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ABSTRACT

This study compared four different extended employment models for people with disabilities using a procedure to control for disability characteristics. The study compared sheltered employment, enclaves, affirmative industry, and supported employment involving a job coach. Four samples of workers (total N=160) were matched on age, gender, measured intelligence, primary disability, secondary disability, and performance on a Functional Assessment Inventory. Wage and benefits information as well as fees for supportive services were obtained and each worker was interviewed using an instrument designed to assess job satisfaction, socialization and integration, etc. Findings indicated: (1) the sheltered employment model scored lowest on most measures except annual number of days worked and job variety; (2) the enclave model's major negative factor was low number of days worked per year; (3) the affirmative industry model was very stable but downtime and job awareness of workers were deficits; and (4) the job coach model, the only individual model, paid the highest hourly wages and had the highest productivity but dependence on the job coach and a short work day were deficits. The importance of consumer choice in model selection is stressed. Tables and text present the data and conclusions in substantial detail. Appendices include the data collection forms and item analysis of job awareness and satisfaction questions. (Contains 50 references.) (DB)

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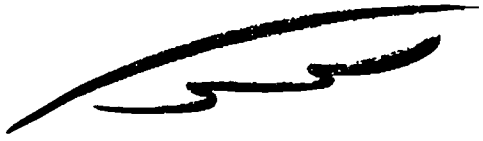

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INTRODUCTION

It is estimated that between 50 to 75 percent of adults with disabilities are either unemployed or not in the labor market (Hill, Wehman, Kregel, Banks, & Metzler, 1987; Rehab Brief, 1988). The traditional approach to employment has been the provision of time limited rehabilitation services that allow the individual to gain access to competitive employment. For over 600,000 persons with disabilities, the traditional rehabilitation program does not result in direct placement in competitive employment. Instead, extended employment and training programs are provided in over 5,000 community rehabilitation programs across the nation. Within these extended employment programs, a number of approaches are currently in use throughout the country to provide training in different employment settings (e.g., mobile work crews, enclaves, sheltered work, supported work, and affirmative businesses). These approaches apparently offer different paths for obtaining quality employment and opportunity for integration into the regular work force and community.

When various program options exist for achieving the same goals, the rationale for providing the different options should be clearly stated so that professionals and consumers can make informed choices as to the best option for achieving their own goals. While the debate over the last decade has focused on the replacement of the sheltered employment model by the supported employment model, the real issue is what value an employment option has for achieving the desired goals of the individual and society. Program options that have little or no value should not be continued in their present form. When program options appear equal in their capacity to achieve equal goals, then, the more efficient model should be selected over the less efficient model.

Underlying the present concern about employment models is whether these approaches can be considered equal options for achieving the same goals. For example, little has been published regarding matching the appropriate program to meet the needs of the person, the rationale for a mix of program options, or how the programs are related to a national agenda for meeting the needs of the community of persons with disabilities. Instead, a new program (supported employment) has been stated to be superior to all other approaches (Wehman, 1994). The legislation authorizing this new program consists of several approaches, some of which are employment strategies drawn from traditional rehabilitation (such as enclaves, mobile work crews, and other group supported employment approaches). The innovative aspect of the supported employment model, however, is the individual placement approach involving direct placement in a desired competitive job with provision of one-on-one job coaching.

Despite the success of the supported employment movement, research on its cost efficiency has not supported this employment model as a replacement for all other employment options (Coker & Valley, in press; Coker, in press). The debate raises a fundamental question of whether there is one model of extended employment (supported employment) or many models for persons with disabilities to achieve their goals. If only one model for all persons with disabilities is best, then, efforts need to be directed toward the adoption of that model. If there are many models, however, they need to be accurately and clearly identified in terms of how

the models operate and for whom the models are appropriate. Such information would allow development of a taxonomy of the approaches so that rehabilitation professionals can select appropriate program mixes consistent with their community and population needs. Consumers, likewise, need the same information to select among the program options.

Previous studies comparing employment models (Hill et al., 1987; Lam, 1986; Noble, 1991; Noble & Conley, 1987; Rusch, Conley, & McCaughrin, 1993) have reported inconsistent findings on cost/benefit ratios and have been criticized for methodological flaws (Coker, in press; Heal, McCaughrin, & Tines, 1989; Thornton, 1992). One of the major methodological concerns is whether different populations of persons with disabilities were served in each of the employment options. It is therefore not clear whether the relative differences among models are due to the characteristics of the model or due to the characteristics of the persons with a disability served in the model.

The purposes of this project were to compare different extended employment models using a procedure to control for disability characteristics, and to explore the implications for a taxonomy of approaches and the possibilities of a national policy regarding extended employment options. The following specific objectives were pursued under the study:

1. Review the development of extended employment models provided by community rehabilitation programs,

2. Summarize the issue regarding comparison of such employment models,

3. Select employment models for comparison in this study,

4. Develop a valid comparison strategy,

5. Conduct research comparing selected models, and

6. Evaluate the findings for implications regarding extended employment models.

Review of Employment Models

Community rehabilitation programs provide a set of time-limited services for persons with mild disabilities intended to enable these individuals to directly enter or re-enter competitive employment without further supportive services. Other persons with more severe disabilities continue in the community rehabilitation programs as a client of supportive services, an employee of the agency, or both. When individuals are placed in work services or at extended employment settings, their exit rates into direct competitive employment have been estimated to range from 7-12 percent (U.S. Department of Labor, 1977). The residual population consists largely of persons with mental retardation and chronic mental illness who often remain within these community rehabilitation programs for several years. The result is that significant numbers of persons with disabilities are not in the regular competitive work force and require continued support from different rehabilitation and social agencies.

For many years the rehabilitation community itself had often criticized work environments of community rehabilitation programs as lacking appropriate work, services, training, and/or integration (Hansen, 1969; Brubeck, 1974; Greenleigh Associates, Inc., 1975; U.S. Department of Labor, 1977; Vash, 1977; DuRand & DuRand, 1978; DuRand & Neufeldt, 1980). Methods to correct such deficiencies were proposed to provide more opportunities for integration and employment for individuals with severe disabilities in competitive employment without support. For example, mobile work crews, enclaves, and affirmative businesses were proposed to develop more community-based options resulting in more diverse work, better training, and more opportunity for independence. Yet, these models did not appear to significantly increase the number of individuals who achieved competitive employment in the regular work setting (Kiernan & Stark, 1986).

In the 1980s, supported employment offered another way to gain competitive employment by providing direct placement with support in competitive community job sites. This supported work concept (and the movement that followed) advocated replacing support in segregated work environments with support in community-based competitive job sites (e.g., Bellamy, Rhodes, Mank, & Albin, 1988; Mank, Rhodes, & Bellamy, 1986; Gardner, Chapman, Donaldson, & Jacobson, 1988; Moon & Griffin, 1988; Wehman, 1988). Instead of a training for eventual individual placement in a community site, this "train-place" concept was to be replaced with a "place-train" approach involving immediate placement of the individual on the job with training and supportive services through one-on-one job coaching.

The supported employment model was argued to be a more effective method of training since it occurred at a permanent job site rather than an intermediate site. And, the model was consistent with the philosophical approach cited in the literature on the normalization principle and deinstitutionalization (Flynn & Nitsch, 1980; Wolfensberger, 1980). Supported employment research efforts have concentrated on demonstrating that individual supported employment using the place-train approach is more cost effective and more beneficial than the traditional service approach of a train-place model such as day activity centers, work activity centers, work adjustment, and long-term sheltered employment (Hill et al., 1987; Rusch, 1986; Vogelsberg, 1985).

Providing support to individuals while they are working in the community has been considered a more appropriate method for enhancing access to competitive wages and integration into the community. Research has implied that employment with ongoing support in a regular work environment can help an individual to achieve increased economic advantages, opportunities for integration, capacity to contribute to society, job satisfaction, and overall better quality of life than in other models of employment, such as sheltered workshop employment (Bellamy et al., 1988; Mank et al., 1986; Gardner et al., 1988; Moon & Griffin, 1988).

The extended employment options described above include employment in groups of individuals with support and employment as individuals with continued support. These options are in contrast to the ideal successful rehabilitation closure in competitive employment in which the individual no longer requires continued support. Five major types of extended employment models options are reviewed: (a) Sheltered Employment, (b) Mobile Work Crews, (c) Enclaves, (d) Affirmative Industries and Small Businesses, and (e) Supported Employment.

Sheltered Employment Models

Sheltered employment is both a specific term defined by legislation and a generic term referring to a variety of options. In the generic sense, sheltered employment may be used to describe three specific program approaches: (a) sheltered employment, (b) work activity centers, and (c) day activity centers. The terms sheltered employment and work activity centers have their origins in the Fair Labor Standards Act of 1939, the Wagner O'Day Act of 1938, and amendments to those acts.

The acts define the conditions under which it is permissible to pay individuals less than the minimum wage through a wage certificate. For a program to qualify for wage certificates, it must demonstrate that payment of less than the minimum wage is related to productivity. These regulations are still current and require the community rehabilitation program to accurately assess the productivity of the individual and pay proportionate wages commensurate with the productivity and minimum wage or commensurate wage. It is within this context that both sheltered employment and work activity centers were defined in relation to the procedures required to comply with the Fair Labor Standards Act.

The payment of wages is not just a technical question, but is related to differences in the operation of extended employment models. Although some provisions have changed within the Fair Labor Standards Act, compliance with this act is required of all employers whether they are a community rehabilitation program or in industry. All models of extended employment must comply with the Fair Labor Standards Act.

Persons with disabilities must receive fair compensation for the work that they perform while in a training setting or an employment setting. Employers, whether they are community rehabilitation programs or regular employers, must either pay full minimum/commensurate wage or apply for a wage certificate. To obtain a wage certificate, the employer must document how the productivity of the person is assessed, what wage base is used (minimum or commensurate), and pay proportionately in relationship to the wage base and productivity.

Sheltered employment is provided within the premises of community rehabilitation programs. In the past, sheltered employment required a different wage and hour certificate than did a work activity center, served a population with less severe disabilities, paid higher wages, and had higher placement rates (U.S. Department of Labor, 1977). While sheltered employment was viewed as a transitional training site leading to community-based employment, the work activity center's goal was typically movement into sheltered employment. The productivity of individuals in work activity centers was considered so low as to preclude direct placement, though this occurred for less than 1 in 12 of these clients (U.S. Department of Labor, 1977).

Changes in the federal wage and hour legislation in 1986 (Fair Labor Standards Amendments of 1986, Public Law 99-486, 100 Statute 1229) eliminated the need for more than one certification and the physical separation of the work activity center, but retained the right to continue and establish work activity centers to provide therapeutic activities for workers with severe disabilities affecting their productive capacity (Federal Register, August 10, 1989, pp. 32' 28-32933).

Sheltered employment is provided through not-for-profit organizations that offer rehabilitation services in conjunction with paid work for persons with disabilities. These individuals are considered clients of the organization for the provision of services, may be considered employees when being paid wages in accordance with the Fair Labor Standards Act, and may receive fringe benefits. Wages, supervision, and support services are provided by the rehabilitation agency and are funded through production and revenues and fees for services. The two major government agencies that pay organizations for rehabilitation services and/or extended employment are rehabilitation agencies and social service agencies.

Sheltered employment, and to a lesser extent, work activity centers differ from other group settings such as a day activity center. In a day activity center, wages are not paid either because no work occurs or the work is not for production purposes.[1] Individuals at these centers are considered more severely disabled than those in the other two models and are estimated to require additional training to function in a work activity center or sheltered employment. Most day activity centers do not meet fair labor standards. For the purpose of this review, the traditional day activity center is not considered an employment model.

Mobile Work Crew Model

The mobile work crew was first described by Hansen (1969). The distinctive feature of the mobile work crew in comparison to sheltered employment settings is that work sites are outside the walls of the sponsoring community rehabilitation agency. Mobile work crews involve groups of individuals with disabilities who work as a unit at various public or private industry sites around the community. They continue as employees of the community rehabilitation agency, are supervised and receive support services from staff of this agency, and receive pay and benefits according to the policies of the agency. The community rehabilitation program receives fees from government agencies for each employee and also has a contract with the private companies or agencies for payment of work accomplished.

Mobile work crews are as common to community rehabilitation as sheltered employment. This approach is one of the initial forms of off-premises group employment and has changed little since its initial description by Hansen. One or more work crews operate autonomously at various sites in the local area. Each work crew has a supervisor from the community rehabilitation program. The purpose of the mobile work crew is to expose the clients to various work settings. The community rehabilitation program contracts with the various sites for various work tasks such as janitorial, lawn and garden, and other temporary needs.

Marketing of the mobile work crew is similar to marketing of other temporary manpower providers (e.g., Kelly, Manpower, Temps) that provide temporary help to employers who require assistance for a number of reasons: (a) temporary need for extra help, (b) need for part-time employees, (c) seasonal work, and (d) filling in during temporary personnel crises. Companies that contract with the community rehabilitation program do so not as a charitable gesture, but due to their economic and personnel needs.

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[1] Note that in some states (e.g., Minnesota), the day activity center operates at the work activity or sheltered employment level.

The number of individuals in a given group is dictated more by transportation considerations rather than by design. Typically, a van is used to transport clients from the community rehabilitation program to the various work sites that may change each day. Mobile work crews tend to be less visible to the public and other workers in the private company than are other off-premises work groups. This stems, in part, from the type of work they do and the fact that they are employees of the community rehabilitation program and not the company.

Clients are selected on the basis of their capacity to do the work tasks and other factors related to the work setting (e.g., accessibility, safety). Functional capacities of an individual's part of a work crew depend on the work tasks and the training goals for the individual. The community rehabilitation program may include persons with very severe disabilities to accomplish some work tasks or may require persons with less severe disabilities for other work crews. There is a great deal of flexibility, and typically the contracting firm is not involved in these decisions since they only are concerned with having the work tasks completed.

Enclaves

The term enclaves refers to a number of different approaches that represent a continuation of employment outside the physical plant of the community rehabilitation agency. Bordieri (1986) cites the earliest enclave as that of Fountain House in New York City in the 1940s. Other terms include workshops-without-walls (Brickley, 1974), satellites (Gentile, 1977), work stations in industry (Hagner & Como, 1982), and work stations (Conte, 1983). Enclave is used to refer to approaches that involve small groups of individuals with disabilities who are employed at a host business or industry that primarily employs persons without disabilities in its regular work setting. Individuals in enclaves are typically trained as a group and are supervised and work together on a specific set of tasks identified by an employer.

The enclave is similar to the mobile work crew in that a group of workers with disabilities function as a work unit outside the rehabilitation agency. The major difference between enclaves and mobile work crews is that the enclave works at a permanent site, rather than at several different sites. Electronic companies have been cited as frequent hosts for such enclaves (Mank et al., 1986).

Clients working in enclaves are selected based on their ability to perform in regular work settings with close supervision; enclaves represent a step toward more independence for the individuals. The company has more of a vested interest in the enclave operation, than may be the case with work crews, since the workers become part of the work force to some degree. In practice, there are two basic types of enclaves which differ in terms of the employer-employee relationship and the extent that the workers with disabilities become part of the company's work force: agency-payrolled and company-payrolled.

In the agency-payrolling approach, the community rehabilitation program is technically the employer. Thus, the individuals are not only clients of the community rehabilitation program but also employees of that agency. Their work is done for a company while direct supervision is provided by the community rehabilitation program, though the company may provide an overall supervisor for the enclave operation. Typically, the company contracts with the agency for the work to be accomplished, and government subsidies provide funds for the supportive

rehabilitation functions.

The second type is where payrolling is provided by the company wherein the enclave is established. Individuals are employees of the company while clients of the community rehabilitation program. The company assigns and evaluates the work of the group, and government subsidies provide funds for support services. The work of the enclave employee is supervised directly by a company supervisor with the community rehabilitation program providing support services similar to the concept of supported employment.

While both approaches involve groups of persons with disabilities working in a competitive company, the payrolling distinction is significant. The agency-payrolled enclave appears to be more "sheltered" than the company-payrolled enclave. An enclave may begin as agency-payrolled and then have the agency negotiate with the company to adopt the enclave; it would then become a company-payrolled enclave based on demonstrated need for the group and the company's willingness to rely on the agency for further training and support for the individuals in the group. Most agencies that have used the latter model have begun as an agency-payrolled enclave and phased out the agency involvement as the group proves its utility to the company. Not only can the agency's role in providing employment fade, but so can the extent of the rehabilitation support.

Affirmative Industry and Small Business Models

These models describe large and small companies operating as entrepreneurial enterprises as for-profit or not-for profit entities. A unique feature is that the company employs a mix of individuals with and without disabilities to produce goods or services. The business is foremost intended to be a profitable enterprise that relies on a work force primarily consisting of persons with disabilities.

The approaches within these models can cover a number of situations that are as diverse as the market will bear, such as a small spin-off operation of the community rehabilitation program, franchises, and large factories engaged in prime manufacturing. The two basic approaches are affirmative industries and small businesses.

The concept of the affirmative industry was patterned after the industries of Poland where employment ratios are set for the number individuals with disabilities in comparison to those without disabilities. In the United States, DuRand has written extensively about the operations of affirmative industries (DuRand & DuRand, 1978; DuRand, 1990). The typical affirmative industry is a spin-off of a sheltered workshop that becomes a for-profit enterprise paying competitive or commensurate wages based on a wage certificate.

The small business model term is primarily described in the supported employment literature as an attempt to assist an individual or small groups of individuals to successfully run a small business operation. The specifics of this model have not yet been well defined, but examples of models described by Bellamy et al. (1988) include sales of products and services. Contrary to its name, no reference has been found providing support to assist individuals with disabilities to successfully start and run a small business.

There appears to be an interaction between the type of affirmative business and disability type. The larger companies or affirmative industries tend to serve a variety of disabilities, though many of the employees have mental retardation. The small business model or smaller affirmative business tends to favor workers with mental illness. Granger and Baron (1993) report an increasing number of agencies that serve persons with mental illness starting small affirmative businesses. Presumably, this type of small business operation may be more successful for persons with mental illness because they typically have higher functional skills than mental retardation.

Supported Employment

In the mid 1980s, a major thrust was the introduction of approaches designed around a "place-train" model. The term "supported employment" was introduced, but the regulations include several models of employment. Federal regulations (Federal Register, August 14, 1987) defined the term "supported employment" as containing three elements: (a) competitive work, (b) integrated work setting, and (c) ongoing support. The Rehabilitation Act Amendments of 1986 targeted these programs:

(1) for individuals with severe handicaps for whom competitive employment has not traditionally occurred, or

(2) for individuals for whom competitive employment has been interrupted or intermittent as a result of a severe disability, and who, because of their handicap, need ongoing support to perform such work. (Rehab Brief, X(1))

Additional language in the 1987 regulations stated that these individuals "would not traditionally be eligible for vocational rehabilitation services." Individuals in supported employment must be paid wages in accordance with Federal Fair Labor Standards Act must work at least 20 hours per week, and may be employed individually or in groups of no more than eight individuals with disabilities.

Supported employment is not a singular concept since it includes both an individual approach and different group approaches. The individual approach follows the one-on-one job coaching concept of Wehman (1981). The individual is employed and receives wages and benefits directly from the company. The community rehabilitation program provides intensive training on the work tasks through a job coach. Job coaching continues in order to increase the competency of the worker. Job coaching is reduced or faded when the goal is achieved. After the preset goal for reduction of support has been reached, follow-along services are provided as long as the individual requires such services.

The person with a disability is a client of a rehabilitation agency that receives fees for the job coaching and follow-along services. Though the hourly fees for job coaching services may be three times as much as for supervision in sheltered employment (Coker & Valley, in press), proponents estimate that the fading of support would reduce the cost considerably and result in a favorable ratio of costs to benefits over time (Hill et al., 1987). In the individual model, the person with a disability is an employee of the industry in which the person is placed.

Group forms of supported employment may include mobile work crews, enclaves, or small business models as long as the size of the group of workers with disabilities is eight or less. In addition, a benchwork approach to supported employment (Mank et al., 1986) has been described as a small group where individuals with disabilities work on specific subcontract tasks in an industry or, in some cases, as a part of a community rehabilitation agency (even though this setting is not preferred). The benchwork approach has been excluded by some as a supported employment model (e.g., Bellamy et al., 1988), while others include this as one example of small business operations (Moon & Griffin, 1988).

Comparison of Employment Models

While it is clear that different models of extended employment exist, it is not clear whether any one model is superior to the other since the major focus has been to compare supported employment to the general model of sheltered employment. Advocates for supported employment have argued that all sheltered employment programs should be converted to supported employment. The review has shown that supported employment can include mobile work crews, enclaves, small business operations, and any other form in which the size of the group is eight or less and is considered competitive employment. Thus, it would appear difficult to argue that there is just one model of extended employment. Instead, there is a need to identify what extended employment models provide, for whom are they effective, and which are more cost beneficial under specified conditions.

Hierarchies of Employment Models

Vash (1977) and DuRand and Neufeldt (1980) offer hierarchies for comparing independence among employment options. Vash's hierarchy (1977) cites six levels ranging from no employment, either being at home or in an institution (Level VI), to competitive employment without accommodation or shelter (Level I). An intermediate program of employment (Level III) is sheltered employment; homebound employment is Level II. Level IV is semi-integrated work settings, and Level V is full integration but with some support for assisting the individual.

DuRand and Neufeldt's hierarchy (1980) is somewhat similar. They cite five levels of employment programs that offer differing degrees of support to the worker. The lowest level is sheltered employment in a setting where the work force consists entirely of workers with disabilities who are "largely subsidized" through fees from community rehabilitation programs for employing individuals with disabilities. Unlike Vash's model, "no employment" is not included in their hierarchy. Their highest level of employment is individual competitive employment without support as is Vash's Level I. Intermediate levels range from sheltered industry in which workers without disabilities are also included, semi-sheltered employment in which groups of persons with disabilities are employed in regular industry, and competitive work with support in which an individual with a disability is supported in regular industry.

Both hierarchies represent employment levels in which the worker becomes less dependent on support as the work setting shifts from sheltered employment into regular work settings. These hierarchies conceptualize programs in relation to needs for support. Functional capacities of individuals in the lower level employment are more limited than that of persons in

the higher levels in the employment hierarchy. Consequently, each model also suggests the notion that individuals with very severe disabilities would start at the bottom and move through several levels or programs before they attain independence in regular work settings. Each framework cites intermediate community-based options that may include work models where support is provided to groups and to individuals with disabilities.

The five models reviewed above may be fitted to these hierarchies ranging from sheltered employment to the individual job coaching model of supported employment. The affirmative industry would appear to be a level up from sheltered employment, followed by the mobile work crews and enclaves as intermediate to individual competitive employment. This hierarchy may link employment models to recommended treatment for work disability. In theory, the most severely disabled would be served under lower level models. Those with less severe disabilities are capable of functioning in higher level models and would have greater access to integration with workers without disabilities. Each hierarchy suggests methods for increased presence in regular industry for workers with disabilities.

In practice, such hierarchies have led to expectations that persons in one level can be trained to become more independent and reach next levels until they are ultimately competitively employed and no longer require support. These schemes represent a "train-place" model of vocational preparation in much the same way as schools have different grade levels that must be passed before graduating. Unfortunately, research has shown that few individuals who start in sheltered employment reach the highest level of competitive employment, i.e., 1 in 12, according to the U.S. Department of Labor research (1977). Unlike education though, there is no time limit on retention in/or graduation from a level. While widely accepted as a necessary continuum of services, concerns were raised that the lower levels were not rehabilitative in nature, but were simply "warehousing" persons with disabilities.

The supported employment concept was designed to bypass the "train-place" approach and advocate a "place-train" approach in which the individual with a more severe disability would be placed directly in individual competitive employment in an integrated work setting and receive support services to maintain that placement. The individual job coaching approach recommends going directly to Vash's Level V (1977) or DuRand and Neufeldt's (1980) second highest level of competitive employment with support from any lower level. Group forms of supported employment (mobile work crews and enclaves) would be at lower levels on the hierarchies than the individual job coach approach of supported employment.

Classifying the five different models with regard to levels highlights the inconsistencies for a national policy on employing persons with disabilities. Despite the introduction of a new employment model in the form of supported employment in 1986 designed to replace sheltered employment, sheltered employment and other forms of extended employment continue. And despite the "newness" of supported employment, all of these models can be included under both Vash's hierarchy (1977) as well as DuRand and Neufeldt's scheme (1980). And the question still goes unanswered as to whether there is one model or several models of extended employment.

Taxonomy Development

A major purpose of taxonomy research is to provide that needed description of the different extended employment options. Accurate descriptions based on empirical data, however are lacking. Despite the lack of empirical data, certain aspects about employment appear to have consensus. Employment in segregated work environments in which all or nearly all workers have disabilities is viewed within the taxonomy as one of the lower level models of employment. Within this level, the sheltered employment is more advanced than a work activity concept or a day activity concept. As DuRand and Neufeldt (1980) indicate, successive levels involve less segregated environments, greater variety of work tasks, and greater quality in the work environment.

Supported employment does not easily fit into the taxonomy as a general term since it may be a mobile work crew, an enclave, a small affirmative business, or individual placement with support in competitive industry. Quality of support (remediation and training) is a factor within the taxonomy. It would be expected that more support would initially be required within a model and would decrease over time. Initial intensive training may be required to increase competency that would allow the need for rehabilitation supports to decrease as reliance on the natural supports in the work environment (supervision and training) increase. But such a strategy may be successful only if the work setting has these natural supports to access such as in regular industry.

Thus, this taxonomy documents the extent to which a model includes a capacity to fade supports. Currently only the individual job coaching model of supported employment appears to include plans for fading supports. The company-payrolled enclave would also qualify, but the concept of fading of support under this model is not widely adopted. The mobile work crew does not seem to be a viable concept for fading support since the model is dependent on the host community rehabilitation program. The affirmative industry could be designed to have all supports faded if the setting is operated as a regular industry. The small business model would have to have features included so that the enterprise has the capacity to become a self-sufficient enterprise and no longer require support. Fading of support is therefore a critical operation if an employment model is to justify its existence on the basis of cost efficiency.

Inherent in the fading of supports is the quality of work environment regarding existence of natural supports. The highest levels along the hierarchy involve placement in regular industry involving an integrated work force. Not mentioned in any of the classification considerations are the choice of the individual and the recurrent problem of individuals failing in one of the options. Client choice and the need to address the possibility of failure are also aspects that should be included in the operation of extended employment models.

Cost/Benefit Comparisons of Employment Models

There is a critical need for information on the relative effectiveness of the various employment models that enables understanding on how to increase the benefits to the person with a disability and to reduce costs. The data can be used to increase program efficiency, provide information to evaluate extended employment models as viable options, and provide information to the consumer about likely benefits and costs from various options.

The benefits and costs of different models are important issues when determining which employment model to implement. This information not only offers an understanding of resources needed to operate a program but also can be used as a criteria for evaluating the significance of any program-induced impacts (Thornton, Dunstan, & Matton, 1989). Although there is a variety of techniques available to assess and compare the cost effectiveness of different programs (Rhodes, Ramsing, & Hill, 1987), benefit-cost analysis has been used to compare and determine whether or not a certain employment model (e.g., supported employment) offers greater economic benefits to the individual, taxpayer, and society as a whole. Unfortunately, most cost and benefit research appears to be incomplete, and often the data are accepted or rejected based on the bias of the reader.

The discussion of supported employment as an employment option began with the publishing of Wehman's (1981) book citing the techniques of one-on-one job coaching as an effective technique for employing persons with moderate to severe mental retardation. Conte (1983) and Bordieri (1986) cited the failures of the sheltered employment model based on the Greenleigh (1969) and the DOL studies (1977, 1979) and considered Wehman's book (1981) on supported employment as a significant and promising breakthrough in the employment of persons with disabilities.

The intensity changed with publishing of a study by Hill et al. (1987) and advocacy for supported employment legislation. This early study compared the outcomes of supported employment to the estimated outcomes of traditional sheltered employment. Based on this study of cost and benefits, it was concluded that the supported employment model was more cost beneficial than "traditional employment programs" (Hill & Wehman, 1983; Hill et al., 1987) and recommended that community rehabilitation agencies should convert from other models to supported employment. Recent reviews of these studies question these conclusions and suggest that it is not clear whether supported employment is more cost beneficial than other models (Coker, in press; Heal, McCaughrin, & Tines, 1989). More recent studies (Rusch, Conley, & McCaughrin, 1993; Noble, 1991) have not been able to replicate the overall positive society and taxpayer benefits indicated in initial reports on supported employment. In addition, Lam (1986) and Wehman (1988) discuss the possibility that benefits and costs may vary as a function of the disability characteristics of individuals. Thornton (1992) cites several technological concerns in conducting benefit/cost analysis that may reasonably explain divergent findings among studies.

The model does appear to provide increased wages (Coker & Valley, in press; Rusch, Conley, & McCaughrin, 1993; Noble, 1991; Kiernan, McGaughey, Schalock, & Rowland, 1988; Hill & Wehman, 1983). On the other hand, the initial cost of the model also appears to be greater than any other model (Coker & Valley, in press). The question from a cost/benefit analysis is whether the costs do decrease over time to a level lower than other models so that in the long run the supported employment model is more cost beneficial than other models. Despite the attention given to the early studies on promising cost/benefit ratios in Virginia, very little attention has been paid to Noble's (1991) conclusions about the contrasts of costs and benefits in New York and Illinois:

> One of the most frequently cited arguments in favor of supported employment is weakened when intangible benefits are found to be nonexistent or even negative. The low benefit/cost ratios that have been calculated for the New York State and

> Illinois supported employment programs makes this a particularly important issue, and adds urgency to the goal of lowering costs and improving productivity by increasing client earnings. (p. 24)

It would appear that the relative costs and benefits of different employment models have yet to be adequately measured.

Characteristics of the Worker and Employment Model

Taxonomy development and cost/benefit research has raised a number of questions regarding comparison of employment models. Given that there are different employment models, the primary question is whether they provide equal outcomes. Research that addresses the question of equal outcomes must first be certain that the persons served in the model have equal capacities.

A continuing concern in comparing alternative models, therefore, is whether the models are being contrasted or workers in the models are being contrasted. Any comparison of employment models has to resolve this confounding. Without accounting for the contribution of individual differences, it may be argued that benefits or gains among the models occurred because of differences in the functional ability of the workers with disabilities. Without controlling in some fashion for individual differences, studies will be relatively useless in providing information about the relative efficiency of models. This seems to have been an important factor in the debate over supported employment versus sheltered employment.

In a survey of rehabilitation agencies in Wisconsin (Coker & Valley, in press), the mean productivity of workers in 29 sheltered employment models was 34.59 percent, the mean productivity in 20 job coach models was 81.48 percent and the mean productivity of 18 group models in that study fell in between at 61.14 percent. They also found that the job coach model paid higher wages ($3.84) than sheltered employment ($1.75), but not significantly more than group community-based models ($3.45). The question is do individuals earn more in different extended employment models or are wages simply higher because of the productivity levels of the workers?

Another question to resolve is whether it is reasonable to assume that persons with certain disability characteristics should be placed in one model rather than another model. Supported employment advocates argue that disability characteristics are not important factors and that all individuals can be placed directly into regular competitive employment. Lam (1986) indicated that more mild disabilities may be better served in supported employment and those with more severe disabilities would be better served in sheltered employment. Others suggest that persons with chronic mental illness may be more successful in a small affirmative industry, than in a large affirmative industry (Granger & Baron, 1993; Tulchinsky, 1993).

Another aspect of the extended employment models is that four of the five approaches are group approaches. Only the individual job coaching model is an individual approach. Again, the question is whether an individual is being placed in group approaches based on his/her need for working in a group or placed in group approaches simply because they exist. If it is true that some individuals work better in a group extended employment approach than in

an individual extended employment approach, then, it lends support for the need for different models of extended employment.

Present Research

This review suggests a central confusion over employment models. First, is there one model that can be adapted to fit the needs for extended employment of persons with disabilities or are there fundamentally different models of extended employment? If the purpose of these models is to assist persons with disabilities gain functional independence, then the methods used under the model must be shown to relate to achieving that goal. Thus, the methods must show that they provide an environment (ecological match) to meet the specific needs of the individual.

It is only when it has been shown that different models provide the same outcome that the issues of cost efficiency and cost benefit can be addressed. Use of a technique such as cost/benefit analysis must be comparing like options. For example, if the affirmative business model and the individual model of supported employment are indeed like options, then they can be contrasted. If they meet different needs and/or are effective for different populations, then they cannot be contrasted in cost/benefit analysis.

Finally, there are practical concerns regarding policy decision making. The conversion issue is an excellent example of these concerns. The initial research suggested that supported employment should replace sheltered employment, and by doing so, cost savings would accrue. The supported employment amendments were passed in 1986. Coker and Valley (in press) indicate that nearly 85 percent of the agencies in Wisconsin are operating the sheltered employment model and about 78 percent are also operating the individual model of supported employment. Sheltered employment has not been replaced by supported employment, but rather is operated in conjunction with that model. From a cost/benefit analysis perspective, the savings would accrue only if the sheltered employment model was eliminated, but not when operating both models.

From one perspective there is a reason to be optimistic about employment models for persons with disabilities. In 1981, the supported employment model developed out of the research of Wehman, was hailed by the rehabilitation community as an innovative approach (Conte, 1983; Bordieri, 1986) and was added to the array of employment models. On the other hand, there is reason to be pessimistic. The new model is initially very costly (Coker & Valley, in press) and the research is inconsistent whether it is cost beneficial over time (Hill et al., 1987; Rusch et al., 1993; Tines, Rusch, & McCaughrin, 1989; Noble, 1991) or applicable to all the populations currently served in community rehabilitation programs (Thornton, 1992; Lam, 1986).

The cost/benefit studies on sheltered employment and supported employment have not focused on the models, but only on the wages earned, costs of the models, and taxpayer/society returns. Within these cost/benefit studies, two major sources of confounding have existed: (a) Generic supported employment was contrasted with generic sheltered employment and (b) differential characteristics of the workers under each model were neither controlled for nor accounted for. Further, those studies did not address issues of job satisfaction, quality of the

work environment, or extent of integration.

This study was designed to conduct an empirical comparison of extended employment models. Four models were selected for comparison: (a) sheltered employment, (b) enclaves, (c) affirmative industry, and (d) supported employment. The mobile work crew was not selected due to the varied nature of worker assignments and variations in hours worked. In order to control for differences in worker characteristics, four samples of workers were matched on key demographic information (age, gender, measured intelligence, primary disability, and secondary disability).

Though the above demographic characteristics are typical measures to develop matched samples, it is possible that workers might still vary on functional ability even if they are equal on these key variables. In Minnesota, each client of the vocational rehabilitation agency was required to have a Functional Assessment Inventory (Crewe & Athelstan, 1984) completed. Higher scores on the Functional Assessment Inventory are reported to be associated with greater functional impairment (Crewe & Athelstan, 1984). In an effort to further account for differences that may be due to functional ability, scores on the Functional Assessment Inventory were used as a covariate in the analyses. Analyses of covariance essentially controlled for differences on functional ability as measured by the Functional Assessment Inventory. Variabilities due to the Functional Assessment Inventory scores are separated in the analysis, and the correlation of Inventory scores with the other measures is used to correct means based on the influence of the Functional Assessment Inventory measure.

Wage information and benefits information were obtained over a twelve-month period on each worker under the four different models, and fees for supportive services were obtained for the same period. Each worker was interviewed about his/her job using an instrument designed to assess job satisfaction, supervisory patterns, socialization and integration, and other selected questions (e.g., living arrangement, transportation, validity of the responses).

Chapter 2

METHOD

The study was conducted at three different community rehabilitation agencies in Minnesota. Two of the three operated several models including sheltered employment, mobile work crews, enclaves, and the job coaching model. The third agency operated a large affirmative business. A total of 825 clients/workers under four employment models were involved in the study.

Subjects

Demographic information on the 825 workers at the three agencies was obtained in order to develop four matched samples of workers from the following employment models: (a) sheltered employment, (b) enclave, (c) affirmative industry, and (d) job coach approach to the supported employment model. The matching resulted in 40 subjects for each of the four models for a total of 160 subjects. Each worker was one of a set of four subjects matched on the following demographic characteristics: (a) age, (b) gender, (c) measures of intelligence, (d) primary disability, and (e) secondary disability.

Design

The research design used matched samples to detect differential benefits of four employment models. Analysis of covariance, with the Functional Assessment Inventory scores as covariate in the analyses, was used. Several measures related to job satisfaction, supervisory patterns, socialization, economic benefits, and fees for services were used as dependent variables. The analysis of covariance (ANCOVA) controls for functional ability was measured by the Functional Assessment Inventory by separating the variance on Functional Assessment Inventory scores from the dependent measures. The correlation of the Functional Assessment Inventory scores with the dependent measure is used to correct the values of that measure. The use of the analysis of covariance allows for a more pure measure of the actual differences among a dependent measure when it is reasonable to assume that scores on that measure may be influenced by differences in functional ability.

Instrumentation

Three instruments were developed specifically for the study: (a) Demographic Form, (b) Job Interview Form, and (c) Economic Benefit Form. (Copies of each form are included as Appendices A, B, and C, respectively.) All instruments were piloted with samples of comparable subjects and programs.

Demographic Form. This form was used to obtain data with which to match workers on key characteristics. The form identified the client based upon an identification number, agency, and the type of employment model (individual supported employment, enclave, affirmative industry, on-site sheltered employment). The worker's gender, age, full scale intelligence, primary disability, and secondary disability were obtained with the form and used

in the matching process.

Job Interview Form. The Job Interview Form was developed based on review of The Consumer Job Satisfaction Scale (American Rehabilitation Association, 1990) and other literature related to measurement of job satisfaction with persons with mental retardation. The interview consisted of five parts and solicited data for measuring selected benefits.

Part I.	Job/Career/Advancement
Part II.	Supervision/Support
Part III.	Economic Benefits
Part IV.	Socialization/Integration
Part V.	Open-Ended Questions

The job interview was conducted individually at the job site, and the questions were used to measure differences among the various employment models. Job satisfaction and job knowledge scales were developed from questions in Part I, Part II, and Part V. The last question on the Job Interview Form required the interviewer to rate the validity of the responses by each subject.

The job interview format included standardized phrases to be used as prompts for some of the questions either to elicit a full response or obtain information with which to verify the accuracy of the responses. For example, if a "yes" was obtained to the question "Do you pay any bills?" a prompt asked: "Which ones: rent, food, clothing etc.?" If "yes" was obtained to the question "Have you had a raise?" the prompt asked: "How much?"

Economic Benefit Form. The Economic Benefit Form recorded data on the total days worked, total number of hours worked, worker productivity measures, and total gross wages received for four quarters. Fees that the facility received for each worker under each employment model during each quarter were also recorded on this form. Fees for the employment option were also recorded for the same period of time.

Procedure

All forms were piloted to ensure that the data could be collected and to ensure that potential subjects could easily understand the questions and the prompts. After piloting, the forms were revised and prepared for application. The Job Interview Form consisted of the schedule and a separate coding sheet for each subject's responses at the time they were interviewed. Two graduate assistants conducted the piloting of the Job Interview Form and recommended modifications to increase reliability of the responses. The same individuals then conducted all job interviews on all subjects.

Agencies completed and returned 825 Demographic Matching Forms and the data were entered into a dBase file. Successive matches on sets of four subjects (one from each of the employment models) were selected from the pool based on matching demographics in the following order: primary disability, age, gender, intelligence, and secondary disability. Means and frequency counts were calculated to estimate the degree of matching that occurred as the four samples were developed.

Meetings were held with participating agencies to determine the most effective way of interviewing each individual. The identification number of the subjects selected for the study were given to the three agencies. Each agency provided the person's name, the location of employment, and the best time to conduct the interview. A cover letter explaining the purpose of the study, along with a consent form, was sent to each participant or his/her legal guardian.

Data collection occurred in two phases. In the first phase, 225 subjects were selected from a pool of 684 potential subjects and resulted in 60 subjects for each of the following three models: sheltered employment, enclave, and affirmative industry. All data were collected on these 180 subjects before the second phase was initiated in which data were collected on the job coach model of supported employment. A second pool of 141 subjects in the job coach model was identified, and the matching process began again to match the characteristics of the 60 subjects in the other three models. Exact matches could not be obtained for fifteen of the new 60 from the job coach model sample. Another five subjects in the Phase 2 sample could not schedule for interviews for a variety of reasons (e.g., no longer employed, not with the agency). The final sample of 160 therefore included matches on 40 subjects for each model.

In all, 220 individuals participated in the interviews: 180 from Phase 1 and 45 from Phase 2. Job satisfaction interviews were conducted at either the individual's place of employment or at the rehabilitation facility. In 13 cases this was not feasible, and telephone interviews were conducted. Interviews averaged 15 minutes and all persons received a certificate entitling them to five dollars which was paid by the facility for their participation.

The economic benefit information was provided by the agencies on a total of 220 subjects who participated in the job interviews. When necessary, telephone contacts were made to clarify data or to gather further information. Facility staff were reimbursed for their time to collect data from case records as per request of the facility.

Data Analyses

Data were analyzed and are reported for the total sample of 160 with 40 subjects in each of the four employment models. The four samples were compared in terms of differences on the demographic variables by ANCOVAs and chi-squares. Inferential statistics (ANCOVA and Chi-squares) were used to compare the four matched samples on the data obtained from the Economic Benefit Form and Job Interview Form.

Missing data were handled during analysis in two different ways, depending on the type of data. Missing data from the Job Interview Form were expected because of the possibility that the subject could not answer some questions. Lack of a response (after appropriate prompting) was an indication of inability to answer the question and was coded as a legitimate response.

Missing data from the Economic Benefit Form were actual missing data. Initial analyses indicated that data were missing randomly for the various categories of economic data and resulted in unequal n's for the different employment models. Missing data were not from the same records. In order to determine whether missing data might bias the results, cases were eliminated until there were no missing data and second analysis was then conducted with the reduced sample. Consequently, two separate analyses were conducted and compared: (a)

matched samples of 40 with unequal n's due to missing data and (b) a matched sample of 21 sets of subjects for which there were no missing data.

Chapter 3

RESULTS

Demographics and Integrity of Matched Samples

There were six demographic variables obtained on the entire sample of 825 cases: (a) age, (b) full scale intelligent quotient (IQ), (c) gender, (d) primary disability, (e) secondary disability, and (f) scores on the Functional Assessment Inventory. The matching process first examined primary disability, and then matched age, gender, IQ, and secondary disability, in that order. Functional Assessment Inventory scores were used as a covariate in the analyses.

The extensive matching process reduced the 825 cases to a total research sample of 160 with 40 matched subjects in each of the four models. The means or frequencies and ANOVA or chi-squares for comparing employment models are given for each demographic variable and the three samples (825, 40, and 21) in Table 1. The analyses reveal differences in demographics among the four models for the total 825 cases but no significant differences on the same variables for the matched samples. The one exception is with respect to Functional Assessment Inventory scores, which are used as a covariate in subsequent analyses.

Age. The mean age of the 825 workers in the four models ranged from 35.04 to 40.06 and the differences among models were significant, $F(3, 820) = 8.53$, $p < .001$. Workers in sheltered employment were significantly older than those in the other three models. Age differences in the other three models were not significant. After matching, the sample of 40 and 21 were about 34 years old with no significant differences among the models.

Full Scale IQ. The mean full scale IQ in the pool was significantly different among the models, $F(3, 784) = 32.30$, $p < .001$. The affirmative industry model had the highest mean full scale IQ of 70.48 and differed significantly from the other three models whose means were nearly identical around 59. After matching, no significant differences were obtained in full scale IQ among the different models. The average full scale IQ was about 59 in each of the four samples.

Functional Assessment Inventory (FAI). The scores for the Functional Assessment Inventory reflect the level of functional impairment with high scores associated with lower functional ability and low scores indicating higher functional ability. For the pool, significant differences were also found among the models on FAI scores, $F(3, 813) = 6.15$, $p < .001$. Significantly higher scores were found between the means of sheltered employment (43.93) and the affirmative industry (43.81) and both the enclave and job coach models (39.61 and 39.73, respectively).

In the samples of 40 matches, significant differences were still found, $F(3, 156) = 5.22$, $p > .002$). Workers in the affirmative industry model had significantly higher scores (47.88) than the other three models. Though the overall F for the sample of 21 was not at the alpha level of .05, $F(3, 80) = 2.36$, $p = .078$, the post hoc analyses suggest that functional abilities scores for workers under the affirmative industry model (48.29) may be greater than the mean

Table 1. Demographic Characteristics of Workers and Effectiveness in Matching Four Employment Model Samples

A. Age, Intelligence, and FAI Scores

Dependent Variables	Mean Squares		Degrees of Freedom		Analysis of Variance	
	Models	Error	Models	Error	Models F	Models p
Age						
Pool (825)	1103.64	129.406	3	820	8.53	<.001
Sample 40	13.49	93.96	3	156	0.14	.934
Sample 21	12.46	110.68	3	80	.11	.953
Intelligence						
Pool (825)	7200.95	222.97	3	784	32.30	<.001
Sample 40	14.36	91.74	3	156	0.16	.931
Sample 21	39.54	117.28	3	80	0.34	.801
Functional Capacity						
Pool (825)	954.31	155.08	3	813	6.15	<.001
Sample 40	665.04	127.53	3	156	5.22	.002
Sample 21	287.03	121.64	3	80	2.36	.078

B. Post Hoc Analyses on Age, Intelligence, and FAI Scores

Dependent Variables	Model A Sheltered		Model B Enclave		Model C Affirmative		Model D Job Coach		Results of LSD Post Hoc Analyses (p < .05)
	n	Mean	n	Mean	n	Mean	n	Mean	
Age									
Pool (825)	364	40.06	89	35.04	230	38.99	141	35.45	Older workers in Models A & C.
Sample 40	40	34.68	40	34.78	40	34.58	40	33.53	None
Sample 21	21	36.48	21	36.71	21	36.33	21	35.00	None
Intelligence									
Pool (825)	348	59.61	90	56.67	210	70.48	140	58.15	IQ highest in Model C.
Sample 40	40	59.93	40	59.08	40	60.53	40	59.70	None
Sample 21	21	60.33	21	57.95	21	61.10	21	59.19	None
Functional Capacity									
Pool (825)	363	43.93	83	39.61	230	43.81	141	39.73	Lowest functional capacity in Models A & C.
Sample 40	40	40.68	40	41.83	40	47.88	40	38.30	Lowest functional capacity in Model C.
Sample 21	21	41.24	21	41.33	21	48.29	21	40.29	Lowest functional capacity in Model C.

Table 1 (continued)
C. Gender and Primary Disability

Items and Response Categories	Percents for Each Model				TOTALS (N=160)		Analysis		
	Model A Sheltered	Model B Enclave	Model C Affirmative	Model D Job Coach	f	%	Chi-Square	Degrees of Freedom	p-Level
Gender									
Pool (825)							1.8	3	.615
Male	50.0	45.6	52.2	53.9	419	50.8			
Female	50.0	54.4	47.8	46.1	406	49.2			
Total Ns	364	90	230	141	825	100.0			
Sample 40							1.9	3	.588
Male	40.0	42.5	35.0	50.0	67	41.0			
Female	60.0	57.5	65.0	50.0	93	58.1			
Total Ns	40	40	40	40	160	100.0			
Sample 21							1.2	3	.750
Male	43.0	43.0	29.0	38.0	32	38.0			
Female	57.0	57.0	71.0	62.0	52	62.0			
Total Ns	21	21	21	21	84	100.0			
Primary Disability									
Pool (825)							235.0	30	<.001
Borderline MR	.0	4.4	28.3	3.6	73	8.9			
Mild MR	46.8	52.2	24.3	65.5	363	44.4			
Moderate MR	25.9	23.3	19.5	16.5	182	22.2			
Severe MR	13.8	13.3	5.8	7.9	86	10.5			
Profound	.0	.0	.0	.0	0	.0			
Mental Illness	4.4	3.3	9.3	2.2	43	5.3			
Traumatic Brain Injury	2.2	.0	.4	.7	10	1.2			
Physical Disability	5.2	.0	7.1	3.6	40	4.9			
Learning Disabled	.3	2.2	2.7	.0	9	1.1			
Blind	1.1	.0	.0	.0	4	.5			
Deaf	.3	1.1	1.3	.0	5	.6			
Non-Disabled	.0	.0	1.3	.0	3	.4			
Total Ns	363	90	226	139	818	100.0			
Sample 40							9.7	9	.375
Borderline MR	15.0	10.0	15.0	7.5	19	11.8			
Mild MR	57.5	70.0	70.0	75.0	109	68.1			
Moderate MR	25.0	10.0	12.5	10.0	23	14.3			
Severe MR	2.5	10.0	2.5	7.5	9	5.6			
Total Ns	40	40	40	40	160	100.0			
Sample 21							10.9	9	.280
Borderline MR	19.0	14.2	14.2	9.5	12	14.2			
Mild MR	57.1	61.9	71.4	71.4	55	65.4			
Moderate MR	23.8	4.7	9.5	4.7	9	10.7			
Severe MR	0.0	19.0	4.7	14.2	8	9.5			
Total Ns	21	21	21	21	84	100.0			

Table 1 (continued)
D. Secondary Disability

Items and Response Categories	Percents for Each Model				TOTALS (N=160)		Analysis		
	Model A Sheltered	Model B Enclave	Model C Affirmative	Model D Job Coach	f	%	Chi-Square	Degrees of Freedom	p-Level
Secondary Disability									
Pool (825)							105.6	33	<.001
None	32.7	47.8	42.6	61.7	347	42.1			
Borderline MR	0.0	0.0	3.0	0.0	7	.8			
Mild MR	4.7	2.2	1.7	2.8	27	3.3			
Moderate MR	1.4	1.1	.4	1.4	9	1.1			
Severe MR	0.0	0.0	0.0	.7	1	.1			
Profound	0.0	0.0	0.0	0.0	0	0.0			
Mental Illness	12.9	10.0	16.1	6.4	102	12.4			
Traumatic Brain Injury	.3	.0	0.0	0.0	1	.1			
Physical Disability	35.2	32.2	25.7	13.5	235	28.5			
Learning Disabled	.3	0.0	3.9	.7	11	1.3			
Blind	1.9	0.0	0.0	1.4	9	1.1			
Deaf	3.0	2.2	.9	5.0	22	2.7			
Speech Impairment	7.7	4.4	5.7	6.4	54	6.5			
Total Ns	364	90	230	141	825	100.0			
Sample 40							13.16	18	.782
None	50.0	50.0	45.0	62.5	83	51.9			
Borderline MR	0.0	0.0	2.5	0.0	1	0.6			
Mild MR	2.5	0.0	0.0	0.0	1	0.6			
Mental Illness	7.5	10.0	10.0	5.0	13	8.1			
Physical Disability	35.0	35.0	37.5	22.5	52	32.5			
Deaf	0.0	0.0	0.0	2.5	1	.6			
Speech Impairment	5.0	5.0	5.0	7.5	9	5.6			
Total Ns	40	40	40	40	160	100.0			
Sample 21							4.6	9	.871
None	42.8	42.8	42.8	66.6	41	48.8			
Mental Illness	14.2	14.2	14.2	9.5	11	13.0			
Physical Disability	33.3	33.3	33.3	23.8	26	30.9			
Speech Impairment	9.5	9.5	9.5	0.0	6	7.1			
Total Ns	21	21	21	21	84	100.0			

scores for workers under the other three models combined. The Functional Assessment Inventory scores suggested that the workers in the affirmative industry may be more functionally impaired than those working under the other three models.

Gender. For all samples (825, 40, and 21), there were no significant differences in the number of males and females under the four models. Males and females are proportionately represented in the models.

Primary Disability. About 700 of the 825 subjects had a primary disability of mental retardation. While analyzing this data for matching on primary disability, the labels of

borderline to profound were not applied consistently in relationship to the stated IQ scores either due to coding errors or inaccurate classification. A reclassification of the primary disability of mental retardation was computed by assigning new primary disability labels using a standardized system for relating intelligence scores to levels of retardation (Robinson & Robinson, 1965, page 50, Table 5). This system and the results of the reclassification of the levels of the primary disability of mental retardation are given in Table 2.

Table 2. Consequences of Reclassifying Sample on Primary Disability of Mental Retardation

Label	IQ Range	Frequencies Original	New	Change
Borderline	70 - 84	139	73	- 66
Mild	55 - 69	354	363	+ 9
Moderate	40 - 54	146	182	+ 36
Severe	25 - 39	68	86	+ 18
Profound	Under 25	0	0	0
Missing		0	3	+ 3
Totals		707	707	0

Three of the original codes were changed to missing due to lack of the full scale IQ measure. The major change was that the number of subjects labeled as borderline mental retardation was reduced by 66 and the numbers under the three remaining classifications increased. No other changes were made to any of the other disability labels.

For the sample of 825, there were significant differences among the four models, $\chi^2(30, N = 818) = 143.9, p < .001$. The major difference among the models was that there were a greater number of workers in the affirmative industry whose primary disability was classified as borderline mental retardation and fewer workers classified as mild mental retardation. The matched sample of 40 and 21 resulted in no significant differences in primary disability among the four models.

Secondary Disability. The pool of 825 also differed significantly on the proportionate number of secondary disabilities, $\chi^2(33, N = 825) = 105.6, p < .001$. Most workers in the job coach model did not have a secondary disability (61.7%) which was probably due to the fact that fewer workers in this model had a physical disability (13.5%) in comparison to the other three models. In the sample of 40 and 21, there were no significant differences among the models on secondary disabilities. It is noted that the job coach model percentage of workers without disabilities remained approximately the same (around 60%) as for the pool.

Dependent Measures

The dependent measures were derived from two sources: (a) structured interviews conducted with the Job Interview Form and (b) economic benefits using quarterly data obtained from facilities on the Economic Benefits Form. The interview data resulted in several clusters of information: (a) job satisfaction, (b) supervisory patterns, (c) socialization and integration, and (d) remaining questions. These analyses relied on the sample of 40 for each group. For the economic data, two analyses were conducted on the matched samples of 40 with unequal n's due to missing data and a matched sample of 21 with no missing data.

Validity of Responses. Since it was expected that the subjects might not be able to answer all the questions on the Job Interview Form reliably, the interviewers were to rate how valid were the responses of the subject. The validity of responses was rated after administering the entire questionnaire. A "one" on the four-point scale indicated that all answers were valid; a "two" indicated that most of the answers were valid; a "three" indicated that there might be some problems with the validity of the responses; a "four" indicated that there were definite problems with validity. The results of the chi-square analysis for validity of responses is given in Table 3. There were some differences across the models, $\chi^2(9, N = 160) = 17.03, p = .048$. For 6 of the 16 cells, the frequency is less than 5 and for 2 of these cells, the frequency is 0. Small cell sizes inflate the size of the chi-square.

Most of the subjects (142 out of 160 or 88.8%) were rated as responding validly (one) or mostly valid (two). Only two subjects were rated as definitely having problems validly responding to the questions, while the remaining 16 subjects were rated as having some problems validly responding. Of importance for comparison of the models, note that the number of subjects rated as having some difficulty (a three or four) was equal in the sheltered employment model and the job coach model. In contrast, the enclave model and affirmative industry tended to have subjects rated as responding completely valid (one on the scale). Though the chi-square indicated some differences among the models, most of the subjects' responses were considered valid. On the other hand, bias in the sample due to validity of the responses is not ruled out.

Job Interview Data

Employment Choice and Community. Results of the questions (a) how did they get their jobs, (b) transportation used, and (c) residential status are also presented in Table 3. The chi-square for the question on job getting was highly significant, $\chi^2(9, N = 132) = 77.4$, $p < .001$. Ninety-seven percent of the workers in the enclave and job coach models got their job from staff at the agency. Though about half of the workers in sheltered employment reported that staff at the rehabilitation agency were involved in their getting their job, about one third (31.0%) also indicated that friends or relatives helped them get their job. In the affirmative industry, the most frequent method was "other" (44.8%) such as schools and staff from other agencies.

Two questions asked how workers got to their jobs. The first question asked all workers how they got to the agency. For some workers in the enclave and job coach model, they did not come to the agency, but went directly to the community-based (CB) job site. For these

workers, a second question was asked about how they were transported to the community work site. The chi-squares for these two questions were significant, $\chi^2(12, N = 153) = 100.4$, $p < .001$) respectively, and are interpreted together. The workers in sheltered employment were most often transported by agency vehicles (72.2%), while the majority of workers in the affirmative industry relied upon public transportation (59.0%). For those workers going directly to the community-based job site, it was more common for the workers in the enclave model to reach their community job site through agency vehicles than for the job coach model.

Table 3. Validity, Employment Choice, and Community

Items and Response Categories	Percents for Each Model				TOTALS		Analysis		
	Model A Sheltered	Model B Enclave	Model C Affirmative	Model D Job Coach	f	%	Chi-Square	Degrees of Freedom	p-Level
Validity							17.03	9	.948
1. All Valid	40.0	62.5	70.0	35.0	83	51.9			
2. Most Valid	42.5	35.0	22.5	47.5	59	36.9			
3. Some Problems	15.0	2.5	7.5	15.0	16	10.0			
4. Definite Problems	2.5	0	0	2.5	2	1.3			
How Did You Get Your Job?							77.4	9	< .001
Friends/Relatives	32.1	2.7	10.3	2.6	14	10.6			
Staff from Agency	50.0	97.3	31.0	97.4	96	72.7			
Self	0.0	0.0	13.8	0.0	4	3.0			
Other	17.9	0.0	44.8	0.0	18	13.6			
Total Ns	28	37	39	38	132	100.0			
Transportation to Work Site (Facility and/or Community)							100.4	12	< .001
Direct to CB Site	0.0	57.9	0.0	57.5	45	29.4			
Facility Vehicles	72.2	34.2	25.6	40.0	65	42.5			
Family/Friends	2.8	2.6	10.3	0.0	6	3.9			
Public System	25.0	5.3	59.0	2.5	35	22.9			
Self	0.0	0.0	5.1	0.0	0	1.3			
Other	0.0	0.0	0.0	0.0	0	0.0			
Total Ns	36	38	37	40	153	100.0			
Residential Status							40.3	21	< .001
Own Place	2.7	10.3	10.3	2.5	10	6.5			
Family	32.4	10.3	46.2	35.0	48	31.0			
Foster Home	0.0	5.1	10.3	2.5	7	4.5			
Group Home	48.6	38.5	25.6	32.5	56	36.1			
CBRF	5.4	15.4	0.0	2.5	9	5.8			
Own + Support	8.1	10.3	5.1	20.0	17	11.0			
Supported Apartment	2.7	10.3	2.6	2.5	7	4.5			
Other	0.0	0.0	0.0	2.5	1	.6			
Total Ns	37	39	39	40	155	100.0			

The last question asked about place of residence. The differences among the models were significant, $\chi^2(21, N = 155) = 40.3, p < .001$. Each model appeared to have a slightly different pattern. Approximately 80 percent of the workers in sheltered employment tended to live in group homes or with the family. For workers in the enclave, a diffuse pattern emerged with about one-third living in group homes and the rest divided across the other options. The residential status of workers in the affirmative industry was fairly similar to sheltered employment with about 70 percent living with the family or group homes. The highest number of workers living in an apartment with support was found for workers under the job coach model (20.0%).

Job Awareness and Satisfaction. Seventeen items from Parts I, II, and V that related to job satisfaction and job knowledge were grouped together and a total mean score was calculated based on the point values for each question. Thirteen of these questions related to job satisfaction. The remaining four related to the individual's awareness of his/her job. The item's criteria for assigning points, point values, and results of the item analyses for this measure are presented on Table 4. The item analysis of all 17 items was conducted using chi-squares and is given in Appendix D. Seven items, two on job awareness and five on job satisfaction, were significantly different at or beyond the .05 level.

From these 17 items, three analyses were conducted based on different combinations of the items: (a) all 17 items, (b) 13 satisfaction only items (satisfaction scale), and (c) 4 awareness items (awareness scale).

The results of the analysis of covariance for the job satisfaction scales are given in Table 5. For all analyses on the mean across the job satisfaction items, there were significant differences among the models with all p values less than .01 and F values for the models ranging from 4.17 to 6.80. The degrees of freedom remained constant at 3 and 159. The FAI varied with the models for most of the analyses. The major advantage of the FAI is to reduce the error terms by removing variance associated with FAI scores. The scores on the job satisfaction scale are corrected by using the mean square error associated with the FAI. Post hoc analyses were conducted using the least square difference (LSD) test and an alpha value of .05.

With all 17 items, significant differences were found among the models, $F(3, 159) = 5.40, p = .002$. The FAI scores did vary with the mean on job satisfaction/awareness scores on the 17 items, $F(1, 159) = 5.40, p = .021$. Post hoc tests indicated that the mean for sheltered employment (10.95) was lower than the mean for the other three models which ranged from 12.43 to 13.21. Overall, sheltered employees were less aware and less satisfied than workers in enclaves, affirmative industries, and job coach models.

Job satisfaction and job awareness items were then analyzed separately. For the scale on job satisfaction (13 items), the results are somewhat similar to the 17-item scale with the mean for sheltered employment (8.98) lower than the affirmative industry and the job coach model. The difference between sheltered employment and the enclave model (9.84) was not significant.

A different pattern of differences emerged for the awareness items. The awareness scale consisted of four items. Like the satisfaction items, significant differences were found among

Table 4. Job Satisfaction Scales

Item	Significant	Criteria	Value
Scale 1 - Knowledge Items (4 items)			
1. What do they call your job?	*	Knows job title	1
2. What is the hardest part of your job?		Names a task	1
3. What is the easiest part of your job?		Names a task	1
4. Have you had a raise?	*	Knows about raise	1
Total for Knowledge			4
Scale 2 - Satisfaction Items (13 Items)			
5. Is your job: Too easy/neither/too difficult		Neither	1
6. Is your job: Boring/neither/fun/?		Neither	1
7. Was it your choice to take the job?		Yes	1
8. Are you doing the type of work you want?		Yes	1
9. Would you like to work more/less/same?	*	Same	1
10. Do you like where you work?		Yes	1
11. Would you rather work somewhere else?	*	No	1
12. What kind of work do you want to do in the future?		Same	1
13. Are you paid fairly for amount of work you do?	*	Yes	1
14. Does this job allow you to earn enough money to buy the things you want?		Yes	1
15. When you think about the place you work, the amount of money you are paid, friends, and all the people you work with, do you think that your job is:		Better than most = 33 About the same = 2 Worse than most = 1 Don't know = 0	
16. Are there things you would like to change about your job?	*	No	1
17. Are there things you would like to change about where you work?	*	No	1
Total for Job Satisfaction			15
Total Scale	7	17	19

* Chi-square analyses indicated significant differences across models at $p < .05$ (See Appendix D).

Table 5. Analyses of Covariance Job Satisfaction Scales Across Employment Models

Dependent Variables	Mean Squares			Degrees of Freedom			Analysis of Covariance			
	Covariate FAI	Models	Error	Covariate FAI	Models	Error	Covariate FAI		Models	
							F	p	F	p
All Job Satisfaction/ Job Awareness Items (k=17)	43.84	43.82	8.12	1	3	159	5.40	.021	5.40	.002
Job Satisfaction Items (k=13)	19.96	27.01	6.48	1	3	159	3.08	.081	4.17	.007
Job Awareness Items (k=4)	4.64	7.66	1.13	1	3	159	4.11	.044	6.80	<.001

Post Hoc Analyses

Dependent Variables	Model A Sheltered		Model B Enclave		Model C Affirmative		Model D Job Coach		Results of LSD Post Hoc Analyses (p<.05)
	n	Mean	n	Mean	n	Mean	n	Mean	
All Job Satisfaction/ Job Awareness Items (k=17)	40	10.95	40	12.43	40	13.14	40	13.21	Lower overall score in Model A than the other three models.
Job Satisfaction Items (k=13)	40	8.98	40	9.84	40	10.98	40	10.25	Lower job satisfaction score in Model A than Models C & D, but not Model B.
Job Awareness Items (k=4)	40	1.98	40	2.49	40	2.16	40	2.97	Lower job awareness in Model A than in Models B and D. And job awareness lower in Model C than in Model D.

the means both for the four-item scale, $F(3, 159) = 6.80$, $p<.001$. The overall pattern for sheltered employment (1.98) and affirmative industry models (2.16) were similar and lower than the enclave (2.49, 0.97) and job coach models (2.97).

Supervisory Patterns. Six of the seven questions asked pertained to how the individual received feedback on the job. These six questions asked who gave that feedback: (a) job coach/case manager, (b) supervisor, (c) both, (d) other, or (e) nobody. The job coach and case manager are considered rehabilitation support personnel, while the floor supervisor is more often associated with the work tasks. Even though the models differed in some respects, all models had both rehabilitation support staff and work supervisors.

The seventh question asked about the consequences if a worker made a mistake on the job. Chi-square analyses comparing the models on these questions are given on Table 6.

Table 6. Comparison of Supervisory Patterns Across the Four Employment Models

Items and Response Categories	Percents for Each Model				TOTALS (N=160)		Analysis		
	Model A Sheltered	Model B Enclave	Model C Affirmative	Model D Job Coach	f	%	Chi-Square	Degrees of Freedom	p-Level
TOTAL ACROSS ALL SIX ITEMS									
Rehab Support	65.1	17.3	22.0	62.1	360	41.0	263.50	12	<.001
Work Supervisor	19.6	72.3	61.9	14.6	375	42.8			
Both	2.9	0.4	2.2	5.5	24	2.7			
Other	9.6	5.8	5.4	12.3	72	8.2			
Nobody	2.9	4.0	8.5	5.5	46	5.2			
Total Ns	(209)	(226)	(223)	(219)	877	100			
1. Who watches you do your job?									
Rehab Support	69.4	17.9	21.6	62.5	65	42.8	60.25	12	<.001
Work Supervisor	13.9	69.2	51.4	7.5	54	35.5			
Both	0.0	0.0	2.7	0.0	1	0.7			
Other	13.9	7.7	5.4	10.0	14	9.2			
Nobody	2.8	5.1	18.9	20.0	18	11.8			
Total Ns	(36)	(39)	(37)	(40)	152	100			
2. Does someone else check your work?									
Rehab Support	48.6	15.4	17.1	76.3	58	39.53	67.92	12	<.001
Work Supervisor	17.1	71.8	54.3	5.3	55	7.4			
Both	2.9	0.0	0.0	2.6	2	1.4			
Other	25.7	5.1	8.6	7.9	17	11.6			
Nobody	5.7	7.7	20.0	7.9	15	10.2			
Total Ns	(35)	(39)	(35)	(38)	147	100			
3. Who teaches you about your job?									
Rehab Support	57.1	16.7	13.9	31.4	42	29.6	48.38	12	<.001
Work Supervisor	28.6	77.8	72.2	34.3	76	53.5			
Both	5.7	0.0	0.0	17.1	8	5.6			
Other	5.7	2.8	5.6	17.1	11	7.7			
Nobody	2.9	2.8	8.3	0.0	5	3.5			
Total Ns	(35)	(36)	(36)	(35)	142	100			
4. Who tells you "good job"?									
Rehab Support	68.6	18.9	41.0	78.9	77	51.7	44.58	12	<.001
Work Supervisor	14.3	70.3	46.2	7.9	52	34.9			
Both	2.9	2.7	5.1	2.6	5	3.4			
Other	8.6	5.4	5.1	7.9	10	6.7			
Nobody	2	2.7	2.6	2.6	5	3.4			
Total Ns	(35)	(37)	(39)	(38)	149	100			

Table 6. Comparison of Supervisory Patterns Across the Four Employment Models (continued)

Items and Response Categories	Percents for Each Model				TOTALS (N=160)		Analysis		
	Model A Sheltered	Model B Enclave	Model C Affirmative	Model D Job Coach	f	%	Chi-Square	Degrees of Freedom	p-Level
5. Who shows you new things?									
Rehab Support	66.7	21.6	16.2	38.7	48	34.8	39.64	12	<.001
Work Supervisor	24.2	75.7	75.7	38.7	76	55.1			
Both	6.1	0.0	2.7	12.9	7	5.1			
Other	3.0	2.7	2.7	9.7	6	4.3			
Nobody	0.0	0.0	2.7	0.0	1	0.7			
Total Ns	(33)	(37)	(37)	(31)	138	100			
6. Who helps you at work?									
Rehab Support	80.0	13.2	20.5	78.4	70	47.0	85.38	12	<.001
Work Supervisor	20.0	71.1	71.8	0.0	62	41.6			
Both	0.0	2.6	2.6	0.0	1	0.7			
Other	0.0	5.1	5.1	21.6	14	9.4			
Nobody	0.0	0.0	0.0	0.0	2	1.3			
Total Ns	(35)	(38)	(39)	(37)	149	100			
7. What happens if you make a mistake?									
Receive Instructions	40.0	52.9	45.9	62.2	72	50.3	9.18	9	<0.421
Get in Trouble	2.9	2.9	2.7	0.0	3	2.1			
Fix it myself	42.9	41.2	48.6	32.4	59	41.3			
Other	14.3	2.9	2.7	5.4	2	6.3			
Total Ns	(35)	(34)	(37)	(37)	143	100			

Significantly different patterns of supervision were found among responses to the six questions related to who gives feedback on the job among the models. Chi-square values based on all six questions and each question analyses separately were significant with *p*-values at the .001 level.

In the first analysis, the responses to these six questions were summed yielding total frequencies for who is most relied upon in each model. The frequencies differed across the models for the reported reliance on rehabilitation support staff (job coach/case manager) or work supervisor, $\chi^2(12, N = 877) = 263.50, p<.001$). A distinct pattern was clearly evident. Workers in sheltered employment and the job coach model most frequently reported that they relied upon rehabilitation support staff (65.1% and 62.1%) rather than the work supervisor (19.6% and 14.6%) for assistance. In contrast, the work supervisor was most frequently reported by workers in the enclave model and in the affirmative industry model (72.3% and 61.9%) as the individual from whom they requested assistance rather than rehabilitation support staff (17.3% and 22.0%).

The analysis of the six individual items indicated a similar pattern emerged for most of these questions, but not all. For example, on the item "Who watches you do your job?", rehabilitation support staff was most frequently reported for both the sheltered employment model (69.4%) and the job coach model (62.5%), while the work supervisor was most frequently identified in the enclave model (69.2%) and the affirmative industry model (51.4%). Identical patterns emerged for items "Does someone else check your work?" and "Who helps you at work?"

For the item, "Who tells you 'Good job'?", the pattern was similar except for the affirmative industry. Sheltered employment and the job coach model continue to rely on the rehabilitation support staff, and the enclave again relied on the supervisor. In the affirmative industry workers relied equally on the work supervisor (46.2%) and upon the rehabilitation support staff (41.0%).

For two other items, "Who teaches you about your job?" and "Who shows you new things?", the pattern was similar to the overall pattern except for the job coach model. Sheltered employment relied on the case manager/job coach and the enclave and the affirmative industry continued to rely upon the supervisor. For both questions, workers under the job coach model were evenly split between rehabilitation support staff and the work supervisor, 31.4 percent versus 34.3 percent for the former and a tie of 38.7 percent for the latter.

The last question in this area asked what would happen if the worker made a mistake. There were no significant differences among the models. Most of the workers would either "receive instructions" (50.3%) or "fix it myself" (41.3%).

Socialization and Integration. Eleven questions were directed toward socialization and integration patterns at the work place. Each question was answered yes or no, with positive responses awarded one point. Three questions asked about friendships at work (do you have friends, make new friends, and eat lunch with friends). Four questions asked about integration opportunities (can you eat lunch with anybody, can you talk to anybody, can you go anywhere during lunch or breaks, and do you do things after work with your friends). In addition, for the question on integration opportunities, participants were asked whether they did or did not choose to do so (See Appendix B for Part IV: Socialization/Integration).

The analyses for these questions are given in Table 7. These items were combined into three main scales: (a) friends, (b) social opportunity, and (c) social choice. The models did not differ on friendship relationships (three items), $F(3, 133) = 0.83$, $p=.434$, on the opportunity for integration with other workers (four items), $F(3, 123) = 3.04$, $p=.333$, nor on the choice of social integration (four items), $F(3, 92) = 1.94$, $p=.576$. It should be noted that there were a number of missing responses for the job coach model on the last scale on choice.

Autonomy and Job History. The remaining questions asked about the degree of control over their paycheck and the number of prior jobs. The control over their paycheck was rated on a three-point scale where "one" equaled full control, "two" equaled partial control, and "three" equaled no control. The analyses of covariance are also presented in Table 7. The overall differences among the models was not significant at the .05 level with the $F(3, 148) = 2.41$, $p=.070$. Even so, the post hoc test revealed significant differences ($p=.05$) with the mean

rating of workers in sheltered employment (2.11) greater than both the enclave model (1.87) and the affirmative industry (1.83) while the difference with the mean of the job coach model (1.89) had a slightly lower p value of .059.

Table 7. Covariant Analyses of Socialization, Integration, Autonomy, and Job History

Dependent Variables	Mean Squares			Degrees of Freedom			Analysis of Covariance			
	Covariate FAI	Models	Error	Covariate FAI	Models	Error	Covariate FAI		Models	
							F	p	F	p
Friends Items (k=3)	0.19	0.20	0.22	1	3	133	0.83	.373	0.92	.434
Social Opportunity Items (k=4)	2.72	1.02	0.89	1	3	123	3.04	.084	1.15	.333
Social Choice Items (k=4)	2.00	0.69	1.03	1	3	92	1.94	.168	0.66	.576
Social (all 11 items)	0.05	2.65	1.98	1	3	90	0.26	.875	1.34	.267
Control of Paycheck (1=full control)	.97	0.61	0.25	1	3	148	3.83	.052	2.41	.070
Number of Previous Jobs	11.82	73.55	10.87	1	3	108	1.09	.30	6.77	< .001

Post Hoc Analyses for Significant Fs

Dependent Variables	Model A Sheltered		Model B Enclave		Model C Affirmative		Model D Job Coach		Results of LSD Post Hoc Analyses (p<.05)
	n	Mean	n	Mean	n	Mean	n	Mean	
Control of Paycheck (1=full control)	39	2.11	37	1.87	40	1.83	37	1.89	Model A has less control than Models B and C.
Number of Previous Jobs	48	4.99	32	1.98	19	4.19	40	1.38	More jobs for Models A and C than Models B and D.

Workers in sheltered employment reported less control over their paycheck than did workers in the other models. However, less than 10 percent of the workers in these other models reported no control over the paycheck while nearly 25 percent of workers in sheltered employment reported no control. The covariant for the FAI approached the significance level for this item $F(1, 148) = 3.83$, $p=.052$, which suggests level of functioning capacity influences the extent to which individuals have control over their paycheck.

The number of previous jobs also was significantly different among the models $F(3, 108) = 6.77$, $p<.001$. Workers under the sheltered employment and affirmative industry model

reported having had significantly more previous jobs than did workers under the enclave and job coach models.

Only two questions from the interview form were not used in these analyses. The first question asked each worker "What do you do?" For a positive response, the worker had to describe some aspect of the job tasks. Nearly all workers successfully described their job and there were not any significant differences across the models. Note that giving the job title is a different question and was included under the knowledge items in Table 4. The second question was eliminated due to a low level of response. This question asked workers how long they believed that they would work at each model. Most workers did not know how long they would work at the current job.

Direct Economic Benefits

Economic data (wages, productivity, and earnings) were collected quarterly on all subjects for a 12-month period. Each subject's economic data were summed over quarters to obtain totals for the year. Two different samples were used in the analysis: (a) a sample of 40 in each model that included missing data and (b) a sample of 21 in each model with no missing data. Because the sample of 40 contained missing data, the validity of the economic data might be compromised. As a check on this validity, the matched set of cases were eliminated if any case was missing economic data. Elimination of cases due to missing economic data resulted in about a 50 percent reduction of 160 cases to 84 cases.

The data for the samples of 21 are relied upon as the most valid, and are therefore, referred to as the "primary sample." The "alternative sample" refers to the samples of 40 and are given for generalization. Analyses with seven economic measures across the four different employment models and with FAI scores as covariant are reported on Table 8: (a) total days worked per year, (b) total hours worked per year, (c) annual gross wages, (d) annual net income, and (e) mean hourly wage. Significant differences on all five measures were found at or beyond the .001 level with both the 40 and 21 subject samples. Results are very comparable for the two samples.

Total Days Worked Per Year. The annual number of days worked per year was significantly different among the models, $F(3, 79) = 12.49$, $p < .001$. Workers in the enclave model worked the least number of days (154.95) than the other three models. The alternative sample was similar with respect to the enclave model number of days being the lowest (162.98). In addition, the mean number of days worked per year in the affirmative industry model (217.56) and sheltered employment (236.54) was greater than that for the job coach model (194.27). The FAI was not significant.

Total Hours Worked Per Year. The number of hours worked per day was multiplied times the number of days worked per year to derive the total number of hours worked per year. Since this measure is not independent of the above two measures, the significant differences found among the models were expected, $F(3, 79) = 6.98$, $p < .001$. Workers in the affirmative industry model worked significantly more hours per year (1344.56) than did those in the enclave (908.19) or job coach (863.86) models, but it was not significant for sheltered employment. In the alternative sample, workers in sheltered employment also tended to work more hours than

those in the enclave model or job coach model. While the FAI was not significant for the primary analysis, it was highly significant for the alternative sample and suggests that the FAI would correlate with total hours worked.

Annual Gross Income. The annual gross income differed significantly among the models, $F(3, 79) = 6.24$, $p < .001$. The means for both the affirmative industry model ($3,563.80) and the job coach model ($3,544.79) produced means greater than the sheltered employment model ($1,777.59). The enclave model was not significantly higher than sheltered employment or lower than the other two models. In the alternative sample, the same results were found except that the mean gross income for the enclave model ($2,668.97) was now greater than sheltered employment ($1,638.21) and less than the affirmative industry model ($3,698.87).

Annual Net Income. The net income was that obtained after taxes and any other standard deductions (social security, etc.). For the sheltered employment, enclave, and affirmative industry models, the net income was the actual figure provided by the agency. For the job coach model, the wage information was provided by records reported to the state's division of vocational rehabilitation and not the actual employer wage statements. Therefore in order to estimate the net income for the job coach model, the average ratio of net to gross for the other three models (86.03%) was used to provide an annual net income estimate for each subject in the job coach model.

Table 8. Comparisons of Employment Models on Economic Benefits Based on Covariant Analyses With FAI Scores

Dependent Variables and Samples Matched	Mean Squares			Degrees of Freedom			Analysis of Covariance			
	Covariate FAI	Models	Error	Covariate FAI	Models	Error	Covariate FAI		Models	
							F	p	F	p
Annual Days Worked										
21	1801.22	25588.84	2048.22	1	3	79	.88	.36	12.49	<.001
40	6684.73	36792.17	1931.41	1	3	141	3.46	.06	19.05	<.001
Annual Hours Worked										
21	2293368.47	13368.51	130825.39	1	3	79	1.75	.189	6.98	<.001
40	912170.27	1264796.62	123784.77	1	3	141	7.37	.008	10.22	<.001
Annual Gross Income										
21	11178734	16502452	2644359	1	3	79	4.23	.043	6.24	<.001
40	28048877	32701234	3047182	1	3	142	9.21	.003	10.73	<.001
Annual Net Income										
21	6686687	11566001	1849632	1	3	79	3.62	.06	6.25	<.001
40	16960699	23143182	1937806	1	3	143	8.75	.004	11.94	<.001
Hourly Wage										
21	5.38	17.62	0.88	1	3	79	6.12	.016	20.04	<.001
40	8.12	34.01	1.01	1	3	140	8.03	.005	33.65	<.001

Table 8 (continued)
Post Hoc Analyses

Dependent Variables	Model A Sheltered		Model B Enclave		Model C Affirmative		Model D Job Coach		Results of LSD Post Hoc Analyses ($p < .05$)
	n	Mean	n	Mean	n	Mean	n	Mean	
Annual Days Worked	21	233.00	21	154.95	21	224.98	21	200.02	Model B works fewer days per year than the other three Models.
	38	236.54	36	162.98	40	217.56	32	194.27	And Model D worked fewer days than Models A and C.
Annual Hours Worked	21	1027.72	21	908.19	21	1344.56	21	863.86	Model C works more hours per year than Models B and D.
	38	1005.60	35	966.27	39	1295.38	34	839.62	And Model A worked more hours per year than Models B and D.
Gross Annual Income	21	1777.59	21	2335.59	21	3563.80	21	3544.79	Income from Models C and D was greater than Model A.
	39	1638.21	36	2668.97	39	3698.87	33	3478.67	And income from Model A was lower than Model B and Income from Model B was lower than Model C.
Net Annual Income	21	1546.96	21	2073.98	21	3046.51	21	3056.85	The net income was greater in Models C and D than in Models A and B.
	39	1389.46	38	2279.56	38	3098.01	33	2992.74	And Model B was greater than Model A.
Hourly Wage	21	1.72	21	2.61	21	2.60	21	3.95	Hourly wage is greatest in Model D and lowest in Model A.
	38	1.61	35	2.59	39	2.74	33	4.01	Same as above.

The differences on net income among the models were significant, $F(3, 79) = 6.25$, $p < .001$, and the results of the post hoc comparisons were fairly similar to the gross income. The mean net income for workers in the affirmative industry and job coach models were approximately the same at $3,050 while earnings under the enclave model were $2,074 and $1,547 for persons working in sheltered employment. While these earnings data clearly favor support for the job coach and affirmative industries model, the net and gross earnings are well below the poverty line for subjects in the four employment models.

Hourly Wage. The mean hourly wage for workers in this model showed significant differences among the models, $F(3, 79) = 20.04$, $p < .001$. The mean hourly wage paid in sheltered employment ($1.72) was less than paid under the other three models and that paid under the job coach model ($3.95) was greatest. The mean wages paid under the enclave and affirmative industry model did not differ significantly.

Operating Characteristics of the Models

Based on different items from the Job Interview Form and the Economic Benefits Form, various characteristics of the models and the workers within the models were examined: (a) length of the work day, (b) standard hourly wage, (c) level of productivity, and (d) government fees for models.

Length of the Work Day: Paid Hours, Reported Hours, and Downtime. On the Economic Benefits Form, the number of paid hours worked per day were recorded and on the Job Interview Form, the number of hours the subject reported as working was recorded. The difference between these two measures of the work day was used to estimate the downtime within the model: time at work, but not paid.

Significant differences were found among models based upon worker reports of the length of their work day, $F(3, 135) = 14.02$, $p < .001$. The mean work day under the affirmative industry (6.67 hours) was longer than that reported under the other three models. The work day in the job coach model (4.44 hours) was also shorter than the reported work day under either the sheltered employment and the enclave models.

The number of paid hours worked per day differed among the models, $F(3, 79) = 10.37$, $p < .001$. Workers in the sheltered employment and job coach models worked fewer hours per day than did workers under the enclave and affirmative industry models. The FAI did not vary significantly with hours worked per day. The analysis of the alternative sample was identical.

The difference between the time paid for being at the work place and time spent at the work place is downtime. Since each measure is a separate dependent variable based on the same subjects, the differences between measures were analyzed by a paired comparison technique. The means of reported hours at the work place and paid hours were analyzed separately for each model to determine whether significant differences existed.

Significant differences were found for sheltered employment, $t(26) = -4.00$, $p = .0005$, and for the affirmative industry, $t(37) = -3.55$, $p = .0011$. The mean for reported hours worked was 5.83 ($SD = 1.39$) for sheltered employment with paid hours equal to 4.55 ($SD = 0.88$). For the affirmative industry, the mean for reported hours worked was 6.66 ($SD = 1.82$) with paid hours equal to 5.69 ($SD = 1.32$). For these latter two models, there was apparently a period of downtime that is estimated to be about an hour a day.

In contrast, no significant differences were found for the enclave, $t(30) = 0.84$, $p = .41$, and job coach, $t(31) = 0.02$, $p = .98$, models between the means for reported hours worked and paid hours (5.77, $SD = 1.12$ and 5.95, $SD = 1.02$; 4.41, $SD = 1.22$ and 4.41, $SD = 1.64$, respectively). Based on this analyses, no downtime appeared to occur in these models.

Standard Hourly Wage. The commensurate base wage for compliance with the Fair Labor Standards Act was requested for all workers. There were differences among the models on the standard hourly wage used for wage payments, $F(3, 79) = 7.93$, $p < .001$. The mean for the sheltered employment model ($4.74) and the enclave models ($5.03) were both higher than the mean for the job coach model ($4.31) and significantly lower than the mean for the

affirmative industry ($5.35), which was the highest of all the models. The results for the alternative sample were similar except that the mean for sheltered employment ($4.72) did not reach statistical significance when compared to the mean for the job coach model ($4.12).

Productivity. Productivity of each worker was calculated by dividing the hourly wage by the standard hourly wage for each subject. The differences in productivity for workers under the models were significant, $F(3, 79) = 26.03$, $p < .001$. The estimated productivity of workers under the job coach model (90.82%) was significantly greater than reported productivity for workers under the other three models. The productivity of the sheltered employment model (37.61%) was lower than productivity in the enclave model (52.26%) and the affirmative industry model (51.03%). The productivity in the latter two models did not differ. The alternative sample was identical with the mean for sheltered employment being the lowest and the job coach model the highest.

Fees for Models. The Economic Benefit Form requested data on fees paid by other agencies to provide support or supervision for each worker during the same four quarters as wage and other benefits data were compared. For the enclave and sheltered employment models the reporting of fees appeared to be reliable as specific fee data were reported for each worker. Fee data for the affirmative industry model though are suspect as a flat rate was reported for several workers and none for other workers. We could not determine whether the data on fees for workers in this model were missing or whether no costs were incurred for these workers in the affirmative industry model. For the job coach model, fees for services were not consistently reported for all subjects. It is unknown whether other workers in this model did have costs for services. It is, however, highly likely that fees were paid since the job coach model is totally subsidized by fees.

The fees reported for the workers was relatively stable across the four quarters and all total fees included entries for each of the four quarters. The analysis of fees for services is reported in Table 9 as a preliminary report, but the data are not considered valid for either the affirmative industry model or the job coach model.

Matched Samples, Analysis of Covariance Design, and Interpretation of the Data

The design for matched samples of 40 subjects in each employment model was successfully achieved as indicated by the lack of significant differences on the five matching variables (age, gender, IQ, primary disability, and secondary disability). The subjects in the sample of 21 in each model were also successfully matched. As a further control for functional differences, scores on the Functional Assessment Inventory were used as a covariate in analyses of variances to control for the effects of differences in functional capacity on selected measures of impact on benefits under the four models. It was assumed that this design would account for individual differences in the subjects which may confound interpretation of the results.

Though the comparison of the four different employment models revealed significant differences among the models on many of the variables, three factors should be considered when attempting to interpret the mean values for the dependent measure to other settings: First, the means are calculated on selected subsamples of the entire population served in the models within each agency. Second, the means for the criterion measures were corrected in the analyses of

Table 9. Operating Characteristics of the Models

Dependent Variables and Samples Matched	Mean Squares			Degrees of Freedom			Analysis of Covariance			
	Covariate FAI	Models	Error	Covariate FAI	Models	Error	Covariate FAI		Models	
							F	p	F	p
Length of Work Day	2.76	29.81	2.13	1	3	135	1.30	0.256	14.02	<.001
Hrs. Worked per Day										
21										
40	1.43	14.59	1.41	1	3	79	.99	.33	10.37	.001
	4.70	25.74	1.61	1	3	139	2.93	.09	16.01	<.001
Downtime	0.01	15.43	2.44	1	3	127	.00	0.993	6:33	0.001
Standard Hourly Wage										
21	0.42	3.91	.49	1	3	79	.085	.774	7.93	<.001
40	1.56	17.85	2.42	1	3	140	.65	.43	7.39	<.001
Productivity										
21	.20	1.09	.04	1	3	79	4.71	.033	26.03	<.001
40	.26	1.90	.04	1	3	134	6.25	.014	44.09	<.001
Fees										
21	3400760.0	16034275	12629374	1	3	45	.269	.6119	1.270	.296
40	7765595.8	47376451	11053265	1	3	91	.703	.4131	4.286	.007

Post Hoc Analyses

Dependent Variables	Model A Sheltered		Model B Enclave		Model C Affirmative		Model D Job Coach		Results of LSD Post Hoc Analyses (p<.05)
	n	Mean	n	Mean	n	Mean	n	Mean	
Length of Work Day	28	5.68	34	5.81	39	6.67	39	4.44	Model C has the longest work day and Model D the shortest.
Hours Paid per Day	21	4.44	21	5.71	21	5.97	21	4.32	Longer work days in Models B and C than in Models A and D.
	38	4.28	35	5.84	39	5.77	32	4.36	Same as above.
Downtime	27	1.29	31	-.17	38	.97	32	-.01	More downtime in Models A and C than in Models B and D.
Standard Hourly Wage	21	4.74	21	5.03	21	5.35	21	4.31	Model D standard wage rate was lower than the other three models and Model C was higher than Model A.
	39	4.72	34	5.25	39	5.84	33	4.12	Model D standard wage rate was lower than Models B and C and Model C higher than Model A.
Productivity	21	37.61	21	52.26	21	51.03	21	90.82	The productivity in all models differed except for Models B and C.
	38	34.63	29	53.33	39	51.50	33	90.60	The productivity in all models differed except for Models B and C.
Fees 21	21	5562.1	20	5707.9	6	5319.83	3	1277.9	Models A, B, and C higher than Model D.
40	38	5743.0	38	5506.1	11	5277.5	9	1210.3	Same as above.

covariance based on its relationship to scores on the Functional Assessment Inventory. Finally, the data were obtained only from three different agencies at a certain point in time (1990-1992) who defined how the different employment models were conducted.

Despite the matching design, there were three areas in which the workers differed that may potentially affect outcomes: First, the scores for workers in the affirmative industry model on the Functional Assessment Inventory were higher than the scores for workers in the other models. That is, these workers were considered more functionally impaired. It is likely that the analysis of covariance did statistically remove the effect of this variable on the dependent measures. Second, there was some indication that the responses to the Job Interview Form were less valid for workers in sheltered employment and the job coach model than the other two models as reported by interviewer ratings of the interviews. Note that most responses of most workers were considered valid. Consequently, these differences may not have affected responses. Finally, the productivity of the workers varied significantly with workers in sheltered employment having the lowest productivity and the job coach model having the highest. Since the productivity of the workers was measured by the ratio of hourly wage to the standard wage rate, productivity may be a function of both the characteristics of the individual and an outcome of the model.

There is not any clear evidence that these factors did influence outcomes, but these points are noted as potential factors. The contrasts presented in this study, therefore, reflect the relative differences among four different employment models on the various variables. Matching of samples strategy enables a direct comparison of the data from each of the four extended employment models.

The analysis of covariance using the Functional Assessment Inventory may not have been as effective due to two factors: First, a significant F-value for the relationship between the Functional Assessment Inventory and the selected variable indicated that the Functional Assessment Inventory was highly related to that variable. The Functional Assessment Inventory covariate was significant on two of the three job satisfaction scales and for several measures on economic benefits. The corrected and uncorrected means and F-values were examined, and nearly all of the comparisons would remain significant. Second, the Functional Assessment Inventory scores were nearly equal for three of the four models. In effect, then, the covariate was controlled for three of the four models. Consequently, it is concluded that the analysis of covariance increased the level of significance of all ready significant values.

Chapter 4

DISCUSSION AND CONCLUSIONS

From an initial pool of 825 potential subjects, demographic data were used to select a matched sample of 40 and 21 workers under each of four employment models: (a) sheltered, (b) enclave, (c) affirmative industry, and (d) job coach model. Within the pool, significant differences among the employment models were found on five out of the six demographic variables: (a) age, (b) intelligence scores, (c) primary disability, (d) secondary disability, and (e) scores on the Functional Assessment Inventory. There were no differences among the models on the proportion of males and females. Workers under the enclave model and job coach models were younger than those working under the other two models. Across all models, the primary disability most often reported was mental retardation and the most frequently occurring secondary disability was physical disability, followed by mental illness.

The matched samples were equal on all five matching variables: (a) age, (b) intelligence scores, (c) ratio of males to females, (d) primary disability, and (e) secondary disability. These workers were approximately 35 years old with average intelligence of 60. Approximately 60 percent of the workers were female and nearly 70 percent of the workers had a primary disability of mild mental retardation. Nearly half of the workers had no secondary disability. Of those who had a secondary disability, it continued to be most often a physical one. For workers in sheltered employment, enclave, and job coach models, the mean score on the Functional Assessment Inventory was around 40, while the mean score for workers in the affirmative industry was 48. Differences due to the Functional Assessment Inventory were controlled by using these scores as a covariate in the analysis.

The primary purpose of this research was to compare employment models when the effect of individual worker differences was controlled. The successful matching and the use of the Functional Assessment Inventory as a covariant makes it likely that individual differences were controlled. Given that the research design, then, obtained differences could be expected to be due to the type of employment model rather than the individual. The differences could be used to (a) evaluate the relative value of each model in relation to a hierarchy of extended employment models and (b) evaluate whether there should be one model of extended employment or several models of extended employment. The experimental controls, however, do have limitations for generalization since subjects for this study were not randomly selected. The results are considered valid for persons with the selected demographic characteristics as summarized above and given in Table 1. This study is most applicable to persons with various levels of mental retardation.

Summary Across Models

Table 10 summarizes the findings of this study with regard to the measures obtained from interviews of clients and data from the Economic Benefits Form. An 'H' indicates that a model was significantly higher on that variable, while an 'L' indicates that the measure for that model was significantly lower. A zero (0) indicates no difference. Corresponding source tables from which the information was obtained are presented in the last column.

The differences among models are offered as a visual summary based on the relative differences found in this study. The ratings are structured so that "high" is a desirable feature and "low" is a less desirable feature. The true values of high and low, however, is a judgment each individual has to make regrading their true desirability. For example, the low number of work hours for the enclave and sheltered employment may be valued as high by an individual; a high level of self-transportation may be an undesirable feature, and more job variety may not be appreciated. Others are not so subjective. For example, high job satisfaction and high annual income are assumed to be generally accepted as desirable. The following summary interpretations of the data are based on the high-low rating presented in Table 10.

Table 10. Summary of Findings

Dependent Measures	Sheltered	Enclave	Affirmative Industry	Job Coach	Table
Job Satisfaction and Awareness:					
Overall	L	H	H	H	5
Satisfaction	L	0	H	H	
Awareness	L	H	L	H	
Natural Supervisory Patterns	L	H	H	L	6
Economic Benefits					8
Annual Hours	0	L	H	L	
Annual Days	H	L	H	0	
Hourly Wage	L	0	0	H	
Gross Income	L	0	H	H	
Net Income	L	0	H	H	
Operating Characteristics:					9
Hours/Day	L	H	H	L	
Lack of Downtime	L	H	L	H	
Standard Wage	0	0	H	L	
Productivity	L	0	0	H	
Employment Choice and Community:					3
Employment Choice	0	0	H	0	
Transportation	0	L	H	H	
Residential Status	0	H	0	0	
Socialization, Budget, and Job Variety:					7
Social/Integration	0	0	0	0	
Budget Control	L	H	H	H	
Job Variety	H	L	H	L	

Table Note: H = High; L = Low; 0 = No difference.

Job Satisfaction and Awareness

Workers in the affirmative industry and job coach models scored highest on the Job Satisfaction Scale than did workers in the other two models. In contrast, job awareness in the enclave and job coach model was higher than in sheltered employment and affirmative industry models. Overall, workers in the job coach model were both more aware of job conditions and more satisfied with their job.

Supervisory Patterns

The supervisory patterns provided interesting information about how the employment models appear to differ in operations. Workers in the enclave model and the affirmative industry would more often seek assistance from their work supervisor rather than from rehabilitation support staff (case manager or job coach). The enclave in industry is set up as a self-contained small work force with a distinct work supervisor. Most daily contact is expected to be with the work supervisor. The affirmative industry stresses the importance of real work conditions and quality work. Workers are expected to seek assistance directly from the work supervisor as they would in any regular work setting.

For the sheltered employment model and the job coach model of supported employment, the case manager or job coach most often provided the assistance. It appears that these two models represent more rehabilitation support to train the workers. Or, it may be that these models train the workers to rely on additional rehabilitation support in lieu of the natural supports provided by the work supervisor.

It is interesting that on this point the job coaching model is similar to sheltered employment rather than similar to the enclave model, which is alsc a supported employment approach. This finding suggests that these two approaches to supported employment are different from one another on this aspect. In contrast, the two models which typically operate with large numbers of workers (sheltered employment model and the affirmative industry model) are also distinct from one another on supervisory patterns.

Reliance on the work supervisor is a positive aspect since it is a natural support found in regular industry. It would appear that the enclave model and affirmative industry provide a setting that utilizes the natural supports more often than do sheltered employment and job coach models. The job coach and sheltered employment models instead appear to rely on the case manager and job coach, both of which are usually "subsidized" with some public funding. It is assumed that most of the subjects in the sheltered employment model would have been in this model sufficient time for any fading to occur, and therefore, it is likely a valid measure of the reliance on subsidized support. For the job coach model, all subjects had been in the model at least one year. It is not known whether the rehabilitation support in this model had faded or not, but reliance on rehabilitation support was still reported after a one-year time period.

Economic Benefits

Annual Income. Annual income earned from the various models depended on a number of factors: (a) annual hours worked, (b) annual days worked, and (c) hourly income.

Annual Hours. The number of annual hours is a combination of the number of days worked and the hours worked per day. The greater the number of hours, the greater the potential for increased income. The enclave had a low number of hours, while both sheltered employment and the affirmative industry were high.

Annual Days. Annual days reflect the stability of the model in providing full employment. Higher number of days indicate more stability. Sheltered employment and the affirmative industry offered the greatest stability while the enclave model provided the fewest number of work days and the job coach model was provided the second highest number of days of work.

Hourly Wage. The hourly wage paid in each of the models is an important but not sole indicator of economic benefit success. The job coach model paid the highest hourly wage while sheltered employment paid the lowest hourly wage. Wages paid in the enclave and affirmative models were both higher than wages paid in sheltered employment, but all models were lower than those paid under the job coach model.

Gross and Net Income. Total annual income includes the cumulative effect of total hours worked and the hourly wage and represents the actual financial benefits from the model. Across all these factors, sheltered employment was the least effective of the four models in producing benefits. While the annual income in the affirmative industry and the job coach model were equal, workers under the job coach model worked fewer hours to obtain comparable incomes because of higher hourly wages. Low numbers of work days for those under the enclave model kept total annual earnings down. The average net was approximately 87 percent of the gross income, and the models kept their relative ranking on the net as contrasted to the gross.

Operating Characteristics

Hours of Work per Day. The length of the work day was assessed in two ways: (a) verbal reports of the workers during the interview and (b) dividing the total number of annual hours paid for work by the total number of days worked per year. Greater work hours were reported for the affirmative industry and enclave models on both these measures than were reported for sheltered employment or the job coach model.

Extent of Downtime. The difference between self reports of hours worked per day and actual hours paid per day was used to operationally define "downtime." Workers in the sheltered employment model and the affirmative industry model tended to have more "downtime" based on the comparison of reported length of the work day to hours paid. In contrast, little or no differences were found between the workers' report of the work day and actual measure of the work day.

The ideal model would pay workers for all the time present at the work site. Even though it might be argued that the workers in sheltered employment and affirmative industries were in rehabilitation services during the downtime rather than just standing around, the other two models are also designed to provide intensive support. Thus, it would appear that the enclave and job coach models are more efficient at providing support and pay at the same time.

Standard Wage. A related factor is that of the standard or commensurate base wage for regular competitive employment. Workers with equal productivity will be paid more per hour when the base wage standard is higher. In this study, the lowest base standard was for the job coach model and the highest was for the affirmative industry. Higher base wages are a factor that can affect the overall hourly wage and should be included in the evaluation of extended employment models.

Productivity. Productivity may be a direct effect of the model with certain approaches resulting in greater productivity of the worker, or productivity may be a result of the characteristic of the worker and not related to the model. The question in this study was whether productivity could be attributed directly to the model. Given the matched groups and covariate analysis, wide differences in the productivity were not expected. The productivity of the job coach model was the highest and sheltered employment, the lowest. The other two models were in between.

It is probable that the models' operating characteristics impact on the productivity measure. The job coach model is more likely to pay full wages to the individual because of the nature of the model (competitive wages based on the job coach assisting with job duties). If the alternative explanation is assumed that productivity is a direct measure of the workers' functional ability, then, it would indicate that supported employment is being applied to those with the greatest functional ability. Given the federal selection requirements for supported employment and the matched group design of this study, it is not likely that the functional differences among workers could account for the large differences in productivity.

Employment Choice and Community

Employment Choice. This item referred to how the worker obtained employment in each of the models. Most of the workers in the enclave and job coach models obtained their job based upon the recommendation of the staff at their agency. For workers in these models, it may have been more of being selected for transfer within the agency rather than getting a new job. On the other hand, more workers in the affirmative industry were referred by sources external to the agency. The workers in this model were more likely to have come from another agency or it was their first job out of school. Based on these considerations, the influence of staff outside the agency is likely to indicate more consumer involvement in the employment decision than in moving from one employment approach to another within an agency.

Transportation. The issue of transportation was examined more to determine whether workers under one model were more likely to self-transport (public or own vehicles) than under other models. Information from transportation to the agency and/or directly to the work site was used to examine this issue. Workers in the affirmative industry and job coach model were more likely to self-transport than the others. Workers in the enclave were less likely to self-transport. It may be in this latter model that it was more convenient for the agency to provide transportation rather than indicate a worker's lack of ability to self-transport.

Residential Status. The residential status or community living arrangements of the workers did differ. A primary concern is whether the individual was more likely to be living independently in the community. The enclave group appeared to rely the least on the family and

were spread out evenly over a number of different residential options.

Integration/Socialization, Autonomy, and Job History

Integration/Socialization Patterns. One of the goals of this study was to examine the concept of integration and socialization on the job in terms of assessing which model facilitated greater integration and greater socialization opportunities. The items used to assess these areas focused on the opportunity and choice to socialize with any the other workers. From this study, it does not appear that the socialization patterns reported in friendship relationships, opportunities to socialize, nor the choice to engage in social activities differed among the models.

Autonomy over Budget. The issue of budgeting independence was assessed through control of paycheck. The only difference among the models was that workers in the sheltered employment model were less likely to have control over their paycheck. Workers in the other three models were about equal in control over their paycheck.

Job History or Variety. The work history of individuals in the models also differed. Workers in the affirmative industry and sheltered employment models were more likely to report more jobs in the last year than workers in the other two models. Previous jobs did not specifically exclude other assignments within the model. It may be that the subjects reported the number of different job tasks within the model rather than the number of jobs with other agencies or companies. It may be that this variable simply reflects the variety of tasks within the model.

Issues in Comparison of Models

Weighing each of the variables as equal is not a justifiable method since each factor is different. For example, is job satisfaction more or less important than dependence on subsidized rehabilitation support? Should annual income be the most important economic benefit or hourly wages? Is a group job setting better or worse than an individual job setting. Attaching weights would appear to be subjective based on what is considered desirable. In actuality, it is the person with the disability who should decide which model is best for him/her. In this study, the data indicate differences among the models, and a review of the highs and lows in Table 10 suggest that the sheltered employment model did not fare well. Other factors should be considered when reviewing these data.

Productivity. The wide difference in the productivity of the workers could question the achievement of matched samples. On the one hand, the effort to control for individual differences by matching clients should have resulted in relatively equal measures of productivity of the workers. Equal measures of productivity would have clearly indicated that the model produced different results. With unequal measures of productivity, the question arises as to whether there are additional individual differences operating, that is, whether the subjects in this study were truly equal or not.

The differences in productivity may not accurately reflect an individual's actual productivity. Note that the largest discrepancy was between the job coach model and all other models. Level of productivity was not directly measured but was estimated by dividing the

standard wage by the wage paid. Most workers in the job coach model were paid nearly the same as the standard base wage.

Workers in the other three models were paid commensurate wages based on measured productivity relative to Fair Labor Standards Act for paying less than the minimum wage. Under each of these models, the agency had an agreement with the U.S. Department of Labor to pay less than the minimum wage commensurate with measured productivity.

Under the job coach model, workers are paid by separate companies and not by the rehabilitation agency. To avoid the complexity of each company obtaining a certificate for paying less than the minimum wage, the worker is typically paid the minimum wage even if their actual productivity is not equal to 100 percent of the standard. The job coach is to make up any differences in productivity during the training stage. Training is expected to help the worker to increase productivity to meet the minimum standard. If the worker cannot increase productivity, the company would have to obtain the minimum wage exception certificate to pay less than the minimum wage, fire the individual, or pay full wages for less than full productivity. Very few companies have filed for minimum wage exceptions and within reason would rather pay the full wage rather than fire the individual. Therefore, it is possible that workers in the job coach model may have an inflated measure of productivity solely due to the operating characteristics of the model.

Even if the job coach model is excluded, there are still differences among the remaining three models. The productivity of workers in the affirmative industry and enclave were rated higher than workers in sheltered employment. In addition, according to the FAI, workers in the affirmative industry were more functionally impaired than workers in the other models. It would have been logical to assume that the workers in the affirmative industry would have had lower productivity measures, but this did not happen.

Annual Income. One area that should be kept in perspective is the comparison of the total annual income from these extended employment models to a standard for financial parity or economic independence. For example, economic success could be judged in terms of full time competitive employment in an entry level position at minimum wage. Using a minimum wage of $4.25 per hour (1991) and annual hours for a full-time equivalent position of 2080 hours, the benchmark annual totals for an entry level position is $8,880. The ratio of the annual income of each model to this benchmark value is .21 for sheltered employment, .28 for the enclave, .42 for the affirmative industry, and .41 for the job coach model. Though there still remains variability, all of the models produce financial gains less than one-half of full-time competitive employment at the entry level.

Hierarchy of Extended Employment Models

The four models of extended employment in this study differed on most of the variables, which indicates that the models are distinct from one another. The differences clearly suggest that the sheltered employment is less beneficial than the other three employment models. This finding is consistent with the Vash (1977) and DuRand and Neufeld (1980) classifications of desirability. Their taxonomies, though, suggest that sheltered employment is perhaps more appropriate for individuals with more severe disabilities and that it would be expected that the

benefits of sheltered employment are less because of the characteristics of the workers with disabilities rather than the actual employment model.

This research suggests that sheltered employment is less desirable as an extended employment model regardless of the characteristics of the worker. It suggests that workers will earn more economic benefits and greater job satisfaction if they are placed in another extended employment model. This study supports other research findings that sheltered employment results in less benefits than other employment models (e.g., Coker & Valley, in press; Hill et al., 1987; Noble, 1991; Rusch et al., 1993).

Previous research, however, has tended to confuse terms. For example, sheltered employment has been applied in reference to work activity centers and day activity centers, as well as to a sheltered employment model. Supported employment has been applied to mobile work crews, enclaves, job coach models, and small business models. Supported employment has been referred to as "competitive" employment with support. Yet, it would appear than none of these models are truly competitive employment in terms of achieving an income that would allow self-sufficiency.

Even though the confusion of terms does detract from distinguishing different models, conclusions can be drawn about the four models based upon this research.

Sheltered Employment. Against most measures, this model achieved low marks, except for the annual number of days and job variety. The deficits appear to outweigh the positives of the model.

Enclaves. This model has some attractive features that outweighed a major negative aspect in employment stability (low number of days worked per year). Increasing the number of days per year would be a priority for this model. Increasing the hourly wage rate to the level of the job coach model would also be desirable.

Affirmative Industry. The affirmative industry appeared to be a very stable model with reliance on the work supervisor, higher annual income, and a higher commensurate wage base. Downtime and the job awareness of the workers were deficits. Increasing the hourly wage rate to the level of the job coach model would be desirable.

Job Coach. This model was the only individual model, paid the highest hourly wages, and may result in the better productivity of the worker. The dependence on the job coach, a short work day, and lower standard base wage rates are deficits of the model. Increasing hours in the work day and annual days worked, as well as ensuring that support of the job coach is faded to more reliance on the work supervisor would improve this model.

One or Many Models of Extended Employment

One of the logical consequences of research on extended employment models is to evaluate the need for more than one model of extended employment. It is clear from this research that models have different operating characteristics and result in different outcomes even when the workers are matched on key demographic information. And the models tend to

follow a hierarchy based on the comparison strategy of this study. While it was clear that sheltered employment did not fair well in this study, there was not a clear winner among the other three models. Each had characteristics that were desirable and each had deficits to overcome that would improve the model.

The sheltered employment model has been severely criticized as being viable since the Greenleigh Report (1975) and the U.S. Department of Labor (1977) studies. Its viability was questioned more severely with the advocacy of supported employment. This research indicates that there are at least three other alternatives to sheltered employment that result in more optimal outcomes for the workers in this study. While this study was limited to workers with mental retardation in one area, it is consistent with other findings about sheltered employment. The matched samples tend to eliminate the competing explanation that differences were due to the characteristics of the workers rather than the employment model.

Cost/Benefit Ratios and Consumer Choice

When models are relatively equal, cost/benefit analysis might assist in the decision making about which alternative to select. The only completely valid comparison was between sheltered employment and the enclave. Given that the costs were equal, then the enclave model would be more beneficial than sheltered employment. This argument may also apply to other models since the preliminary data suggested that neither of these models would be more costly than sheltered employment, and perhaps, could be less.

Fading subsidized support within each of these latter three models may be possible and could further reduce costs. The fading from an agency-payrolled enclave to a company-payrolled enclave could decrease the costs of this model. For the affirmative industry, fading of rehabilitation support would need to be included in the model through total reliance on the work environment. The job coach model has the mechanism for fading support, but the success in fading has to be carefully monitored.

The other major consideration is that of client choice. Though the job satisfaction measure in this study is not the same as consumer choice, it is a measure of consumer judgment of the employment model. This study presents perhaps the first empirical research demonstrating that workers in sheltered employment have lower job satisfaction than workers under other models. It is presumed that workers would have chosen another model based on the level of job satisfaction.

It should be noted that the workers in this study were very likely to have been in one or more other models. All the workers in the enclave and job coach model had been in sheltered employment. It is likely that many of the workers in the affirmative industry had also been in sheltered employment or had chosen to work under this model. The job satisfaction measure, therefore, is based on workers with experience in several models of extended employment.

Program Mix or Single Model

If sheltered employment is not so desirable as the other three models, the question is which model of extended employment should be adopted in its place. The data from this study

are not so clear as to which model should replace sheltered employment. The job coach model of supported employment did provide best hourly wages, but the affirmative industry model provided equal annual income and more stability. And the enclave was not without advantages.

If adoption of an affirmative industry were to be considered as one option, it must be noted that the specific affirmative industry approach in this study did not provide the option for operating other extended employment models. The rationale was that the goals of the affirmative industry are to not only provide quality employment but also to retain a stable work force. Other affirmative industry approaches do, however, provide a mix of employment options rather than just the affirmative industry. The example examined in this study did not.

Adoption of an enclave and a job coach model appears to result in less stable employment since workers in these models work only four hours per day and fewer days per year. Despite this drawback, overall income is greater in comparison to sheltered employment.

At the present time, agencies across the nation have converted entirely to the job coach model and abandon use of sheltered employment. Others have more program mix as did two of the three agencies that operated sheltered employment, enclaves, mobile work crews, and job coach models. This study does not suggest a specific program mix. It does, however, question the hierarchy of extended employment models. Given equal subjects, differential outcomes were found for different approaches. No one current model could be argued to be superior over the others. If a single model of extended employment exists, it would appear to be one that should be based on the inclusion of the positive aspects of the enclave, affirmative industry, and job coach model, and avoidance of the negative aspects of sheltered employment.

Conclusions

This study reviewed and then carefully compared different approaches to extended employment in terms of benefits to consumers. Based upon an initial review, it was clear that the approaches did differ in the way the models of extended employment operated. Sheltered employment operated with a large group of workers who were receiving rehabilitation services and employment within the walls of the agency. The enclave provided employment for supervision and rehabilitation support for a small group of workers in an regular industry. The job coach model provided rehabilitation support to an individual worker employed by a regular industry. The affirmative industry employed a large number of workers with disabilities in a company designed to function similar to regular industry while also providing rehabilitation support.

While data presented in the literature suggested that the models would produce different outcomes, one explanation was that such differences would be due to differences in functional ability of the workers. A second premise was that workers were placed into these models based upon their level of disability and a presumed hierarchy of models. That is, the most severely disabled were in the sheltered employment model and the less severely disabled in the job coach model.

The empirical research question was then whether differential outcomes would be found if the differences among worker characteristics were controlled. If the worker characteristics

were responsible for differential outcomes, then no differences should have been found in this study. If the model of extended employment was responsible, then the differences would be found. Based on the design of this research and the wide differences in outcome data among the model, it must be concluded that the model of extended employment impacts on the outcomes. And this study suggests that, for persons with mental retardation, sheltered employment is less beneficial than an enclave, an affirmative industry, or a job coach model of extended employment.

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APPENDIX A

Demographic Form Used to Collect Identifier and Matching Variable Data

Enclosure 1

DEMOGRAPHIC FORM

Subject Identifying Code:

Facility ID	Employment Model ID	Subject ID (SSN)

1. Age:_____

2. Gender:_____

3. Primary Disability:_____

4. Secondary Disability:_____

5. I.Q. Full Scale:_____ Test:_____

   Verbal: _____

   Performance:_____

6. FAI Scores:_____

APPENDIX B

Job Interview Form

JOB SATISFACTION INSTRUCTIONS AND SCORING

CONSENT:

WE ARE STUDYING WHAT PEOPLE LIKE AND DON'T LIKE ABOUT THEIR JOBS AND WHERE THEY WORK. WE WOULD LIKE TO TALK TO YOU ABOUT YOU AND YOUR JOB. WE WON'T TELL THIS TO ANYONE ELSE UNLESS YOU SAY IT IS OK AND WE WON'T EVER USE YOUR NAME IN OUR WORK. FIRST WE WILL ASK YOU SOME QUESTIONS AND THEN AT THE END YOU CAN TELL US IF YOU WANT US TO SHOW THIS TO YOUR SUPERVISOR OR NOT.

THE QUESTIONS THAT WE ARE GOING TO BE ASKING YOU WILL BE ABOUT YOUR JOB:

SUPPORTED EMPLOYMENT/ENCLAVES: "AWAY FROM (RISE OR OP SHOP)"

INTERNAL: "AT (RISE' OR OP SHOP'S) BUILDING OR WORKSHOP"

AFFIRMATIVE: "AT MDI"

(Note: Can't Answer/Don't Know Always = "?")

PART I. JOB/CAREER/ADVANCEMENT	SCORING CODES
A. What do you do?	ADEQUATE KNOWLEDGE 1 = YES 0 = NO
B.. What do they call your job? (Gives job title or similar)	ADEQUATE KNOWLEDGE 1 = YES 0 = NO
C. Is your job: 1. Too easy/too difficult/neither/? 2. Boring/fun/neither/?	 1/2/3/? 1/2/3/?
D. What is the hardest part of your job?	1 = names a task(s) 0 = all/none hard ? = don't know
E. What is the easiest part of your job?	1 = names a task(s) 0 = all/none easy ? = don't know
F. How many jobs have you had in the last year?	Number OR ?

G.	How did you get your job?	1 = Friends/relatives 2 = Agency/any staff 3 = Myself 4 = Other
H.	Was it your choice to take the job?	1 = YES 0 = NO
I.	Are you doing the type of work you want?	1 = YES 0 = NO
J.	How many hours a day do you work?	Number OR ?
K.	Would you like to work more or less?	more/less/same/ ? 1 / 2 / 3 / 4
L.	Do you like where you work?	1 = YES 0 = NO
M.	Would you rather work somewhere else? Where?	YES (Use prompt) 1 = Logical answer ? = Illogical answer 0 = NO
N.	What kind of work do you want to do in the future?	Evaluate Job Goal: Better/Worse/same 1 2 3

PART II. SUPERVISION/SUPPORT

Supervisor = 1 Job coach/Case manager = 2 both = 3 Other = 4 Nobody = 5

			Prompts
A.	Who watches you do your job the most?	Code 1-5	What is their name?
B.	Does someone else check your work?	Code 1-5	What is their name?
C.	Who teaches you about your job?	Code 1-5	What is their name?
D.	Who tells you when you have done a good job?	Code 1-5 multiple	What is their name?
E.	Who shows you how to do new things?	Code 1-5	What is their name?
F.	Who help you at work when you need it?	Code 1-5	What is their name?
G.	What happens if you make a mistake?	1 = Receive instructions 2 = Gets in trouble 3 = Don't tell anyone 4 = Fix it myself 5 = Other	

PART III. ECONOMIC BENEFITS

A. Transportation

(ENCLAVE ONLY: Ask whether they go directly to the enclave site or to the facility first, then enclave site. Give two codes beginning with E where 0 =goes directly to enclave site. For Example for enclave E: 0/4= goes directly to enclave and self-transports; E: 1/1 = use contracted transportation to go first to facility and contracted to get to enclave site:

How do you get to work?
Facility 1st (F)
Enclave 2nd (E)

0 = Does not come to facility
1 = Special transportation (facility or contracted)
2 = Family/friends
3 = Public transportation
4 = Self Transport
5 = Other:

B. Do you live:

1 = Own place w/o support
2 = With relatives
3 = Foster Home
4 = Group Home
5 = Residential Facility
6 = Other: (specify)
a: Own-drop-in support
b: Supported Apartment

C. Who decides what to do with your paycheck?

1 = Full control
2 = Some control
3 = No control

Prompts:

1. Do you pay any bills?
If Yes: Which ones? Rent? Food? Clothing? Phone? Utilities? Others?

Do you have spending money?

D. Are you paid fairly for amount of work you do? 1 = YES 0 = NO

E. Does this job allow you to earn enough money to buy the things you want? 1 = YES 0 = NO

F. Have you had a raise?
Yes: How much (knowledge)

1 = Yes and knows
2 = Yes and doesn't

No: Do you expect one soon?
Yes: When and how much (knowledge)

3 = No/No
4 = Yes and knows
5 = Yes and doesn't

PART IV. SOCIALIZATION/INTEGRATION

A. Do you have friends at work? (Prompt: " Who are they?) — 1 = YES 0 = NO

B. Do you have a chance to make other friends with any of the people you work with? — 1 = YES 0 = NO

C. Do you eat lunch with your friends? — 1 = YES 0 = NO

Next FOUR use:

Yes = 1 (Opportunity Present)
Prompt = "Do you?" 1 = YES 0 = NO (Choice)

No = 0 (Determine reason)
Prompt = "Why don't you"
0 = Don't what to (Choice)
1 = Can't - due segregation
2 = Can't - due to job type

D. Can you eat lunch with anybody you want to at work? — Opportunity (1 or 0)

Do you? — Choice (0, 1, or 2)

E. Can you talk to anybody you want while at work? — Opportunity (1 or 0)

Do You? — Choice (0, 1, or 2)

F. Can go anywhere you want to on breaks or at lunch? — Opportunity (1 or 0)

Do You? — Choice (0, 1, or 2)

G. Do you do things after work with your friends? — Opportunity (1 or 0)
Choice (0, 1, or 2)

PART V. OPEN-ENDED

A. When you think about the place you work, the amount of money you are paid, friends, and all the people you work with, do you think that your job is:

Better than most people have = 3

About the same as most people = 2
Worse than most people have = 1

B. Are there things you would like to change about:

1. Your job? 1= YES 0 = No

2. Where you work? 1 = Yes 0 = No

C. How long do you think you will work here before getting another job? Record time

Why?

Are there other things you would like to talk about, things you would like to get a chance to do, or other things that you would like changed?

CONSENT: Do you want me to show this to your supervisor or not ?

YES/NO

YES: WHO?

GET SIGNATURE AND DATE:

INTERVIEWER: RATE THE DEGREE TO WHICH YOU BELIEVE THE INDIVIDUAL WAS ABLE OR WILLING TO GIVE THEIR APPROPRIATE ANSWERS: VALIDITY CHECK

1 = ALL ANSWERS VALID
2 = MOST OF THE ANSWERS VALID
3 = MOST ANSWERS A PROBLEM-INCLUDE DATA WITH CAUTION
4 = TERMINATED INTERVIEW BECAUSE CLIENT COULD NOT ANSWER

APPENDIX C

Economic Benefits Form

ECONOMIC BENEFITS

Client/Worker ID: _____ Date Started Job: _____ Mo/Yr

QTR 1 = 7/1/90 - 9/30/90 QTR 2 = 10/1/90 - 12/31/90

QTR 3 = 1/1/91-3/31/91 QTR 4 = 4/1/91 - 6/30/91

PART I. QUARTERLY TOTALS (Use "/" in columns if client has earnings in both enclave and internal)		QTR 1	QTR 2	QTR3	QTR4
A. Number of Different Days Worked/QTR:	(DAYS)				
B. Number of Paid Work Hours:	(HRS)				
C. Total Gross per Quarter:	($)				
D. Net Quarterly Income:	($)				
E. Productivity: Client % of Standard	(%)				
Standard (100%)	($)				
F. Total Benefit Hours USED per QTR: (OR)	(HRS)				
F1. Paid Sick Hours USED per QTR:	(HRS)				
F2. Paid Holidays USED per QTR:	(HRS)				
F3. Paid Vacation Hours USED Per QTR:	(HRS)				
G. Total Fees Received for Employment of Client/Worker During Quarter:	($)				

PART II. DEDUCTIONS AND BENEFITS (Based on annual history)

A. Deductions Information from Gross Earnings:

Federal Income Tax	(%)	
State Income Tax	(%)	
FICA	(%)	
Other	(%)	
	(%)	
	(%)	

B. Employer Paid Fringe Benefits:

FICA	(%)	
Workers Compensation	(%)	
Other	(%)	
	(%)	

C. Annual Number of Paid Sick Days: _____ Vacation Days: _____ Holidays: _____

D. Cost of Other Client/Worker Benefits:

$_____	Health Insurance
$_____	Life Insurance
$_____	Retirement

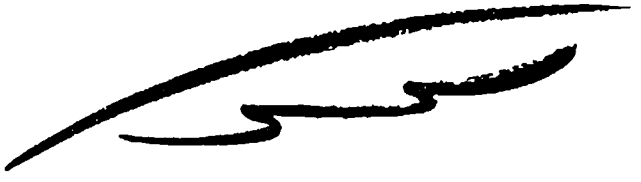
APPENDIX D

Item Analysis of Job Awareness and Job Satisfaction Questions

Item Analysis of Job Awareness and Job Satisfaction Questions

Job Satisfaction Items	Percents for Each Model				TOTALS (N=160)		Analysis		
	Model A Sheltered (n=40) %	Model B Enclave (n=40) %	Model C Affirma-tive (n=40) %	Model D Job Coach (n=40) %	f	%	Chi-Square	Degrees of Freedom	p-Level
Job Awareness									
1. What do they call your job?							35.76	3	< .001
0	75.0	35.0	57.5	12.5	72	45.0			
1	25.0	65.0	42.5	87.5	88	55.0			
2. What is the hardest part of your job?							2.86	3	.414
0	40.0	27.5	30.0	42.5	56	35.0			
1	60.0	72.5	70.0	57.5	104	65.0			
3. What is the easiest part of your job?							3.75	3	.290
0	25.0	10.0	25.0	20.0	32	20.0			
1	75.0	90.0	75.0	80.0	128	80.0			
4. Have you had a raise?							30.077	3	< .001
0	60.0	67.5	80.0	22.5	92	57.5			
1	40.0	32.5	20.0	77.5	68	42.5			
Job Satisfaction									
5. Is your job too easy/neither/too difficult?							2.590	3	.459
0	80.0	82.5	90.0	90.0	137	85.6			
1	20.0	17.5	10.0	10.0	23	14.4			
6. Is your job boring/neither/fun?							1.148	3	.766
0	30.0	25.0	27.5	20.0	41	25.6			
1	70.0	75.0	72.5	80.0	119	74.4			
7. Was it your choice to take the job?							3.858	3	.277
0	20.0	22.5	15.0	7.5	26	16.3			
1	80.0	77.5	85.0	92.5	134	83.8			
8. Are you doing the type of work you want?							1.480	3	.687
0	15.0	17.5	10.0	10.0	21	13.1			
1	85.0	82.5	90.0	90.0	139	86.9			
9. Would you like to work more/less/same?							9.889	3	.020
0	65.0	50.0	30.0	47.5	77	48.1			
1	35.0	50.0	70.0	52.5	83	51.9			

Job Satisfaction Items	Percents for Each Model				TOTALS (N=160)		Analysis		
	Model A Sheltered (n=40) %	Model B Enclave (n=40) %	Model C Affirma-tive (n=40) %	Model D Job Coach (n=40) %	f	%	Chi-Square	Degrees of Freedom	p-Level
10. Do you like where you work?							5.760	3	.124
0	10.0	5.0	.0	12.5	11	6.9			
1	90.0	95.0	100.0	87.5	149	93.1			
11. Would you rather work somewhere else?							10.428	3	.015
0	57.5	37.5	22.5	37.5	62	38.8			
1	42.5	62.5	77.5	62.5	98	61.3			
12. What kind of work do you want to do in the future?							2.685	3	.443
0	60.0	42.5	55.0	55.0	85	53.1			
1	40.0	57.5	45.0	45.0	75	46.9			
13. Are you paid fairly for amount of work you do?							9.812	3	.020
0	27.5	7.5	7.5	10.0	21	13.1			
1	72.5	92.5	92.5	90.0	139	86.9			
14. Does this job allow you to earn enough to buy the things you want?							2.272	3	.518
0	22.5	12.5	20.0	12.5	27	16.9			
1	77.5	87.5	80.0	87.5	133	83.1			
15. Do you think your job is better than most/about the same/worse than most/don't know?							14.262	9	.113
0	17.5	17.5	10.0	10.0	22	13.8			
1	12.5	10.0	12.5	5.0	16	10.0			
2	27.5	57.5	52.5	45.0	73	45.6			
3	42.5	15.0	25.0	40.0	49	30.6			
16. Would you like to change your job?							12.324	3	.006
0	55.0	40.0	17.5	42.5	62	38.8			
1	45.0	60.0	82.5	57.5	98	61.3			
17. Are there things you would like to change about where you work?							10.329	3	.016
0	50.0	42.5	17.5	32.5	57	35.6			
1	50.0	57.5	82.5	67.5	103	64.4			



STOUT

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