CHAPTER 5

SOCIAL SERVICES AS SUPPLEMENTARY ON-FARM ACTIVITY FOR MENTALLY DISABLED PEOPLE

KATJA VADNAL AND KATARINA KOŠMELJ

University of Ljubljana, Biotechnical Faculty, Dept. of Agronomy, Jamnikarjeva 101, 1000 Ljubljana, Slovenia. E-mail: katja.vadnal@bf.uni-lj.si and katarina.kosmelj@bf.uni-lj.si

Abstract. The parents of mentally disabled people were interviewed with regard to their willingness to include their offspring in the everyday life and the activities on farms, which would provide them with social services (employment, care, nursing) in the form of supplementary on-farm activities. Among 361 interviewed parents, 54 % expressed willingness to participate in the programme. In order to assess the association between 'willingness' and the relevant characteristics of the parents and their mentally disabled offspring, the logistic regression models were applied. The analysis shows that the most probable users of services provided by care farming are young persons with a lower degree of mental disability who have well educated parents, and who already have some practice in agriculture.

Keywords: care farms; on-farm therapy; multifunctional agriculture; agricultural therapy; horticultural therapy; statistical models

INTRODUCTION

Background

According to the National Report of Slovenia on the Social Standing of Mentally Disabled (SOŽITJE 2001), 55% of the mentally disabled adults are unemployed and/or without proper occupation, while 83% of the adults with mental disability have no access to permanent occupational training. The high unemployment rate of this population segment is mainly the result of the economic transition and reconstruction of the manufacturing industry that used to be the main provider of simple jobs. Yamaki and Fujiura (2002) found out that employed mentally disabled persons generated higher incomes than expected. Their income exceeded benefits from social transfers granted to unemployed mentally disabled persons. The authors stress the problem of social marginalization of the majority of the mentally disabled that cannot find a proper job: low income – low capability to take on job opportunities. Therefore, the question of how to solve this problem is a very important issue with regard to the quality of life of adult persons with mental disability (Kebbon 1997).

Jan Hassink and Majken van Dijk (eds.), Farming for Health, 57-72. © 2006 Springer. Printed in the Netherlands

One of the possible solutions could be provided through multifunctional agriculture (Cahill 2001; OECD 2001): social services for people with disabilities (so called agri-care or care farming) could be provided by farmers as a supplementary on-farm activity. In this case people with disabilities would be in regular contact with the usual social environment. They would also be included in the everyday on-farm routine of the farmer's family, which would provide the opportunity for their individual treatment (Van der Schilden and Vink 2000). On the other hand, the positive externalities (Merlo and Briales 2000; Terluin 2003) of farming on the well-being of people with disabilities (Kahn and Juster 2002) become a visible economic value through the farmer's additional income.

Agriculture is included as an indispensable component in the occupational therapies for people with special needs, those with mental disabilities in particular (Predny and Relf 2000). However, the role that agriculture and rural communities can play in the social reintegration of historically excluded social groups – people with special needs – is often totally neglected when multiple functions of agriculture and rural amenities are discussed (Randall 2002).

Aim

The inclusion of farmers in therapeutic programmes based on agriculture will make better use of the therapeutic potential of agriculture and rural amenities, as well as contribute to a higher life quality of the disabled. Therefore, the aim of the research is to assess whether the parents in Slovenia are willing to include their mentally disabled offspring in the system of social services provided by the farmers as supplementary on-farm activity.

METHODOLOGY

Qualitative research procedure

Thirty groups of parents – participants of rehabilitation programmes organized by The Slovenian Association for Persons with Intellectual Disability (SOŽITJE) –were surveyed by means of group interviews. The interview was designed as a combination of cognitive and conative approaches (Malholta and Birks 2000??). Two sets of indicators were used: one for parents themselves, another for their mentally disabled offspring. Indicators related to parents were: geo-demographic and socioeconomic characteristics, satisfaction with the actual employment and occupational situation of their children and their expectations in this field, experiences with farming (professional or amateur), willingness to place the mentally disabled on a farm, cooperation of therapeutic staff and farmers with necessary skills, anticipated allocation of vouchers. Indicators related to the mentally

disabled were: degree of mental retardation, actual dwelling and employment situation, occupation and training, experiences with farming, suitability of various lines of agricultural production, effects of farming/gardening on the emotional state, mood and behaviour of the people involved, and advantages and disadvantages of placing mentally disabled persons on a farm.

After the group interviews, the parents were asked to fill out a questionnaire, which served as the starting point for the individual interviews. If both parents were present, they were asked to fill out a single questionnaire. Three of the families had two mentally disabled offspring. In this case, one parent for each offspring filled out a questionnaire for one offspring. Thus, the number of 361 parents in a questionnaire refers to the same number of mentally disabled offspring.

Statistical models

The logistic regression models were applied to answer two questions:

- How does a particular characteristic of the parent and/or their mentally disabled offspring influence the degree of the parents' willingness to include their mentally disabled offspring in everyday on-farm activities?
- Which group of the parents shows the highest degree of willingness to include their mentally disabled offspring in everyday on-farm activities?

The characteristics, which were included in the models, were derived from the qualitative research. We assumed that, in the case of the parents, age, education and experience with agriculture would have the crucial influence, while in the case of the mentally disabled offspring, age, degree of mental disability and experience with agriculture would be decisive.

The studied characteristics were divided into two groups:

- The characteristic 'degree of willingness' is the response variable (*Y*). It has three values: unwilling (coded as 0), indecisive (coded as 1) and willing (coded as 2).
- All other characteristics are exploratory variables $(X_1, X_{2,...,} X_p)$.

The degree of willingness of the parents and the degree of mental disability of the offspring were regarded as the key characteristics. The qualitative phase of the research revealed that the data on the key characteristics were missing for 90 respondents. These respondents were excluded from the statistical analysis that was carried out in relation to 271 respondents.

The association of a particular exploratory variable with the response variable (univariate models), as well as the simultaneous association of several exploratory variables with the response variable (multivariate models), was in the centre of our attention. We used the nominal logistic regression (Hosmer and Lemeshow 1989) to analyse our data. This method is a simple generalization of the standard logistic regression, which is defined by the function *logit* in case the responsive variable *Y* has two values (denoted by 0 and 1):

logit
$$P(Y = 1 | 0) = \ln \frac{P(Y = 1)}{P(Y = 0)}$$
 (1)

In our case the response variable *Y* has three values (denoted by 0, 1 and 2); two more *logit* functions can be defined:

logit
$$P(Y = 2 \mid 0) = \ln \frac{P(Y = 2)}{P(Y = 0)};$$
 (2)

logit
$$P(Y = 2 \mid 1) = \ln \frac{P(Y = 2)}{P(Y = 1)} = \text{logit } P(Y = 2 \mid 0) - \text{logit } P(Y = 1 \mid 0)$$
 (3)

The latter equation clearly demonstrates that the third logit is the difference between the first and the second one. In the case of the first and the second logit, value 0 refers to the reference group; in the case of the third logit, the reference group is 1.

The multivariate logistic model includes p exploratory variables and is a generalization of the univariate logistic model defined by two *logit* functions:

$$g_{1}(X) = \ln \left[\frac{P(Y=1 \mid X)}{P(Y=0 \mid X)} \right] = \beta_{10} + \beta_{11}X_{1} + \dots + \beta_{1p}X_{p}$$
(4)

and

$$g_{2}(X) = \ln \left[\frac{P(Y=2 \mid X)}{P(Y=0 \mid X)} \right] = \beta_{20} + \beta_{21}X_{1} + \dots + \beta_{2p}X_{p}$$
(5)

RESULTS

Descriptive analysis of the parents' view on including their mentally disabled offspring in everyday on-farm activities

As there is no care farming in Slovenia, the idea of incorporating farms and farmers into the system of protection and training of persons with mental disability was quite new to the respondents – parents or guardians of those persons. The majority of 361 interviewed parents, 67%, opted for suggested answers: 54% were willing to include their mentally disabled offspring in everyday on-farm activities (19% unconditionally, 35% under certain conditions), while 13% were against it (5% of all respondents expressed their strong opposition).

 Table1. Willingness of the parents of mentally disabled offspring to include him/her into everyday on-farm activity, % (N=361)

Willingness	Degree of	Degree of mental disability							
w mingless	mild	moderate	severe	profound	unknown	All			
Willing	2.8	10.8	1.9	1.7	1.7	18.8			
Willing conditionally	3.3	20.5	7.8	2.2	0.8	34.6			
Unwilling	-	3.0	2.5	1.1	0.8	7.5			
Unwilling under any condition	0.8	1.7	1.7	0.6	0.6	5.3			

Indecisive	2.2	10.0	1.4	0.6	1.1	15.2
Already living on a farm	0.8	2.2	1.7	2.2	0.6	7.5
Unknown	0.6	3.0	1.1	1.7	4.7	11.1
All	10.5	51.2	18.0	10.0	10.2	100

The parents consider employment of their mentally disabled offspring as a crucial factor contributing to the quality of his/her life. Due to the poor opportunities to find a proper job or activities for their adult mentally disabled offspring, one third of the parents see the periodical leisure activities as the most suitable way to include their offspring in everyday on-farm activity.

Table 2. Forms of on-farm activities preferred by the parents of the mentally disabled, %(N=361)

	Degree of	mental disat	oility		All	
	mild	moderate	severe	profound	unknown	
Protected employment	42.1	37.3	30.8	33.3	8.1	33.2
Periodical leisure activities	23.7	23.2	21.5	16.7	8.1	20.8
Daily care	7.9	18.4	12.3	8.3	10.8	14.4
Dwelling community	18.4	14.1	4.6	2.8	10.8	11.4
Other	7.9	7.0	0	5.6	0	5.0
Indecisive	0	0	30.8	33.3	62.2	15.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

The farmer to whom the parents would entrust their mentally disabled offspring, has to be trained adequately and must have personal experience with mentally disabled. Yet, first of all, he/she has to be 'a good sort of a person'. The parents expect the farmer to respect and to understand the mentally disabled, as well as to bear with them. As the parents have no practical experience with care farming, they would like to have professional attendance on a farm for their mentally disabled offspring.

The agricultural lines of production that the parents assessed as the most adequate ones for their mentally disabled offspring, corresponded with the lines they already had had experience with: vegetable and ornamental-flower production, followed by fruit and herb production. More than half of the interviewed parents thought that involvement with plant production has a favourable impact on the wellbeing of the mentally disabled. Being in the open air, an increase in self-dependence and self-confidence, as well as gaining experience and the acquisition of skills were the positive effects most often quoted by the parents. Even when the frequency of contacts with animals was lower, the experiences with regard to the impact on the emotional state, behaviour and mood were the same. These impacts were described as soothing, stimulating, enlivening and strengthening one's self-confidence.

	Parents according assessment of the production lines for disabled, % (N=36	suitability of the or the mentally	Practice of the parents and the mentally disabled offspring in the production lines, % (N=361)			
Production lines	suitable	unsuitable	parents	mentally disabled offspring		
Vegetable	32.1	5.5	63.7	25.2		
Ornamental flower	25.2	4.7	63.7	15.5		
Poultry	16.3	7.4	13.3	8.3		
Small breeding	14.9	9.7	8.0	8.3		
Crop	14.6	12.4	26.6	11.9		
Herbal plants	13.3	7.2	5.8	1.4		
Fruit	13.0	13.1	20.2	8.3		
Cottage industry	12.8	7.4	1.4	1.1		
Horse breeding	12.2	12.5	4.2	3.9		
Cattle breeding	11.1	13.3	17.5	10.0		
Vine growing	9.1	10.5	16.1	8.3		
Home food processing	7.4	5.5	16.6	8.6		
Pig breeding	7.0	13.0	12.7	6.9		

Table 3. The parents' evaluation of the suitability of agricultural lines of production for the mentally disabled, and the experiences of the parents and the mentally disabled offspring with agriculture

Out of 13 different sources of risk, the parents perceived two groups as the most threatening: those that originated from farming itself (injuries caused by agricultural machinery and tools, poisoning with agricultural chemicals, injuries caused by animals) and those that originated from farmers' behaviour (verbal abuse, physical abuse, slave labour). Although the parents were aware of all the relevant risks of farming, the fear of mistreatment predominated. They believed the appropriate personal attitude of the farmers towards the mentally disabled to be the most important characteristic. Respect, understanding and patience were the most frequently mentioned attributes. Positive experiences with mentally disabled persons were more important for the parents than the experience in farming and farming skills. Farmers should receive special training for working with the mentally disabled. The training should be organized by SOŽITJE (55%), and centres for protection and training (57%), i.e., organizations and institutions they are familiar with.

Analysis of the willingness of the parents to include their mentally disabled offspring in everyday on-farm activities

Impact of the age

The parents provided the data on the age for 255 mentally disabled offspring: the youngest one was 3 years old, the oldest was 63. The data on the age of the parents were obtained for 250 mothers of the above mentioned 255 mentally disabled offspring. The youngest mother was 23 years old, and the oldest was 89. The average age of the mother was 50.9 years, with a standard deviation of 14.4 years.

Figure 1 shows that for younger mothers with younger mentally disabled offspring willingness (yes) or indecision (there is no significant difference between these two categories) is detected more often, while older ones expressed their unwillingness (no) in a higher degree. As a strong correlation (r = 0.838, p = 0.000) between the age of the mother and the offspring can be detected, the latter will be studied further on. The calculation, which supplements the figure, shows that the first quartile for the age of the mentally disabled offspring is 13 years, the second one (median) 24 years and the third one 34 years.

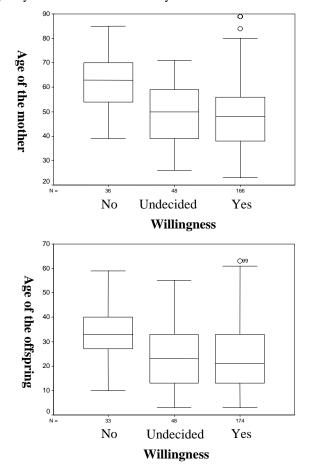


Figure 1. Age of the mother (above) and age of the mentally disabled offspring (below) according to the willingness of the parents to include their mentally disabled offspring in everyday on-farm activities

The impact of the age was evaluated by the nominal logistic regression. The age of the mentally disabled offspring was divided into two groups: *younger* (up to 24 years of age) and *older* (25 years of age and more): The older were taken as the reference group.

The comparison of the parents who are willing to include their mentally disabled offspring in everyday on-farm activity with those who are not shows that the age of the offspring is highly statistically significant (p = 0.001). A younger person has 4.9 times higher odds to be sent on a farm (95 % CI is 2.0 - 11.9) than an older one. The comparison of the parents who are willing to include their mentally disabled offspring in everyday on-farm activities with those who are indecisive pointed out a statistically insignificant impact of the age (p = 0.859). The comparison of the parents who are indecisive pointed out a statistically insignificant impact of the age (p = 0.859). The comparison of the parents who are indecisive presents almost identical results: exp(1.590+0.006) = 5.200, the corresponding 95% confidence interval is 1.9 - 14.3.

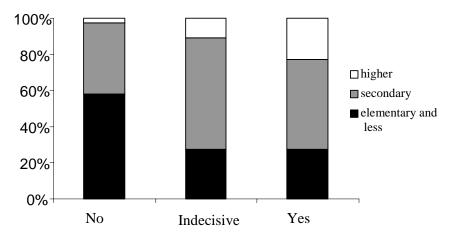
Table 4. Results of the nominal logistic regression: impact of the age of a mentally disabled person on the parents' willingness to include him/her into everyday on-farm activities

	b	se(b)	Wald	DF	р	exp(b)	95% C	ĽI		
Willingness: Yes/No										
Age group										
up to 24 years						1.000				
25 years and more	1.590	0.452	12.344	1	0.001	4.903	2.020	11.902		
Willingness: Yes/Indec	Willingness: Yes/Indecisive									
Age group										
up to 24 years						1.000				
25 years and more	-0.006	0.330	0.032	1	0.859	0.943	0.493	1.802		
Willingness: Indecisive	Willingness: Indecisive/No									
Age group										
up to 24 years						1.000				
25 years and more	1.649	0.517	10.179	1	0.001	5.200	1.889	14.317		

Impact of the education of the parents

The data on the education of the parents refer to the parent, who filled out the questionnaire. The data on 14 parents (5.2 %) are missing. The level of education is presented in three categories: elementary school or less (82 respondents or 31.9 %), secondary school (130 respondents or 50.6 %), higher education (45 respondents or 17.5 %).

Figure 2 shows the education of the parents according to their willingness. The graph and the χ^2 statistics confirm the impact of education on the willingness ($\chi^2 = 20.220$; p = 0.000); a higher degree of willingness is characteristic of parents with a higher level of education.



Willingness

Figure 2. Education of the parents according to the willingness to include their mentally disabled offspring in everyday on-farm activities

The results of the logistic regression are presented in Table 5. The category 'basic' corresponds to the elementary school and less, and is defined as the reference group. Two other groups were merged into the category 'more than basic' and then compared with the group 'basic'.

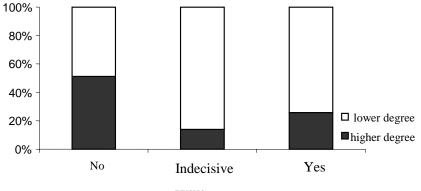
The comparison of the parents who are willing to include their mentally disabled offspring in everyday on-farm activity with those who are not shows that the offspring whose parents have more than basic education have 3.7 times higher odds (95 % CI 1.8 - 7.6) to be sent to a farm than those whose parents have only basic education. The comparison of unwilling and indecisive parents gives similar results. The comparison of the parents who are willing to include their mentally disabled offspring in everyday on-farm activity with those who are indecisive does not show any significant differences.

Table 5. Results of the nominal logistic regression: association of parents' education with their willingness to include their mentally disabled offspring in everyday on-farm activities

	b	se(b)	Wald	SP	р	exp(b)	95% C	ĽI	
Willingness: Yes/No									
Education of the parents:									
basic						1.000			
more than basic	1.297	0.370	12.251	1	0.010	3.657	1.769	7.559	
Willingness: Yes/Indecisive									
Education of the parents:									
basic						1.000			
more than basic	0.017	0.368	0.002	1	0.964	1.017	0.494	2.093	
Willingness: Indecisive/	No								
Education of the parents:									
basic						1.000			
more than basic	1.280	0.463	7.644	1	0.006	3.596	1.451	8.910	

Impact of the degree of mental disability

The degree of mental disability is one of the key characteristics that were studied. Thirty-three parents (12.2%) reported a mild degree of mental disability of the offspring, 164 (60.5%) reported a moderate degree, 54 (19.9%) reported a severe degree, and 20 (7.4%) reported a profound degree of mental disability of their offspring. During the analysis of the influence of the degree of disability, it became obvious that the number of the respondents in a particular cell of the table was very low. Therefore, the initial four categories of the degree of mental disability were merged into two: lower degree of disability (mild and moderate) and higher degree of disability (severe and profound).



Willingness

Figure 3. Degree of mental disability of the offspring according to the willingness of the parents to include him/her in everyday on-farm activities

The graphical presentation of the structure of the willingness according to the degree of mental disability is given in Figure 3. Approximately one half of the parents of the persons with a higher degree of mental disability expressed unwillingness, while only 26% (47 out of 182) of them expressed willingness. Yet, the proportion of offspring with a higher degree of disability is higher in the group of willing parents in comparison with the group of indecisive parents. The influence of the degree of mental retardation on the willingness of the parents to include their mentally disabled offspring in everyday on-farm activities is tested by χ^2 statistics ($\chi^2 = 15.955$; p = 0.000).

 Table 6. Results of the nominal logistic regression: the association of the degree of mental disability of the offspring with parents' willingness to include him/her in everyday on-farm activities

-	b	se(b)	Wald	SP	р	exp(b)	95% C	ľ		
Willingness: Yes/No										
Degree of disability:										
higher						1.000				
lower	1.106	0.362	9.322	1	0.002	3.024	1.486	6.151		
Willingness: Yes/Inc	Willingness: Yes/Indecisive									
Degree of disability:										
higher						1.000				
lower	-0.760	0.441	2.966	1	0.085	0.468	0.197	1.111		
Willingness: Indecis	ive/No									
Degree of disability:										
higher						1.000				
lower	1.867	0.518	12.964	1	0.000	6.466	2.341	17.861		

The comparison of the parents who are willing to include their mentally disabled offspring in everyday on-farm activity with those who are not shows that the influence of the degree of disability of the offspring is highly statistically significant (p = 0.002): the offspring with a lower degree of disability have 3.0 times higher odds to be sent on a farm (95% CI is 1.4 –6.2) than those with a higher degree of mental disability. The comparison of the parents who are willing to include their mentally disabled offspring in everyday on-farm activity with those who are indecisive showed a marginal statistical significance of the influence of the degree of mental disability (p = 0.085). The corresponding ratio of the odds is approximately 0.47 (it means below 1). This means that the offspring with a higher degree of disability have 2.1 times (95% CI is 0.9 –5.1) more odds for their parents being indecisive than in favour of sending them to a farm. The interval is 1.9 – 14.3.

Impact of the practice in agriculture

Only 20 parents (7.4%) reported that they have no practice in agriculture, while all the rest (249 or 92.6%) have personal practice in agriculture. Yet, only one third (82 or 30.9%) of their offspring have personal practice in agriculture (including gardening), while 183 (69.1%) have none.

The bivariate analysis shows that the parents' practice in agriculture has no statistically significant influence on their willingness to include their mentally disabled offspring in everyday on-farm activities ($\chi^2 = 3.171$; p = 0.205). In the case of mentally disabled offspring and their practice in agriculture the analysis shows a statistically significant influence on the willingness of their parents to send them to a farm ($\chi^2 = 12.721$; p = 0.002). The more the offspring have practice in agriculture the more the parents are willing to send her or him to a farm: the relation is linear.

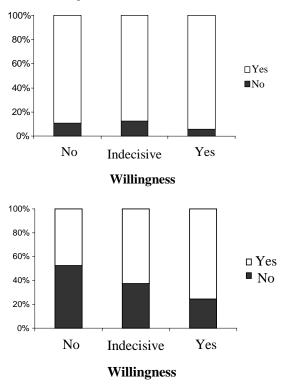


Figure 4. Practice in agriculture (above: parents, below: offspring) according to the willingness of the parents to include their mentally disabled offspring in everyday on-farm activities

The results of the nominal logistic regression are presented in Table 7. They relate only to the mentally disabled offspring and the experience they have with agriculture. The reference group is the group 'without practice'. The analysis of the value *b* shows a linear trend in the *logit* function: value 0.6 in the comparison willing/indecisive, as well as when comparing indecisive/unwilling, and 1.2 when comparing willing/unwilling.

 Table 7. Results of the nominal logistic regression: the association of the experience with agriculture of the mentally disabled offspring with the parents' willingness to include him/her in everyday on-farm activities

	b	se(b)	Wald	SP	p	exp(b)	95% C	ľ	
Willingness: Yes/No									
Practice in agriculture:									
without practice						1.000			
with practice	1.226	0.368	11.085	1	0.001	3.409	1.656	7.018	
Willingness: Yes/Indecisive									
Practice in agriculture:									
without practice						1.000			
with practice	0.610	0.345	3.129	1	0.077	1.841	0.936	3.620	
Willingness: Indecisiv	e/No								
Practice in agriculture:									
without practice						1.000			
with practice	0.616	0.441	1.953	1	0.162	1.852	0.780	4.395	

The impact of the practice in agriculture is highly statistically significant in the case of comparison willing/unwilling (p = 0.001): the mentally disabled who have some practice in agriculture have 3.4 times higher odds for being sent to a farm in comparison with those who have no such practice (95% confidence interval is 1.6 – 7.0). The comparison of those who are willing with the indecisive parents shows a marginal statistical significance (p = 0.08), the ratio of odds is 1.8 (95% confidence interval is 0.9 – 3.6).

The multivariate analysis of the willingness of the parents to include their mentally disabled offspring in everyday on-farm activities

In order to determine the difference between the parents who are willing to include their mentally disabled offspring in the everyday on-farm activities and those who are not, the following variables were incorporated into the model: age of the mentally disabled offspring (up to 24 years, 25 years and more), education of the parents (basic, more than basic), degree of mental disability (lower, higher), experience of the mentally disabled offspring with agriculture (with experience, without experience). The results of the nominal logistic regression are presented in Table 8. The estimations of the parameters in the multivariate model are slightly different from those in the corresponding univarate models due to the association between several explicative variables. The comparison of the parents who are willing to include their mentally disabled offspring in everyday on-farm activities with those who are not revealed that the age of the offspring has the strongest impact (p = 0.006), followed by the impact of having experience with agriculture (p = 0.043). The impacts of the degree of mental disability of the offspring and the education of the parents have a marginal statistical significance (p = 0.08 and 0.09, respectively). The parents who are willing to include their mentally disabled offspring in everyday on-farm activities differ from those who are indecisive in having experience with agriculture. This has a significant statistical impact (p = 0.023). In this case a marginal statistical significance of the degree of mental disability (p = 0.088) is detected.

	b	se(b)	Wald	DF	p	exp(b)	95 % (CI
Willingness:Yes/No								
Age group								
older						1.000		
younger	1.323	0.481	7.555	1	0.006	3.755	1.462	9.648
Education								
basic						1.000		
more than basic	0.763	0.435	3.075	1	0.080	2.145	0.914	5.034
Degree of disability								
higher						1.000		
lower	0.729	0.429	2.884	1	0.089	2.073	0.894	4.810
Practice								
no						1.000		
yes	0.869	0.430	4.091	1	0.043	2.386	1.027	5.540
Willingness:Yes/ Ind	lecisive							
Age group								
older						1.000		
younger	-0.111	0.363	0.093	1	0.760	0.895	0.440	1.822
Education								
basic						1.000		
more than basic	0.215	0.396	0.294	1	0.588	1.240	0.570	2.695
Degree of disability								
higher						1.000		
lower	-0.798	0.467	2.915	1	0.088	0.450	0.180	1.125
Practice								
no						1.000		
yes	0.856	0.376	5.183	1	0.023	2.354	1.126	4.419

Table 8. Results of the nominal logistic regression: multivariate model

DISCUSSION

As there is no care farming in Slovenia, the idea of incorporating farms and farmers into the system of protection and training of the mentally disabled was quite new. Through the interviews the parents began to recollect their own experiences and the experiences gained by their mentally disabled children through different contacts with the rural environment. Activities that are offered by the existing institutions are few and monotonous; therefore the variety of activities that could be offered by farms attracted their attention. As their contacts with plant production have been more frequent than those with animal breeding, the potential of the latter is being underestimated. The parents do not exaggerate in their concern for the wellbeing of their offspring on a farm. Careful selection of farms and specific training of farmers could further diminish the potential threats. The parents would trust most the farmer who is 'one of us', i.e., the farmer with a mentally disabled offspring. It is obvious

that the parents want to see how this novelty will work; therefore, they prefer periodic on-farm activities to permanent employment. The parents see care farming as an attractive new opportunity for their mentally disabled offspring. They have a good idea of the performance of care farming that would gain their confidence and meet the needs of their offspring

The information provided by the parents of the mentally disabled can help us to define proper guidelines for the development of the system of care farming in Slovenia for this segment of the users. The most suitable initial providers of services are farmers with first-hand experiences with the mentally disabled (family members, foster children). The second group are farmers who live near the existing institutions and already have some business and/or social contacts with mentally disabled persons (selling products, family members being employed in the institution, etc.). The supply of services should start with periodic activities (horse riding, fruit picking, making hay), gradually expanding to regular full-time protection and training. Farmers should have an easy access to special training programmes, which should be individualized and carried out on the farm.

CONCLUSION

The analysis of the willingness of the parents to include their mentally disabled offspring in everyday on-farm activities shows that the most probable users of services provided by care farming are young persons with a lower degree of mental disability who have well-educated parents, and who already have some practice in agriculture. Therefore it is crucial to 'green up' the existing programmes of education and training of the mentally disabled in order to provide the room for acquiring experiences and for having them evaluated by the mentally disabled themselves. They have to be provided with the opportunity to make choices, whether they are consistent with the parents' ideas or not.

The discussions with the parents on the studied issues revealed the real truth about the wellbeing of mentally disabled persons. They are trapped in the system of large and dominant institutions having only one option: institution or nothing. "We are not aware that things can be organized in any other way" is the common comment. It only proves that in the case of the privatization of social services (*Nacionalni program socialnega varstva do leta 2005 (NPSV). Uradni list Republike Slovenije: 31/2000 2000*) the coalition of providers and users can easily be deformed into a coalition of politicians and professional providers, with no influence from the users (Rus 1999). In this case there is no room for the choices made by persons with mental disabilities, nor for those made by farmers as providers of social services.

ACKNOWLEDGEMENTS

The Ministry of the Republic of Slovenia for Education, Sport and Science, the Association of Societies for Helping Mentally Disabled (SOŽITJE), Slovenia, and the Agriculture - Forestry Chamber of Slovenia sponsor research on social services

as supplementary on-farm activities in Slovenia. Our warmest thanks go to all the parents who gave us their precious time and shared with us their experiences, observations and opinions.

REFERENCES

Cahill, C., 2001. The multifunctionality of agriculture: what does it mean? EuroChoices, 1 (1), 36-41.

Hosmer, D.W. and Lemeshow, S., 1989. Applied logistic regression. Wiley, New York.

Kahn, R.L. and Juster, F.T., 2002. Well-being: concepts and measures. *Journal of Social Issues*, 58 (4), 627-644.

Kebbon, L., 1997. Nordic contributions to disability policies. Journal of Intellectual Disability Research, 41 (part 2), 120-125.

Merlo, M. and Briales, E.R., 2000. Public goods and externalities linked to Mediterranean forests: economic nature and policy. *Land Use Policy*, 17 (3), 197-208.

Nacionalni program socialnega varstva do leta 2005 (NPSV). Uradni list Republike Slovenije: 31/2000, 2000. [http://www.gov.si/mddsz/doc/managed/428_fc87882dae4791118c42d3f2daeed971.pdf]

OECD, 2001. *Multifunctionality: towards an analytical framework*. OECD, Paris. [http://www.blw.admin.ch/imperia/md/content/international/mf_analytical_framework.pdf]

Predny, M. and Relf, P.D., 2000. Perspectives on integenerational horticultural therapy. Journal of Therapeutic Horticulture, 11, 34-42.

Randall, A., 2002. Valuing the outputs of multifunctional agriculture. European Review of Agricultural Economics, 29 (3), 289-307.

Rus, V., 1999. Introduction: conflicts and cooperation between public and private social services. *Družboslovne Razprave*, 15 (29), 5-11. [http://dk.fdv.uni-lj.si/druzboslovnerazprave/pdfs/ dr29rus1.pdf]

SOŽITJE, 2001. National report of Slovenia on the social standing of mentally disabled. The Slovenian Association for Persons with Intellectual Disability SOŽITJE, Ljubljana.

Terluin, I.J., 2003. Differences in economic development in rural regions of advanced countries: an overview and critical analysis of theories. *Journal of Rural Studies*, 19 (3), 327-344.

Van der Schilden, M. and Vink, A., 2000. Labour organisation in Dutch therapy agriculture. In: Ogier, J.P. ed. XIVth international symposium on horticultural economics. ISHS, Leuven, 447-454. ISHS Acta Horticulturae no. 536.

Yamaki, K. and Fujiura, G.T., 2002. Employment and income status of adults with developmental disabilities living in the community. *Mental Retardation*, 40 (2), 132-141.