

The Brain Injury Handbook

*An Introductory Guide to
Understanding Brain Injury for
Vocational Rehabilitation Professionals*



**BRAIN
INJURY**
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*An Introductory Guide to Understanding Brain Injury
for Vocational Rehabilitation Professionals*

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I: THE NATURE OF BRAIN INJURY

Persons with traumatic brain injury (TBI), remain the most difficult and challenging group to serve within the vocational rehabilitation (VR) system. These individuals present needs that are unique to their disability and symptoms that are frequently baffling. In order to provide effective service for people with TBI, VR counselors require explicit preparation. This handbook has been developed to provide direction for VR counselors faced with selecting appropriate programs for this deserving and challenging population.

The Essential Counselor Preparation

As will be emphasized throughout this document, individuals with traumatic brain injury are unique as service recipients. Their particular disability sets them apart from any other disability group the counselor may have encountered. The VR counselor must acknowledge that his/her traditional education will have to be expanded to serve this group. Persons with brain injuries simply do not exhibit disabling conditions in the same way as other disability groups, and it is this nonconformity that sets them apart. When counselors attempt to use traditionally based notions in trying to assess the vocational potential of this challenging group, their efforts result in a failure to serve these clients.

To serve this population effectively, the rehabilitation counselor must first acquire a basic knowledge of how the brain functions and understand how alterations in brain functioning change or limit the capacity to respond to specific task demands. Only then can the counselor adequately appreciate the complexity of the client with TBI. It is of paramount importance that the counselor develop a familiarity with the nature and consequences of traumatic brain injury and begin to understand the interaction among dysfunctions (since none exist in isolation).

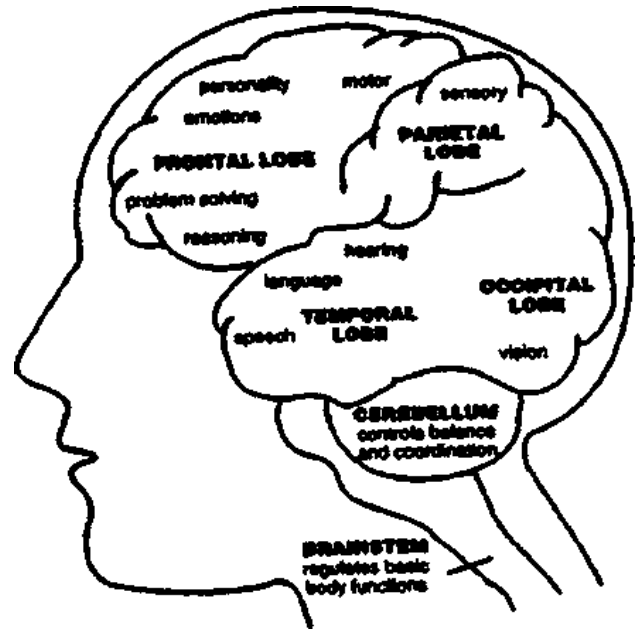
Once having gained familiarity with brain mechanisms and the patient's locus of injury from medical reports, the counselor still should exercise extreme caution in placing labels on anticipated areas of dysfunction. The rigid assignment of certain activities to specific areas of the brain can prompt the pessimistic view that damage to tissue leads to permanent impairment of related functions. However, there are individual differences in the organization of each human brain, and these differences may in part account for unanticipated functional achievements in some clients, although severe deficits (and therefore limited potential) had been observed in a neuropsychological examination. Conversely, subtle deficits

noted during testing procedures may be quite serious obstacles to success in a variety of vocational spheres. One can anticipate with certainty that disparities between test results and actual task performance will surface continually. The bottom line in serving this population is that creativity and flexibility are absolute requirements in the approach one takes. It is hoped that as the reader goes through the handbook, issues touched upon briefly in this introductory section will grow in clarity.

Types of Brain Injury

The State of Florida defines moderate to severe brain injury as: "an insult to the skull, brain or its covering, resulting from external trauma, which produces an altered state of consciousness or anatomical, motor sensory, or cognitive/behavioral deficits."

As a result of traumatic brain injury, the brain sustains damage which may be either temporary or permanent. This damage results when the head is struck by an outside force, or when the head strikes a stationary object, or when the head is violently shaken as often occurs in a motor vehicle accident. This type of brain injury is referred to as a closed brain injury meaning that the brain has not been externally penetrated. When the brain is penetrated, such as with a gunshot wound, the injury is called an open brain injury. There is usually some period of unconsciousness following a trauma to the brain. However, there are those individuals who do not lose consciousness but will nonetheless exhibit symptoms of TBI.



The consistency of the brain has been compared to gelatin or custard. Under normal conditions, this soft mass, gently cushioned by cerebral spinal fluid, floats within the vaults formed by the membranes that line the skull and the protective bone of the skull itself. The term concussive is used to describe the external forces that cause damage to the brain. There are three primary types of damage that result from injury: diffuse, concussive and coup/contre-coup.

Diffuse

The first type, diffuse axonal brain injury, results from the stretching and tearing of nerve fibers (axons) throughout the brain. This diffuse, widespread damage to the brain is the type that frequently results from a motor vehicle accident. When the momentum of a rapidly moving vehicle is suddenly halted, with the head striking a stationary object inside the car such as the dashboard or the windshield, the impact results in rotational forces twisting and dislocating or shifting the brain mass.

When the brain is subjected to these violent motions, there is enormous stretching and pulling of the threadlike nerve connections (axons) that form the network for brain functioning. As the axons are stretched, biochemical functioning ceases and the nerves stop functioning. Axons that are severely stretched sometimes snap, and the likelihood of these nerves ever functioning again is remote. The more severe and widespread the damage, the greater the probability of an ensuing loss of consciousness (coma). Practically all patients emerge from coma. However, the type of injury described above virtually always leads to permanent and generally severe brain damage.

Concussive damage

Concussive damage is the result of the brain colliding with the sharp ridges on the inside front of the skull. The resulting bruises or contusions are most likely to occur in the base of the frontal and temporal lobes of the brain. These localized contusions produce two of the most frequently encountered deficits following closed brain injury. They are executive dysfunction and impaired memory functions.

Since the temporal lobes are essential to the system that registers, stores and retrieves information, damage to this area impacts negatively on the ability to learn new material.

Damage to the frontal lobes may seriously impair the wide range of abilities known as executive functions. Individuals thus impaired are unable to think abstractly, to conceptualize, to be effective problem solvers. They are generally inflexible thinkers who remain concretely bound to a presenting situation. They are unable to take a self critical view and are therefore frequently unaware of how their behavior may affect others.

Because of a pronounced inability to form an intention and initiate an activity, these individuals are frequently labeled unmotivated. Frontal lobe

injuries are the most prevalent in automobile accidents, and those who are dysfunctional as a result are the most difficult to treat in vocational rehabilitation.

Coup/Contre-coup

The third type of primary damage seen in closed brain injury occurs when the head is struck with such intensity that it literally bends the skull in at the point of impact, injuring the brain beneath it (the initial blow or coup), and then propelling the brain against the opposite side of the brain (the counter blow or contre-coup). This type of damage is most likely when the stationary head is struck by a moving object. It does not necessarily occur in all closed brain injuries. When it does happen, the impairments that result depend on which specific brain areas have been damaged. A range of functional areas may become selectively impaired following a coup/contre-coup injury. These may be in the motor, sensory, perceptual and language domains.

Secondary Damage in Closed Brain Injury

In addition to the three types of primary damage described previously secondary damage is a common occurrence in closed brain injury. This can include bleeding within the brain itself (intracerebral hematoma); or between the skull and the brain covering (epidural hematoma); and/or between the brain and brain covering, (subdural hematoma).

There is further damage to the brain tissue as blood collects and builds up pressure that compresses the brain. Intracranial pressure increases as the brain swells with fluid (edema, hydrocephalus) or becomes engorged with blood. Since the rigidity of the skull allows no room for the brain to expand, surgery is frequently necessary to repair, stop bleeding, remove clots, relieve pressure and/or prevent herniation. When secondary damage occurs, usually in severe brain injury, it can produce functional limitations more severe than originally anticipated.

II: FUNCTIONAL LIMITATIONS

The residual deficits encountered after closed brain injury can be categorized in three functional domains: physical, cognitive (including executive), and interpersonal (or psychosocial).

Physical Deficits

Physical deficits, if they exist, are always the most obvious or noticeable limitations in individuals with traumatic brain damage. Unlike the more subtle cognitive impairments, physical deficits are generally visible and frequently become the central issue upon which an individual places all responsibility (blame) for his/her inability to return to preinjury activities and lifestyle.

Physical impairments are usually neurologically based, i.e., the result of damage to the brain centers that control motor functions rather than direct injury to the extremities. Deficits may include loss of motor coordination, spasticity, poor balance, an inability to ambulate unassisted, and a loss of effective eye-hand coordination. Hemiplegia (paralysis affecting one side of the body) and hemiparesis (weakness of one side of the body or part of it) may further complicate vocational issues, particularly when these conditions affect the use of the pre-injury dominant hand.

Within this category, one must note the potential for seizure disorders, and—if they are prescribed—medications taken to control seizures. The potential of these drugs to further compromise vocational rehabilitation efforts should be taken into consideration.

Additionally, there is decreased tolerance for alcohol and drugs following brain injury. Smaller doses produce more rapid effects. Social drinking can be difficult to control and will interrupt and interfere with the rehabilitation process. The client should be made aware of the harmful effects of these substances.

Cognitive Deficits

Persons with brain injury may exhibit problems in a variety of cognitive areas such as basic arousal, alertness, attention, concentration, abstract thinking, planning, organizing, problem solving, judgment, language processing, visual processing, learning and memory.

Signs of arousal problems include an inability to attend to the environment; a lack of (or reduced) alertness; an inability to assume a vigilant stance, i.e. to accurately observe environmental details and occurrences; and a severely slowed capacity for information processing. People with arousal impairments are frequently slow in reacting and responding to others and are highly susceptible to fatigue following cognitive or physical exertion. They may appear almost "lost in space" or "not in touch," which is essentially true. They may require constant external prodding in order to be engaged, and when they respond, their responses are seldom consistent.

Impaired attention and concentration are exhibited as easy distractibility. This may be a response to interference either by external or internal forces. For the person with brain injury, the inability to "screen out" environmental noises makes it difficult to sustain concentration. The noise being referred to here is common to most work settings, e.g., conversation of others, usual office "traffic", humming of machines and the general related "buzz" of activity.

However, for the person with brain injury, the most distracting noise to manage may be the internal conversation within his/her own mind. Intrusions by external noise can often be controlled or minimized, and the capacity for concentration will usually improve. But intrusive inner thoughts that limit productivity are exceedingly hard to contain, primarily because they belong to a hidden agenda. They become visible (observable) only when they serve to interrupt performance.

An unfocused or undirected internal agenda can produce a misguided response to an impulse. Task-related impulsivity is a major obstacle to adequate job performance. Poor impulse control will be addressed further on since it is manifested primarily as part of executive dysfunction.

Loss of adequate memory function and ability to immediately recall new information (anterograde amnesia) are predominant characteristics of damage following brain injury. While significant improvement in memory function may be noted during the initial period of recovery, this deficit is often observed in varying degrees for most people with TBI. (Loss of memory for events and periods of time before an injury or accident is called retrograde amnesia).

Inadequate memory function is one of the primary complaints reported by survivors of brain injury. They are often forced by their social environment to develop an awareness of this particular problem area. The

reprimands of acquaintances and significant others for missed appointments, appliances left on or bills left unpaid compel the person with brain injury to acknowledge that he/she forgets important things. Inadequate memory function remains, unfortunately, unresponsive to remedial intervention. However, memory impairments can be compensated for by a variety of mnemonic devices (memory aids) such as those described later.

Practically all persons with brain injury retain a clear memory of themselves as they were pre-injury, in contrast to residual impairments in learning and memory after the injury. Intact old memories and overlearned information frequently represent areas of strength, i.e., preserved skills that can be drawn upon when helping a client with brain injury redevelop vocational goals.

If inattention to presented materials produces what appears to be a memory impairment, it is essential for the client and the counselor to know the difference. The inability to remember, as a response to lack of effective attention, can be remediated frequently, or at least substantially improved, by attention training.

An important concern for rehabilitation is whether the client with TBI is able to engage in abstract thought. Clients can remain stuck in one view of a situation. They may lack the flexibility to shift to other aspects of a problem or to readily search for alternatives. They may lack the capacity for imaginative thought and remain poor problem solvers. This narrowness of thought limits the types of productive activity they can pursue autonomously, and impacts on the range, complexity, and variety of tasks they can successfully attempt.

Conceptualization, dependent on the capacity to think abstractly, is another area in which the individual may exhibit cognitive deficits. The ability to effectively conceptualize lies within the realm of higher level cognition. One must possess a store of learned material that is reliably and readily drawn upon in order to "imagine" or form a mental picture, organize these mental events, and be able to translate this cognitive activity into an observable behavior/skill.

Deficits in executive functioning are the direct result of frontal lobe damage. For high-level individuals, they are probably the most devastating and debilitating residuals of trauma to the brain. Intact executive functions allow an individual to engage in autonomous, independent, well-planned, effectively-organized, sufficiently-monitored, self-regulated, purposeful or

goal-directed enterprises. When these capabilities are diminished as the result of brain damage, the individual remains impaired in sustaining gainful employment, maintaining satisfactory social relationships and, at times, maintaining adequate self-care, regardless of how well specific cognitive capacities are retained.

The person who looks good and sounds good and whose test results on examinations of skills, knowledge and basic abilities are unimpaired, cannot function productively when executive skills are impaired. Such clients remain poor self managers. These clients who are so often capable of "talking a good game" are probably the most difficult to treat or evaluate vocationally.

The rehabilitation counselor cannot solely depend on test scores in order to focus on the client's deficits. During counseling sessions, he/she must gently confront such individuals with the established evidence of their inability to become successfully reintegrated, both socially and economically. Such clients have lost the ability to accurately monitor their own social responses as well.

The counselor should be aware of a client's ability to formulate goals. While capable of engaging in complex activities, those impaired in executive functioning may lack the capacity to form intentions or initiate purposeful activity. In extreme cases these individuals may appear apathetic and unable to initiate activity except in response to external stimuli. The ability to become engaged dynamically in interactive and intentional behavior is basic to executive skills. As mentioned earlier, when this capacity falters, persons with brain injury are labeled lazy, without motivation or uninvested.

Interpersonal Deficits

Behavioral dysfunction resulting in interpersonal and social inadequacies probably presents the most serious impediment to vocational reintegration. A client may possess intact, high level, functional work skills, but will often be prevented from sustaining substantial gainful employment because in most employment settings, job retention depends on maintaining the good will of co-workers and supervisory staff.

An important question to be answered: Can the client relate to co-workers and supervisory staff in a work-appropriate manner; maintain a pleasant, approachable affect, or at least, a neutral one? People with traumatic brain injury may be left with marked changes in their behavioral

repertoire and exhibit verbal and physical disinhibition, poor social judgment and a general decrease in "social graces."

Some clients may exhibit dysfunctional social behaviors of such magnitude that they are prevented from engaging in any consistent task performance. When even lengthy treatment and clinical intervention cannot modify undesirable social behavior, there remains little or no hope for success in the work world.

A high degree of egocentricity is often another consequence of traumatic brain injury. Many clients have difficulty in adopting a flexible stance and remain fixed in their view of the world only as it relates and revolves around them. They confuse the impact of environmentally relayed messages and consistently interpret them as being personally directed. For instance, constructive criticism may be interpreted as a personal assault. They lack the capacity to "read" their obvious environment accurately. Some fail to read it at all; they seem oblivious to nuances of speech and body language of others.

Clients may also misinterpret a co-worker's or supervisor's anger or disappointment over an equipment failure as a strong negative message about their personal performance. The unfortunate by-product of this type of misinterpreting is that the client who perceives the anger as directed at him/herself generally responds with anger. Clients who are susceptible to this type of misinterpretation are encouraged to note these occurrences in a personal journal, which allows for interpretation during personal counseling sessions. They should be encouraged either not to respond at all or, if they can remain calm, to ask for clarification.

The list of dysfunctional interpersonal skills is very long, indeed. One of the least understood dysfunctional interpersonal skills is the loss of emotional control. Clients can overreact or become immobilized by a type of emotional flooding rarely observed in other disability groups except possibly stroke. The type and extent of their emotional response is not merited by the external stimuli, but is often the direct result of some internal dialogue. Loss of emotional control will usually surface unexpectedly and sometimes be of such magnitude that it precludes any productive activity.

This emotional instability is characterized by rapid, exaggerated mood or affect swings. Known as emotional lability, the condition is the result of weakened or impaired control in emotionally charged situations. Because the client's physical appearance may give no indication of a disability,

observers tend to misinterpret his/her strong emotional responses.

Many clients with a brain injury appear to be ideal vocational candidates. They typically possess substantial pre-injury work records; former employers willingly attest to their good work adjustment; and self-reports of pre-injury employment or educational attainments are usually in keeping with the reports of others. It is important to emphasize, however, that the person being described in these reports is not necessarily the same person, post injury.

In addition many employers are hesitant about returning a cognitively/physically incapacitated individual to their work force because of liability concerns. Skills are often diminished; personalities may be altered; and many pre-injury worker attributes have all but disappeared. In actuality, the client requiring vocational placement post-injury may bear little resemblance to the person remembered before the injury, both by him/herself and others. It is essential, however, to keep an open mind and not pre-judge or take a jaundiced view of the vocational potential of this very deserving and challenging group of people.

Mild Brain Injuries

The VR counselor will be called upon to provide services for persons who possess a wide range of incapacities as the result of brain injury. Along with those who have moderate or severe brain damage, there are those classified as having mild brain injuries. Because persons with so-called mild or minor brain injury do not exhibit obvious deficits, they are not referred for rehabilitation services until long after the actual injury.

Following a brief period in an acute care facility, individuals with mild brain injuries return home and subsequently return to work. They generally have no awareness of altered abilities; yet their job performance is markedly diminished and the ability to retain employment suffers. This group of people with brain injuries appear unchanged from pre-injury status and their difficulties are further compounded by the expectations placed upon them by their social environment. Because they appear so intact, these expectations are high and usually in total disagreement with their reduced capacities. When the employment problems become obvious and the individual is finally referred for vocational counseling or rehabilitation, there still may not be a recognition of the original cause of problems. If this is the case, the VR counselor can be instrumental in determining whether a minor brain injury may be a factor in the employment problems the individual is experiencing and in arranging for

appropriate testing by a neuropsychologist to address these problems.

It should be noted that mild/minor brain injury is a complex problem and is often addressed in the rehabilitation literature as a separate and unique topic. The VR counselor may want to seek additional reading material on this subject to better prepare for recognizing when the problem is present and how it should be handled.

The gamut of mental status examinations as well as a number of neurodiagnostic techniques are conducted during the natural course of convalescence of patients with TBI. These tests are usually performed early and during the recuperative process, and are not immediately relevant to the vocational rehabilitation process. Their main purposes are in measuring the severity of the injury and thus guiding medical management, and also in charting improvements as they occur. However, later neuropsychological testing, which is best administered when the person with a brain injury has become medically stable, bears direct relevance to vocational rehabilitation.

Neuropsychological Consult/Evaluation

A neuropsychological evaluation may be part of the case records already reviewed. However it may not lend itself to ready interpretation by vocational staff members. Test scores are relayed as they compare to established norms, and a client's performance or level of functioning may be described in terms that tell us only that he/she is "deficient," "impaired" or below the "average," and the like. These terms mean little when they have to be translated to a job analysis. The client's internal profile of levels of functioning usually conveys more valuable information than how his/her performance stands relative to the general population. Additionally, these reports may be written in jargon, or worse, language that only serves to obfuscate. In most cases, a neuropsychologist, whose expertise is in brain-behavior relationships is the one who should be able to provide the critical evaluation that is basic to the process, assuming that the appropriate questions are asked.

Vocationally Relevant Questions for the Neuropsychologist

- What functional limitations are evident, e.g. in terms of memory, information processing, visual and auditory comprehension?
- What is the potential for further remediation?
- What is the prognosis for length of treatment?
- Can you comment on specific strengths noted in the testing situation, e.g., ease in receiving oral instruction, persistence, concentration?

- Is the client distractible? Externally? Internally?
- Can you comment on those aspects of pre-injury learning (i.e., firmly entrenched, over-rehearsed, repertoire of skills) that have surfaced during the current testing?
- Is there potential for new learning?
- How much supervision and environmental support will be needed at the current level of functioning?
- What is the possibility of creating special situations for this client?
- What is the client's best method of learning (job tasks)?
- What are the effects of interpersonal deficits on vocational goals?

The results of a well-focused neuropsychological evaluation can translate into practical recommendations for the vocational assessment process. These results allow the informed counselor to make preparations and take the anticipatory steps that ensure a successful experience for the client. The vocational counselor, thus armed, can begin to design the types of environmental support systems that the client, given his/her limitations, will require at the beginning of the vocational evaluation.

III: READINESS FOR VOCATIONAL REHABILITATION

Collecting information relevant to the vocational rehabilitation process, includes certain essential elements. In assembling a written profile, the counselor should try to create a detailed, total picture of the person with a brain injury. As detailed a picture as can be made available is the desired goal. A critical review of the assembled records should provide the VR counselor with special insights, for it is the information contained in these records that often is a factor in deciding the course of vocational exploration. Of equal importance is the oral data explored during the course of the interview.

Determining the Appropriateness of the Referral

Before beginning the assessment of readiness to engage in the VR process, the determination of the appropriateness of the referral is fundamental. One of the first considerations is to recognize the source of the referral. Professionals in both medical and rehabilitation settings frequently push patients with brain injury into untimely, and therefore inappropriate, vocational rehabilitation efforts.

If the person being presented for VR consideration is at a stage of medical care or rehabilitation in which there is promise for further improvement, then the engagement in a vocational evaluation process is best deferred. In assessing readiness to engage in work, careful consideration of the stage and stability of both current and potential improvement must be made.

The crucial issue of timing and the manner in which vital services are delivered to persons with traumatic brain injury remain critical considerations in the process of vocational rehabilitation. The time to begin is when the client with TBI is ready, and this readiness depends upon proper preparation. Those with acquired brain damage often do not appreciate the need for vocational services. They are unable to assess their own incapacities and frequently are unaware of their injury-imposed limitations. An effectively designed preparatory stage that helps to develop awareness and acknowledgment of residual changes in a range of capacities is essential before individuals are ready to begin the process.

Intake Interview

The intake interview is actually the first essential step in the process of

assessing readiness to engage in the VR process and is probably the best initial assessment tool available. It is recommended that the VR counselor allow more time for initial interviews with individuals with TBI than other clients. The intake interview serves a variety of purposes from a fact finding mission to establishing rapport with the client. Additionally, it allows the counselor to make clinical observations, which is another form of data collection. If the behavior of the client is so dysfunctional that the counselor develops concerns about dealing with him/her, there is a strong possibility that the person is not ready for the VR process.

First and foremost, the interview provides the counselor with an opportunity to evaluate the client's ability to participate at a very basic level; in other words, to test his/her capacity to engage reliably in a two-way communication necessary for the VR process. Did the client remember to keep the appointment? Punctually? Can he/she adequately supply information about him/herself coherently? How adept is the client in supplying pertinent demographics? In the course of conversation, is the candidate focused? Is he/she attentive, or highly distractible, either by external stimuli or by an internal agenda? Is the client oriented to time and place? Does the interviewer detect a degree of impulsivity? And if not, is it possible to set up a special situation to test this aspect of behavior? Designing special situations requires some creativity and common sense; and the possibilities are endless.

Vocational Candidate's Arrival

Two things to be noted during this first meeting are: by what means of transportation did the candidate arrive, and did he/she arrive alone or accompanied by a significant other. The inclusion of this additional person as a source of background information and details of injury is recommended when the client cannot reliably provide this important information. However, the counselor must find out whether the presence of this additional person(s) is in response to a need of the client or to that of the significant other.

When someone wishes to go to work, the issue of independent mobility must be addressed during the vocational assessment process. The inability to gain access to the job market independently limits a person's potential for competitive employment.

Readily Observed Behaviors

The list of behaviors that are readily observed during the interviewing process is lengthy, and the skilled counselor must be aware of all those that

will have a negative or positive impact in a work situation. For example, note signs of disinhibition. The client who is extremely uninhibited will not fare well in maintaining employment because a high degree of disinhibition precludes establishing adequate interpersonal relationships in the workplace. One should also note whether a potential client is physically disabled or has communication problems. The counselor should gain knowledge of specific deficits that, unless they can be compensated for or sufficiently remediated, will preclude certain jobs.

Significant Others

During this initial phase of fact finding, the counselor should obtain information concerning the constellation of significant others who can be relied upon for supplying support. The lack of this type of support system can make the process more difficult. Family members and familial role models make a measurable contribution in vocational rehabilitation.

Forming a Profile

Medical Information

Relevant medical reports should describe the injury, its severity, and the circumstances under which the injury occurred. Descriptions of medical treatment, complications during convalescence, and efforts aimed at rehabilitation should also be part of this data collection. The circumstances surrounding the injury may also provide information, such as the presence of alcohol or drugs as contributing factors.

The presence of a surgically implanted shunt should be noted. These shunts are put in place to relieve buildup of fluid in the brain (creating increased intracranial pressure) during the acute care stage. They usually remain in place and generally offer no problems. However, if the shunt becomes clogged, there must be a surgical revision or replacement to correct the malfunction. A malfunctioning shunt will contribute noticeably to a sudden diminishment in performance.

Prescribed drugs for seizure control must also be noted. Additionally, some patients are given psychotropic medication in an effort to control aberrant behaviors. These drugs almost always inhibit task performances.

Leisuretime Activities

Leisuretime activities should be examined. If the client is fortunate and has remained socially active following TBI, the counselor should consider

how he/she maintains leisuretime activities. The skills needed to retain social contacts can approximate the strengths required for success in the job market. The counselor should also explore at this point whether the individual is involved in TBI support groups.

Post-Injury Work History

During the interview, the counselor should find out whether there is a post-injury work history or whether attempts to return to school were made. The quality of the work effort should be explored in detail when possible. Since the client has been referred for vocational services, previous attempts at reintegration may not have been successful or produced the desired results. It is important to determine how realistic the client's perception is of what transpired, and his/her self-report of adequacy, or lack of it, should be confirmed in consultation with former employers or teachers whenever possible.

Post-Injury Education

Academic degrees earned post injury merit special attention. However, the degree awarded sometimes has no applicability in the "real" world, and may have been earned under highly structured conditions.

Goals and Self-Perception

It is important during this process to ask the vocational candidates about self-perceptions regarding specific injury-induced problems. The counselor should gather information on the qualities the client possesses that might represent strengths. Usually people with brain injury will mention problems in memory because their social circle has forced them to acknowledge this deficit. Memory impairments become self-evident as do physical limitations, which clients are able to report readily and identify as the primary reason for their inability to gain employment.

This interview would also be well spent in discussing the client's personal goals and assessing how realistic they are when compared with the client's abilities. The counselor should be able to observe whether the self-report is biased by anxiety due to the interviewing situation, or whether the client who presents as unrealistic is simply responding with faulty judgment to a social need for approval—to look good.

History Prior to Injury

Information gathered during the intake interview may be incomplete

or, in some cases, not totally accurate. The counselor must now assemble those elements of pre-injury history that can be documented by written record. In this way, the counselor continues to create a portrait of the person who is about to begin the vocational assessment process.

Counselors must reference the injury-produced changes, the alterations in cognitive/intellectual function and personality/emotional style, but must also keep in mind that who a person was before injury is often the final determinant of who he/she will become. The tragic circumstance of acquired brain damage may blunt aspects of behavior or, conversely, exacerbate them. Armed with pre-injury information, the well-prepared counselor can begin to anticipate styles of behavior that may bring success in particular work situations.

Pre-injury Health History

It is important to obtain a pre-injury health history because pre-existing medical ailments often complicate traumatic brain injury. Earlier injuries to the central nervous system have implications for the rehabilitation process, as do congenital anomalies. The person prohibited since birth from the development of a full range of functional capacities presents a special challenge, different from that of one who had no significant problems prior to injury.

A history of substance abuse or psychiatric disability also compromises prospects for successful vocational rehabilitation. Pre-injury drug abuse and alcoholism address a person's style of social adjustment. The mere suggestion of this predilection should alert the counselor to the fact that the potential for this behavior will have to be monitored throughout the VR process.

Pre-injury Education

Level of pre-injury educational attainment must be obtained and, when possible, the quality of educational performance. Any indication of a learning disability that interfered with the normal progression of educational achievement should be noted. The presence of a learning disability may complicate the VR process.

Clients with advanced academic or professional degrees will often possess a greater range of vocational options. However, it should be considered that after brain injury, individuals frequently exhibit problems with recent memory; therefore, the length of time that has passed since the degree was obtained and the amount of time spent in applying what was

learned may be very relevant. Most retain memory for a repertoire of overlearned skills developed before the injury.

Pre-injury Work History

In compiling a pre-injury work history, the counselor should note the skills that were demanded in pre-injury occupations. These skills, often retained, suggest further areas for vocational exploration. The counselor should also look to on-the-job training experiences as well as formal training required for pre-injury work. Retrievable skills may have resulted from these types of training.

Referral For Vocationally Relevant Services

When written and orally delivered reports as well as observations made in the course of a personal interview do not indicate readiness to engage in the VR process, the VR counselor should have the option of referring the client for further vocationally relevant services. These services might include therapies in any of the rehabilitation disciplines or alternate ones as necessary.

The nature of the discipline to which the client is being referred should be at the discretion of the vocational counselor who has made the determination that the client is not ready. For example, whatever the functional skills attested to by written report, the inattentive client may profit from a period of cognitive remediation designed to ameliorate this specific deficit. Efforts made to engage people with brain injuries in the VR process before they are ready are never cost effective.

Course of Rehabilitation/Reports

Some individuals may never have participated in conventional rehabilitation programs prior to the VR interview. If this is the case, the only means of evaluating the current status of neurological and physical improvement is to acquire the most recent reports of the medical professionals who cared for them. The counselor's primary concern in reviewing these records should be the stability of gains made. The stability of improvements, both neurologically and physically, is a determining factor in judging the timeliness of vocational intervention.

With an awareness that the course of rehabilitation is not fixed, but rather, highly individualized and dependent upon a range of variables, the

VR counselor should gather all available records from the various reporting disciplines. In most cases this means nursing, physical therapy, occupational therapy, psychology and neuropsychology, speech and language services, social services, and recreational therapy. These reports typically document functional skills across a gamut of work-related domains. When it is determined that the client has the appropriate degree of readiness to begin, the counselor, in consultation with a competent neuropsychologist if possible, should design the individualized vocational assessment plan.

IV: COGNITIVE REHABILITATION

Cognitive rehabilitation is the systematic, goal-oriented therapeutic intervention designed to remediate/improve a range of cognitive abilities. Areas addressed in a program of remediation are highly individualized and may include attention, concentration, and impulse control. Remedial rehabilitation programs also address lack of awareness of injury-imposed limitations and social and emotional needs. Memory impairments are attended to and compensatory devices are taught. To profit from a program of remedial efforts, the person with a brain injury must be able to participate actively or at least be alert at outset.

Cognitive remediation is carried out in carefully planned stages or steps. The first step, noted above, is making certain the individual with a brain injury is ready to be optimally participating. Clients then move on through a variety of highly structured training exercises. Skill acquisition and skill stabilization are stressed.

For most people possessing true functional memory deficits, compensatory aids must be established if they are to return to any level of occupational productivity. Compensatory measures often take the form of environmental cueing systems. Cueing can be as simple as an index card inscribed with the alphabet for the client who is involved in a filing task, or a written list of sequential steps for a given task supplied to the client and suitably available for visual reference. Sometimes these mnemonic devices require only common sense to create. Environmental prompts may consist of the simple list of task requirements as mentioned, or may include, for example, color coding of instructions that respond to correspondingly color-coded equipment.

It is important to remember that environmental cueing systems must incorporate the steps to be taken in a logical sequence. This is true whether they are being designed for the work place or for those activities of daily living that must be accomplished at home. Environmental structure may include all or any mnemonics brought into play to support task performance. These might be written guidelines for procedural operations; calendars and journals for personal appointments; job logs, maps, written step-by-step procedures for gaining access to a particular place; and a daily schedule which facilitates transitions from one aspect of the day to the next.

Indicators of Need

Sometimes a client with a brain injury is determined eligible for vocational rehabilitation, yet demonstrates functional deficits in cognitive skills. If these deficits limit the client's potential for independence and vocational success, then cognitive rehabilitation may be indicated. The important criteria lie with the discrepancy between what the client is able to do now and what will be required of him/her on the job or vocational placement. If the job will require more skill and the client has demonstrated potential for it (or perhaps does it already but not consistently), then cognitive retraining should be initiated. The following additional guidelines should also be observed:

- The client should demonstrate the motivation and ability to actively participate in the learning situation and display a capacity for consistent improvement on new learning.
- The client's own goals should be both realistic and congruent with the final goals of the remediation and ultimate job placement.
- There should be evidence that the skill deficits exhibited by the client are retrainable in therapy. If not, the focus of the therapy should be on development of compensatory strategies, use of external aids, providing more structure in the environment, and job support.

Role of Cognitive Rehabilitation in Vocational Training

Goals for training should be made with regard to the skills needed to perform in the client's vocational placement and the events leading to it. Since these needs and placements may change, it is important to update them regularly. The goals may be relevant for a sheltered placement initially and training may be in that direction. After working in the sheltered placement, the client may demonstrate the potential for competitive employment. This may indicate further training toward new goals and self-sufficiency.

Individuals seen for vocational rehabilitation referral are frequently, though not always, further along post onset and generally more stable in the behavioral manifestations of their neurological injury. They are typically long past the early post-coma stages.

Compensating for Deficits on the Job

People with brain injuries are usually taught a variety of compensatory mechanisms in the course of cognitive remediation. At issue here is whether they are capable of incorporating compensatory strategies

into an open environment. Those who are fortunate enough to have adopted even limited ways of compensating are ahead of the game when they begin the VR process.

Because most people with brain injury experience memory deficits, attempts to teach them mnemonics do not usually meet with much success. And there are real reasons: (a) the memory deficits mentioned and (b) a profound inability to think in the abstract, i.e. incorporate information that is presented out of context.

The best way to teach work-relevant compensatory measures is in a work context. It is only in a work setting that these strategies have real meaning to most people with brain injuries.

Critical Features of Cognitive Rehabilitation

1. Adequate evaluation, planning, and ongoing supervision by a trained professional.
2. Daily structured tasks that include:
 - Supervision
 - Minimal distractions
 - Step-by-step acquisition of skills
 - Constant systematic feedback
 - Maximal stimulation
 - Built-in success
 - Repeated learning
 - Transfer of training to functional settings
3. Written instructions and notes by supervisor of daily task:
 - Cognitive rehabilitation therapist/technician
 - Attendant
 - Family member
4. Regular (e.g. weekly) review of program by neuropsychologist.
5. Coordination of program with other rehabilitation team personnel.

V: EMPLOYMENT OPTIONS

Traditional Vocational Rehabilitation Setting

The type of adult with a brain injury most typically served in a vocational rehabilitation program has significant cognitive, emotional, and/or physical residuals that limit his/her ability to return to school or work. Problems arise when the vocational rehabilitation system is faced with clients needing specialized services to return to the community.

The traditional VR service delivery model for the majority of clients consists of vocational evaluation, vocational training, and job placement, in that order. This model presupposes that the client is capable of independently transferring what has been learned from one setting to another, e.g., transferring skills learned from the rehabilitation facility to the job. However, the deficits of many clients with brain injury include impaired memory, slow information-processing skills, and impaired ability to generalize newly learned information—the very skills necessary to complete a traditional vocational rehabilitation program successfully.

Limitations of Traditional Vocational Evaluation

Traditional vocational evaluation systems have been ill equipped to meet the special needs of people with brain injuries. Standardized tests of intelligence, personality, aptitude, interest and achievement typically provide scores that indicate how an individual compares with "norm" groups. Those with brain injuries are often capable of displaying areas or "pockets" of high achievement on these structured tests of discrete skills. The results yielded by many of these tests are predicated on old learning, i.e., a well-rehearsed repertoire of pre-injury skills.

An excellent example of a score that can misrepresent the potential of a client is a verbal IQ, predicated, as mentioned, on intact material learned before the injury. Unfortunately, these traditional tools and the evaluators who use them assume a systemic integrity, and people with brain injuries do not conform to the normal populations upon which these tests were standardized. The component that prevents these instruments from being valid predictors of success is the inability of those with brain injuries to integrate, apply and generalize many of the skills tested.

Most standardized examinations do not address (other than the administrator's observations) or make allowances for the problem areas that pose the major barriers to social, educational and vocational

reintegration. That is, they provide *quantifiable* data, but make no provision for including in reports of scores an assessment of the *quality* of performance. Traditional systems, with a growing awareness that those with traumatic brain injuries are unable to respond to these tests in ways that accurately translate to functional skills, are now recognizing the necessity for other modes of evaluation. These standardized measures, however, can lend themselves to careful adaptations that address the skill capacities of clients with brain injuries. When administered creatively without adherence to formal protocol, by a counselor familiar with functional behaviors commonly found in this population, the results can be used to determine appropriate types of entry level job placements.

The introduction of traditional hands-on, situational assessments (a short-term monitoring of work performance in an actual setting as opposed to a standard testing environment) as a means of measuring vocational potential has met with limited success in this population when applied in the manner used by most vocational work evaluation programs. It is limited because most clients with brain injuries are ill equipped to engage in on-the-job work situations without some preparatory guidance.

Most clients retain a picture of themselves functioning at pre-injury levels. It is unrealistic to anticipate whole hearted participation in a situational assessment, which usually begins at entry level, by clients who cling erroneously to a view of themselves as functioning at their capacity before the injury. Such participation is possible only following a personal adjustment to disability, an adjustment that includes both an awareness and an acknowledgment of injury-imposed functional limitations. Developing this essential degree of awareness must be accomplished before engaging the client with a brain injury in any vocational evaluation process.

Once the individual has a sense of awareness of his/her functional limitations and a willingness to accommodate these limitations in a work setting, then a more realistic evaluation can be conducted. Implementation of a skillfully designed situational assessment followed by a preparatory period to help the individual become aware of limitations can provide the VR counselor with an excellent opportunity to observe the qualitative aspects of work behaviors. It is the vehicle that can allow the VR counselor to design compensatory measures; provide structure and support systems; test autonomy; gently confront in areas that require modification; and, if provided when the client is ready, can be the optimal guide toward vocational reintegration.

Supported Employment

Supported employment is a special type of placement that allows for continued treatment throughout the VR process, and may be applicable to clients with a brain injury, particularly if long-term, ongoing support can be arranged.

Since this type of placement could be particularly effective for people with brain injuries, it would be worthwhile to seek further information to determine whether it could be made available. Literature about the various models of supported employment and other requirements necessary to meet the Federal definition of supported employment can be obtained through the State VR Supported Employment Office.

Definition

The definition of supported employment is competitive work in an integrated work setting with ongoing support services for individuals with the most severe disabilities for whom competitive employment has not traditionally occurred or has been interrupted or intermittent as a result of severe disabilities.

Key Concepts

Individual with the most severe disability: means an individual with a physical or mental disability:

- (a) who has a severe physical or mental impairment that seriously limits two or more major life activities (mobility, communication, self-care, self-direction, interpersonal skills, work tolerance or work skills) in terms of an employment outcome;
- (b) whose vocational rehabilitation can be expected to require multiple vocational rehabilitation services over an extended period of time; and
- (c) who has one or more physical or mental disabilities or combination of disabilities determined on the basis of an assessment for determining eligibility and vocational rehabilitation needs to cause comparable substantial functional limitations.

Integrated work setting:

- (a) a job site where most employees are not disabled and the individual with the most severe disability interacts regularly in performance of job duties with co-workers who are not disabled and/or members of the general public.
- (b) a job site where the individual with the most severe disability works

alone but has regular contact with the general public in performance of duties.

- (c) a job site where the individual with the most severe disability works in a group of not more than eight workers with disabilities and interacts regularly in performance of job duties with non-disabled co-workers and/or members of the general public.
- (d) interaction only with individuals who provide ongoing supported employment services at the job site does not satisfy the integration requirement.

Competitive work: for individuals receiving supported employment services, work performance on a full-time or part-time basis as defined by a weekly work goal in the Individual Written Rehabilitation Plan (IWRP). The client will be expected to make substantial progress toward this goal, and to have met the goal by the time of transition to extended services funding.

Ongoing support services: services specified in the IWRP according to individual need, which support and maintain an individual with the most severe disabilities in supported employment. Division of Vocational Rehabilitation sponsored ongoing support services are provided from the time of placement until the individual is stabilized on the job.

Extended services: means ongoing support services provided once the time-limited vocational rehabilitation services are completed and consist of specific services needed to maintain the supported employment placement. Extended services are paid from funding sources other than DVR and are specifically identified in the IWRP. Unfortunately, the lack of extended support services has been a major obstacle in utilizing this type of placement through the current system.

Use of Job Coach

A principle underlying theme of supported employment is to provide ongoing support at the job site to help clients function in an integrated work setting. The person who provides this support is often called a "job coach" or "job coordinator". Ongoing support is provided by this individual as long as needed. As the client learns the job, the coach will spend less time in on-the-job support. Ongoing support may include retraining, job modifications and meetings with supervisors and co-workers.

A job coordinator or job coach is often vital for the successful placement of clients with brain injuries. He/she must be aware of the

strengths and weaknesses of the client and what, if any, compensatory techniques are used by the client to overcome cognitive deficits. The job coach may need to develop specific strategies at the job site to assist the client in performing the essential components of the job. He/she must also be able to intervene if problems arise on the job site.

One essential function of the job coach is to be an educator to the employer and other employees at the site. One cannot emphasize too strongly the need to educate employers about brain injury in general, and about the specialized needs of the individual client in particular. For example, the employer has to be aware of the strengths and needs of the client so as not to expect or require more than the client's capabilities allow.

Graduated Placements

The demands of a competitive job are significantly greater than those found in most rehabilitation facilities and are almost a quantum leap for many clients with a brain injury. However, many clients can make the transition if it occurs slowly. For example, one method might begin by placing the client in a volunteer position on a part-time basis, then gradually transferring him/her to a part-time job, and ultimately to a full-time job, all under the direction of a community re-entry specialist. Any number of variations of this technique are possible. The key is to introduce new demands in small enough increments for the client to handle.

Another advantage of graduated placements is to increase a client's awareness that additional skills are needed before full-time competitive employment can be seriously considered. Professionals have found that clients who work on a trial basis in the community often return with new awareness of the objectives of the rehabilitation program. They become aware that treatment suggestions made by the rehabilitation professionals may indeed be necessary for successful vocational functioning.

A temporary placement can be used to improve appropriate work behaviors. Frequently clients will demonstrate marketable vocational skills but will display behaviors that would result in job loss. For these clients a volunteer work site with "real-world" supervisors has proved to be beneficial. Often the client more readily accepts supervisory criticism from someone outside the rehabilitation facility.

Placement Considerations

The following steps should be taken by the VR counselor prior to

placing a client with a brain injury on a work site, to avoid an inappropriate match and a possible failure situation for the client.

Selectivity

The placement must be consistent with the client's cognitive, physical, and psychosocial strengths and weakness. Moreover, the client's interests, abilities, and aptitudes must also be considered.

Job Analysis

There are a variety of techniques designed to organize and evaluate information relevant to the performance of a job. For the client with a brain injury, that analysis must contain information with respect to the physical, emotional, and cognitive elements necessary to perform the job at the observed site. The demands of the job can then be compared with the strengths and weaknesses of the client prior to placement.

Placement with Education and Training

Employers and work-site supervisors must be fully aware of a client's strengths and weaknesses. An informed supervisor is less likely to misunderstand behaviors that on the surface may appear to be willful and deliberate. For example, a flat affect whose etiology is neurologic may be misinterpreted as a lack of motivation. Equally important is educating the employer that satisfactory performance on one type of job does not necessarily imply promotion to higher level jobs. Again, the job should be analyzed to determine whether the client is capable of performing its individual components.

Staff Supports

Effective placement assumes the availability of a knowledgeable staff member to function as a liaison between the employer and the rehabilitation facility and to assure that necessary supports for the client are in place.

Placement Redefined

Full-time, competitive employment may be the ideal objective, but the reality is that many clients with a brain injury are incapable of achieving it. Therefore, a broader definition of placement must be developed to encompass the needs of this population. Job placement can be redefined as community re-entry, including not only full-time and/or part-time

competitive employment but volunteer employment as well. Integration of the client into the community and the provision of supportive services are ongoing needs throughout the duration of the client's placement. Job placement cannot be a final, non-supported step for this population. Specialized treatment throughout the entire rehabilitation process, including long-term, follow-along services after placement, must be made available to clients who have a traumatic brain injury.

VI: INVOLVING THE FAMILY IN THE VOCATIONAL PROCESS

While family involvement in the vocational process is an important factor, it must be pointed out that not all families produce a positive influence in the vocational process of their loved one. Families may push for unrealistic vocational goals, or because of lack of cohesiveness in the family structure, may be unable to carry out a plan of action to produce the best vocational outcome for the individual. Family dynamics as well as the family's value system play important roles in determining the response to projected vocational goals.

Family Expectations and Values

The answer to the question, "What are your expectations?" will often reveal a great deal of information about the family system: their needs, values, adjustment to and accommodation of the family member with a brain injury.

Most often an individual's identity within his/her community and family is related directly to employment. Many people form assumptions about the level of education, income, living environment and lifestyle of an individual by that person's type of employment. This attitude reflects the importance work holds for people in terms of addressing strong, deeply felt needs and values, and eliciting psychological protective mechanisms.

It follows that work serves to justify one's value and identify one's worth in society. While the most obvious purpose of working is providing financial support, most people do not work for financial support alone, nor is this necessarily the major reason for choice of work. Rather, most people choose certain jobs because they fulfill certain needs and address values that the individual and his/her family have developed over a lifetime.

It is important to consider the role models played by families in the process of adjustment to work. At one end of the spectrum are families determined to be productive and self-supporting (described as possessing a work ethic). At the other end are families with little or no investment in work as a way of life. These latter families may subtly (or more obviously) transfer their attitude toward work as non-essential and valueless to the member of their family who has a brain injury. Certainly an individual who comes from a family with firmly established work ethics is a better vocational rehabilitation candidate than the one whose family is not

motivated to work. While professionals should not judge the value systems of individual families, including those who place other rewards above the value of conventional work, it is of pragmatic importance to recognize the influence of such value systems on the person with the brain injury and adjust vocational rehabilitation accordingly.

Effects on Family Structure

Families of individuals with brain injuries must realize the inescapable effects on and changes within the family structure. If the person with a brain injury is the income provider, there will likely be changes in marriage/family relationships, income, economic stability and social status. One or more family members may be forced to assume the role of provider. It is important to remember that sudden, unexpected shifts in roles, goals and responsibilities after traumatic brain injury affect all family members.

Denial

During the vocational rehabilitation process, many families appear to be "stuck" in a phase of denial. If the family has extreme difficulty in accepting the reality of the reduced vocational reintegration plans, this message is often passed on to the person with the brain injury. This may hamper the beginning of the vocational process at the entry level.

People with brain injuries remember clearly how they performed prior to their injury and are often reluctant to take on a task that is viewed as boring or non-challenging. Families will often support this attitude and at the same time reinforce idealized vocational goals.

Bargaining and Splintered Skills

At the stage of adjustment when the individual is making substantial physical improvement, he/she often feels ready to return to his/her previous life style, including work. It is frequently observed that the individual at this point often disregards or minimizes the impairment of skills such as problem solving, reasoning, judgment and organization, which are critical for vocational adaptation and community re-entry. While the person may recognize some limitations, he/she feels deserving of a reward for achievements in physical rehabilitation.

Frequently, family members who desire to see the individual function at a higher level will support this type of thinking. This is the point at which "bargaining" takes place, when the client and the vocational

counselor must reach an agreement about the skills that can be realistically performed by the individual.

Vocational counselors face the dilemma that jobs relying on splintered skills do not exist and that there are few, if any, employers who are willing to redesign jobs that rely on one or two limited skills. Even if the vocational counselor located a perfect job, the individual would still need problem solving, communication and interpersonal skills in order to get along with co-workers and supervisors.

Placing a client in a job for which he/she does not possess the skills may cause embarrassment or ridicule at the job site or eventually cause the person to be ostracized. The individual risks a loss of self-esteem, which may take much time to rebuild. Also, certain jobs could expose the individual to harm. In a dangerous environment, cognitive limitations, especially a vulnerability to distraction or reduced safety judgment, could result in an accident or injury.

Another detrimental result of placing an individual on a job when he/she possesses only splintered skills is the possibility of a critical mistake costing the employer much time, effort, and/or money. This would also reflect poorly on the VR program or professional. Moreover, a valuable employment resource could be lost.

Vocational counselors must remain neutral and objective to manage effectively the delicate situations of families' attempted bargaining. The first step in the right direction is to help the family gain an appropriate perspective on the progress that has been made. The second step might be to encourage them to list the pros and cons of continued rehabilitation or attempting a job placement. By assisting them with discussion, the counselor can facilitate movement toward acceptance of the situation, while maintaining an objective and supportive role. Identifying jobs that require the skills the individual currently possesses can be a group effort. The individual, the family members, and the rest of the rehabilitation team can help the counselor. The VR professional may also be preparing a list of jobs in which the individual might be successful with an expanded repertoire of skills. A list of potential job options can help all parties to refocus and remain hopeful when the reality of the market viability of splintered skills is recognized.

Depression

People with brain injury often experience a drop in self-esteem

stemming from the loss of a career or employment; a loss of social identity generally defined by one's work; and guilt created by reduced earning capacity and becoming a financial burden on the family. Family members as well as the client may become depressed, as they each anticipate a loss of independence and individually realize that their own future goals and plans will have to be adjusted to accommodate the caretaking needs of the family member with a brain injury.

Vocational counselors need to use both supportive and exploratory counseling approaches with the depressed client and his/her family members. Counselors should help these individuals re-examine and challenge their long-held ideas about the personal aspirations and goals they have established in order to feel worthwhile.

Counselors may also need to explore the individual's pre-injury feelings and attitudes toward persons with a disability. Frequently, these feelings will have been based on stereotypical ideas of equating disability with helplessness and the sick/patient identity. Helping both the individual and family members to identify their feelings of losing control can diminish depressive reactions, and support the development of worthwhile, contributing roles in the home and community.

Above all, vocational counselors will also need to provide active listening support and confirmation as the client and family members express their sadness about their losses.

Accommodation

The vocational process can be viewed and used by professionals not only as the culmination of a successful rehabilitation program, but as a psychotherapeutic tool to facilitate movement through stages of emotional adjustment. The skillful use of vocational tools and situations in the rehabilitation process should facilitate emotional adjustment to limitations resulting from brain injury, while encouraging the use of practical accommodation strategies. To successfully assist individuals with brain injury in becoming gainfully employed, vocational counselors need not only to focus on the desired outcome, but also to become knowledgeable and sensitive to the adjustment process that must first occur.

The VR counselor will encounter many different types of family involvement through the vocational process. Different levels of family involvement may include the involved and supportive family; the involved and unsupportive family; or the uninvolved and unsupportive family. Each

type of family involvement must be dealt with by the vocational counselor, as brain injury is truly a family matter. It is important for the vocational counselor to consider, understand and include all aspects of the family during the vocational process. Professionals need to be sensitive and skilled in order to design interventions that are helpful, timely, and culturally and environmentally appropriate to the family and to the individual.

Success in the vocational rehabilitation process is often commensurate with the degree to which professionals successfully involve family members as a needed and valued part of this process.

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