Title: Quality of Life of Workers with an Intellectual Disability in Supported Employment

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# Quality of Life of Workers with an Intellectual Disability in Supported Employment

#### Abstract:

Aim: This study investigates what characteristics of supported employment may increase quality of life and if quality of life is higher in supported employment workers than in sheltered employment workers in Spain. Typicalness, the degree to which the characteristics of a job are to the same as those of coworkers without a disability in the same company, was considered as one of supported employment characteristics in the analysis.

Method: Two groups were put together to obtain the data using two questionnaires that were administered by trained professionals. Correlational analysis of the data and MANOVA were also employed.

Results: No differences were found between the two groups regarding quality of life, but results indicate that in supported employment high levels of typicalness are associated with a higher quality of life, and that the handling of certain characteristics of support and the job, for example the hours of direct external support, are related to enhancing the quality of life of the workers.

Conclusions: Workers in supported employment show the same quality of life s workers in sheltered employment centers

In Spain the greater the typicalness of the employment the higher the quality of life. The implications of this for the amount of direct external support for workers with disability is that such support should be used only as absolutely necessary – the minimum support necessary needed to encourage development.

#### Key words:

Supported employment, Quality of life, Typicalness

#### 1.- Introduction

Supported employment is a form of inclusion into real work for people with disabilities that developed in the 1980s in the U.S.A. (Mank 1998; Storey & Certo 1996; Verdugo & Jenaro 1993; Verdugo *et al.* 1998; Wehman & Bricout, 1999; Wehman *et al.* 1987). Lacking any clear definition or official regulation in Spain, our operative definition is "Integrated employment for people with disabilities, who haven't usually accessed the open labor market, into employers in the community, through the provision of appropriate support, inside and outside the workplace, throughout the working life of the person if necessary, and with the same features, e.g job characteristics and wages, as other workers without a disability in a similar job in the same company" (Jordán de Urríes & Verdugo, 2001).

The use of natural supports are now considered to be one of the key aspects of the practical development in current best practice in supported employment (Butterworth *et al.* 1996; Callahan 1992; Hagner *et al.* 1995; Kiernan *et al.* 1993; Murphy & Rogan 1994; Storey & Certo 1996; Wehman & Bricout 1999). Natural Supports at work can be defined as "any strategy, resource, relation, or interaction provided by persons, procedures, instruments or equipment that (a) is typically available and/or is culturally suitable in the community environments surrounding a person, (b) facilitates the obtaining of positive results in the professional and social spheres and (c) increases the quality of life of the person" (Jordán de Urríes & Verdugo, 2003).

In relation to natural supports, Typicalness has recently been advanced as the degree to which the characteristics of job accessibility, the job itself (duties, benefits, etc.) and the job environment (places, co-workers, etc.) are similar to those of co-workers without a disability in the same company (Jenaro *et al.* 2002; Mank 1997; Mank *et al.* 1997a; Mank *et al.* 1997b; Mank *et al.* 1998; Mank *et al.* 1999; Mank *et al.* 2000; Olson *et al.* 2000). It is defined according to the four elements that comprise it: job acquisition and hiring, job characteristics, management of human resources and social aspects. These four characteristics provide a general index of similarity. Typical does not necessarily mean better, as some potential employees from within the population of those with intellectual disabilities may experience severe difficulty in obtaining employment in an ordinary company within the community. Thus, the balance between typical and specifically adapted remains with the professional who must establish the proper criteria in each case with an essential contribution from the employee.

Quality of life is a multidimensional concept with a large subjective component that is reflected in a general perception of well-being or satisfaction. To understand the quality of life of a person, the need of a multidimensional and contextual model is widely endorsed (Schalock 1996; Schalock & Verdugo 2002). One of the dominant models currently used is that proposed by Schalock (Schalock 1996; Schalock & Verdugo 2002; Verdugo & Schalock, 2001). In its most recent version it includes 24 indicators referring to 8 domains that represent the nucleus of the life dimensions of each person. The scientific literature includes several studies relating quality of life to supported employment, arguably converging on three fundamental questions. In the first place, workers in supported employment show higher levels of quality of life than those working in sheltered employment (Eggelton *et al.* 1999; McCraughrin *et al.* 1993; Sinnott-Oswald *et al.* 1991). Second, workers in supported employment show quality of life levels similar to those of workers without a disability (Sinnott-Oswald *et al.* 1991). And finally, the level of quality of life does not improve immediately after gaining employment in an ordinary company, since the initial stress can decrease it (Fabian 1992), but subsequently quality of life may reach similar levels to those of workers without a disability.

Our research question was what characteristics of supported employment may increase quality of life, and if quality of life is higher in supported employment workers than in sheltered employment workers in Spain.

2.- Approach

Our objective was to analyze different job elements affecting the quality of life of workers with an intellectual disability in supported employment. We thus posed the following hypotheses:

(H1) Workers in supported employment will show a higher quality of life than those in sheltered employment.

(H2) Workers in supported employment in more typical jobs will show a greater quality of life.

(H3) Characteristics of support afforded to workers with an intellectual disability in supported employment and their co-workers will improve the quality of life of supported employees.

(H4) Characteristics of the worker in supported employment, the jobs and the companies will improve the quality of life of supported employees.

#### 3.- Method

# 3.1.- Participants

To carry out this research contact was established with 9 different organizations, 6 of which carry out job programs or services with support and 3 have sheltered employment centers.

The total group comprised 232 participants distributed in two groups: 160 in supported employment (SE) and 72 in sheltered employment centers (SEC). SECs in Spain are developed for workers with disabilities, earning at least the minimum wage, and receiving personal and social adjustment services. These SECs receive financial support from the administration. All the participants have an intellectual disability, which was mild in 56.9% of the participants in both groups. Other characteristics of the groups are shown in Table 1. The supported employment group, makes up 6.62% of the total population of those in supported employment in Spain (N = 2,417) at the end of 1999 (Jordán de Urríes & Verdugo 2001; Verdugo & Jordán de Urríes 2001).

#### Insert Table 1

#### 3.2.- Instruments

To carry out this research two different instruments were used.

The "Quality of Life Scale" by Schalock and Keith was translated from the original (Schalock *et al.* 1990; Schalock & Keith 1993) and modified by culturally adapting its language, presentation and reply format. The application procedure is the personal interview. The scale has 40 items divided into 4 subscales: Competence / Productivity, Self-Determination / Independence, Satisfaction, and Social Belonging/ Integration in the Community. Reliability coefficients were obtained with coefficient of internal consistency (split-half) for the four subscales and while these were lower than those presented originally, they were acceptable (see Table 2).

#### Insert Table 2

The "Typicalness Questionnaire" was translated and adapted to Spanish based on that developed by David Mank and his colleagues (Jenaro *et al.* 2002; Mank 1997; Mank *et al.* 1997a; Mank *et al.* 1997b; Mank *et al.* 1998; Mank *et al.* 1999; Mank *et al.* 2000; Olson *et al.* 2000). It is designed to be completed by a person close to the worker with a disability who is very familiar with his/her job situation and the aspects surrounding it. The Typicalness Questionnaire has 75 items divided into 5 sections: A.- Confidential Information, B.- General Information, C.- Information concerning the Disability, D.- Information on the Job and E.- Information on the Company Personnel. Although no retest was made to ensure the stability of the measurements, with regard to the questionnaire on typicalness or similarity, test-retest reliability of the instrument was obtained by Mank in his research obtaining good results.

#### 3.3.- Design

Two research designs were applied in this study (Borg & Gall, 1989). First a descriptive study identified characteristics of the sample population based on information collected in the questionnaires. Second, a correlational causal-comparative study was carried out in which the participants in the sample with and without certain characteristics were compared with regard to different dependent variables. The differences between groups were examined using multivariate analysis of variance (MANOVA), which also allowed us to control for the correlations among the dependent variables. Consequently, if significant differences appeared, it was possible to eliminate the intercorrelation between the dependent variables as a possible explanation of the differences observed. Univariate analysis of variance (ANOVA) was subsequently carried out when Hoteling's T was statistically significant.

Quality of life was operationalized using an overall measurement with four components: Competence / Productivity, Self-Determination / Independence, Satisfaction, and Social Belonging/ Integration in the Community. The typicalness or similarity was operationalized with an overall measurement with four components: job acquisition and hiring, job characteristics, management of human resources and social aspects.

#### 3.4.- Procedures

The steps followed to carry out the research consisted of: 1.- Selection of participants who met two criteria: their main disability was intellectual disability, and they had individual supported employment; 2.- Training of those who administered (for quality of life) or filled in (for typicalness) questionnaires, took place in two day sessions in each organization. The questionnaires were piloted with several participants. Differences were resolved through consensus; 3.- The questionnaires were administered or filled in by the trained questionnaire givers in each organization interviewing supported workers (for quality of life) or filling in themselves (for typicalness). All of the questionnaire givers and supported

employers were informed that the data was confidential and workers were asked for consent.

#### 4.- Results

With regard to the hypothesis that *workers in supported employment will show a higher quality of life than those in sheltered employment (H1)*, it should be noted that contrary to what was expected, no significant differences were found between supported employment and sheltered employment workers. The lack of agreement between these results and the research cited above may be due to the unusual situation of the Sheltered Employment Centers in Spain. When comparing these centers to those in other countries that are identified as sheltered employment centers, it can be seen that in the former there are different and more positive job characteristics such as a consolidation of job benefits (vacations, social security, medical attention, overtime) and salaries (never below the minimum wage).

With respect to the hypothesis that *workers in supported employment in more typical jobs will show greater quality of life (H2)*, it was observed that general typicalness is related positively to general quality of life and two of its subscales (competence / productivity and self-determination / independence). A positive correlation was found between typical management and typical social aspects and quality of life as well as three quality of life subscales: competence / productivity; self-determination / independence, and satisfaction (see Table 3).

**Insert Table 3** 

As to the hypothesis that *characteristics of support afforded to workers with an intellectual disability in supported employment and their co-workers influence quality of life of supported employees (H3)*, variables relating to who provides the support, when, how, and for how long were taken into account. It was observed that more hours of direct support per week to co-workers (of 1 to 3 hours, < 1 hour, < once a week) was linked to a lower quality of life, taken overall, as well as two subscales competence / productivity and self-determination / independence. The results can be seen in Table 4.

#### Insert Table 4

Likewise, a greater number of hours of direct support per week to workers with intellectual disabilities (less than 1 hour a week or more than 1 hour a week) was associated with a lower quality of life overall as well as with lower self-determination / independence. The results are shown in Table 5.

### Insert Table 5

Analysis of the components of quality of life considered separately yielded specific relationships summarized in Table 6. Workers with intellectual disability show more social belonging / integration in the community when co-workers are not trained about disability but receive ongoing support. Workers with intellectual disability show more self-determination / independence when co-workers are not trained in supporting workers with disabilities. Finally, workers with intellectual disabilities show higher competence / productivity when the person who spends more time providing support is the immediate co-worker, followed by supervisors or managers and thirdly by another supporter.

Insert Table 6

Focusing on the hypothesis that *characteristics* of the worker in supported employment, the jobs and the companies influence quality of life of supported employees (H4), we first look at the relationship between personal characteristics and quality of life. The variables taken into account in the analysis were: sex, age, level of intellectual disability, presence of behavioral problems and their severity (Table 7).

#### Insert Table 7

Males scored significantly higher on quality of life, while there are no significant differences when it comes to age. Workers with lower levels of previous training showed a lower quality of life. No significant differences appeared with respect to the presence of additional disabilities or the degree of severity of the intellectual disability. Finally, the presence of behavioral problems was linked to lower results in quality of life; the more severe the problems, the lower the quality of life.

Finally, the relationship between job characteristics and the company and quality of life were explored. Type of job, presence of adaptations, contact with co-workers without a disability, contact with the public, number of integrated jobs held previously, company sector, number of employees, number of employees with a disability, and whether training is offered regarding diversity or disabilities were not significantly related to overall quality of life scores.

Some significant relationships were observed between quality of life subscales and job characteristics (Table 8). There was a negative association between the presence of adaptations and self-determination / independence. Providing guidance to new employees and the feeling of social belonging / integration in the community were positively associated. By contrast, guidance about diversity was negatively associated to competence productivity and when supported workers have carried out a greater number of community jobs they showed lower satisfaction.

Insert Table 8

# 5.- Discussion

The data obtained suggest certain conclusions and practical implications for programs of supported employment. Spanish workers with an intellectual disability in supported employment do not seem to have a higher quality of life than those working in sheltered employment centers, as would be expected according to other research carried out (Eggelton *et al.* 1999; McCraughrin *et al.* 1993; Sinnott-Oswald *et al.* 1991), although they did have better job outcomes in several respects. Perhaps this situation is related to the distinctive features of sheltered employment centers in Spain as mentioned above.

The more typicalness in the job, the higher the quality of life. This means that it is advisable to seek the highest levels of typicalness or similarity in jobs if they are to benefit the workers.

Some characteristics of support for workers with an intellectual disability and their co-workers seem to be related to the level of quality of life. This is especially evident with respect to the number of hours of direct support provided for both the workers with a disability and their co-workers, as there is a negative relationship between quality of life and a higher number of hours of external support provided by professional job coaches. This suggests we should use this type of support only when absolutely necessary.

Women and workers with lower levels of training showed lower results in the quality of life scale, and thus both these aspects should be considered in the process of integration. On the other hand, although the severity of intellectual disability does not seem to be related to quality of life, it does seem to be related to behavioral problems and their severity. This suggests we need to control these problems in order to maintain or enhance the quality of life for the individual.

The job characteristics and the company do not seem to be especially related to quality of life, although the fact that the company provides information to new workers seems to generate a positive feeling of social belonging / integration in the community.

It should be pointed out that the study participants were not randomly selected. Instead, using specific criteria we selected all the workers possible from among the relevant population. The possible bias towards those with mild intellectual disability may reflect the real bias towards them in the population served by supported employment programmes. Although both groups have similar characteristics, a more detailed analysis should be undertaken in future research. With respect to the questionnaire on typicalness or similarity, the replies were provided by persons who supported and worked for the participants who were in supported employment, Even thought the professionals were trained to attempt to avoid bias there is a possibility that bias could have been generated.

We would like to conclude by pointing out that quality of life is still a key concept in the evolution of services in the area of disability. Typicalness, on the other hand, is emerging as a concept of particular interest in the area of employment and more specifically in supported employment, which, as we have seen, is also related to quality of life. Finally, the management of the minimum support necessary to achieve development or employment sustainability is of fundamental importance in reaching the higher levels of quality of life.

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Supported employment (160)	Sheltered Employment Centers (72)	
Male (71.3%)	Male (86.1%)	
Age 22 to 30 (54.4%)	Age 31 to 40 (47.2%)	
Living at family home (88.8%)	Living at family home (77.8%)	
3 to 5 members (73.2%)	2 to 4 members (80.5%)	
Primary studies (46.3%)	Occupational training (58.3%)	
Intellectual disability (100%) (Mild 56.9%)	Intellectual disability (100%) (Mild 56.9%)	
Associated disabilities (29.4%)	Associated disabilities (44.4%)	
Behavioral problems (25%) (Mild problems 16.3%)	Behavioral problems (12.5%) (Mild problems 8.3%)	

Table 1. Sample characteristics

SUBSCALES	Original reliability	Obtained reliability (internal consistency) (N=232)
Competence / Productivity	0.90	0.59
Self-determination / Independence	0.82	0.64
Satisfaction	0.78	0.73
Social belonging / Integration in the community	0.67	0.64

Table 2. Reliability coefficients of subscales of the Quality of Life Scale: original values (Schalock *et al.* 1990; Schalock& Keith 1993) and values obtained in this study.

	Competence / Productivity	Self-determination /	Satisfaction	Social belonging / Integration in the community	Quality of life
General Typicalness	0.358**	0.415**			0.329**
Acquisition					
Characteristics		0.191*			0.203*
Management	0.258**	0.345**	0.228**		0.289**
Social aspects	0.431**	0.348**	0.253**		0.434**

Table 3. Correlations between typicalness and quality of life (N=160)

Variables	Ν	Mean	s. d.	F
Competence / Productivity				3.369*
< once a week	99	25.39	2.53	
< 1 hour a week	19	24.58	3.32	
1 to 3 hours a week	40	23.98	3.77	
Self-determination / Independence				10.102**
< once a week	99	24.76	2.85	
< 1 hour a week	19	22.47	3.22	
1 to 3 hours a week	40	22.53	3.40	
Satisfaction				2.066
< once a week	99	23.31	2.94	
< 1 hour a week	19	23.05	3.01	
1 to 3 hours a week	40	22.05	4.24	
Social belonging / Integration in the community				2.076
< once a week	99	20.67	3.75	
< 1 hour a week	19	18.79	3.28	
1 to 3 hours a week	40	20.10	3.93	
Quality of life				7.797**
< once a week	99	94.13	7.58	
< 1 hour a week	19	88.89	7.33	
1 to 3 hours a week	40	88.65	10.30	

Table 4. Differences in quality of life related to weekly support hours given	o coworkers
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Variables	Ν	Mean	s. d.	F
Competence / Productivity				2.671
Less than one hour a week	89	25.24	2.48	
More than one hour a week	70	24.41	3.83	
Self-determination / Independence				4.108*
Less than one hour a week	89	24.35	2.82	
More than one hour a week	70	23.31	3.61	
Satisfaction				0.553
Less than one hour a week	89	23.11	3.05	
More than one hour a week	70	22.71	3.70	
Social belonging / Integration in the community				2.321
Less than one hour a week	89	20.74	3.65	
More than one hour a week	70	19.83	3.88	
Quality of life				5.236*
Less than one hour a week	89	93.44	7.34	
More than one hour a week	70	90.27	10.10	

Table 5. Differences in quality of life related to number of hours of direct support to workers provided by external suppor	t
professionals	

	Quality of life components				
Variables	Competence / Productivity	Self-determination / Independence	Satisfaction	Social belonging / Integration in the community	
				Mean YES=19.68	
Training coworkers about disability				Mean NO=20.93	
				F=4.282*	
		Mean YES=23.40			
Training coworkers about how to train and support workers with disabilities		Mean NO=25.72			
and support workers with disabilities		F=13.077**			
				Mean YES=20.90	
Ongoing support to coworkers				Mean NO=18.84	
				F=9.610**	
	Mean 1= 25.15				
What type of coworker spends more time providing support to workers with disability (1=immediate coworker, 2=supervisors or managers, 3=others)	Mean 2=25.10				
	Mean 3=22.96				
	F=4.294*				

Table 6. Summary of significant relationships of some support variables with quality of life components

Variables	N	Mean	s. d.	F
Gender				4.278*
Male	114	92.87	8.36	
Female	46	89.72	9.57	
Age				0.658
16 to 21 years				0.146
22 to 30 years	24	91.33	7.13	
31 or +	87	92.38	8.94	
Educational level				3.374*
Special education	20	87.15	11.96	
Primary	74	91.95	7.54	
Job skills	25	94.52	9.05	
Occupational training, secondary or vocational training.	31	93.39	6.06	
Presence of other disabilities				3.132
YES	47	90.06	9.07	
NO	113	92.75	8.62	
Mental retardation level				1.967
Moderate to severe (I.Q. 0 to 54)	17	88.35	9.51	
Mild (I.Q. 55 to 69)	91	92.88	8.77	
Borderline (70 or +)	50	91.66	8.49	
Presence of behavioral problems				12.962**
YES	40	87.88	9.84	
NO	112	93.51	7.97	
Severity of behavioral problems				6.535**
None	92	93.21	8.37	
Mild	26	88.00	9.20	
Medium or Severe	14	86.14	9.84	

Table 7. Relationships of individual variables with global quality of life

	Quality of life components			
Variables	Competence / Productivity	Self-determination / Independence	Satisfaction	Social belonging / Integration in the community
Presence of job adaptations		Mean YES=23.02 Mean NO=24.37 F=6.832*		
Number of community jobs carried up by the worker			Mean 1°=23.93 Mean 2°=22.57 Mean 3°=22.38 Mean 4°=21.56 F=3.846*	
Guidance is provided for new workers				Mean YES=20.89 Mean NO=20.60 F=4.980**
Guidance about diversity is provided	Mean YES= 22.38 Mean NO=24.86 F=4.362*			

Table 8. Summary of significant relationships of some job and company variables with quality of life components