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**Chi square analysis of the supported employment and  
unsuccessful placement survey to assess individualized needs  
when program planning**

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CHI SQUARE ANALYSIS OF THE  
SUPPORTED EMPLOYMENT AND  
UNSUCCESSFUL PLACEMENT SURVEY  
TO ASSESS INDIVIDUALIZED NEEDS WHEN PROGRAM PLANNING  
BY  
MELISSA S. NELSON  
A THESIS SUBMITTED IN FULFILLMENT OF THE  
REQUIREMENT FOR THE DEGREE OF  
MASTER OF ARTS  
IN  
PSYCHOLOGY

MARSHALL UNIVERSITY GRADUATE COLLEGE

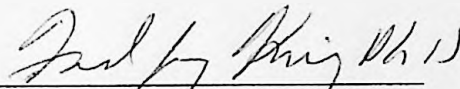
1998

Master of Arts Thesis  
of  
Melissa S. Nelson  
Supported Employment Survey  
and  
A Chi Square Analysis Study

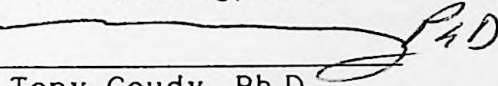
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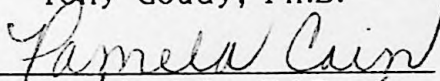
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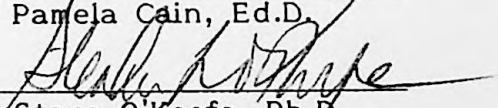
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(Short Title)  
Supported Employment

## ABSTRACT

This study is a chi square analysis of the Supported Employment Survey (SES) and the Unsuccessful Placement Survey (UPS) developed for the purpose of this study. Subjects included 76 males and 35 females ranging from the ages of 19 to 64. All of the individuals included in this survey have been involved in supported employment programs throughout the state of West Virginia. Individuals were surveyed based on DSM-IV diagnosed disability (mental retardation verses mental illness), support networks during placement (living independently or with a family member), and previous experience in sheltered workshops prior to placement in support employment programs. Results were analyzed using a CHITEST which yielded a chi square of 38.633, p-value of  $<.0001$  for support networks, chi square of 18.487, p-value of  $<.0001$  for disability, and a chi square of 38.408, p-value  $<.0001$  for sheltered work experience. All of the independent tests indicate a statistically significant relationship between successful and unsuccessful supported employment placements based on specific demographic information. The results of this study provides data to suggest that supported employment programs must be initiated based on individualized information regarding disability, support networks, and sheltered work experience.

## Acknowledgments

I would like to express my appreciation to the supported employment staff of several community based rehabilitation centers (CRS's) throughout the state of West Virginia. SW Resources, Inc., Jackson County Developmental Center, Northwood Health Systems, Goodwill Industries of Kannawha Valley, Russell Nesbitt Services, Inc., Pac-Tech Training and Evaluation Center, and Open Doors Incorporated willingly volunteered to complete surveys which helped assist me in completing my thesis.

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Supported Employment Survey-  
A Chi Square Analysis

In society today individuals with disabilities continue to face many difficulties in their daily lives. Disabled individuals face daily physical challenges that nondisabled persons tend to take for granted. Many individual with disabilities cannot walk without technical assistance, have physical deformations, or cannot interact with others appropriately due to behavioral problems which at times serve as a barrier in the formation of friendships with nondisabled individuals. Nondisabled individuals who have not been educated about the challenges disabled individuals face or who have not been exposed to disabled individuals do not always treat these individuals as equals. Due to this unequal treatment many changes in state and federal policies were developed to ensure equal treatment of disabled individuals (Wehman & Moon, 1988).

The American with Disabilities Act, Rehabilitation Act of 1973, and the Individuals with Disabilities Act all provide individuals with disabilities a stronger legal and policy basis for protection of their rights (Wehman & Moon, 1988). Unequal treatment of individuals in the work place which leads to lack of financial independence contributed to the ongoing need for policies to protect disabled workers. Individuals with disabilities are stigmatized as being less productive than nondisabled workers. The major reason for this lack of

skill is due to the small amount of support and training available for individuals with severe disabilities in the competitive job environment (Bellamy, Rhodes, Mank, & Albin, 1988).

Supported employment has served as a vehicle for thousands of individuals with disabilities to help them demonstrate their competence and to gain knowledge and skill in the competitive labor force. This program also aides in improving the quality of life for individuals with disabilities. Although this program has been successful in serving individuals with disabilities, Shafer, Revell, & Isbister feel that supported employment programs have not accomplished the initial mission of successfully securing employment for individuals with severe disabilities (Shafer, Revell, & Isbister's study (as cited in Boas, Garner, Langford, & Strohmer, 1993)). In practice, the majority of individuals receiving supported employment services has been limited to individuals with mental retardation and developmental disabilities (Shafer et. al's study (as cited in Boas et. al., 1993)).

Supported employment programs have noticed this gap in services and have attempted to make supported employment programs more available for individuals with severe disabilities such as the mentally ill. The "ecological model" was developed to include the expertise and resources of the employer in the placement of individuals with disabilities (Baer, Boebel, Flexer, Martonyi, Sabousky, Shall, Simmons, & Stelle,

1993). This model has had some success by establishing natural supports on the job for individuals with disabilities as well as by providing information regarding the type of work environment available. This model also gives supported employment providers the ability to match job requirements and environments to an individual's specific needs. For these reasons this job matching practice is ultimately more important when serving individuals with severe disabilities (Baer et al, 1993).

Studies have been conducted to predict success in supported employment programs. Wehman and Hill (1985) conducted a longitudinal study for mentally retarded persons over a six year study period. This study investigated some demographic differences in individuals who maintained competitive employment for over six months versus those who did not achieve a six month work history. Significant differences were found in the two groups by using chi square analysis. Significant retention rates were found for individuals who had a more limited reading ability, came from a community work crew-oriented program, did not have a natural parent listed as a primary guardian, and were males (Wehman & Hill, 1985).

The state and federal government continue to be interested in improving employment opportunities for persons with disabilities. Wehman states that in order to be able to enhance supported employment

programs it is important to look at selected demographic characteristics such as the ones presented in his study. "This information is critical for enhancing appropriate placements, counseling parents, designing training strategies, evaluating programs, and formulating public policy (Wehman et. al., 1985, p. 67)."

Supported employment providers have identified several barriers within supported employment programs that have made it difficult for disabled individuals to succeed (Shafer et. al's study (as cited in Boas et. al, 1993)). One of the main problems supported employment providers face is eligibility determination. Counselors who determine eligibility for supported employment programs generally do not observe disabled workers on a daily basis (Shafer et. al's study (as cited in Boas et. al., 1993)). These individuals historically make their eligibility determinations based on assumptions of employability and categorical diagnostic labels rather than on functional limitations (Shafer et. al's study (as cited in Boas et. al., 1993)).

For this reason alone it is increasingly important that state agencies consider recommendations given by professionals who work one on one with disabled workers to establish eligibility for supported employment programs. If organizations who provide services for disabled workers begin working together by evaluating more specific personal information rather than following a set guideline, supported

employment programs will begin to reach an even greater success. This success will continue to empower disabled workers by giving them more opportunities to succeed as well as an improved quality of life.

This study was prompted by the author's own personal experience in working with individuals with disabilities. It is the author's contention that more individualized information be gathered by state agencies when available before program eligibility is established. Supported employment providers can help state agencies and disabled individuals by providing specific information which can be used to establish appropriate program planning methods.

Previous studies have already proven that gender, disability, and with whom the consumer resides all play a factor in successful placements of individuals with mental retardation. It is the author's contention that more time and dollars be spent by state and federal governments to investigate other factors that lead to successful employment. Once these factors have been investigated and recognized, current policies can be changed or modified or new programs developed to help provide disabled workers with an even greater opportunity for success (Wehman, 1985).

When agencies agree to take a closer look at specific demographic information such as the information mentioned previously as well as the criteria set forth in this study, a more proactive approach can be

taken to assist disabled individuals with their employment goals.

Supported employment providers such as sheltered workshops can also be more supportive to individual workers by providing individuals at risk of employment failure with more aggressive pre-vocational training to help transition them into community integrated programs.

#### Purpose of Study

The purpose of this study is to determine if specific demographic information such as an individual's disability category (mental retardation versus mental health), with whom an individual resides upon placement (self or relative), and previous experience in sheltered work before utilizing supported employment programs play a factor in predicting future success in supported employment placements. This study will determine some factors that will be helpful to vocational rehabilitation counselors and supported employment agencies when establishing individual program plans. This study will assist counselors in identifying individuals who will need more intensive support in the community compared to individuals who will not need as much support by looking at information that is generally available in the intake packets. Two surveys were developed that contain specific demographic information as well as information on supported employment placement models. The following hypotheses apply:

**Ho:** There is no significant difference between individuals who have been placed successfully in the community in relation to those who have not been successfully placed based on the individual's living arrangement during the time of the placement.

**H1:** There is a statistically significant difference between individuals who have been placed successfully in the community by using a supported employment program in relation to those who were not successfully placed based on the individuals living arrangement during the time of the placement.

**Ho:** There is no significant difference between individuals who have been placed successfully in the community in relation to those who have not been successfully placed based on the individual's disability.

**H1:** There is a statistically significant difference between individuals who have been placed successfully in the community by using a supported employment program in relation to those who were not successfully placed based on the individual's disability.

**Ho:** There is no significant difference between individuals who have been placed successfully in the community in relation



to those who have not been successfully placed based on the individual's previous experience at working for a sheltered workshop.

H1: There is a statistically significant difference between individuals who have been placed successfully in the community by using a supported employment program in relation to those who were not successfully placed based on the individuals previous experience at working for a sheltered workshop.

### Method

#### Subjects

Subjects were selected from seven certified supported employment providers throughout the state of West Virginia based upon successful and unsuccessful completion of supported employment vocational programs. Success is measured by the Division of Rehabilitation Services as the individual being placed for three months on the job without losing the job or without needing further training. Individuals who were not successful were those individuals who did not remain in their supported employment placement for up to three months. Individuals were selected from supported employment programs from SW Resources, Inc. in Parkersburg, Northwood Health Systems in Moundsville

Goodwill Industries of Kanawha County, Russell Nesbitt Services in Wheeling, Pac-Tech Training and Evaluation Center in Morgantown, Jackson County Development Center in Ripley, and Open Doors Incorporated in Lewisberg.

The sample was comprised of thirty-seven (37) females and seventy-six (76) males. The mean age of the females was 32.02 and the mean age of the males was 32.14. There were two females whose ages were not known. Individuals were selected by the seven agencies previously listed based on involvement in supported employment programs and successful or unsuccessful completion of supported employment programs. Table 1 displays the distributing of subjects regarding age and gender.

The subjects chosen were between the ages of 19-64. The subjects were diagnosed according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) as having mental retardation or as having a mental illness. The Division of Rehabilitation Services (DRS) is the only agency within the state of West Virginia capable of determining eligibility for services. DRS has strict guidelines regarding eligibility for services based on diagnosis rendered by licensed psychologist or psychiatrist.

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Insert Table 1 Here

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Instruments

The Supported Employment Survey (SES) and Unsuccessful Placement Survey (UPS) were developed by this researcher for the purpose of this research. Both surveys consist of eight questions regarding specific demographic information as well as one question regarding placement method used. The surveys did not need to be validated as an instrument to predict success. They were simply used to collect information about individuals who were already categorized as successful or unsuccessful as determined by the Division of Rehabilitations's guidelines .

The survey's were used to gather information available regarding individuals utilizing supported employment programs to see if any of the information analyzed reflects success in supported employment programs. The surveys consist of the following information:

1. Name(initials only)\_\_\_\_\_
2. Gender\_\_\_\_\_
3. Age\_\_\_\_\_
4. Length position was held\_\_\_\_\_
5. Who was the client's primary care provider during the time of the placement\_\_\_\_\_
6. What is their primary disability\_\_\_\_\_
7. Did the client spend time at a sheltered workshop before being placed in the community\_\_\_\_\_

8. What support model was used to place this individual in the community(individual, enclave, mobile work crew)\_\_\_\_\_

Table 1

Distribution of Sample by Age and Gender

	N	Mean Age	SD
Males	76	32.14	31.36
Females	37	32.02	33.04
Total	113	32.08	31.78

### Procedure

The Supported Employment Survey (SES) and the Unsuccessful Placement Survey (UPS) were mailed to seven agencies throughout West Virginia that are approved supported employment service providers. Individuals who filled out the surveys were all working in the supported employment placement field. Once the surveys were completed and returned each survey was evaluated by this researcher to verify that each survey met the criteria set forth in this study. The surveys were then combined for statistical interpretation.

### Statistical Analysis

To examine the between variables a chi square analysis was conducted between the SES and the UPS to determine if an individual's disability type (mental retardation compared to mental health), current living arrangement (independent living compared to living with family), and whether or not the individual worked at a sheltered workshop predict success in supported employment programs. Subjects were selected by the seven agencies based upon successful and unsuccessful completion of supported employment programs.

### Results

When specific information gathered from the SES and the UPS was compared between groups using the Chi Square Analysis, significant differences were found between groups in three areas at the (.05)

significance level. Significance level ( $p=\alpha$ ) specifies the confidence interval which is to be  $100(1-p)$ . At .05 level of significance there is a 5% chance of a Type 1 Error, in other words, rejecting a true null hypothesis. The degrees of freedom for each hypothesis was equal to (1). Degree of freedom is a function of the number of categories,  $k$ , in a current sample. The three areas studied were: 1) mental retardation versus mental illness, 2) individuals living independently versus those living with family members, and 3) involvement in vocational rehabilitation provided by sheltered workshop placement. The majority of the individuals surveyed had mental retardation (71.4%) compared to (28.6%) that had mental illnesses. Individuals who lived independently during supported employment placement represented (31.5%) compared to (61.5%) of individuals who lived with some member of their family. Individuals who had sheltered work experience represented (58.9%) of the population compared to (41.1%) who had no sheltered work experience. Table 2 summarizes these current percentages.

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Insert Table 2 Here

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Insert Table 3 Here

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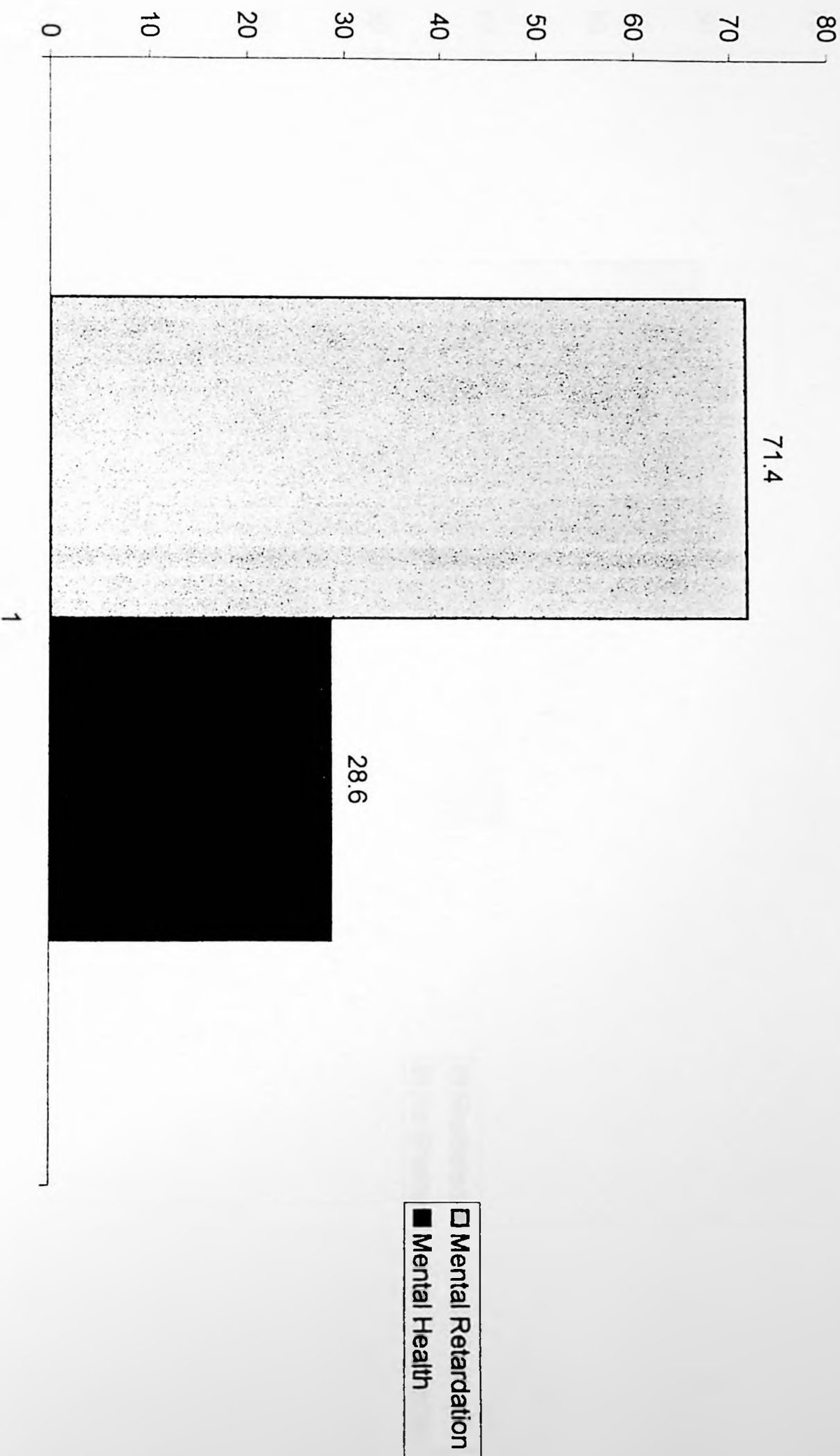
Insert Table 4 Here

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When the raw data was compared using the chi square analysis the chi square value for living arrangement during placement was equal to 38.633 with a chi square p-value of  $<.0001$ . The chi square for disability category was equal to 18.487 with a chi square p-value of  $<.0001$ . Finally, the chi square for sheltered work experience was 38.408 with a chi square p-value of  $<.0001$ . Therefore, all of the obtained values fall within the critical range for rejection of the  $H_0$ . In this case, rejection of the null hypotheses supported the original hypotheses which stated that there is a significant difference between the groups compared.



**Table 2. Percentage of individuals with mental retardation versus those with mental health disabilities.**



**Table 3 Percentage of individuals with sheltered work experience versus those with no sheltered work experience**

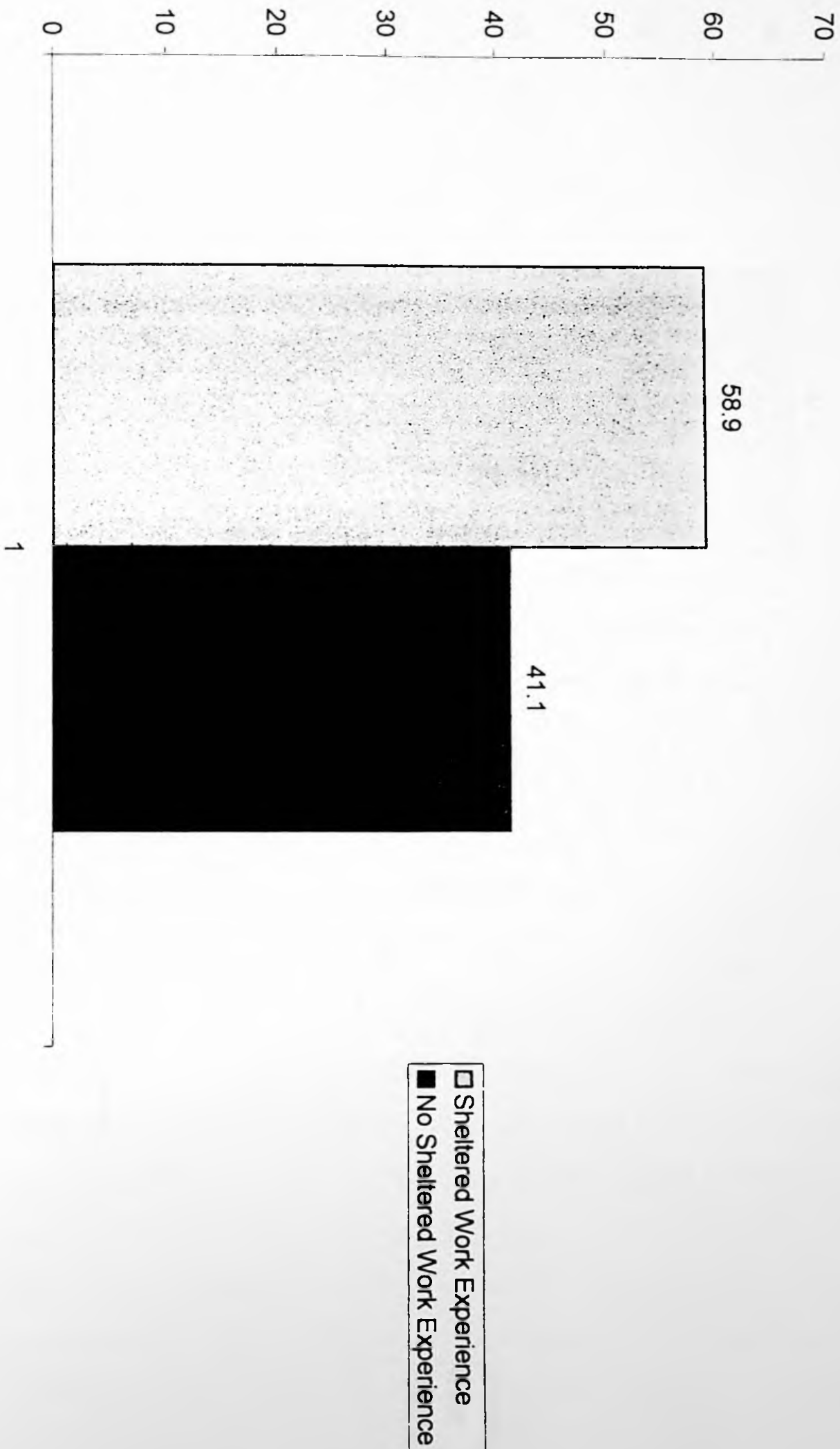
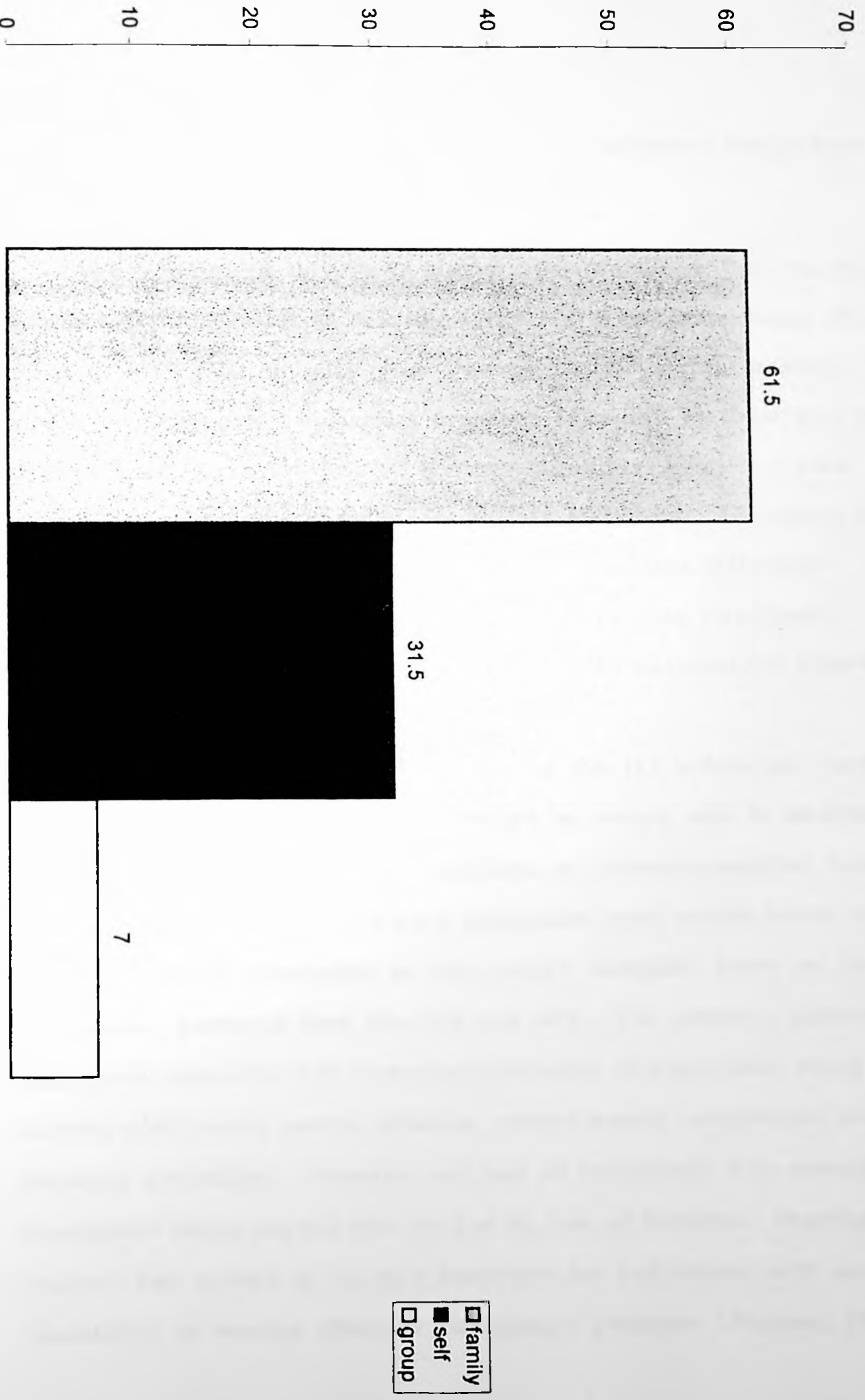


Table 4 Percentage of Individuals living with family members, those living independently, versus those living in group homes



Discussion

The findings of this study support the conclusion that the null hypothesis,  $H_0$ , should be rejected. The null hypothesis states that there is no significant difference between individuals successfully placed in supported employment programs compared to those who have not been successfully placed based on their disability, sheltered work experience, and living arrangement during placement. Therefore, the alternative hypothesis,  $H_1$ , that there is a significant difference between individuals successfully placed in supported employment programs compared to those who have not been successfully placed, should be accepted.

Demographic information show that of the 113 individuals surveyed 71.4% of them have a disability classified as having mild to moderate mental retardation. This result indicates an underrepresented number of individuals served with severe disabilities such mental health and profound mental retardation as the primary disability based on the information gathered from the SES and UPS. The research gathered for this study supports this underrepresentation of individuals being served with severe mental illnesses, severe mental retardation, and physical disabilities. However, the lack of individuals with severe disabilities being served may be due to lack of funding. Ongoing support has proved to be very important for individuals with severe disabilities to develop effective employment programs (Wehman, 1995).

Therefore there may be many individuals waiting for replacement into community integrated programs who were not offered additional training and were not included in this study (Wehman, 1995).

Family support is an aspect of supported employment programs in which the family is required to provide some of the support within the supported employment placement such as transportation. Within the sample population 61.5% of the individuals served lived with a family member during the time of placement. Although one cannot predict that all individuals living within a family home have supportive relationships, support from family members may not be the same as support from spouses or roommates. There were more successful placements for individuals living with family members during the time of placement which may indicate differences in support.

Sheltered workshops have received ongoing criticism during the supported employment era from sponsors of supported employment programs (Bellamy's study (as cited in Block, 1997)). Many individuals working in vocational rehabilitation feel that sheltered workshops are not appropriate for many disabled workers due to their lack of community integration (Bellamy's study (as cited in Block, 1997)). However, sheltered workshops serve as a stepping stone to provide pre-vocational training and skill building such as maintaining a consistent schedule and following procedures which are helpful for individuals

with little work experience. Bellamy states that "sheltered workshops provide little or no chance of advancing to community integrated employment (Bellamy's study (as cited by Block, 1997, p. 269))."

Although this is a common belief among supported employment specialists the results of this study does not support this conclusion. The results of this study indicates that 58.9% of individuals who have had success within supported employment programs also have sheltered work experience. This result does not indicate an increased failure rate in supported employment programs due to sheltered work experience for West Virginia consumers.

The present study contained several limitations. All of the subjects included in this study live in West Virginia. Therefore, the results should not be generalized to all supported employment programs since individuals served in supported employment programs in West Virginia may not necessary reflect individuals involved in all programs.

Another limitation is that only subjects who have utilized supported employment services were included in this survey. There may be many individuals waiting on placements who were not represented in this study.

It was also brought to the author's attention that providers only have a select number of successful or unsuccessful placements to chose from. Therefore, true random sampling did not occur due to the

specific qualifications required for the survey.

Secondary disabilities were not included in the information gathered for this survey. Secondary disabilities may be analyzed in further studies to investigate how multiple disabilities impact success in supported employment programs.

Finally, information as to why individuals did not succeed in supported employment programs was not gathered. This information would be useful to determine if the disabled workers lost their jobs due to complications related to their disability, lack of proper training, or employer terminations.

The results of this study can be used to provide vocational rehabilitation specialists and supported employment providers with additional information to be used when determining eligibility for supported employment services. The study will help counselors and supported employment providers by indicating how significant their disability, primary supports during time of placement, and sheltered work experience are in predicting success in supported employment placements.

This study can already be beneficial to counselors when determining vocational rehabilitation program plans. Based on this study it is suggested that individuals living independently, who are diagnosed with a mental health disability, and have no sheltered work

experience have significantly less chance of successfully completing supported employment programs. These individuals are more likely to need more pre-vocational training, on-the-job support once placed, and follow-up support. By looking at this information vocational specialist may be able to make recommendations regarding training needs more appropriately based on this individualized information.

Individuals who have a higher risk of employment loss can be provided this additional piece of vocational training based on to their needs to ensure a higher probability of having a successful experience in community integrated programs. By having successful experiences in supported employment programs disabled workers will gain the independence they have been working for while improving their quality of life.



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Appendix A

Literature Review

## SUPPORTED EMPLOYMENT

Supported Employment is currently defined as the following: competitive work in integrated work settings-(a)for individuals with severe handicaps for whom competitive employment has not traditionally occurred, or (b)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 services to perform such work (Rehabilitation Act Amendments (as cited in Kidder, Maxwell, Parker, Schaller, & Szynabsk, 1992).

Supported employment has grown from a small university-based program into a program that now serves well over 100,000 people in the United States and an additional 25,000 to 50,000 more throughout other countries. Supported employment was initiated in the late 1970's to serve people with severe disabilities who were either working in extended sheltered employment or receiving day habilitation services. Traditionally individuals served in these settings were considered to be unemployable in competitive jobs (Brooks & Barcus, 1996).

Individuals who qualify for this service typically need ongoing intensive supported employment services in order to perform such work due to the nature and severity of his/her disability. This ongoing support enables the individual to obtain and maintain competitive work in an integrated job setting. Competitive work when referring to

supported employment is work performed on a full-time or part-time basis in an integrated work setting (working with nondisabled people) at the minimum wage or prevailing wage for that specific job (Wehman & Moon, 1988).

West Virginia Division of Rehabilitation Services (WV-DRS) counselors determine an individual's eligibility for supported employment services. Supported employment is a service for individuals with the most severe disabilities. Most severe disabilities include severe physical or mental disabilities that seriously limit two or more functional capacities such as mobility, communication, interpersonal skills, self-care, self-direction, work tolerance, and work skills. Their functional capacities must be limited in terms of employability. A final eligibility requirement is that the individual's vocational rehabilitation program must be expected to require two or more services over an extended period of time (nine months or more). Certification of eligibility is determined strictly by the WV-DRS counselor who develops an individualized supported employment program plan. This determination will also authorize payment for supported employment services through community rehabilitation programs (CRP's) such as job coaching and follow-along support (WV-DRS, 1996).

Supported employment has been characterized as "a cornerstone of new state and federal initiatives to improve the quality of life of

persons with severe disabilities" (Rogan & Murphy, 1991, p. 40). Not only do individuals perform the same work as their nondisabled coworkers, but participate in the same social environment. This provides disabled individuals with an equal opportunity to form natural social ties as well as the ability to form relationships with a diverse set of people. However, a recent study conducted in Illinois indicated that although supported employees received more integration opportunities, became more competent and independent, and were able to interact with their nondisabled coworkers, they were filled with loneliness. This factor needs to be considered and addressed in the future to fulfill the mission of improving the quality of life for individuals with disabilities (Ellis, Heal, McCaughrin, & Rusch, 1993).

Supported employment is also seen as a service which enables persons with disabilities to secure employment in competitive work environments. People who qualify for supported employment services are generally people who have been excluded, devalued, and disenfranchised due to their perceived lack of vocational competence (Wehman et. al., 1988). With the recent push toward competitive, integrated work for persons with disabilities supported employment has also been utilized as an alternative to placements within sheltered workshops. Community rehabilitation programs who began by providing work in sheltered workshops are now also providing supported employment services. Supported employment is an option based on the movement that disabled

people themselves are capable of deciding where they will study, work, and live (Asch, 1986).

Supported employment was introduced into state and federal vocational rehabilitation programs through a series of system change grants which were awarded during fiscal year 1986. These grants were awarded by the Rehabilitation Services Administration (RSA) initially to ten state vocational rehabilitation agencies for five year system changes. During the following fiscal year 1987, 17 more states received these awards which began the transitional movement away from sheltered workshop facilities (Kregel, Shafer, Wehman, & West's study (as cited in Kidder et. al., 1992).

Wehman states that the need for system change was attributed to the lack of shared values, beliefs, and organizational philosophies among sheltered workshop and supported employment programs. Some feel that the two programs are not compatible. Both groups categorize, judge, and refer to each other according to their beliefs (Rusch's study (as cited in Block, 1997) . This ongoing judgement continues to label and stereotype individuals in much the same way that society judges individuals with disabilities. This practice can be dangerous for individuals with disabilities when choosing the route of vocational rehabilitation services due to counselor biases.

Economics has also played a major role in this recent push toward

supported employment and the transition of sheltered workshops into supported employment programs. Several studies have been conducted and conclude that supported employment is likely to produce greater wages than in house employment settings such as sheltered workshops (Houchard, Powers, & Thompson, 1992). Competitive wages provided by supported employment placements have helped individuals with disabilities become less dependent on government assistance and charitable organizations which in turn helps them achieve significant economic independence (Moon, Goodall, Wehman, 1985).

Although decreasing dependence on social assistance is a positive factor to the economy, a sudden loss of benefits can at times decrease the overall quality life for an individual with a disability. This is especially true for individuals with severe physical or psychiatric disabilities. When supported employment programs are being explained to consumers it is very important that the loss of benefits be properly investigated and explained along with the incentives and benefits (Moore & Powell, 1990).

Despite the positive outcomes of supported employment for individuals with disabilities, some argue that the program is too expensive due to the amount of intensive support and follow up support required. However, a review conducted by Conley (1989) concludes that "although costs of supported employment are greater than benefits

during the first years of implementation, costs decrease and benefits increase over time because employees increase both their hours and average hourly wages, while the amount of support needed on the job decreases (Moon et. al, 1985, p. 68)."

Two Central Illinois agencies serving clients with developmental disabilities found supported employment to be cost beneficial from the perspectives of the supported employee, the taxpayer, and society over a five year period as programs move from sheltered employment. The results of the study show that the net benefits include the supported employees' increase in wages by \$1,027 during the first year for individuals with severe mental retardation and \$4,607 for individuals with mild mental retardation when leaving sheltered workshops to enter supported employment. Benefits to the tax payer included a payer range from a low of -\$6,126 during the first year to +\$105 by the fifth year for individuals with moderate to severe mental retardation to a corresponding figure of -\$3,841 to +\$396 for individuals with mild mental retardation. Net benefits to society included -\$5,099 to \$1,132 for moderate to severely retarded individuals to \$766 to \$5,003 for an individuals with mild mental retardation (Ellis, Heal, McCaughrin, & Rusch, 1993).

In 1997 data collected from the West Virginia Supported Employment Placement Survey by WV-DRS from 58 approved supported employment providers statewide indicated that 445 individuals are currently placed



in the community by utilizing supported employment placement services. These individuals earned an average hourly wage of \$4.83 and worked an average of 16.6 hours per week (West Virginia Division of Rehabilitation Services, 1997).

There are several disability groups served by supported employment services. A recent survey by the West Virginia Division of Rehabilitation Services (WV-DRS) on supported employment indicates that 74.69% of the population utilizing this program are mentally retarded, 13.90% are mentally impaired, 1.74% have traumatic brain injuries, .74% have some type of physical disability, and 7.20% were classified by other unspecified types of disabilities. These numbers show that supported employment services can be utilized for individuals with many different types of disabilities (WV-DRS, 1997).

The supported employment initiative focuses on targeting persons who have severe functional limitations to employment. However, in actual practice, the majority of individuals receiving services have been limited to persons with mental retardation and developmental disabilities. This practice holds true for WV supported employment consumers as well. As one can see from the results of the supported employment survey, 74.69% of individuals served have mental retardation (Shafer, Revell, & Isbister's study (as cited in Boas, Garner, Langford, & Strohmer, 1993)).

A review of the national service delivery trends indicates that intensive supports which are typical of supported employment programs have not been needed due to high functional levels of most supported workers. Shafer states that "in order to make supported employment determinations, counselors must discriminate the point along this functional limitations continuum at which any given client becomes severely disabled in terms of employment. When faced with this task, the data detailing of who is actually placed in supported employment suggest that counselors may not be responding to functional limitations. Rather they seem to select from the less severe end of the continuum, basing their decision on historical assumptions of employability and categorical diagnostic labels that hertofor have assured eligibility." Limited access to supported employment services will continue to exist for individuals with severe mental retardation, severe and persistent mental illness, and significant physical disabilities as long as those responsible for determining eligibility do not identify these individuals as appropriate candidates for supported employment services (Boas et. al., 1993, p. 39).

The Rehabilitation Act of 1973, the Americans with Disabilities Act, and the Individuals with Disabilities Education Act all provide a broader and stronger legal and policy basis for providing individuals with severe disabilities supported employment opportunities (Baer, Goebel, Flexer, Martonyi, Sabousky, Shall, Simmons, & Stelle, 1993).

Despite all the efforts of laws and policies the unemployment rate among individuals with significant disabilities remains 70% as reported by a recent Lou Harris poll (Brooke & Barcus, 1996). Research gathered by the 1990 U.S. Census reported that an estimated 142,245 West Virginians alone between the ages of 16-64 have a work disability. Only 20.3% of these West Virginians are employed. This statistic shows one of the many reasons why the community needs to look at programs such as supported employment to help disabled individuals find and successfully maintain employment (WV-DRS, 1996).

Ferguson and Hahn (1985) stated that "due to the economic and social barriers people with disabilities face which are reinforced by society the locus of change must shift from the individual with a disability to the social, political, and economic structures (Wehman & Moon, 1988, p. 45)." In some way supported employment has helped reinforce this belief. Individuals will have a larger sense of economic security by having a greater influence over where they work which will in turn help them gain greater control over their individual lives. This integration will also give disabled workers the ability to proudly and publicly demonstrate how productive they can be (Wehman, & Moon, 1988).

In part, the reason for these individuals lack of employment options is due to societies persistent stereotype of people with severe

developmental disabilities. Many people share negative attitudes and stereotypes about people with disabilities. They feel that people with disabilities are incapable of meaningful participation in a competitive work force. Supported employment is one service that has helped change society's negative stereotypes regarding people with disabilities (Brooke et. al, 1996).

West Virginia Division of Rehabilitation Services completed a state wide needs assessment to determine why employers were not hiring disabled workers. Among the employers who participated in the needs assessment survey 45% reported that an absence of job openings as a large barrier. Other barriers included safety risks at 30.7%, complex nature of the work at 26.4%, lack of qualified applicants 22.7%, lack of special/modified equipment 18.8%, training difficulty at 14.8%, lack of knowledge on adaptive equipment for making job accommodations 12.9%, lack of knowledge about programs available to recruit or retain persons with severe disabilities 11.9%, and difficulty in evaluating the qualifications of persons with severe disabilities related to hiring decisions at 11.9% (WV-DRS, 1996).

With all of these barriers in mind, it is important for the service providers to inform the community of the individual needs of people with disabilities and programs available to assist them and the employer in the work setting. As supported employment programs have emerged so has the need to include employers as part of the solution to

the problem. Supported employment has not been marketed based on the belief in the benefits of hiring persons with disabilities. Due to the lack of marketing employers have not been utilized in supported employment placements. Professionals do not know what local businesses needs are simply due to selling the program without marketing (Baer, et. al., 1995).

The "ecological model" has been developed to include the expertise and resources of the employer in the placement of individuals with disabilities. It allows employers to identify their needs to assist rehabilitation professionals in finding an appropriate placement based on the business' needs as well as the individual. This model also allows employers to become more involved in the individualized rehabilitation process (Baer et. al, 1995).

Historically, extensive support needs for individuals with disabilities have not been fully met. Individuals need natural co-worker supports, peer and family supports, training supports, self-management, and organizational support (Balzell, Gold & Marrone, 1995). The economic model has assisted in providing more natural social support and training mechanisms which also allows broader social integration by asking the business to determine how much support they can offer an individual based on their business needs. This method may also decrease the level of loneliness that a large percentage of

consumers face when working in supported employment programs (Baer, et. al., 1994). This model is especially important as individuals with severe mental illnesses enter into supported employment programs. Research indicates that individuals with severe psychiatric illnesses tend to lack interpersonal skill development, including modelling appropriate social interactions with co workers and supervisors. The more natural supports these individuals have on the job the better their opportunity for job success (Fabian & Wiedefeld, 1989).

Once a job match has been investigated and it has been determined that the individual's vocational needs will be met, a placement models must be utilized that will ensure the worker's success in specific employment settings. There are four primary models of supported employment services approved for payment under the WV-DRS program. The first model is the individual placement model. This model requires the employment specialist to place and train an individual in the community. Wehman and Kregel suggest that two advantages of this model of service is that the worker does not have to be "job ready" before the placement can occur and it assures long-term support for the worker in terms of job related needs (Wehman et. al., 1988).

The second service model is the enclave. Enclaves are groups of three to eight individuals who work in special training groups within a unsheltered community-based industry with support. This model is used most for persons with severe disabilities who tend to need more

supervision on a more permanent basis and for whom may never function adequately in a regular community job (Wehman et. al., 1988).

Mobile work crews are the third model of supported employment options. A mobile work crew is a group of three to eight individuals with one to two supervisors who travel through a community performing specialized services which may vary from contract to contract.

The main advantages of the mobile work crew is that it gives the worker the ability to show a large amount of people in the community their specific job specialization as well as some opportunity for integration (Wehman et. al., 1988).

The final model is a small business model which may consist of eight or less individuals with disabilities or with an integrated crew of workers. Boles et al. (1984) suggest that this option should be used for workers who will constantly need behavioral training due to their severe disabilities. It is also appropriate for workers who exhibit severe social or behavioral deficits, have limited self-care skills, or who are slow paced (Wehman et. al., 1988).

The four models of supported employment services vary considerably. It is difficult to determine which method is the best. The individual work model has been the model which seems to provide the worker greater opportunities for integration with nondisabled co-workers in a work setting. Regardless of the differences among the

four models the support remains the same. Individuals must be placed and trained by the provider to ensure success. Ongoing training must also be provided if necessary to help the individual maintain their job in the community. Follow-along services are also required as part of the supported employment service that will continue as long as the worker keeps their specific job or has requested that services be terminated (Wehman et. al., 1988).

After the service provider has provided the proper training and support within the work setting including job coaching it is then up to the worker, parents, and advocates to provide assistance outside the work place to ensure vocational success. The efforts of all these individuals is necessary to implement supported employment programs (Bellamy, Rhodes, Mank, & Albin, 1988).

With the significant move toward supported employment programs within the past several years a need to evaluate the quality of this new program has also developed. Many people are concerned about the integrity of this program as well as many other programs available to serve individual's with disabilities. Many studies have been completed to measure the success of supported employment services. Studies by Vogelsburg, Bates, Rusch, and Moss indicate that previously unemployed persons with developmental disabilities were able to work only after a supported employment approach was utilized (Welman, Sale, & Parent, 1992).



Several other studies show that although supported employment services have been successful, a significant portion of consumers experience job loss and job movement due to employee resignations, layoffs, or firings. Many consumers may need additional training and placement services. This has been difficult to address due to the limited amount of funding available by vocational rehabilitation and support agencies as well as an unwillingness to provide the necessary funding. It is important for this program to develop a better understanding of employment retention in order to develop policies regarding eligibility for services and financing for ongoing support. (Banks, Kregel, & Shafer, 1991).

Many vocational rehabilitation programs have been able to successfully implement cooperative agreements and leveraged extended service dollars from long-term funding agencies such as state agencies, social services, mental health, mental retardation, and other developmental disability programs. These agencies which are traditionally providers of ongoing services have purchased extended supports with new and redirected dollars that have been used in the past for day rehabilitation programs as well as sheltered work programs (Wehman, 1995).

A study by Banks, Kregel, and Shafer indicates that twenty-four months following placement, less than one third of the individuals

placed remained within their original placement. The results of this study and others not noted show that due to the lack of employee retention, continued development of supported employment services must continue to ensure the success of consumers served in this program (Banks et. al, 1991).

The need for program evaluation tools has been developed in the past several years to help monitor supported employment services. Wehman indicates the use of a seven category checklist, the Quality Indicators Profile, or the Degree of Implementation Scale to mention a few program evaluation tools which can be utilized to evaluate program goals and success (Wehman et. al., 1992).

Evaluation tools for determining quality assurance in supported employment programs is vital. The focus has changed somewhat from the input factors such as proper development of programs to individual client evaluation of work outcomes. Brooke and Barcus feel that consumer involvement can be enhanced by making it a priority within the program and the driving force behind all services delivery practices. Providers of the services and supports must also allow consumers to realize the outcomes of their choice by including them in all activities associated with supported employment implementation. Individual satisfaction must be assessed and responded to proactively. Also, job coach support must be provided by well trained individuals who specialize in working with individuals with disabilities.

The best way to ensure consumer satisfaction and preference is to spend time with the individual. Only by truly getting to know the individual will one be able to assess their individual needs. Before employment options can be explored the service provider must provide detailed information about available services so individuals can make informed choices regarding their vocational goals. Finally, counselors must help consumers explore options by arranging for practical experiences related to jobs and supports of interest. How does anyone truly know how they will like any job before actually having a "work related experience" on that job (Brooke et. al., 1996, p. 8-10). Supported employment gives each individual the financial stability needed to improve their quality of life as well break through the stereotype society has placed upon individuals with disabilities. (Brooke et. al., 1996).

APPENDIX B

RAW DATA

## SUCCESSFUL PLACEMENT SURVEY RESULTS

N	Gender	Age	Sheltered Work Exp.	Disability	Living Arr.
1	M	23	No	MR	Self
2	M	29	Yes	MR	Self
3	F	23	Yes	MR	Family
4	M	34	Yes	MR	Family
5	F	33	Yes	MR	Family
6	M	40	Yes	MR	Other
7	M	31	Yes	MR	Self
8	M	51	No	Other	Self
9	F	38	Yes	MR	Family
10	M	40	Yes	MR	Self
11	F	41	Yes	MH	Family
12	F	25	No	MR	Family
13	M	35	Yes	MR	Family
14	M	27	Yes	Other	Family
15	M	30	Yes	MR	Family
16	M	32	No	MR	Family
17	M	23	Yes	Other	Family
18	M	33	No	MH	Self
19	M	23	Yes	MR	Self
20	M	24	No	MH	Self
21	F	20	No	MR	Family
22	F	25	Yes	MR	Self
23	M	48	Yes	MR	Family
24	M	24	No	MR	Family
25	M	21	No	MR	Self
26	M	24	No	MR	Family
27	F	29	Yes	MR	Family
28	F	33	No	MR	Family
29	F	38	No	MR	Self
30	M	42	Yes	MR	Family
31	M	26	No	MR	Self
32	M	42	No	MR	Self
33	M	26	No	MR	Family
34	M	44	No	MR	Self
35	F	33	No	Other	Self
36	F	20	No	MR	Family
37	M	46	Yes	MR	Self
38	F	25	Yes	MR	Family
39	M	24	Yes	MR	Family
40	M	29	Yes	MR	Family
41	F	64	Yes	MR	Self
42	M	29	Yes	MR	Family
43	M	23	Yes	MR	Family
44	M	28	Yes	MR	Self
45	M	44	Yes	Other	Family
46	M	39	No	Other	Self
47	M	34	No	MH	Self

Supported Employment  
45

N	Gender	Age	Sheltered Work	Disability	Living Arrang.
48	F	30	No	MH	Family
49	M	40	No	MR	Family
50	F	45	Yes	MR	Self
51	M	29	Yes	MR	Family
52	M	41	No	MR	Other
53	M	30	Yes	MR	Self
54	F	26	Yes	MR	Family
55	M	28	Yes	MR	Family
56	F	35	Yes	MR	Self
57	M	25	Yes	MR	Family
58	M	46	Yes	MR	Self
59	M	28	No	MH	Family

UNSUCCESSFUL PLACEMENT SURVEY

N	Gender	Age	Sheltered Work	Disability	Living Arrang.
1	F	21	Yes	MR	Family
2	F	--	Yes	MR	Self
3	M	22	Yes	MR	Family
4	F	36	Yes	MH	Self
5	M	37	Yes	MR	Other
6	M	28	Yes	MR	Family
7	M	24	No	MR	Family
8	F	24	No	MR	Family
9	M	29	No	MR	Self
10	M	25	Yes	MR	Family
11	F	24	No	MH	Self
12	F	23	Yes	MR	Family
13	M	22	Yes	MR	Other
14	M	33	Yes	MR	Family
15	F	40	No	MH	Self
16	M	36	Yes	MR	Self
17	M	29	No	MR	Self
18	F	19	Yes	MR	Family
19	M	31	No	MH	Family
20	M	28	Yes	MR	Family
21	M	22	Yes	MH	Family
22	M	34	No	Other	Family
23	M	32	No	Other	Self
24	F	47	Yes	MR	Self
25	M	43	Yes	MH	Other
26	M	28	No	MR	Family
27	M	33	No	MH	Self
28	F	40	No	MH	Self
29	F	30	No	MR	Family
30	F	37	No	MR	Self
31	M	27	No	MR	Family

Supported Employment  
46

N	Gender	Age	Sheltered Work	Disability	Living Arrang.
32	M	32	No	MR	Self
33	M	36	No	MR	Self
34	F	35	Yes	MR	Family
35	F	21	Yes	MR	Family
36	M	19	No	MH	Family
37	F	21	Yes	MR	Family
38	M	38	Yes	MR	Family
39	M	25	Yes	Other	Family
40	M	45	Yes	MR	Other
41	M	28	Yes	Other	Family
42	M	23	No	MH	Self
43	M	30	Yes	MR	Family
44	F	--	No	MH	Self
45	F	48	Yes	MH	Family
46	F	42	No	MR	Self
47	M	32	Yes	MH	Family
48	F	30	Yes	MR	Family
49	M	25	No	MR	Family
50	M	40	Yes	MH	Self
51	M	31	Yes	MR	Family
52	M	30	Yes	MR	Family

APPENDIX C

SUPPORTED EMPLOYMENT SURVEY



Supported Employment Survey

1. Name(first name or initials)\_\_\_\_\_
2. Gender\_\_\_\_\_
3. Age\_\_\_\_\_
4. How long did they hold this position?\_\_\_\_\_
5. Who did the client live with during the time they were in the supported employment program?\_\_\_\_\_
6. What was their primary disability?\_\_\_\_\_
7. Did this client spend time at a sheltered workshop before being placed in the community?\_\_\_\_\_
8. What type of supported employment service model was utilized to assist in placing this individual in the community(individual, enclave, mobile work crew)?\_\_\_\_\_

APPENDIX D

UNSUCCESSFUL PLACEMENT SURVEY

Unsuccessful Placement Survey

1. Name(first name or initials)\_\_\_\_\_
2. Gender\_\_\_\_\_
3. Age\_\_\_\_\_
4. How long did they hold this position?\_\_\_\_\_
5. Who did the client live with during the time they were in the supported employment program?\_\_\_\_\_
6. What was their primary disability?\_\_\_\_\_
7. Did this client spend time at a sheltered workshop before being placed in the community?\_\_\_\_\_
8. What type of supported employment service model was utilized to assist in placing this individual in the community(individual, enclave, mobile work crew)?\_\_\_\_\_

APPENDIX E

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