ASSESSMENT OF BEHAVIORAL AND VOCATIONAL POTENTIAL OF PERSONS WITH MODERATE TO SEVERE COGNITIVE DISABILITIES FOLLOWING TRAUMATIC BRAIN INJURY

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Abstract

This article attempts to relate information describing common deficits subsequent to a traumatic brain injury (TBI) of potential interest to professionals involved in the vocational evaluation of this population. The article is based chiefly on information identified from a recent research project, and personal experiences of the author. Although the goal of this article is not to describe recommended practices, the deficits in the areas of physical, sensory-motor, cognitive, emotional and other psychosocial and behavior problems that are outlined, can serve as clues to the factors necessary to consider in the evaluation of a TBI referral. Consideration for managing behavioral disturbances and suggestions for developing a general evaluation strategy are also provided.

Background and Problem

The rehabilitation literature suggests a recent dramatic increase in referral of persons with TBI into the state/federal Vocational Rehabilitation (VR) system (Thomas, 1986; Twelfth Institute on Rehabilitation Issues, 1985; Lezak, 1984. The reason for this increase is multifaceted, but relates to the fact that more people survive a traumatic head injury today than did ten years ago (Rosenthal, 1987). The fact that the general public is better informed of the special needs of the person with TBI, coupled with the growth of support and advocacy groups which stress the importance of vocational rehabilitation services, has also contributed to more frequent referral of persons with TBI to state VR agencies and to vocational rehabilitation facilities.

Traditional vocational evaluation programs are frequently unsuitable for evaluating the special needs of persons with moderate to severe TBI. The reason that traditional programs are frequently unsuccessful in effectively dealing with this population is in part due to the relative inexperience of service providers. Inconsistently exhibited behavioral problems and psychosocial deficits inherent with this disability further complicate the process of assessing suitability for employment.

Vocational evaluators tend to be unfamiliar with the special problems of the TBI referral, since the majority of all evaluators work with a relatively small percentage of TBI in relation to the aggregate of disability groups typically served. Generally speaking, evaluators are unfamiliar with the nature of behavioral and physical deficits exhibited following a moderate to severe TBI. In addition, evaluators are typically unfamiliar with methods of managing problem behaviors. The excessive demands for time that persons with TBI places upon the evaluator present another problem in working with this population. Finally, evaluators have not had adequate models of evaluation approaches to follow in planning the evaluation process, therefore each evaluator needs to structure their own unique evaluation protocol.

Common Deficits Following TBI

A recent study conducted by Thomas and Czerlinsky (1987) detailed specific characteristics and rehabilitation needs of moderate to severe TBI which can serve as a checklist of criteria to examine in the course of a vocational evaluation. This study examined follow-up data on 760 TBI survivors in order to determine the prevalence of deficits in the areas of: Physical Problems, Sensory Motor Problems, Cognitive Problems, Emotional Related Problems, and other Psychosocial or Behavioral Related Problems.

Physical Problems

The majority of the subjects studied were found to have significant physical problems, the most common of which included deficits in: balance (74%); walking or ambulation (70%); physical strength and lifting (52%); and general weakness (51%). Surprisingly, although many individuals noted problems with lifting, walking and balance, the majority were not using wheelchairs for mobility, but rather were ambulating independently or with the use of walkers, quad canes, etc.

Sensory-Motor Problems

Sensory-motor problems were generally less of a problem, with the exception of coordination which was reported by 72% of the population, and visual problems which was a problem with nearly half of the respondents. Visual problems included difficulties with double vision, blind spots, and reduced peripheral vision. Approximately 16-17% reported difficulties with hearing, smell, and taste. With the exception of the latter, all would tend to impart significant deficits in regard to return to work programs, and some may represent significant problems which warrant careful evaluation prior to placement or a community-based situational assessment. Seizure related difficulties were reported in approximately one-third of the sample.

Cognitive Problems

Cognitive problems are among the sequelae which are reported most often in the literature, and are the most apparent to the evaluator. Topping the list at 74% were memory problems, which tend to occur in one type of memory or recall and not in others. For example, only deficits in auditory memory were reported for some persons while others sustained deficits only in visual memory. Others were found to have intact memory for distant events, but significant problems in regard to learning any new material. A neuropsychological evaluation is essential to determine the nature and extent of such difficulties. This data supports the contention that depending on the nature of the injury, some memories are significantly problematic while other types of memory process are less disturbed or are preserved.

Organization and planning were reported as areas of difficulty with approximately 61% of the population. This included analyzing and attacking a problem and knowing what to do in various social situations. Approximately 50% or more of the people studied had problems with communication, either in regard to expressive or receptive language. Attention in conversations, reading and writing problems, deficits in visual problem solving, recognizing faces or simply route finding in the neighborhood were also common deficits.

Emotional Related Problems

Surprisingly, many of the difficulties that occur to individuals after a moderate to severe TBI involve issues that one may view as chiefly emotional in nature. For example, 77% of the population were easily frustrated, overwhelmed by simple tasks and were emotionally over-reactive. Over 60% encountered problems of mild to severe depression, anxiety, boredom with day to day activities, loneliness, and anger. To a lesser degree, psychotic type symptoms were reported in the population as well. Twenty-eight percent were reported as being paranoid or suspicious, eight percent reported auditory hallucinations and almost 40% reported visual hallucinations. Seven percent were regarded as being behaviorally out of control and unmanageable in integrated community settings.

Other Psychosocial and Behavioral Problems

Social and behavioral problems following TBI involve those interpersonal skills necessary to get along on a job or to live independently in the community. These psychosocial and interpersonal difficulties are thought to account for most work related problems in this population. Problems with social awkwardness, poor judgement, immaturity, impulsiveness, isolative behavior and aggressiveness were common to nearly 40% of all moderately to severely head injured individuals. Nearly 18% were considered aggressive and assaultive to others in their immediate vicinity without provocation.

Impairments in activities of daily living are also deficits which should be examined during the course of an evaluation. The majority of all persons reported problems with the following behaviors:

1. Use of public transportation
2. Driving a car
3. Managing finances
4. Shopping for groceries
5. Using the telephone
6. Obtaining medical help
7. Caring for minor injuries
8. Cleaning the house
9. Washing dishes
10. Preparing meals independently

To a lesser degree, individuals were also found to have deficits in terms of dressing, bathing and grooming, making change for five dollars and finding their way in the neighborhood.

Practical Considerations for Managing Behaviors in Light of Acquired Deficits

For persons with moderate to severe head injuries an evaluator can generally expect some difficulties in terms of emotionality, impulsiveness and anger. Musante (1984), related that expression of anger during the vocational evaluation process was a common and natural occurrence that one may expect to observe. Being alert to some of the emotional reactions that evaluators are likely to encounter will help them prepare for dealing with such issues if they arise. Accepting emotional reactivism as a natural by-product of a TBI can help an evaluator to deal with this frustrating personality trait.

Evaluators can expect to meet resistance to programs. This can be countered with reassurance,

encouragement and setting of small yet reasonable goals. Scheduling part-time assignments initially with frequent attention and praise will promote success in the early stages of the evaluation. It is also helpful to obtain a strong commitment to become involved in the program, and to frequently ask the person to state their impression of the purpose of the evaluation. This information can be channeled back to the client if they become oppositional or negative toward the program.

Planning frequent rest breaks will aid in minimizing fatigue that is not only physical but emotional in nature, which can add to frustration and therefore potential expression of anger. Use of natural reinforcers such as encouraging a person to work until break time or giving job responsibilities that the person sees as desireable as a reward for completing more routine tasks, may be a useful motivational technique with this population. Speaking in short sentences when giving directions, and verifying that the person indeed comprehends directions by observing them at work or by asking them to verbally repeat or demonstrate what they are expected to do is one method for determining the degree of comprehension of work instructions. The method of verifying comprehension of work instructions must be approached with the realization that deficits in certain areas will negatively affect performance (e.g., with aphasics it may be better to have them demonstrate what they are to do as opposed to verbally describe the task which may be impossible for them to efficiently do). Finally learning as much as possible about brain behavior relationships will help the evaluator to identify potential problems before they develop.

Developing an Evaluation Strategy

Of primary importance in the vocational evaluation of persons with TBI is to collect all relevant information as soon as the initial referral is made. Collecting information can be a time consuming and tedious task, but it is important to document deficits, preserved skills, and residual deficits of the types discussed earlier in this paper. Documentation of all existing problems and formulation of evaluation questions that can be answered in the evaluation report is of vital importance. Tailoring the evaluation to answer the questions that have been developed will help to plan the assessment. For example, a referral question which asks whether or not certain behavior management strategies may be useful in maintaining a person in sheltered employment implies that the evaluation may be chiefly a behavioral assessment of work related behaviors. In other cases, a referral source may request a broad based evaluation to determine potential for a variety of occupations. If the referral question asks "can this individual return to his former job as an auto mechanic," specific worker traits necessary to performing that job must be evaluated, in addition to behavioral and psychosocial competencies.

Evaluators are encouraged to use the input of other professionals in the vocational evaluation process. Speech and language pathologists, occupational therapists, work adjustment counselors, placement specialists, etc., can provide valuable insight into potential vocational problems. It is critical to get the opinion of individuals who have observed a client in a less structured work situation to determine flexibility, ability to work independently and ability to independently problem solve.

Activities of daily living frequently present problems after TBI, therefore this should be addressed during the vocational evaluation. Frequently, the evaluator is asked to determine if a person is capable of functioning independently at present or at a given point in the future. Generally this will require the assistance of the family or other resources.

Talking with parents, guardians, or individuals with whom the person lives can provide invaluable information about current and past functioning. Involvement of family and significant others should be considered as an essential element of the rehabilitation process. Active involvement of significant others in the early planning stages should promote involvement without demanding that they act as a primary therapist, although they may in actuality assume this role.

Conclusion

An increase in the referral of persons who have encountered TBI's into vocational evaluation programs has been evidenced in recent years. The reason for the increase in referrals stems from an increased survival rate following TBI and the public's awareness of the importance of vocational involvement. The majority of all evaluators have had little experience with this population, chiefly because the amount of total referrals with TBI in relation to the entire caseload is typically quite low. The nature of the deficits following TBI are difficult for most professionals to understand. To further complicate the problem, training programs that prepare vocational evaluators have not had a strong emphasis in this area until the recent past.

Some of the more common impairments following a TBI can be categorized as falling within the areas of physical deficits, sensory motor problems, cognitive difficulties, emotional related problems, psychosocial and behavior problems and impairments in activities of daily living. The specific deficits discussed in this paper address the most common problems, which should be targeted as a specific focus of evaluation.

Understanding some of the common behavioral difficulties that the evaluator may expect can help prepare for dealing with problems which may arise. It is common for a TBI referral to show resistance and anger in the initial stages of evaluation, therefore obtaining a working commitment to reinforce the importance of the evaluation process is of critical importance. Scheduling frequent rest breaks, using naturally occurring reinforcers and planning for part-time involvement are important considerations. Giving directions in short statements and verifying the client's understanding of the directions is also important in order to insure that the person can demonstrate an understanding of exactly what is being asked of them.

The development of an evaluation strategy is based on the fact that as much information as possible can be put together prior to the evaluation. Documentation of all existing problems leads naturally to the formulation of evaluation questions that can be answered in the evaluation report. The particular type of evaluation to be conducted should be tailored to answer the evaluation questions. Evaluators may find themselves addressing issues of behavioral compliance more than work potential. Using other professionals can be extremely helpful in terms of providing basic evaluation data such as information on activities of daily living is highly encouraged.

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