not huge by no means, but it's big enough. You got to carry your books from the parking lot in through the school, from classroom to classroom and whatever, right. I found that really, really difficult.

Client 12's lift limit was 25 pounds, but he too commented that "lifting the four or five books around all day long wasn't the best."

Pain sufferers had fewer difficulties in the academic upgrading programs designed to help the participants meet post-secondary admission requirements. Unlike the post-secondary courses, academic upgrading programs usually allowed students to work at their own pace, and gave them the freedom to take frequent breaks or get up and move around the room. Client 18 summed up the difference this way: "We weren't confined to the seats, you know what I mean, five hours a day. If we felt any pain or anything we could move around the classroom." Client 20 attributed the relative physical comfort he experienced in academic upgrading to the fact that the program was "self-paced."

Academic upgrading programs allowed injured workers the control they needed to manage their pain, even though they had to do without the prescribed ergonomic supports. Nine clients registered in academic upgrading programs following WSEP recommendations. All of them were successful and moved on to retraining programs in post-secondary institutions. At the time of the interviews, clients one, 13, 18, and 24, had dropped out of their post-secondary programs due to pain; clients seven and 12 were still taking post-secondary courses, but were having difficulty managing their pain; and client 20 was continuing post-secondary studies with ergonomic support. Client eight reported experiencing physical discomfort during her retraining, but was able to complete her program and had found employment. Only client 21 reported no physical discomfort during retraining. He, too, had completed his program and was employed.

Four clients went directly into retraining programs at the post-secondary level because they had the requisite academic skills, and all of them experienced discomfort from chronic pain to varying degrees. At the time of the interviews, clients two and 23 had finished their retraining programs and were employed, client 10 had dropped out because she could not handle her pain, and client 17 was still involved in retraining, but had switched, because of pain and other health related problems, from full-time to part-time studies.

Pain was a problem for 12 of the 13 clients who went on to post-secondary studies on the recommendations of WSEP. Five clients (38% of post-secondary participants) quit their retraining programs and gave painful physical discomfort as the primary reason. Pain was a major factor in the decisions of four other clients (31% of participants) to reduce their post-secondary workloads. All together, nearly 70% of those who started post-secondary studies said pain was their main reason for dropping out of retraining or for reducing their post-secondary workloads. The following accounts are representative of their experiences.

WSEP considered Client 10 to be a good candidate for a formal retraining program and rated her fit to perform light work that involved lifting no more than 10 pounds. She enrolled in a two-year business administration course, but was unable to cope with her chronic pain. She said in her interview, "I finished the first year, I completed it. I did really well with it. Went back for the second year and physically I couldn't complete it." Client 10 was assessed as a good candidate for retraining. She felt positive about her career choice and had the academic skills to achieve success, but she

failed to fulfil the expectation for vocational rehabilitation because she was unable to manage the pain that she experienced in the post-secondary setting. That was a consistent pattern in the accounts of clients who had dropped out of rehabilitation.

Client 13 was considered suited for a one to two year on-the-job training program, but was advised to avoid employment that overhead reaching, repetitive neck movements, unsupported forward reaching, prolonged driving, static standing, and lifting or carrying weights over 10 pounds. He registered in a two-year computer program and performed well academically, but could not sustain the effort because of his worsening health.

> I did a year and a half. And actually what happened, I was shortly into the program, and only three months into it, and I had so many medical problems that they had to cut me back to going to school part time. And from there, I was another year after that and continued to have medical problems right throughout, and finally I had to come right out of the program.

Client 24's academic potential was also correctly assessed by WSEP. Physically, he was considered capable of performing work that involved lifting 50 pounds safely on an occasional basis, but was advised to avoid sustained or repetitive trunk flexion, and crouching as well as prolonged standing over concrete floors. He attempted two programs, Small Engine Repair and Microcomputer Service Technician, but dropped out of both because he could not meet the physical demands of the training programs, despite receiving some ergonomic support. During the interview he told me, "I had special chairs and that but, like in the small engine thing, there was a nice bit of lifting in that. And I

wasn't able to do it. And then in the microcomputer part of it there was a lot of sitting. And I was crippling myself just sitting."

Client 17 reported chronic pain and other health problems, but the documentation in his file does not provide enough information to validate his account. He was referred to WSEP for psychological evaluation only. There were no assessments or inputs from professionals in occupational therapy and social work. He wanted to do a vocational education degree at Memorial University, and the psychologist who evaluated him supported his choice, although she clearly doubted his readiness for university studies. In her report she stated:

> In my view, (client 17) is likely to have some difficulty in academic courses at the university level. Given his good reading comprehension and good basic arithmetic skills along with his good motivation, however, he appears to have some potential to succeed, with appropriate help . . . Since [he] presented as a nervous man, he was alerted to the support services through the counselling Centre. He may need assistance dealing with the stress of being a student if he is to persevere and reach his goal.

When interviewed, client 17 had reduced his workload from full-time to a part-time student and gave pain and sickness as the reason.

> Since '96 I started. There's a few times I got sick there, right, because I couldn't even go. So I was cut off Workers, right, because I couldn't go, because I was too sick. I had to take a few semesters off, really sick, right. I still feel sick and that, but I got to get more tests done, right. They don't

> know what's on the go, right. . . . [I am] just going on a slower basis, like I say. I'm doing three courses, so they're paying me 60% of my pay, right. But its still really hard going.

WCC had medical and occupational therapy reports on client 17 that were not available to this study. Given WCC's actions relating to his benefits, I can only assume that the reports did not support his account of his physical condition. However, the psychologist's report, along with the tone and content of client 17's conversation during the interviews, suggests that his difficulties may be due, at least in part, to the stress of university studies.

Perception of Chronic Pain Sufferers

Clients also spoke during the interviews about the lack of public understanding for chronic pain, a disability that cannot be seen and often defies unambiguous diagnosis (Holloway, 1994). Client nine spoke of a lack of community understanding, and an attitude among friends and relatives that made him feel ashamed of getting WCC benefits:

> Oh my, oh my, oh my. So like, it gets very frustrating at times. And yet you can't like, with your back problem you can't see anything, people don't see anything. What's he doing, you know, he's got a great life. Sure . . . ha . . . lovely. I wish they had it, not me. you know what I mean.

Client 13 had similar experiences, but she also acknowledged the assistance provided to her by the Chronic Pain Management Program at the Leonard A. Miller

Centre. A WSEP psychologist made the following comment in her recommendations: "If client is unable to build up tolerance on her own for full-time training or competitive employment she may need further medical investigation of fatigue and a holistic chronic pain management program for developing productive coping skills." Client 13 took advantage of the program and it was very beneficial to her:

> I really appreciated the Pain Clinic. I thought it was a wonderful thing. You know it doesn't cure your pain, but it makes you aware of a lot of things in regard to what provokes your pain and what can better your situation physically. And, for me, it almost saved my life because my family was going through a terrible time with me and I was . . . by the time I got to the Pain Clinic my family had been through hell and back. And if not for them being there and helping everybody in my household adjust to the new me, that I can't predict where it would have all ended. . . . From my own experience I know people who suffer chronic pain. It's hard for normal people to understand it, but there's a lot of shame associated with it, and a lot of times you hide away and you know, you don't want anyone to know you're suffering through this because of the fear of being treated enormously. You want to be treated as normal as possible. But it's very true that everything changes and you try and keep your environment pretty much the same as it always was, especially with friends and relatives. But it's very difficult to do so and because of that you tend to be stuck in a closet and it's only those people down there who fully understand what

chronic pain means, that people like myself can open up and say "look this is what's really going on."

Employment Related Concerns

Five clients, representing 31% of the clients who were considered fit for rehabilitation, did not follow through with the recommendations of WSEP psychologists relating to training and employment. Two of them felt that the training programs recommended for them did not reflect standards of training currently required in the labour market. Client seven was recommended for on-the-job training or academic upgrading followed by a short retraining course of up to one year's duration. After he had been evaluated at WSEP, he decided to look into the value of short-term training courses in the current labour market and concluded they were not worth his time and effort:

> Like, I went to Manpower and that. And they said if you're going to take anything you got to go for at least two years to have a half decent trade, right. . . . Well I went to two or three different manpower and they told me, they said you know, these nine month courses are not much good to anybody.

Client 12 was recommended for a nine-month technology course in microcomputers. He had second thoughts after finishing his WSEP evaluation, because "I was 49 at the time and I am 51 now. And I figured there's no way I'm getting a job at my age with a nine-month course." He was also concerned about the lifting involved if he followed the career path that was recommended for him:

> They recommended through all my testing that I take a Computer Technology Course. But that entailed lifting computers in and out of companies, lifting gear, all your tools up and down flights of stairs. So, the other end of the course, my back couldn't take that. I think I could lift five to 10 pounds or something.

Both client seven and 12 decided on their own to enroll in 3-year post-secondary programs that, they felt, offered better prospects for suitable employment. Their experiences suggest that the psychology unit at WSEP may not have up-to-date information on the training required for employment in the current labour market.

Client 19 had expected clear direction from WSEP, instead the training and employment related recommendations recorded in her final report read as follows:

> Client requires further information in order to make her best choice. This could include job search, job shadowing, Career Explorations for Women, Occupational Exploratory Training (OET), etc. Client was encouraged to contact the Women's Enterprise Bureau for assistance in exploring self-employment ventures.

Instead of following the recommendations, client 19 returned to her pre-injury employment, which she had been advised not to do. In the interview, she commented:

> Actually they recommended for me not to go back to my job and to seek other job opportunities or go back to school. The problem was that they couldn't come up with something for me. They wanted me to set

something up but I couldn't even come up with anything for myself because at that time I had an arm injury.

WSEP's psychology evaluations are usually completed over a one-week period of vocational assessment and counselling. Client 19 had a dominant arm injury, and lacked confidence in her physical ability to perform the tasks required in the careers that seemed suitable for her. The psychologist who assessed client 19 recognized that she needed more help than WSEP could provide, but the client felt she had been left on her own. In the circumstances, the psychologists had done what she could, her recommendations were intended as much for WCC as they were for the client, and the responsible WCC counsellor should have offered the support client 19 needed to follow up on the psychologist's recommendations.

Client 18 was considered a good candidate for practical on-the-job training or for formal retraining of one to two years duration, and able to do work with light to moderate physical demands. He completed an academic upgrading program, but his applications for admission to post-secondary programs were turned down. In the interview, he said: "I applied for, like I say, a couple of courses and didn't get accepted. And the Compensation Board jumped on me and gave me X numbers of hours to get . . . ha . . . [a job]." He decided to abandon the effort to get into a post-secondary course, and negotiated a compensation settlement with WCC instead. There is no evidence of a problem in the client 18's vocational assessment, or that the training and employment recommendations prepared for him and WCC were inappropriate. As in other cases, client 18 was left on his own to find an appropriate post-secondary placement, a task that can require

sophisticated skills, diligence, and good morale. He may have had a better result if WCC had worked with him to find an appropriate post-secondary placement.

At 57 years of age, Client 25 thought he was too old to start a new career that required two or three years of schooling before he would be qualified to look for a job. WSEP had said he was capable of performing light, sedentary work following academic upgrading and a one to two year retraining course. In the interview, client 25 described his feelings as follows:

> And the only thing that they could come up with, a couple of things that they could come up - environmental technician which would require a lot of, I would imagine, walking. I was not going to be able to, as if there is a problem in the environment, you're not always going to walk to them. . . . And it would take about three years to upgrade my basic education and then 2-3 years, you know . . . And the fact that I was 57 then, just about 58.

Client 25 chose not to follow retraining recommendations, and negotiated a compensation settlement with WCC. His situation was outside the scope of WSEP, but it raises a legitimate question for WCC about the value of spending resources on assessments, upgrading and retraining for older workers who, if they find a job at the end, will have only two or three years in their new jobs before retirement. It is unfortunate that this man was placed in a situation where he felt compelled to settle for lower benefits.

Attitudes toward the Workers' Compensation Commission

There is a general distrust of the motives of WCC among the client population, and several of them thought WSEP was its agency. The notion that the two organizations were somehow linked affected the attitudes of some clients toward WSEP. In their view, the program was working for WCC, rather than for them, and they participated in it because they had to. As a result, their experiences at WSEP were stressful.

Initially, Client 4 did not wish to participate in the evaluation project as it was outlined to him, but he wanted to record his frustration. His comments make no distinction between WCC and WSEP.

> It was a complete waste of time . . . it was one of the most embarrassing things I had to do in my life. Like I say, with people that you have in there, like, you're just a number and that's it. . . . It doesn't matter to them who you are or what you are, you're just shoved through a system and that's it. Like I say, in my line of thinking, it was the biggest waste of money that I ever encountered in my whole life. . . . It was just a force, force, force. Like I say, I was unlucky enough to have an injury. Like I say, it was the most embarrassing two years of my life that I had to go through. . . . If you want to, you know, stretch it out farther, like I say, you could just say, like what I said, you know, like was to me the biggest waste of time. Sure it probably was good if they had to go about it a different way. But not the way they done it with me anyways. . . . And then they shove me through a program just to get rid of me more or less.

Just before my interview with him, WCC had referred client nine to a private clinic for assessment by an occupational therapist. He felt pressure to perform beyond his functional capacity, and believed the private clinical was under pressure to obtain performances from him that he could not repeat on a regular basis.

> You go through Work Skills and they pass off their opinion over to Workers. [The private clinic], in other words, they pass it over to Workers. . . . Like I suppose at the time, I really pushed myself, like you're suppose to go to the limit. Like you have a good day and a bad day. Like I was in there, probably a couple of months before that, and I couldn't even finish it. . . . They didn't say anything about the first time I tried it and couldn't finish it. That didn't mean nothing. I got to do it on a good day and do the very best I can do. This is what they base their conclusion on, that. I mean it's not fair, right, to me. The way I look at it anyway. And you push yourself to more than what you can do, actually, trying to get this thing. Because I got all kinds of threatening letters that if you don't do it you're going to be cut off. You know, so what are you suppose to do? . . . So a report goes you couldn't do it. They write you why? - you must try again, you know. So anyway, when I went back in the middle of December and I did it and, like I say, you don't know what I went through after that.

Client 10 spoke of the pressure she felt to perform physical routines that were difficult for her, and felt that WSEP assessment of her physical abilities was based solely on good-day performances.

> I knew that I wasn't going to be able to do what they wanted me to do . . . physically. I did it. I went for a full year. I suffered and I mean I really suffered but I started it and I wanted to finish it just to see if I could . . . Well, I mean when I had it done, right, when I had the Work Skills done, right, they based what they saw, you know, and what they saw while I was there and whatever, which is not really a complete thing. Right? It's not the same.

While specific criticisms were most frequently directed at the occupational therapy unit at WSEP, psychology assessments received some critical comment. Client 12 felt psychological assessment tools were inappropriate and suspected that psychologists used them to find out if clients were telling the truth.

> Some of the questions were kind of silly to me, like . . . what would you like to do when you grow up? You know . . . they give you a booklet to bring home to fill out all these questions, and they're asked different ways to see if you're really telling the truth, right? You know, would you like to be a fireman, policeman, you know. I thought it was a bit, you know.

Client 12 felt pressure to perform well on tests that purported to measure his academic skills and potential. He felt that his performance on these tests would decide whether or not WCC funded the career training he wanted to pursue.

> But that was a bit stressful down there because I wanted to prove that I was smart enough to be retrained because if you're not they won't retrain you. So you got a lot of pressure on to perform. . . . Some people go in and

they act stupid, right, because they don't want to be retrained. They want to be retired. So they say, "I can't do this." But I really wanted to. I wanted to prove to myself that I could do it, and I did.

Psychosocial Issues

The complexities of dealing with job-ending injury in mid-career, worsened health, pain, medical and psychological examinations, upgrading and retraining, and the bureaucracy at WCC all impact on clients' attitudes and motivation, and helped shape the outcome of their rehabilitation efforts. Some were able to maintain a high level of motivation and a positive attitude. The four former clients of WSEP who had been successful at the time of the study, i.e., they had completed retraining programs and found employment, exemplified those qualities. Two, of them had the academic skills to go directly into vocational retraining, and two were routed through academic upgrading. They all experienced discomfort as a result of their injury-induced physical disabilities, yet they remained positive, retained their motivation, and appreciated the help they received. Client eight commented, "Oh, I found when I was at the Leonard Miller out there, I found the psychologists, well, whoever, the counsellor, everybody was great. They were great, I must say. I couldn't speak more highly of them."

Client 21 said he would never have pursued training as an Electronic Engineer if he had not attended WSEP. He loved the training, and he loves his new job. "I found it easy," he said, "Just reading about it or something like that, before I went down and took that exam, I would never in my life have thought I could do that program. . . . I would

never, never ever, went for that course unless I was told down there. They said [I could do it]."

Discussion and Recommendations

This report examined the relationship between the training and employment recommendations in the work skills evaluation reports and subsequent rehabilitation outcomes. The evaluation reports indicate that all but one of the persons in the group studied could be rehabilitated. Three years later 23.5 percent of those who could be rehabilitated had been successful, 23.5 percent were still at the retraining level, although half of them had switched programs, and 53 percent had withdrawn at various stages in the rehabilitation process. Assuming that the four individuals who are still attending post-secondary courses complete their courses and find jobs, the program will be only marginally successful in achieving its objective of vocational rehabilitation. The findings suggest that a high proportion of training resources for injured workers are being spent on clients who are subsequently unsuccessful.

The specific services considered in this study were the recommendations of the psychology unit at WSEP for academic upgrading and vocational retraining. Most of the former clients who participated in the study felt the psychologists' recommendation properly assessed their academic abilities and vocational interests. 87.5% of participants who could be rehabilitated found the recommendations were suitable in the context of their individual cognitive abilities, aptitudes, and interests, and none of them found the upgrading and retraining programs academically difficult. Two individuals, representing

12.5% of the participants, criticized the psychology unit for suggesting nine-month training courses for them. The unit, they felt, was out of touch with the training levels employers expected in the current market. However, since both of them are completing three-year courses that they started on their own initiative, they will probably be counted in the success column. Nevertheless, the psychology unit should take note of the criticism and explore ways to keep their labour market information up-to-date.

Although the study was not structured to examine other WSEP services or the vocational rehabilitation system in general, participants in the study identified several factors that influenced the result of their rehabilitation efforts. These included pain, inadequate ergonomic support, attitudes of others, anxiety about unemployment or low-income employment, mistrust of the rehabilitation system, their own assertiveness, attitudes, and motivations, and the general stress associated with trying to achieve rehabilitation goals in an unsupportive environment.

Pain was the most frequently cited reason for abandoning vocational rehabilitation, or for proceeding at a slower pace. A review of the recommendations in clients' evaluation reports indicates that the occupational therapy unit (OT) at WSEP had placed restrictions on lifting and other physical activity for all participants, and had recommended ergonomic support for 62.5% of them. However, WCC provided set-ups for only two individuals, 20% of those who needed ergonomic equipment, and then only after the individuals had completed a year or more in post-secondary programs.

Many participants who attended post-secondary institutions could not stay within OT's limitations on lifting and other physical activities. They sat too long, moved too

little, and lifted and carried weights that exceeded the recommended limits. Post-secondary institutions expected them to do what everybody else did. They had to keep up. OT needs to consider the routines and expectations of post-secondary institutions in assessing the kinds of equipment needed to support the attendance of injured persons.

The interview record suggests that the problems participants experienced in rehabilitation were not rooted in the recommendations of WSEP, but in the failure of WCC to follow up on the recommendations. It is impossible to avoid the impression that more people would have been successfully rehabilitated if, for example, WCC had supplied the ergonomic support OT had recommended. Ideally, WCC counsellors should function as advocates for their clients, helping them work through activities that may be routine for healthy persons, but may present insurmountable obstacles to persons with disabilities.

The findings of this study have implications for all components of WSEP and for WCC. Agencies involved in the vocational rehabilitation system should more fully integrate the concept of contextual variables into their practice. Vocational assessment should be based on identification of existing skills, a thorough assessment of variables in the environment that may support or hinder rehabilitation efforts, and development of effective coping strategies which may involve adjustments in individual and environmental variables. There is a need as well for ongoing evaluations throughout the rehabilitation process of the individual and environmental variables deemed to be significant for each client. These evaluations should form the basis for interventions by

WCC counsellors to enhance the prospects for successful rehabilitation, even if it is necessary to go to clients' training or workplaces to effect changes there.

To enhance prospects for successful rehabilitation, I make the following recommendations:

1. Most injured workers either abandoned or delayed vocational rehabilitation at the retraining stage, because they could not cope with the pain they experienced. Given the importance of this issue to success in rehabilitation, WCC and WSEP should be more aggressive in promoting pain management training, the use of ergonomic equipment, and greater awareness and sensitivity to the issue of chronic pain in post-secondary institutions attended by injured workers.

2. Occupational therapists at WSEP should review their assessment procedures to make sure that appropriate consideration is given to the physical stresses experienced by injured workers in attending post-secondary institutions.

3. The psychology unit should review its information on job training to make sure the data corresponds to actual levels of training required in the current job market.

4. Because of persistent age-discrimination in the labour market, age is a second disability for older injured workers. WSEP should broaden the scope of its recommendations to include early retirement as an option for injured workers who would be near retirement age by the time they finished retraining.

5. The structures and routines at post-secondary institutions and in work places are oriented to physical competencies of healthy people. Injured workers usually feel they are expected to fit in and keep pace with everybody else, and too often fail in the

effort, instead of discussing their problems and working out more suitable arrangements. WSEP should assess clients' self-assurance and communication skills, and recommend assertiveness training for those who need it.

6. WSEP's responsibility should go beyond entry assessments to ongoing evaluations of individual and environmental factors that may affect rehabilitation success. If WCC will not fund ongoing professional assessments, WSEP should include recommendations in the final report certifying the need for (a) ongoing monitoring of training and work places for specific conditions that may affect a client's rehabilitation and (b) intervention on the client's behalf to bring about desired changes.

Suggestions for Further Research

The vocational assessment of injured workers suffers from a lack of assessment instruments designed or modified to match the characteristics of the target population. Most of the evidence for the validity of psychometric tests and vocational interest inventories used at WSEP comes from studies of the general population or, as in the case of interest inventories, teenagers in high school and college and persons with mental disabilities. Such instruments may be unreliable in predicting training and job placement for mature adults who acquire one or more physical disabilities in mid-career because of a workplace injury or some other accident. There are many possibilities for studies in this area including (a) identifying promising tests for use with this population and gauging their predictive validity for specific disabilities, and (b) modifying existing tests to make them more sensitive to the target population.

There is an assumption in practice and in the literature that behavioural observations and interviews can compensate for deficiencies in traditional paper and pencil tests, but there is no validity data to back it up (Bond and Dietzen, 1993). Identification of key questions and things to observe that can be generalized to training and work environments could improve the usefulness of observation and interviewing as methods of assessment.

Many vocational assessment services such a WSEP are financially dependent on referrals from insurance and claims adjustment agencies such as WCC. The relationship raises a number of potential research questions. How are clients selected for rehabilitation services? Are providers of assessment services primarily accountable to WCC counsellors or to the client? What is the working relationship between evaluators and WCC counsellors? Do WCC counsellors give reasons for the evaluation or suggest questions to be answered? Do evaluators look for cues in the referral or from WCC counsellors about what the referring agency may expect? How do clients perceive their relationships with WSEP and WCC? Where should the line be drawn between claims adjustment and rehabilitation services? Research into these questions could lead to development of assessment policies that are more client-centred and enhance prospects for successful rehabilitation.

Summary

Using a qualitative research approach, I examined the success of injured workers in achieving training and employment goals recommended by WSEP within the context

of client identified environmental variables. Participants in the study received vocational assessments at WSEP in 1993. The results show that 23.5% of the former clients had been fully rehabilitated, 53% had abandoned the effort, and 23.5% were still taking retraining courses in post-secondary institutions. Most clients felt that assessments of cognitive abilities, aptitude and vocational interest performed by psychologists at WSEP produced accurate profiles of their academic abilities and career interests. Decisions to quit rehabilitation or to pursue it at a slower pace were closely associated with other factors such as pain management, age, psychological distress, physical inability to perform routine tasks associated with training or work, lack of assertiveness, insensitivity to disabilities in training and work places, and pressure from WCC to get a job or settle compensation claims. These findings suggest that success in rehabilitation can be enhanced by changes in the individual (e.g., through skills and assertiveness training) and through environmental adjustments that may eliminate or reduce barriers to specific training and employment. Recommendations are made for fundamental changes in current practices and polices to better support injured workers in training and employment, and for research aimed at improving assessment instruments and developing more client-centred rehabilitation policies.

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Appendices

Appendix A

THE GENERAL HOSPITAL

300 Prince Philip Drive
St. John's Nfld., Canada A1S 3V6

Health Sciences Centre
Telephone: (709) 737-6300
Fax: (709) 737-6400
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Dr. L. A. Miller Centre
Telephone: (709) 737-6555
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Office: (709) 737-

WORK SKILLS EVALUATION PROGRAM
Leonard A. Miller Centre
The General Hospital
100 Forest Road
St. John's, Newfoundland
A1A 1E5

CONSENT FOR WORK SKILLS EVALUATION

I, the undersigned, give consent to the Work Skills Team to perform the required assessments for a work evaluation. I understand that I will complete tests, interviews and activities designed to assess abilities and interests related to work and training. These results will be discussed with me and my counsellor and used as a basis for considering various career paths.

_____
(Signature)

_____ _____
(Witness) (Date)

CONSENT FOR RELEASE OF REPORTS

I, the undersigned, give consent to the Work Skills Team to release assessment reports to the referring agency.

_____
(Signature)

_____ _____
(Witness) (Date)

September 24, 1993

Appendix B

WORK SKILLS EVALUATION (PSYCHOLOGY)

NAME: Mrs. XX MCP: XXX XXX XXX

REPORT DATE: 1996-07-24 DATE OF BIRTH: XX/XX/XXXX

GENERAL OBSERVATIONS:

Mrs. XX presented as a friendly, open, and talkative individual. The examiner found it easy to establish rapport with her, although she claimed to be shy. Mrs. XX attributed her comfort with the examiner to the fact that the examiner's family came from XX , her home town. During the evaluation, she expressed feelings of sadness and anxiety, was uncertain as to the purpose of the Work Skills Evaluation Program, or why she was referred to it. She felt that WCC was attempting to make her life uncomfortable. She does not drive a car and had to rely on her daughter for transportation to the Miller Centre.

Despite her anxiety about WCC motives, Mrs. XX was very cooperative during the testing, arrived an hour early, and appeared to do her best on the tests. Her work habits were slow and methodical. She was relatively organized and deliberate in problem solving, and careful and systematic in performing tasks. She was persistent in tasks that interested her, but not with tasks that she found troublesome or dull. For example, Mrs. XX gave-up trying to solve block design problems before time limits had expired, but she was interested and persistent in putting together a puzzle of an elephant, questioning the examiner on the correct solution. She tended toward concrete thinking, finding abstract concepts difficult to grasp. For example, she had difficulty understanding the Spatial Relations Subtest of the CAPS, which deals with abstract concepts.

Mrs. XX indicated that concentration was a problem for her. She tended to break off into small talk frequently, which lengthened her testing session. During written work, the examiner had to leave the room so as not to serve as a distraction to her. She commented during oral testing that if another individual had been in the room, she would not have been able to attend to the tasks presented to her.

Mrs. XX was aware of her failures and limitations, and seemed to accept them, though not in a positive way. She generally appeared to have low self-esteem. She often put herself down as the dumb one in the family, or someone who couldn't do anything, and would list individuals in her family who she felt could perform the tasks that she couldn't. The examiner noted that she would respond well to praise and general friendliness, and that this approach seemed to ease her anxiety about her performance.

Mrs. XX appeared uncomfortable during the testing. Her body seemed twisted, her right arm was always positioned across her abdomen, and she appeared to lean forward in an odd "slouch". She was uncomfortable with aids, and refused them when offered. She took very few breaks, one in the morning and a lunch break. She appeared passive, as if she were in pain but unwilling to talk about it or admit to it. The examiner noted that Mrs. XX complained of the heat in the waiting area, but did not open the window, even after the examiner suggested that she do so. Consequently, the examiner checked on her whenever she was in the waiting area, and opened the window if she appeared uncomfortable.

Mrs. XX was slow and deliberate with motor skills. Her hand occasionally shook when she manipulated blocks and puzzle pieces. She is left-handed, and placed her work upside down on the table when she wrote, so that the printed material faced the examiner who was sitting on the opposite side of the table.

She noted that she had a hearing problem. She could hear people, but sometimes could not pick-out what they were saying. She also commented that she could not see clearly with her glasses and may need a new pair.

TEST ADMINISTERED:

Wechsler Adult Intelligence Scale - Revised (WAIS-R)
Wide Range Achievement Test - Revised (WRAT-3)
Test of Adult Basic Education (TABE, form 6, level M)
Career Ability Placement Survey (CAPS)
Safran Interest Inventory (Safran)
Interest Determination, Exploration and Assessment System (IDEAS)
Beck Depression Inventory (BDI)
Beck Anxiety Inventory (BAI)

Psychometrics performed by: Carolyn Wheeler, Educational Psychology Intern.

Appendix C

WORK SKILLS EVALUATION (PSYCHOLOGY)

NAME: Mrs. XX MCP: XXX XXX XXX

REPORT DATE: 1996-07-24 DATE OF BIRTH: XX/XX/XXXX

GENERAL OBSERVATIONS:

TESTS ADMINISTERED:

Wechsler Adult Intelligence Scale - Revised (WAIS-R)
Wechsler Memory Scale - Revised (WMS-R)
Benton Visual Retention Test
Hooper Visual Organization Test
Wide Range Achievement Test - Revised (WRAT-3)
Test of Adult Basic Education (TABE, form 6, level M)
Canadian Adult Achievement Test (CAAT)
Woodcock Reading Mastery Test - Revised (WRMT-R)
Career Ability Placement Survey (CAPS)
Differential Aptitude Tests - Canadian Edition (DAT)
Safran Interest Inventory (Safran)
Interest Determination, Exploration and Assessment System (IDEAS)
Reading Free Vocational Interest Inventory (R-FVII)

Psychometrics performed by: Psychological Assistant II

TEST RESULTS:

Intelligence. The WAIS-R test of intelligence consists of eleven subtests measuring dimensions of intellectual functioning, including general knowledge and numerical skills, verbal and nonverbal problem solving, and visual-motor abilities. The test yields a general full scale score as well as a verbal score and a score for visual-motor performance subtests. Results represent an approximation of the individual's level of intellectual ability and are considered by educators to be a good predictor of academic achievement.

On the WAIS-R, XX scored in the
range of intellectual functioning overall.

Academic Achievement. Reading Vocabulary and Comprehension were assessed using the TABE (6,M). This test produces a maximum score equivalent to the grade 10.9 level. XX obtained a vocabulary score at the grade
level, and a Comprehension score at the grade
level. This represents a total reading score at the grade
level. Further testing in the area of reading using the

On the WRAT-3: In reading (sight reading of words out of context), XX scored at the level. In spelling, on a test of practical dictation skills, he obtained a grade equivalent at the
On Arithmetic, a test of practical mathematical computation skills, he scored at
level.

Aptitudes. The Caps test consists of several subtests, as described below. Scores range from very low (1) to very high (9), with 5 being average. XX's scores are shown at the left.

Stanine
Score

- **Mechanical Reasoning** which measures understanding of mechanical principles and devices and practical applications of the laws of physics.
- **Spatial Relations** which measures ability to visualize or think in three dimensions and mentally picture positions of objects from a diagram or picture.
- **Numerical Ability** which measures ability to reason with and use numbers and work with quantitative materials and ideas.
- **Language Usage** which measures ability to recognize and use correct grammar, punctuation and capitalization in written work.
- **Word Knowledge** which measures understanding of the meaning and precise use of words.
- **Perceptual Speed** and Accuracy which measures ability to perceive small detail rapidly and accurately within a mass of letters, numbers and symbols.

In further aptitude testing using the DAT, XX scored at the
percentile on Verbal Reasoning and the
percentile on Numerical Ability. His combined score on these two tests fell at the
percentile, indicated that he scored better than
percent of people in the reference group. This combined score provides an estimate of scholastic aptitude and suggests that

Interests. On the Safran, XX's areas of highest interest were

On IDEAS, he expressed high interest in the areas of
When these areas of interests were explored with him, XX identified a variety of occupations consistent with this pattern of interests, including:

CONCLUSIONS AND RECOMMENDATIONS:

XX

_____

Psychologist

Appendix D

Work Skills Training Recommendations Follow-Up

My name is _____. I am calling to follow-up on a program you attended at the Miller Centre.

You came to the Miller Centre to the Work Skills Program in _____, 1993. I am phoning to see if the program was helpful. I have some questions I'd like to ask. This will take about 5-10 minutes.

It is important for you to know that you are under no obligation to take part in this survey. Information about you will be kept confidential, and will be combined with information from other clients. You will not be identified in any way in compiling the survey results. The results will be used to improve our program for future clients.

Would you agree to answer a few short questions on the phone? Is this a convenient time? Is there another time that would be better.

Client ID# _____

QUESTIONNAIRE: Part 1

WAS UPGRADING RECOMMENDED? no (go to Part 2)
yes (complete part 1)

Did you do any upgrading?
_____ yes

_____ no

What program did you do?

_____

How long did you participate?

_____

What level did you complete?
Level ___1/___2/___3
(If 3 go to part 2)

What happened/Why did you stop?

_____ achieved goal (go to part 2)

_____ still involved (go to ** this page)

_____ has problems (go to ** this page)

What happened instead?

_____

_____

_____

_____

** Did you have any problems?
(Tell me a bit more about . .

Medical problems _____

Physical problems _____

Ergonomic set up
_____yes/ _____no

Other _____

Course difficulties _____

eligibility issues _____

other problems _____

other issues:

go on to Part 2

QUESTIONNAIRE: Part 2

WAS FORMAL RETRAINING RECOMMENDED?

no (go to Part 3)
yes (complete part 2)

Did you go to formal retraining?

_____ yes

What program did you do?

_____

_____

Did you complete the program?

_____ yes (go to part 3)

_____ no

How long did you participate?

_____

What happened/Why did you stop?

_____ achieved goal (go to part 3)

_____ still involved (go to ** this page)

_____ has problems (go to ** this page)

_____ no

What happened instead?

_____

_____

_____

_____

** Did you have any problems?
(Tell me a bit more about . .

Medical problems _____

Physical problems _____

Ergonomic set up
_____yes/ _____no

Other _____

Course difficulties _____

eligibility issues _____

other problems _____

other issues:

go on to Part 3

QUESTIONNAIRE: PART 3

_____ no

Did you look for work?
_____ yes

_____ no

Did you find work?
_____yes

What happened instead?
_____
_____
_____
_____

What type of job?
_____

Are you still on the job?

_____ yes

** Did you have any problems?
(Tell me a bit more about . .

_____ no (go to **)

Medical problems _____

Physical problems _____

Ergonomic set up
_____yes/ _____no

difficulty with job responsibilities _____

lay off issue_____

other problems _____

other issues _____

Do you have other questions or other comments you would like to add?

Thank you for your help. The information you've given will help us improve the Work Skills Program.

Appendix E

The General Hospital
Leonard A. Miller Centre
100 Forest Road
St. John's, NF
A1A 1E5

WORK SKILLS EVALUATION

SURNAME: CLIENT 2	**GIVEN NAME:**
ADDRESS:	**TELEPHONE:**
BIRTH DATE:	**AGENCY:**
MCP:	**REFERRAL AGENT:**
DATE SEEN:	**REFERENCE #:**

Presenting problem: Lumbar spine injury.

Reason for referral: Assess for general work skills.
Assess for training potential.

Team Recommendations
Based on the current Work Skills Evaluation, including interdisciplinary, agent and individual client consultations. Summary only. Please refer to the attached reports for further information.

1. Capable of sedentary to light job demands avoiding prolonged standing, overhead reaching, working at floor level and transferring in and out of this position.

2. Encouraged to explore lighter employment options with present employer following retraining.

3. Requires a low back Obus Forme cushion and seat, as well as lumbar roll.

4. If retraining/sedentary employment is indicated, will need ergonomic set-up.

5. Appears to be a suitable candidate for formal retraining at the community college level.

6. May benefit from job shadowing/trials in areas of potential training and employment interests.

CLIENT 2

Q. Wonderful. Did you do any upgrading? Was that recommended?

C2. Yes it was.

Q. What program did you do?

C2. Secretarial studies.

Q. Secretarial studies. Okay, and where did you do that?

C2. At XXX in XXX

Q. And did you complete the program?

C2. Yes I did.

Q. Okay, and how long was that?

C2. That was 1 year.

Q. Were you able to obtain employment with that program?

C2. Yah. I worked at the XXX for, let me see, 2 years.

Q. Okay, and your finished work there now?

C2. Yah. I finished and actually I'm here at XXX now working at a store and I do the book work for the store.

Q. Okay. Great. How do you find that, you know with regards to your injury? Your working and everything is functioning fine?

C2. Yah. No problem.

Q. Okay, and the retraining, did you have to go to any upgrading prior to going to XXX? You didn't have to do any refreshers?

C2. No, nothing at all.

Q. Okay, and how about the course? Was that adequate? Did you find it okay with your injury?

C2. Well at times I found it very uncomfortable, like sitting all day, and there were times when I was very uncomfortable but. . . .

Q. Did they provide you with any set-ups, ergonomic set-ups?

C2. No.

Q. They didn't provide you with any. Academically, was it appropriate for you?

C2. On yes, no problems at all.

Q. Okay. Great. Well that is all the questions I have. Did you have anything you wanted to add about your experience with the program or the recommendations?

C2. Not really. Nothing come to mind at the time.

Q. Well thank you very much for your help. This was great.

C2. Thank you, you're very welcome.

Q. Bye bye.

C2. Bye bye.

Appendix F

HealthCare

Corporation of St. John's

July 18, 1996

Dear:

As you will remember, you participated in the Work Skills Evaluation Program with us at the Miller Centre in 1993. We hope things worked out well for you since that time, and that you have been able to progress toward your vocational goal.

We want to know whether our recommendations about retraining have been appropriate and helpful to you, and have asked Carolyn Wheeler, a graduate student at MUN, to collect and interpret the information we need. Carolyn has attached a consent form, required by the university, to explain what she will be doing, and to get your permission for her to interview you over the telephone.

By consenting to the interview you will help us insure that our recommendations are on target, and that we get the information we need to improve services to our clients. Be assured that your responses will be kept in strict confidence.

Carolyn will be calling you over the next few weeks to answer any questions you may have about her work. Alternatively, you can call us anytime at 737-6501 with your questions or comments. Please leave a message on the answering machine.

Sincerely,

Ms. Donna Reimer
Director of Work Skills Evaluation Program

Leonard A. Miller Centre
100 Forest Road, St. John's, Newfoundland, Canada A1A 1E5 Tel. (709)737-6555 Fax (709)737-6969
Sites: General Hospital • Janeway Child Health Centre/Children's Rehabilitation Centre • Leonard A. Miller Centre
St. Clare's Mercy Hospital • Salvation Army Grace General Hospital • Dr. Walter Templeman Health Centre • Waterford Hospital

DISCLOSURE AND CONSENT FORM
EDUCATIONAL RESEARCH

TO CLIENTS OF THE WORK SKILLS EVALUATION PROGRAM:

This document requests your participation in an evaluation of the recommendations made by psychologists involved in The Work Skills Evaluation Program at the Miller Centre. It assures you that your participation is completely voluntary and that your responses will be entirely confidential. It seeks your written approval of your involvement in the research project.

PURPOSE

The purpose of this study is to evaluate the success or failure of recommendations made by psychologists at the Work Skills Evaluation Program. The research will focus on whether upgrading and/or retraining recommendations were appropriate, and if retraining eventually led to work.

PROCEDURES

The evaluation will be conducted using qualitative methodology as outlined by Wiersma (1994). The researcher plans to conduct telephone interviews with 25 clients referred by the Workers' Compensation Commission and seen by the Work Skills Evaluation Program in 1993. The research is also participating in an internship at the Work Skills Evaluation Program between June 24, 1996 and August 16, 1996. During her internship she will interview psychologists who made Work Skills Evaluation recommendations, observe team meetings, administer instruments, review psychological reports, and in general observe The Work Skills Evaluation Program. You and selected participants will be asked to participate in an interview pertaining to the success of the recommendations made to you by the Program (see interview protocol attached). With your specific permission, interviews of a maximum one hour duration will be recorded electronically. These tapes will be transcribed and then stored in a locked cabinet. Those quoted will be given a chance to review their comments to ensure accuracy and confidentiality. Recordings will be erased when the research is complete. In addition, Work Skills Evaluation documents, specifically psychological reports, that pertain to your case will be analysed to determine what recommendations were made to you.

RESEARCHER

My name is Carolyn Wheeler. I have worked as a teacher, guidance counsellor, educational therapist, and educational psychologist. This work is part of my completion of a Master's Degree in Educational Psychology at Memorial University.

RIGHTS OF REFUSAL OR WITHDRAWAL

Your participation in this research is entirely voluntary. You may participate in any or all of the components. You may decline to respond to any questions or opt out at any time without prejudice. If during the research, you should need to consult a resource person other than the researcher, Dr. Patricia Canning, Associate Dean of Graduate Studies is available. In addition you may contact my internship supervisor, Dr. Ed Drodge. They can be reached at 737-3403.

CONFIDENTIALITY

Anonymity of individuals is assured, both while the research is in progress and in the final report. Please be assured that this study meets the ethical guidelines of the Faculty of Education and Memorial University of Newfoundland. You are assured that your anonymity will be protected and that all records of your participation in the research project will be kept confidential unless your written permission for release is obtained.

RESULTS

The Results of the research will be available to you, upon request, after the study is concluded.

AGREEMENT TO PARTICIPATE

If You agree to participate in the study as outlined above, please indicate your consent by signing below on both copies of the form. Please retain one copy for your own records and return the other to the Work Skills Evaluation Program to be forwarded to me.

Sincerely,

Carolyn Wheeler
Graduate Student
Ph. (709)745-1237 (residence).

STATEMENT OF UNDERSTANDING AND CONSENT

I, _____, understand the purpose of the research study outlined above and recognize the request for involvement that is being made of me relative to the described methodology. I understand that my participation is entirely voluntary, and that I can withdraw from the study or any part of the study at any time without prejudice. I understand that the project has been approved by the Ethics Committee of the Faculty of Education, Memorial University of Newfoundland, and the Director of the Work Skills Evaluation Program. I understand that confidentiality is assured.

Signed: _____ Date: _____

STATEMENT OF UNDERSTANDING AND CONSENT

I, _____, understand the purpose of the research study outlined above and recognize the request for involvement that is being made of me relative to the described methodology. I understand that my participation is entirely voluntary, and that I can withdraw from the study or any part of the study at any time without prejudice. I understand that the project has been approved by the Ethics Committee of the Faculty of Education, Memorial University of Newfoundland, and the Director of the Work Skills Evaluation Program. I understand that confidentiality is assured.

Signed: _____ Date: _____

DISCLOSURE AND CONSENT FORM
EDUCATIONAL RESEARCH

TO THE DIRECTOR OF THE WORK SKILLS EVALUATION PROGRAM:

This document requests your authorization to conduct research in your program and to request the participation of you and your staff in a study related to the success or failure of psychological recommendations at the Work Skills Evaluation Program. It assures both you and your staff that participation is completely voluntary and that all responses will be entirely confidential. It seeks your written approval of your involvement in the research project.

PURPOSE
The purpose of this study is to evaluate the success or failure of recommendations made by psychologists at the Work Skills Evaluation Program. The research will focus on whether upgrading and/or retraining recommendations were appropriate, and if retraining eventually led to work.

PROCEDURES
The evaluation will be conducted using qualitative methodology as outlined by Wiersma (1994). The researcher plans to conduct telephone interviews with 25 clients referred by the Workers' Compensation Commission and seen by the Work Skills Evaluation Program in 1993. The research is also participating in an internship at the Work Skills Evaluation Program between June 24, 1996 and August 16, 1996. During her internship she will be interviewing psychologists, observing team meetings, administering instruments, reviewing psychological reports, and generally observing The Work Skills Evaluation Program. You and selected psychologists and clients will be asked to participate in an interview pertaining to the success of the recommendations made to you by the Program (see interview protocol attached). With your specific permission, interviews of a maximum one hour duration will be recorded electronically. These tapes will be transcribed and then stored in a locked cabinet. Those quoted will be given a chance to review their comments to ensure accuracy and confidentiality. Recordings will be erased when the research is complete. In addition, Work Skills Evaluation documents, specifically psychological reports, that pertain to your case will be analysed to determine what recommendations were made to you.

RESEARCHER
My name is Carolyn Wheeler. I have worked as a teacher, guidance counsellor, educational therapist, and educational psychologist. This work is part of my completion of a Master's Degree in Educational Psychology at Memorial University.

RIGHTS OF REFUSAL OR WITHDRAWAL
Your participation and that of individual staff and clients in this research is entirely voluntary. You may participate in any or all of the components. You may decline to respond to any questions or opt out at any time without prejudice. If during the research, you should need to consult a resource person other than the researcher, Dr. Patricia Canning, Associate Dean of Graduate Studies is available. In addition you may contact my internship supervisor, Dr. Ed Drodge. They can be reached at 737-3403.

CONFIDENTIALITY
Anonymity of individuals is assured, both while the research is in progress and in the final report. Please be assured that this study meets the ethical guidelines of the Faculty of Education and Memorial University of Newfoundland. You are assured that your anonymity will be protected and that all records of your participation in the research project will be kept confidential unless your written permission for release is obtained.

RESULTS
The Results of the research will be available to you, upon request, after the study is concluded.

AGREEMENT TO PARTICIPATE
If You agree to authorize the study as described above, please indicate your consent by signing below on both copies of the form. Please retain one copy for your own records and return the other to me.

Sincerely,

Carolyn Wheeler
Graduate Student

STATEMENT OF UNDERSTANDING AND CONSENT

I, _____, understand the purpose of the research study outlined above and recognize the request for involvement that is being made of me relative to the described methodology. I understand that my participation is entirely voluntary, and that I can withdraw from the study or any part of the study at any time without prejudice. I understand that the project has been approved by the Ethics Committee of the Faculty of Education, Memorial University of Newfoundland. I understand that confidentiality is assured.

Signed: _____ Date: _____

STATEMENT OF UNDERSTANDING AND CONSENT

Authorization to conduct the study at the Work Skills Evaluation Program and seek involvement of psychologists and clients.

I, _____, understand the purpose of the research study outlined above and recognize the request for involvement that is being made of me relative to the described methodology. I understand that my participation is entirely voluntary, and that I can withdraw from the study or any part of the study at any time without prejudice. I understand that the project has been approved by the Ethics Committee of the Faculty of Education, Memorial University of Newfoundland. I understand that confidentiality of all information relative to participants in the Program is assured.

Signed: _____ Date: _____

IMAGE EVALUATION TEST TARGET (QA-3)

1.0 1.1 1.25 1.4 1.6 1.8 2.0 2.2 2.5 2.8 3.2 3.6 4.0 4.5 5.0 5.6

150mm

6"

APPLIED IMAGE . Inc
1653 East Main Street
Rochester, NY 14609 USA
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Fax: 716/288-5989

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