

International Encyclopedia of Rehabilitation

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Job Analysis (What it is and how it is used)

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Job analysis is a systematic and analytical process used in a number of fields to understand, describe and classify jobs. Most job analysis methodologies in rehabilitation provide detailed information concerning major tasks, environmental conditions and the physical, cognitive and emotional capacities required for the average worker to perform a job (Keyserling et al. 1991; Lysaght 1997). While the purposes of job analysis in the rehabilitation field are grounded in primary and secondary prevention of disability, rehabilitation planning and disability accommodation, the technique is applied in other fields for very different purposes. Human resource specialists analyse jobs as a basis for employee hiring, training, supervision, appraisal and/or establishing fair compensation rates (Brannick, Levine & Morgeson 2007). Governments classify jobs as a means of describing and monitoring workforce activity. Organizational psychologists rate job characteristics and demands as a means of studying and understanding issues such as job satisfaction and workplace behaviour. All of these fields contribute philosophically and methodologically to the practice of job analysis.

In rehabilitation, job analysis is used for a number of practical purposes including:

Defining rehabilitation goals

For individuals who are working and have sustained injuries on or off the job, a key focus of rehabilitation is restoration of work capacity. Rehabilitation programs that are funded by government or private insurers often have an explicit goal of returning the injured party to previous or comparable levels of employment. In such cases, it is important to identify required job tasks and expected performance levels. Such information creates targeted outcomes for the rehabilitation program. The overall rehabilitation process is guided by the job analysis through a process wherein assessed levels of current functional capacity are compared to the required job performance demands (Loisel et al. 2001). Identified gaps between worker capacity and job demands are then addressed through restorative programs and/or job modification.

Work transition planning

In rehabilitation the job analysis is used to provide information to match the injured worker with tasks that can be safely performed on initial resumption of duties following an absence or time away from regular duties. The job analysis information serves as the foundation for a graduated work resumption process that optimizes productivity and compliments the rehabilitation program and injury recovery. Regular review of the job analysis is used to identify job demands that are suitable to the worker's capacities throughout the recovery process until the worker resumes the pre-injury job or reaches an optimal level of performance in a different job.

Vocational planning

Persons with disabilities who have never worked, or are seeking new careers following catastrophic injury are typically assessed to determine work interests, employment –related skills, and work habits. Analysis of the physical, cognitive, and behavioural demands of the identified jobs of interest allows for matching of interests and capacities to the job requirements, and helps to establish reasonable goals for vocational training and job search.

Job accommodations

Job analyses offer detailed descriptions and identify demands of both essential and non-essential work tasks. This information can be used to help identify the essential and non-essential tasks that a person with a limitation can safely and competently perform, and those tasks that can be performed with modification to the job process or through use of adaptive devices or procedures.

Primary injury prevention

Analysis of jobs from an ergonomic and/or psycho-social demand perspective can be used in a proactive manner to identify potential areas of risk, and to modify jobs as a means of injury prevention (Keyserling et al. 1991, Domanski, Gowan and Leyshon, 2008).

Secondary disability prevention

Analysis of jobs from an ergonomic and/or psycho-social demand perspective can also identify potential areas of risk. Based on this information, jobs can be modified prior to a worker with an injury or disability resuming job tasks to prevent re-injury or new injuries when returning to work.

Fair hiring practices

Job analyses that identify basic skill requirements for safe and competent job performance can serve as a legal and defensible means of screening employees applying to new positions. By clearly establishing job performance requirements, applicants who lack required skills can be denied positions on objective grounds. This may serve to prevent injury, and also establishes clear criteria for job qualification (Rosenblum and Shankar, 2006). Workers with disabilities who satisfy job requirements as identified through the analysis can thereby not be denied employment on grounds of incapacity.

Approaches to Job Analysis

Job analyses in rehabilitation are typically completed by specialists who have education and/or experience in job analysis procedures. A 2002 study revealed that job analysis was used as a tool in rehabilitation service delivery by 87% of American rehabilitation facilities surveyed, and conducted by a range of professionals (Lysaght, 2004). Occupational therapists use task analysis as a fundamental practice skill, and most also receive training in applying task analysis principles to comprehensive job analysis. They also have a broad background in understanding the physical, emotional and behavioural components of activity (Lysaght and Wright 2005). Ergonomists are trained to perform job analysis from a human performance perspective, and apply engineering and human kinetics principles to the analysis of jobs (Keyserling, 1991). Other rehabilitation professionals who conduct job analyses include physical therapists, vocational rehabilitation specialists and occupational health personnel who have a specialized practice in

work rehabilitation. Often an inter-professional rehabilitation team will contribute to the conduct or interpretation of a job analysis.

Data collection for a job analysis is done systematically, guided by a job analysis framework. A wide variety of approaches are used in rehabilitation, and the focus will vary depending on the nature of the job and the purpose of the analysis. Data sources include worker interviews, interviews with supervisors, on-site observations of jobs being performed, trialling selected aspects of a job, and review of government and company descriptions of jobs (Lysaght 2004; Shaw & Lysaght 2009).

Job Analysis Components

The goal of the job analyst in rehabilitation is to identify key job demands and requirements to satisfactorily perform work as stipulated by the employer (Shaw and Lysaght 2009). Although individual worker abilities have an impact on how jobs are performed, it is important that the analysis address the job requirements, and not individual worker skills or differences, as these are considered in other stages of the rehabilitation process.

Most job analysts use a structured format for recording and rating jobs, and a number of evidence based and more informal formats exist. Typical components of job analyses in rehabilitation include:

- Essential and non-essential **task description**.
- **Equipment** used, including tools, machines, and product components.
- **Physical demands**, including size and weights of materials handled, required movements, coordination of movement, postures, as well as duration and repetition of movements, postures and handling.
- **Cognitive demands**, including information acquisition and processing, analytical skills, creativity, memory, perception, communication, technological skills, and academically-related functions such as literacy and numeracy.
- **Behavioural demands**, such as providing supervision, dealing with conflict, adhering to safety procedures, problem solving, social interaction skills, multi-tasking and decision making.
- **Work context**, including structural aspects, ground characteristics, layout and relationship of work areas, exposure to coworkers, supervisors and the public, and environmental factors such as noise, light, and temperature, chemicals, vibration, air quality and allergens.
- **Required competencies**, such as safety certifications or training in use of specific equipment or software.
- **Safety sensitive demands and pressures**, such as security or deadline pressures, exposure to physical or emotional risks and distractions.

Rehabilitation professionals also consider aspects of the work that may be potentially challenging or put workers at risk, and thus will include information on potential ergonomic or psycho-behavioural risks, and areas of the job that could be modified (Shaw and Lysaght 2009).

Challenges in Conducting a Job Analysis

Jobs are complex by nature. Because they are performed by a range of individuals who work within changeable environments, it can be difficult to accurately define job demands and the human requirements to perform them. Even if there are defined outputs and expected performance levels for a job, the actual approaches and nuances associated with executing the job demands may result in very different actions, depending on the worker and how he or she gets the job done. The job itself may vary in terms of demand levels or activities performed, depending on workload, workflow, teamwork, and variances in the services, products or activities that are the focus of the job at any point in time. As Fine, et al. (1999), note, it is important to describe jobs holistically, considering the requirement of workers to perform both instrumentally in executing work tasks, and latently, in adapting to situations in which work takes place.

A number of factors associated with the measurement process can challenge the validity and reliability of job analyses. One of these is the properties of the rating scales in use, including content validity across job types, definitions used for the scale items, and clarity of the rating procedures (Lysaght et al. 2008). Another lies in the quality of information gathered through worker or supervisor report based on ability or willingness to provide accurate descriptions. Observational data may be compromised through lack of rater familiarity with the job type or milieu, or inability to observe sufficient and representative time samples of the job, especially one that is highly variable. Finally, raters themselves present with different training and levels of experience in performing job analysis, a factor that may compromise both validity and reliability of the report.

Summary

Job analysis serves as a valuable guide to evaluation, program planning, and disability management in the field of vocational rehabilitation. By tailoring methods of job analysis to the rehabilitative or preventive goal, analyses can provide a rich resource for promoting safe and inclusive workplaces.

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