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Please cite this article **The practical skills of persons with vision impairment**

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UDC:

DOI: https://doi.org/10.2298/VSP210328101A

The practical skills of persons with vision impairment

Praktične veštine osoba sa oštećenjem vida

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Abstract

Background/Aim. The acquisition of practical skills, as with adaptive behaviour in general, is affected by an array of personal and environmental factors. The aim of this study was to determine the level of acquisition of practical adaptive skills among adults with vision impairment in comparison to the norms among the general population, and with regard to the visual status (low vision and blindness), age of vision loss onset, gender, age, living arrangements, education, and employment status. **Methods.** Seventy-nine persons who are blind and forty-eight volunteers with low vision with typical intellectual abilities took part in the study. The respondents were aged from 19 to 60 (M = 36.06, SD = 11.777). Practical adaptive skills were assessed using the Practical Skills domain which is part of the Adaptive Behavior Assessment System II – ABAS II. **Results.** The scores achieved in the skill areas of the *Practical Skills* domain, range from extremely low to average. Extremely low scores were detected in the *Work skill* area, for the skill areas of Community Use, Home Living and Health and Safety, the scores were below average, and average scores were noted in the Self-Care skill area. The degree of practical skills acquisition among persons with vision impairment depended primarily on the visual status, but a significant connection with living arrangements and employment status was also established. **Conclusion.** Persons with vision impairment showed significant limitations in the area of practical skills, which indicate the need for support programs designed to foster the development of self-reliance.

Key words: vision impairment, blindness, low vision, practical skills, adaptive skills

Apstrakt

Uvod/Cilj. Niz ličnih i sredinskih činilaca utiče na usvajanje praktičnih veština, kao i na adaptivno ponašanje u celini. Cilj rada je bio da se utvrdi nivo usvojenosti praktičnih adaptivnih veština kod odraslih osoba sa oštećenjem vida, u poređenju sa normama u opštoj populaciji, kao i u odnosu na vizuelni status (slabovidost i slepoća), vreme gubitka vida, pol, uzrast, porodični status, nivo obrazovanja i radni status. **Metode.** U istraživanju je dobrovoljno učestovalo 79 (62,2%) slepih i 48 (37,8%) slabovidih ispitanika tipičnih intelektualnih sposobnosti. Ispitanici su bili starosti starosti od 19 do 60 godina (M=36,06, SD=11,777). Za procenu praktičnih veština korišćen je domen 'Praktične veštine' koji pripada *Adaptive Behavior Assessment System II – ABAS II*. **Rezultati.** Skorovi ostvareni

na subtestovima domena 'Praktične veštine' kretali su se u rangu od ekstremno niskih do prosečnih. Ekstremno niska postignuća zabeležena su na subtestu 'Posao', u rangu ispodprosečnih vrednosti bili su skorovi na subtestovima 'Život u zajednici', 'Život u kući' i 'Zdravlje i bezbednost', a u rangu prosečnih na subtestu *'Briga o sebi'*. Usvojenost praktičnih veština kod osoba sa oštećenjem vida prvenstveno je zavisila od kategorije oštećenja vida, a utvrđena je i njihova značajna povezanost sa porodičnim statusom i radnim iskustvom. **Zaključak.** Osobe sa oštećenjem vida ispoljavaju značajna ograničenja u oblasti praktičnih veština, što ukazuje na potrebu za programima podrške razvoju njihovog nezavisnog funkcionisanja.

Ključne reči: oštećenje vida, slepoća, slabovidost, praktične veštine, adaptivne veštine

Introduction

Persons with vision impairment face many difficulties in different areas of life such as daily living skills, orientation, mobility, leisure activities, social interaction and career choice.[1, 2]

According to the results of some studies, vision impairment greatly affects the development of motor skills, which in turn directly affects the acquisition of the practical skills[3-6] which are relevant for self-care and instrumental daily living skills[7]. Among conceptual and social skills, practical skills represent an integral component of adaptive behavior which is essential for the person's independence and safety.[8-10]

The acquisition and maintain of practical skills is particularly difficult for people with vision impairment, as the learning process requires observation, demonstration, and practice in everyday situations. Children and adults who are blind have a narrower repertoire of acquired practical skills compared to those with low vision.[4,11,12]

Beside confirmed differences related to the level of visual impairment, daily functioning, vitality, and outdoor participation among young adults (18 to 25 years old) with visual impairment significantly are lower than age norm population.[13]

Adults and elderly persons with vision impairment face difficulties with certain practical life skills two to three times more frequently than individuals belonging to the general population. Binns et al. (2012)[14] point out that persons with vision impairment have a more limited set of practical skills, that they use them less often, feel insecure and exhibit greater dependence on the assistance for others. This primarily pertains to those practical skills

which require good eyesight, such as personal hygiene, meal preparation, and movement outside the home (e.g. visits to a physician or shopping).[15,16] Elderly people with vision loss (both partial and total) primarily face difficulties when it comes to independent movement, the use of public transport, completing tasks in their wider surroundings, and regular visits to the doctor,[17-19] but difficulties with regard to household chores are not insignificant either.[20]

Practical skills, like adaptive behavior in general, are affected by an array of personal and environmental factors.[21] This is why the creation of more efficient programs aimed at improving the self-reliance of persons with vision impairment requires a good understanding of the degree to which they succeed in acquiring a wide spectrum of practical adaptive skills and the factors which affect this.[22]

The aim of this study is to determine the level of acquisition of practical adaptive skills among adults with vision impairment in comparison to the norms among the general population, and with regard to the visual status (low vision and blindness), age of vision loss onset, gender, age, living arrangements, education, and employment status.

Methods

Study sample

The participants are members of the Organization of Citizens with Visual Impairment of Belgrade, which is the largest in Serbia, by number of members. The research sample consisted of 127 volunteers with vision impairment of both genders, aged 19-60 (M = 36.06, SD = 11.777). The group included 79 (62.2%) participants who are blind (visual acuity lower than 0.05 (20/400), (according to World Health Organization, 2016[23]) and 48 (37.8%) participants with low vision (visual acuity ranging from 0.05 (20/400) to 0.3 (20/60) according to World Health Organization, 2016[23]). Seventy-nine participants (62.2%) had vision impairment since birth. All participants live in an urban environment, and were involved in some of the rehabilitation programs within the Organization of Citizens with Visual Impairment of Belgrade (computer work, massage training, psycho-social counseling, orientation and mobility training, daily life skills training). According to data were taken from the psycho-social services of the Organization of Citizens with Visual Impairment of Belgrade, all participants exhibit typical intellectual abilities, with no additional impairment.

The research sample was almost exactly balanced with regard to gender (51.2% female; 48.8% male). With regard to living arrangements, 60 (47.2%) subjects lived with their parents, 41 (32.3%) lived with their spouse, and 26 (20.5%) lived alone. The majority had graduated from high school (n = 86, 67.7%) and a third of them had higher education (n = 41, 32.3%). Considering that only 38 (29%) of the respondents were employed at the time of the testing, we took their work experience into consideration as well. More than half of the group confirmed that they had prior work experience (n = 80, 63%).

Instrument and procedure

To assess practical skills as a component of adaptive behavior, we used the *Practical Skills* domain from the *Adaptive Behavior Assessment System II – ABAS II*[24]. This domain consists of five skill areas (*Community Use, Self-Care, Health and Safety, Home Living*, and *Work*), encompassing a total of 116 items. *Community use* assesses using community resources, skills required for shopping and moving around. *Self-care* subtest involves the skills needed for eating, getting dressed, hygiene, face and body care. Activities such as cleaning, doing repairs, housekeeping and preparing food all relate to the *Home Living* subtest. The skills necessary for maintaining health and responding to injury are part of the *Health and Safety* subtest and include following safety rules and general caution. The *Work* subtest is applied only when a participant is employed part-time or full-time. It refers to the skills necessary for successful functioning and keeping a job (completing work tasks, working with a supervisor, keeping up with the work schedule).

The respondents grade a statement by selecting one of the four answers provided: (0) – not applicable, (1) – never, (2) – sometimes, and (3) – always. The answers are added up after each skill area, providing a raw score which is subsequently converted to a standard score based on the chronological age of the participant. The standard score for each separate domain is obtained by adding up all the raw scores from the separate skill areas.

The values of the composite scores in each domain, based on the achievement of American population, are sorted into one of the following categories: *very superior* (130 or more), *superior* (120 - 129), *above average* (110 -119), *average* (90 - 109), *below average* (80 - 89), *borderline* (71 - 79), and *extremely low* (70 or less). The standard scores in skill areas belonging to the *Practical Skills* domain are distributed across the following categories:

superior (15 or more), *above average* (13 - 14), *average* (8 - 12), *below average* (6 - 7), *borderline* (4 - 5), and *extremely low* (3 or less).

The study was conducted during six months in the day time which was the most suitable for each participants, directly, by means of an interview with each participant. Professionals in the Organization assisted in making the initial contacts with the participants. By the phone calls, we contacted 170 persons with vision impairment, 131 of them accepted the participation in the research and for four participants the data was not completed. After acquiring the data relevant for the visual status, age of vision loss onset, gender, age, education, living arrangements, and work experience, the participants were familiarized with the structure of the scale and the answers provided. The statements were read aloud to the participants and their responses were recorded.

The study was approved by the Ethics Committee of the University of Belgrade – Faculty of Special Education and Rehabilitation (No 7/30).

Data analysis

For data analysis was used Statistical Package for Social Science (SPSS, version 19). The achievements of participants with vision impairment in the *Practical Skills* domain are presented in the form of basic descriptive measurements: arithmetic mean, standard deviation, minimum and maximum values. The relationship between the variables was determined using the correlation coefficient. The significance of the differences in the achievements in the applied skill areas in accordance with the defined independent variables was tested through the application of one-way ANOVA and ***multivariate analysis*** of ***variance*** (MANOVA).

Results

Observing the range of values of the standard scores achieved by participants with vision impairment in different skill areas belonging to the *Practical Skills* domain, it is evident that the minimal values range from 0 to 2, which is extremely low in comparison to the norm-referenced score provided by the ABAS II, while the maximum values fall within the above average (13 - 14) to average (8 - 12). In comparison to the norm-referenced skill area scores, the mean values fall within the category of extremely low in the skill area of *Work* and below average in the skill areas of *Community Use* and *Home Living*. The scores achieved in the skill areas of *Health and Safety* and *Self-Care* fall within the average

category (more details in Table 1).

Table 1

Descriptive indicators of the results in the skill areas belonging to the Practical Skills domain

Practical Skills		Min	Max	M	SD
Skill Areas	Community Use	1	13	6.94	2.82
	Home Living	1	13	7.31	2.88
	Health and Safety	1	13	7.65	2.76
	Self-Care	2	12	9.55	2.89
	Work	0	13	2.93	3.97
Domain Composite score	Practical Skills	49	100	79.22	10.64

In comparison to the norm-referenced score, the minimum values of the composite scores achieved by participants with vision impairment in the *Practical Skills* domain are at the below average level, while maximum values are average. The mean value of the score in the *Practical Skills* domain falls within the borderline category (4 - 5) (more details in Table 1).

Table 2 shows intercorrelation between the skill areas belonging to the *Practical Skills* domain (more details in Table 2).

Table 2

Correlation between different skills areas – the Practical Skills domain

		Community Use	Home Living	Health and Safety	Self-Care	Work
Community Use	r		0.475	0.577	0.359	0.042
	p		**0.000**[2]	**0.000**	**0.000**	0.638
Home Living	r	0.475		0.319	0.427	0.159
	p	**0.000**		**0.000**	**0.000**	0.075
Health and Safety	r	0.577	0.319		0.314	0.019

[2]Statistically significant values are presented in **bold.**

	p	**0.000**	**0.000**		**0.000**	0.834
Self-Care	r	0.359	0.427	0.314		0.114
	p	**0.000**	**0.000**	**0.000**		0.201
Work	r	0.042	0.159	0.019	0.114	
	p	0.638	0.075	0.834	0.201	

The relationship between the Practical Skills domain scores and independent variables

Pearson coefficient showed no significant correlation between the age of a respondent and any of the assessed practical skills areas.

The results of variance analysis indicate that there are no statistically significant differences between male and female participants with vision impairment (p = 0.769). The relation analysis between the participants' gender and the achievements in individual skill areas, revealed a significant score difference in favour of the female participants when it comes to the *Home Living skill* area (p = 0.002), while the differences in other skills areas were not statistically significant (from p = 0.142 to p = 0.998).

Analysis of the relationship between visual status and the scores in the area of practical adaptive skills are shown in Table 3.

Table 3

The relationship between the visual status and the score in the Practical Skills domain

Practical Skills		Visual status	Min	Max	M	SD	F(1)	p	η^{2part}
Skill Areas	Community Use	Blindness	1	12	5.53	2.45	87.660	**0.000**	0.412
		Low Vision	5	13	9.25	1.61			
	Home Living	Blindness	1	12	6.44	2.800	22.407	**0.000**	0.152
		Low Vision	3	13	8.75	2.419			
	Health and Safety	Blindness	1	13	6.73	2.520	28.165	**0.000**	0.184
		Low Vision	1	13	9.17	2.478			
	Self-Care	Blindness	2	12	71.44	4.284	5.876	**0.017**	0.045
		Low Vision	6	12	73.40	2.295			
	Work	Blindness	7	39	2.84	3.989	0.116	0.734	0.001

		Low Vision	21	45	3.08	3.978			
Domain Composite scores	Practical Skills	Blindness	49	95	24.14	7.716	58.433	**0.000**	0.319
		Low Vision	70	100	33.98	5.726			

The visual status has the most profound effect on the scores achieved in the Community *Use* skill area ($\eta^{2part} = 0.412$).

No significant relation was found between the age of vision loss onset and the composite score in the *Practical Skills* domain, nor in the individual skill areas.

The level of education of the respondents turned out to be a statistically significant factor only in the *Work* skill area ($F(1) = 31.39$, $p \leq 0.000$). The participants who graduated high school estimate their work skills significantly less favourably ($M = 1.84$) in comparison to those with higher education ($M = 5.22$). The scores of the respondents who graduated high school and those with higher education did not differ significantly in other skill areas, nor in the *Practical Skills* domain.

A similar result was observed through analysis of the relationship between participants' work experience and the practical skills. It was determined that work experience significantly affects only the estimation of work skills included in the *Work* skill area ($F(1) = 33.82$, $p \leq 0.000$). Those with work experience estimated their work skills significantly better ($M = 4.10$) in comparison to those with no work experience ($M = 0.94$). In other skill areas and in the *Practical Skills* domain, no significant differences were found with regard to whether the participants had prior work experience or not.

The analysis of variance also revealed a statistically significant relationship between living arrangements and *Practical Skills* (more details in Table 4).

Table 4

Relationship between living arrangements and the scores in the Practical Skills domain

Practical Skills		Living arrangement	Min	Max	M	SD	F(2)	p	η^2
Skill Areas	Community Use	Family of origin	1	13	6.67	3.245	3.479	**0.034**	0.054
		Alone	4	12	7.50	2.064			

		Married	3	11	6.98	2.554			
	Home Living	Family of origin	2	12	6.48	2.715			
		Alone	5	12	8.69	1.995	6.982	**0.001**	0.102
		Married	1	13	7.66	3.222			
	Health and Safety	Family of origin	1	13	7.15	2.434			
		Alone	1	13	9.04	3.256	6.263	**0.003**	0.092
		Married	1	13	7.51	2.647			
	Self-Care	Family of origin	2	12	8.60	3.010			
		Alone	5	12	10.69	2.241	7.143	**0.001**	0.104
		Married	4	12	10.22	2.669			
	Work	Family of origin	0	11	2.35	3.555			
		Alone	0	13	3.38	3.991	0.611	0.545	0.010
		Married	0	12	3.49	4.484			
Domain composite scores	Practical Skills	Family of origin	7	45	24.72	8.606			
		Alone	20	44	32.62	5.960	13.763	**0.000**	0.183
		Married	13	42	29.44	7.959			

Post hoc analysis revealed statistically significant difference between Domain composite scores of *Practical Skills* was found between the participants who live with their family of origin and those who live alone (Mean Difference = 7.23, p = 0.004). Same analysis of the relationship between living arrangements and individual skill areas of the *Practical Skills* domain identified significant differences in the *Self-Care* skill area between those who live with their families of origin, and both those who live alone (p = 0.007), and those who are married (p = 0.017). In the *Home Living* skill area, there was also a statistically significant difference (p = 0.004) between those who live in their families of origin and those who live alone. Furthermore, it was determined that the self-estimation of successfulness in carrying out household chores differed significantly between participants who live alone and those who live in their family of origin (p = 0.001). The difference between those who live alone and those who live in their family of origin with regard to the degree of acquisition of skills necessary for maintaining personal safety and health is also significant (p = 0.013).

Discussion

The mean value of the score (borderline) in the domain of *Practical Skills* indicates the significant limitations in this area of adaptive behavior according to self-evaluation of the participants with vision impairment, which is in line with the findings of other studies of both children and adolescents[3,5,25] , young adults [13], as well as elderly persons with visual impairment.[16,17] It is possible that, along with the primary impairment, environmental factors also have an impact on the limited acquisition of practical skills, since it is known that young and adult people with vision impairment are not independent in their decision-making or in performing daily tasks such as doing chores and caring for their own health. [6,7,11-13,19,26-28]

Observing the scores of the participants in the skill areas in the domain of *Practical Skills*, it is clear that the lowest scores are seen in the skill area *Work*, which may be connected to the fact that most of the participants are unemployed. The high percentage of unemployment among people with vision impairment may be a result of the poor job market, lack of motivation with regard to searching for work and also the inability to get about independently as a significant reason for leaving an existing job.[29] Among the employed participants, we identified difficulties of access to the workplace and work materials. We should also take into consideration the fact that the limited scope of work for people with vision impairment dictates, to a degree, their choice of profession, which may impact upon their motivation.[30] Also, previous research found that negative attitude toward disability and unfavourable economic situation were additional factors for the low employment rate among people with visual impairment in our society.[31]

The mean score achieved by the participants' self-evaluation in the skill area *Community Use* is also lower than that of the norm for the typical population, and here the greatest difficulties were caused by activities which require good motor skills and mobility. The *Orientation & Mobility* training is not available for all people with blindness in Serbia, especially those who lost vision in adulthood, therefore it could be one of the reasons for the lower score in this skills area. The results of other studies indicate that only 30 - 45% of adults with vision impairment are active in their communities.[20,32] Authors point out that most elderly persons with vision impairment spend their time at home without going out or performing other daily activities in their community [33], which is in accordance with our observations from the conversations we had with our participants. The studies that have

focused on daily functioning in adults and elderly people who lost their sight in adulthood indicate that they have difficulties performing activities such as self-care, going to the bank or a social gathering, shopping and using public transport independently.[17,18]

The participants with vision impairment had the highest average score in the domain of practical skills in the skill area *Self-Care* which corroborates the results of previous studies.[18,19,26] Qualitative analysis has shown that the participants have trouble performing tasks dependent on good vision and established aesthetic criteria. Although most claim to successfully care for their clothes, some believe that their attire is not in accordance with social norms, and so they rely on help from family members or friends in choosing their clothing.

The results of previous studies show that vision impairment negatively affects daily functioning at home.[12,16,34] The average scores of our participants in the skill area of *Home Living* and *Health and Safety* are in the category of below average compared to the norm for the typical population. The parental overprotection of children with vision impairment in their early years can lead to difficulties in performing household tasks.[35] As they grow up the demands upon them increase, and regardless of visual status and adults are expected to find a way and create strategies for performing household tasks independently due to new living arrangements.[33] In our cultural and social environment, families tend to overprotect even adult people with visual impairment, especially those who lost vision later in life. The family members' expectations regarding functioning and independence of people with visual impairment are quite low usually.

Most of our participants are able to care for their own safety and maintain a high level of caution, which is to be expected given the higher risk of injury due to the difficulty or impossibility of monitoring visually the environment and events occurring within it. In the skill area of *Health and Safety*, many difficulties with caring for their health were observed, as was a general divergence between two groups of participants in this area. The interviews showed that one group exhibits great uneasiness and dependence on others, while the second group, in contrast, tends to neglect their health. It is possible that medical treatment outcomes sometimes result in a loss of faith in public health institutions or in the development of resistance towards medical services due to the nature of treatment and frequent hospitalization.[36]

Taking into consideration the dynamic of the acquisition, maintenance and weakening of practical skills through life, and the results of other studies,[17,37] the absence of a relation between age and practical skills is somewhat surprising. As the age range (from 19 to 60 years) was encompassed in this research, we could have expected that the young adult persons acquired practical skills with more success than older participants, since motor skills and physical activity decreased by the age.[3,5,17,28,34,37,38] It is likely this can be explained by the stronger influence of other factors such as visual status, living arrangements, etc.

Comparison of the results of female and male participants shows a significant difference only in the domain of household tasks, which may be attributed to cultural gender roles in the country.[39,40] Female participants did not exhibit greater care for their health, hygiene or appearance, even though some authors consider them more responsible and more successful in these areas of practical skills.[41]

In accordance with the results of previous studies, [17,18,42] it has been established that persons with low vision acquire practical skills with more success than persons who are blind. The statistically significant differences in favour of the participants with low vision were established in all skill areas in the domain of *Practical Skills*, except in the skill area *Work.* The results of other studies also confirm that for most persons who are blind, daily living activities, as well as leisure, is in fact a bigger difficulty than for people with low vision.[2,7,15,16]

Although participants with low vision express more doubts in their success with completing household chores, the results in the skill area *Home Living* tell us that persons who are blind perform significantly fewer tasks in the home and that they require help from family members or friends, as was established in previous study.[35] It was noted that good orientation in a familiar space and adaptation may help the person with blindness to be more independent in performing household tasks and to feel safer.[37]

The significantly lower results of the respondents who are blind in the skill area *Health and Safety* may be attributed to difficulties in caring for their health (e.g. going to the doctor, getting information on their health condition and taking prescribed medication)[43] and the decreased safety in open spaces due to a lack of visual information, which can cause them to overlook dangerous situations or obstacles and fail to protect themselves adequately.[35,38]

The results in the skill area *Self-Care* indicate that persons who are blind have significantly more difficulties in maintaining personal hygiene and choosing appropriate clothing than persons with low vision, which confirms the findings of earlier studies,[7,19] but is not in accordance with Langelaan et al. (2007)[18] who claim that this visual status does not significantly affect the area of self-care.

The age of vision loss onset may also influence the acquisition and practice of acquired practical skills. Partial or complete loss of vision in adulthood often leads to functional difficulties because the person is unable to perform practical tasks for which they relied on their vision before the impairment.[19,38] One of the greatest difficulties for persons who lose their sight in adulthood is the mobility decrease, which influences their engagement in their environment. Nevertheless, our research detected no significant differences between participants with congenital and acquired vision impairment with regard to acquisition of practical skills. Engaging in the practical aspects of life may decrease after vision loss, while participants who have congenital vision impairment have never acquired practical skills in optimal level.

A significant relationship between practical skills and the level of education, as well as work experience was not found, which brings into question the assumption that, for persons with vision impairment, independence in daily tasks is a precondition to developing a career.

Analyzing the influence of living arrangements, it was found that respondents with a vision impairment who live alone have acquired better practical skills than the other two groups of participants (who lives in family of origin/parents and married participants), with the difference being statistically significant when compared to the group of participants who live with their parents. It is possible that, in accordance with the opinions of some authors, participants who experienced independence during childhood had the opportunity to acquire practical skills and a sufficient level of self-confidence to begin independent life.[44,45] In accordance with our results, Desrosiers et al. (2009)[33] did not find any differences in the level of practical skills attainment between persons with vision impairment who are married and those who are not.

Although family life requires a higher degree of responsibility and engagement in the practical aspect of life, the participants who are married have significantly lower results in the skill area *Self-Care* compared to those who live alone, which may be attributed to the

possibility that this group of participants are protected by their spouses. Other authors point out that spouse and other family members often take on health care, household chores and grocery shopping instead persons with vision impairment.[27]

The limitations of this study include the fact that many participants (n=47, 37%) did not have any work experience which may have influenced the achievements in the *Work* subtest. Also, some quality of life parameters, which may have been significant for the participants' achievements in the *Practical skills* domain, were not included.

Conclusion

Based on the analysis of the results we can conclude that adults with vision impairment exhibit significant limitations in the domain of practical adaptive skills. The scores achieved in the skill areas in the *Practical Skills* domain range from extremely low to average. Extremely low scores were detected in the *Work* skill area, for the skill areas of *Community Use*, *Home Living* and *Health and Safety*, the scores were below average, while average scores were noted in the *Self-Care* skill area.

The study showed that the degree of practical skill acquisition among persons with vision impairment depends primarily on the visual status, but a significant relationship with living arrangements and work experience was also established.

In summary these results allow us to make recommendations for support services. It is necessary to establish specialized programs of instruction in everyday activities for children and adults who are blind, and for persons with low vision to make adaptations in the home, the environment and workplace. The training for the use of aids should become part of clinical practice in acquired vision impairments, and enable more effective and motivated performance of practical skills. It is of particular importance for the parents of children with vision impairment to be made aware of the importance of providing their children with opportunities to acquire practical skills since they are among the preconditions of future independence.

Funding

This study was supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia (Contract No 451-03-68/2022-14).

Declaration of Competing Interest

There is none of the conflict of interests.

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Received on March 28, 2021.
Revised on October 15, 2022.
Accepted December 5, 2022.
Online First December, 2022.