

ACCESS TO REHABILITATION SERVICES FOR ADULTS WITH LATE-ONSET VISUAL IMPAIRMENT

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Received: 30.5.2017.

Accepted: 25.10.2017.

Original scientific paper

UDK: 376.1-056.262

Abstract: *Rehabilitation services improve the quality of life of people with visual impairment. Therefore, urgent and prompt rehabilitation intervention is important in helping adults adapt to vision loss faster; especially those with late-onset visual impairment. The goal of this research is to determine differences in the access to rehabilitation services after vision loss (occurrence of a moderate or severe visual impairment, including blindness) between groups differing in the gradualness of vision loss, age when vision loss occurred and gender. Differences in the gradualness of vision loss between groups with respect to access to rehabilitation services were also explored. Information on adults with late-onset visual impairment who were active users of rehabilitation services from 2011 to 2016 was gathered (N= 42, 18F, 24M) from secondary data sources at the Centre for Education and Training "Vinko Bek" in Zagreb, Croatia. The results demonstrated statistically significant differences in access to rehabilitation services between groups who gradually lost their vision within 15 years from the initial symptoms and those who lost it over a period longer than 15 years, between groups whose vision loss occurred before and after 20 years of age, but not between men and women. Gradualness of vision loss differed between groups accessing rehabilitation services up to 10 years and more than 10 years. These results indicate that critical groups of people with visual impairment are not receiving prompt rehabilitation services that could prevent lowered quality of life. As the prevalence of visual impairment with age increases, so does the issue of quality of life for people with late-onset visual impairment. Further research is necessary in determining factors related to rehabilitation service access for adults with late-onset visual impairment.*

Keywords: *late-onset visual impairment, access to rehabilitation services, gradual vision loss*

INTRODUCTION

Research shows that the prevalence of visual impairment is growing and with its growth, it also brings a larger burden on society and demand for services (Lam, 2014; Jose et al., 2016; Adam & Pickering, 2007). For the future, an increase by 20% in the population of people with visual impairment is expected between 2010 and 2020, and an increase of 200-300% in demands for associated services, based on data extrapolated from current statistics from hospital and general practitioner records on the number of people with visual impairment and the services they use. These increases should be accompanied by an increase in the capacity of professional service providers and a redistribution of tasks among them (Keunen et al., 2011). If we take into account the issues of overall

increasing population longevity, there is an even greater social and financial pressure on society (Robillard & Overbury, 2006; Binns et al., 2012). To prevent potential problems for service providers regarding such rapid growth, there is a need for cooperation among all service providers, civil society, medical staff, and government policy makers (Harper et al., 2006; Southall & Wittich, 2012). All ophthalmologists and optometrists should be included in the process of referrals to rehabilitation services (Leat, 2016), especially considering predictions of an increase by 100% in the population of adults with visual impairment over the next 20 years due to population aging and the increase in the number of older adults with age-related visual impairment (Harper et al., 2006). In order to cope with the potential problems of population growth, it is necessary for a successful plan not only to

take into account the most critical groups of persons with visual impairment and those who do not receive services in a timely manner, but also to develop preventive actions. These actions could have a massive impact since prevention could be useful in 80% of visual impairments (Pascolini & Mariotti, 2012). Only by relying on scientific facts and research about access to service is it possible to create a developmental strategy that will truly meet the needs of all people with visual impairment.

Nyman et al. (2012) believe that there are not enough services for those with visual impairment, especially to meet the emotional and psychosocial needs of those recently diagnosed, and they recommend the development of services such as counselling and support with emphasis on the importance of referral to these services. To meet the needs of the population with visual impairment, it is also necessary to develop peer support services and counselling to improve the quality of life of people with visual impairment (Harper et al., 2006).

But the mere existence of a service does not mean that it will be used. Accessibility research shows that there are differences in services that experts claim are offered and services that users declare they use (Gillespie-Gallery et al., 2012). In the study of the mismatch between identified needs for services and the use of services itself, it has been concluded that clear recommendations for people with visual impairment and referral contribute most to the use of services (Matti et al., 2011), and this may lie in the fact that the staff of service providers are not entirely sure who is in charge of the service, and this leads to the duplication of service types (Gillespie-Gallery et al., 2012). Lam et al. (2015) claim that only 10% of patients receive a written referral to a vision impairment organisation from optometrists and ophthalmologists. That low percentage is explained by lack of knowledge among optometrists, lack of education about visual assessment, poor communication with other service providers in the visual impairment sector and lack of equipment, time and funding. Another study shows that the lack of knowledge about referral criteria and lack of information about possible services is the main reason for poor service uptake, which could be solved by educational campaigns for ophthalmologists (Adam & Pickering, 2007).

Failure to recognise the need for services and the lack of recognition of their essential importance for people with visual impairment is common among clinical experts, who behave significantly differently from rehabilitation professionals, who more often recognise the need for emotional support and refer clients to services (Gillespie-Gallery et al., 2012). Active provision of information about the possibilities of rehabilitation is recommended to solve the problem of an especially large number of elderly people with visual impairment who do not receive adequate rehabilitation for their condition (Laitinen et al., 2008).

In many countries services are not available, and in those that have them, it is estimated that only 5-10 percent of the visually impaired access rehabilitation (Ryan, 2014; Pascolini et al., 2004), with especially low service uptake for people with visual impairment in developing countries currently (Jose et al., 2016). Another study also suggests that a relatively small number of people with visual impairment access rehabilitation services, and the worrying results are that it is only 20% of those who would benefit from these rehabilitation services (Gresset & Baumgarten, 2002). The benefit of rehabilitation is wide. The literature confirms that it improves functional ability of people with visual impairment (Binns et al., 2012). Rehabilitation of adults with visual impairment that includes family members in the rehabilitation process provides better social and personal autonomy for the user and better quality of life (Aciem & Mazzotta, 2013). It not only increases social participation, but also reduces dependence on the family and reduces costs associated with additional disabilities. But in spite of the high value of rehabilitation services and generally high opinions about them, only a very small number of people actually access rehabilitation services (Southall & Wittich, 2008).

OBJECTIVES AND HYPOTHESES

The aim of this paper was to examine the differences in access to rehabilitation services of people with late-onset visual impairment after the occurrence of visual impairment, with regard to certain demographic characteristics such as age at the time of visual impairment and gender, as well as with regard to the characteristics of the impair-

ment itself, such as duration of the impairment progression. Based on these objectives, the variables *access to rehabilitation services*, *gradualness of vision loss*, *age at time of vision loss* and *gender* were defined. Two basic hypotheses were set in accordance with the objectives:

- H1: There are statistically significant differences in access to rehabilitation services after vision loss between groups who lost vision gradually over shorter and longer periods of time, between older and younger adults, and between men and women.
- H2: There are statistically significant differences in the gradualness of vision loss between groups accessing rehabilitation services earlier or later after vision loss.

METHOD

Participants

The sample included 42 adults with late-onset visual impairment, of whom 18 were women and 24 men. All were users of rehabilitation services at the Department for Psychosocial Rehabilitation for adults with late-onset visual impairment at the Centre for Training and Education "Vinko Bek" in Croatia. Their rehabilitation service included a minimum of two rehabilitation programmes offered by the service provider (orientation and mobility programme, daily living skills, low-vision training, typhlotechnic training, Braille learning and psychology support programme). The sample consisted of adults involved in rehabilitation programmes during a period of 6 years (2011-2017) without regard to the place of service provision. The sample did not include people from category 0 as defined by the World Health Organisation and the International Classification of Diseases ICD-10 (version 2016, revised). That category indicates no impairment or mild visual impairment with visual acuity $>6/18$ with correction. In the ICD-10 classification, the term "low vision" has been replaced by category 1 and 2 of visual impairment, and it implies moderate or severe visual impairment of visual acuity $<6/18$ with correction; while categories 3, 4 and 5 refer to visual impairment of visual acuity $\leq 1/20$ with correction (Version: 2016.). The sample included people with moderate

and severe visual impairment, including blindness, with a visual acuity of $\leq 6/18$ with correction, which was not congenital but rather occurred and/or progressed in adult life. The sample did not include people with congenital visual impairment or people who previously used rehabilitation services for minors provided at the Centre "Vinko Bek". The sample did include people with congenital mild visual impairment (category 0) whose visual impairment progressed later in life and led to vision loss (category >0).

Data collection

Given that no direct involvement of service users was needed for this research, data were collected from secondary sources on service users made available by the service provider. For this purpose, written consent from the Director of the Centre for Education and Training "Vinko Bek" was requested in order to gain access and collect necessary information on users from documentation owned by the Department for Psychosocial Rehabilitation for adults with late-onset visual impairment. Data were collected in tabular form in accord with personal data protection laws and policies.

Variables

The variables measured were: access to rehabilitation services, age at time of vision loss, gender, and gradualness of vision loss.

Access to rehabilitation services refers to the time between occurrence of visual impairment (final/latest progression of vision loss) and access to rehabilitation services, which starts with assessment by a professional team for provision of specific programmes. The start time of programme implementation was not taken into account because that depended on the capacity of the provider and the demand for services at a specific point in time. The initial team assessment, after which a proposal for inclusion is given depending on the providers' capabilities, was considered a more realistic indicator of access to rehabilitation services, since obtaining this assessment depended more on the user's action and was done shortly after initial contact with the service provider. Study participants

were grouped depending on whether they accessed these services within 10 years or after 10 years of vision loss. The group of those who accessed services within 10 years was also subdivided into two groups: those who accessed services within 5 years or those who accessed them in 6-10 years.

Age at time of vision loss refers to the age of the service user (in years) at the time of vision loss or last deterioration of vision (progression of vision loss), resulting in an even greater loss of vision within the visual impairment category (moderate or severe visual impairment, including blindness, with visual acuity $\leq 6/18$ with correction). Study participants were grouped depending on whether they lost vision before or after the age of 20 years in order to capture the transition from high school to the continuation of education or the seeking of first employment, which is considered a possible contributor to earlier access to rehabilitation services.

Gradualness of vision loss refers to the time period (in years) of gradual visual impairment from initial symptoms to final/latest vision loss. In cases where the vision loss did not occur gradually and was the result of a trauma or a one-time deterioration, the value 0 was given to describe the gradualness of vision loss. Study participants were grouped depending on whether they lost vision within or after 15 years of initial symptoms in order to divide the observed range of gradualness of vision loss in half.

Data analysis

The results gathered were processed using descriptive and inferential statistics. The variables were described and then tested with Shapiro-Wilks test for normality of the distribution. Appropriate non-parametric inferential procedures were then applied. The normality of data distribution was tested using the Shapiro-Wilks test, which indicated the need to use non-parametric Mann-Whitney and Kruskal-Wallis tests. Statistically significant differences between the two groups were tested using the non-parametric Mann-Whitney test, while for the differences among three groups, the non-parametric Kruskal-Wallis test was used. For relations and differences between the individual

groups, which were statistically significant when performing the Kruskal-Wallis test, the Mann-Whitney test was done.

RESULTS

The sample consisted of 18 women (42.9%) and 24 men (57.1%) out of a total of 42. The average time of gradual vision loss was 8.69 years. The sample included people with visual impairment who momentarily lost their vision and were assigned with a minimum value of 0 on this variable, and the longest time of progression of impairment was 46 years (Table 1). Gradualness of vision loss for 97.6% of participants ranged from 0 to 27 years, and the extreme result of 46 years was the only value outside these 97.6%. About 47.5% of service users lost their vision within 5 years of initial symptoms, and 81% in the period of 15 years after initial symptoms (Figure 1). The average age at the time of vision loss was 32 years (Figure 2), with the youngest participant suffering vision loss at the age of 15 (rehabilitation service was used after the legal age of 18), and the oldest at the age of 60 (Table 1). The average period of access to rehabilitation services was 5.89 years, ranging from 0 for those who had undergone rehabilitation services within the first year after vision loss, to 37 years after vision loss or development of the last symptoms (Table 1). The result of 37 years was also an extreme result and the only one outside of the 97.6% of all results that described access to services up to 25 years. Two-fifths (40.5%) of participants who accessed services did so within 2 years after vision loss, while 73.2% did so within 8 years after vision loss (Figure 3). However, in this small sample only the variable of gradualness of vision loss had a normal distribution ($p = .108$; Table 2).

Groups with different gradualness of vision loss were compared in terms of access to rehabilitation services. Two groups were created on the gradualness variable: a group that lost vision within 15 years of initial symptoms ($n = 34$, $mean\ rank = 18.93$), and a group that experienced vision loss over a period longer than 15 years ($n = 8$, $mean\ rank = 32.44$). Distribution tests did not show normal distribution for both groups, so the Mann-Whitney test was used and it showed a statistically signifi-

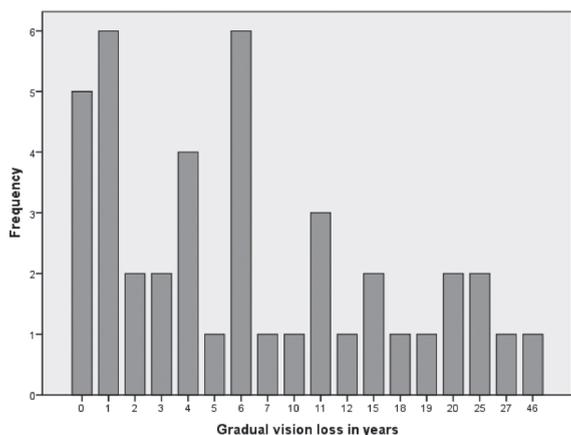


Figure 1. Gradualness of vision loss

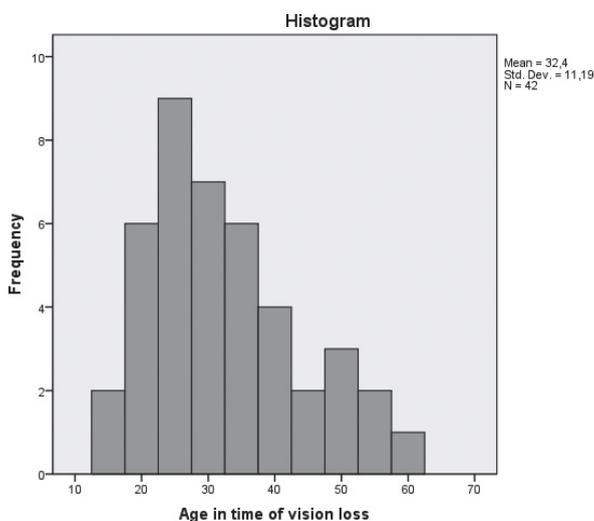


Figure 2. Age at time of vision loss

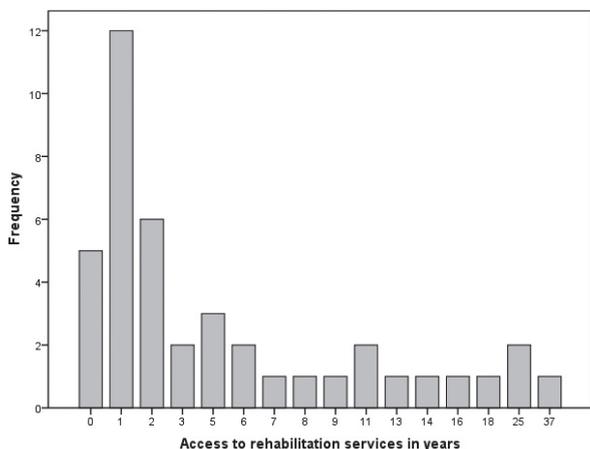


Figure 3. Access to rehabilitation services

cant difference ($U = 48.5, p = .004$) between them. Therefore, we can claim that those who lost their

Table 1. Descriptive statistics for the variables access to rehabilitation services, gradualness of vision loss, and age at time of vision loss

Parameter	Access to rehabilitation services	Gradualness of vision loss	Age at time of vision loss
n	Valid	42	42
	Missing	0	0
Mean	5.98	8.69	32.40
Median	2.00	6.00	31.00
Std. Deviation	8.116	9.692	11.190
Variance	65.877	93.926	125.222
Range	37	46	45
Minimum	0	0	15
Maximum	37	46	60

Table 2. Tests of distribution normality for the variables access to rehabilitation services, gradualness of vision loss and age at time of vision loss

Variable	Shapiro-Wilk's test		
	Statistic	df	Sig.
Access to rehabilitation services	.718	42	.000
Gradual vision loss	.807	42	.000
Age in time of vision loss	.956	42	.108

vision over a longer period of time began to access services later after vision loss (Table 3). Access to rehabilitation services was also compared between a group of service users who lost vision before the age of 20 years ($n = 6$), and a group of service users who lost vision after 20 years of age ($n = 36$). The Mann-Whitney U test was used for testing differences, since the normal distribution test did not show a normal distribution for both groups (Table 4). There was a statistically significant difference ($U = 50.5, p = .036$) in access to rehabilitation services between those who lost vision before the age 20 (mean rank = 31.08) and those who lost vision after 20 years of age (mean rank = 19.90).

Access to rehabilitation services was also compared between genders. Distribution was not normal for both groups, so the Mann-Whitney U test was used and it showed no difference between genders ($U = 209, p = .857$). Hypothesis H1 stating that there would be a statistically significant difference between genders in the time of access to rehabilitation services was rejected (Table 5). On average, women accessed rehabilitation services after 5.83 years ($SD = 7.44$) and men accessed rehabil-

Table 3. Mann-Whitney U test comparing access to rehabilitation services between the gradualness of vision loss group ≤ 15 yr with the gradualness of vision loss group >15 yr

	Access to rehabilitation services
Mann-Whitney U	48.500
Wilcoxon W	643.500
Z	-2.843
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.004a

Table 4. Mann-Whitney U test comparing access to rehabilitation services between the age at time of vision loss group ≤ 20 yr and the age at time of vision loss group >20 yr

	Access to rehabilitation services
Mann-Whitney U	50.500
Wilcoxon W	716.500
Z	-2.097
Asymp. Sig. (2-tailed)	.036
Exact Sig. [2*(1-tailed Sig.)]	.036a

itation services after 6.08 years ($SD = 8.75$). To compare access to rehabilitation services between groups showing different gradualness of vision loss, groups were created for those who accessed services within 10 years ($n = 33$, mean rank = 19.24) and those who accessed services after 10 years ($n = 9$, mean rank = 29.04). The Mann-Whitney U test was used because distribution was not normal, and the test showed a statistically significant difference ($U = 74$, $p = .022$) between these two groups (Table 6). We can conclude that the respondents whose vision loss occurred over a longer period of time began to access rehabilitation services later after vision loss.

The results showed a difference between the groups who accessed services within and beyond 10 years after vision loss. In order to more specifically determine the critical time of access to services after vision loss, three groups were compared in terms of gradualness of vision loss: those who accessed services within 5 years ($n = 28$), in 6-10 years ($n=5$) and more than 10 years ($n=9$) after vision loss. None of the three groups had a normal distribution on this variable, and therefore the Kruskal-Wallis test was used to test statistically

Table 5. Mann-Whitney U test comparing access to rehabilitation services between genders

	Access to rehabilitation services
Mann-Whitney U	209.000
Wilcoxon W	509.000
Z	-.180
Asymp. Sig. (2-tailed)	.857

Table 6. Mann-Whitney U test comparing gradualness of vision loss between groups who accessed rehabilitation services within or beyond 10 years after vision loss

	Gradualness of vision loss
Mann-Whitney U	74.000
Wilcoxon W	635.000
Z	-2.294
Asymp. Sig. (2-tailed)	.022
Exact Sig. [2*(1-tailed Sig.)]	.021a

Table 7. Kruskal-Wallis test for differences in gradualness of vision loss among groups who accessed services within 5 years, 6-10 years and over 10 years

	Gradualness of vision loss
Chi-square	7.450
df	2
Asymp. Sig.	.024

Table 8. Mann-Whitney U test for differences in gradualness of vision loss between groups who accessed services within 5 years and in 6-10 years

	Gradualness of vision loss
Mann-Whitney U	38.000
Wilcoxon W	53.000
Z	-1.615
Asymp. Sig. (2-tailed)	.106
Exact Sig. [2*(1-tailed Sig.)]	.116a

significant differences between groups, and they were demonstrated [$H(2)=7.45$, $p = .24$; Table 7]. The Mann-Whitney U test was then used to test the differences among all groups (Tables 8-10). The Mann-Whitney U test showed no statistically significant difference in gradualness of vision loss between the groups that had accessed services within 5 years and in 6-10 years ($U = 38$, $p = .106$; Table 8). There was a statistically significant difference in gradualness of vision loss ($U = 6$, $p = .027$)

Table 9. Mann-Whitney U test for differences in gradualness of vision loss between groups who accessed services 6-10 and after 10 years

	Gradualness of vision loss
Mann-Whitney U	6.000
Wilcoxon W	21.000
Z	-2.215
Asymp. Sig. (2-tailed)	.027
Exact Sig. [2*(1-tailed Sig.)]	.029a

Table 10. Mann-Whitney U test for differences in gradualness of vision loss between groups who accessed services within 5 and after 10 years

	Gradualness of vision loss
Mann-Whitney U	68.000
Wilcoxon W	474.000
Z	-2.062
Asymp. Sig. (2-tailed)	.039
Exact Sig. [2*(1-tailed Sig.)]	.040a

between the group who accessed services in 6-10 years and the group who accessed services after 10 years (Table 9). A statistically significant difference in gradualness of vision loss ($U = 68$, $p = .039$) was also found between the group that accessed services within 5 years and the group who accessed them after 10 years (Table 10).

DISCUSSION

Statistical analyses showed statistically significant differences in access to rehabilitation services between groups who gradually lost their vision within 15 years from the initial symptoms and those who lost it over a period longer than 15 years, as well as between groups whose vision loss occurred before 20 and after the age of 20. No differences on this variable were found between genders. Gradualness of vision loss in groups who accessed rehabilitation services within 5 years, 6-10 years and within 10 years, differed from the gradualness in the group who accessed rehabilitation services after 10 years.

The results indicate that gradual vision loss over 15 years and loss of vision before the age of 20 can be used as indicators of later access to rehabilitation services. Those whose impairment developed gradually over a longer period of time, access rehabilitation services later than those who

lost vision more rapidly. This can be explained as gradual adaptation to visual impairment and development of coping strategies as the vision gradually deteriorates, while in other cases where visual impairment quickly progresses, fewer opportunities for gradual adaptation exist, which results in faster seeking of rehabilitation services.

It is concerning that the delay before accessing services is such a long period of time. The results point to the fact that a long time of access can reflect a large number of barriers, perhaps including unclear referrals to service (Matti et. al., 2011), with only 10% of patients getting a written referral to an organisation for people with visual impairment (Lam, 2013).

When interpreting results, the fact that rehabilitation services from the provider in this research began only 25 years ago should be considered in the outlying case of our participant who accessed services 37 years after vision loss; previously, sporadic rehabilitation services in the form of courses were provided through different providers for adults in Croatia. This resulted in a small sample with high variability, which cannot represent the entire population of adult people with late-onset visual impairment, because it did not cover all the services or programmes from other institutions or civil society organisations available in Croatia. The real number of people with visual impairment who still have not used rehabilitation services is unknown; therefore, the number describing the access to rehabilitation services reflects only those who chose to access them. It is not established how many people do not access the services and how many are included in similar services. Studies show different percentages of service non-users. Mwilambwe et. al. (2009) described awareness and use of low-vision rehabilitation services in Montreal among hospital patients in ophthalmology departments. They claim that 71% of low-vision patients were aware of rehabilitation, and 81% of these aware patients used rehabilitation services, which represents a high rate. Ethnicity and different first language are also factors of lowered awareness. For those with less severe vision loss, awareness and usage can be improved because they are less likely to use services and know about them. A study by Matti et

al. (2011) has shown that those with better visual acuity access service less. Those with lower visual acuity had higher referrals and service usage. Also those who used services were impaired for a statistically significant longer period of time than those who were unaware of services. No statistically significant difference in age was found between those who attended the initial assessment for rehabilitation services after referral and those who did not. Higher education was one of the predictors of rehabilitation awareness and usage. Greater independence resulted in lowered awareness and usage of rehabilitation services. Additional health problems and a perception among patients that services are unnecessary and unhelpful are major reasons for non-uptake of rehabilitation services (Matti et al., 2011). Other reasons for refusing service are general good functioning, avoidance of the services with the word "blind" in the name of the providers (Southall & Wittich, 2008), transportation problems and remote location of services (CNIB, 2005).

Overbury & Wittich (2011) agree about education being positively correlated with access, as well as lower visual acuity, diagnosis and ethnicity. Psychosocial characteristics and ability to function in daily life and among society, as well as time elapsed after the onset of vision loss should be taken into account, in order to eliminate barriers to rehabilitation services access (Southall & Wittich, 2012). Overbury & Wittich (2011) report a 54% awareness about services, 13% unawareness of services and no referral to services, and 13% awareness with rejection of service among an urban middle class population of mostly highly educated people. The rejection rate is higher than the 3% that other studies state (Matti et al., 2011). Out of those who were aware of rehabilitation services, only half of them eventually used them. The time necessary for them to access service was not described nor is it known when this follow up to gain perspective into service access was performed after initial referral. Other studies containing that information were not found, since the focus of most studies seems to be on the barriers of access and not the characteristics of the access itself.

A belief that people with visual impairment would use services if they were aware of them is a

common belief among rehabilitation professionals, but it is only true in half of the cases where full knowledge is present along with complete referral (Overbury & Wittich, 2011). In light of this finding, the long time of service access in the present study can be explained by the lack of a formal obligatory referral process from the health care system to rehabilitation services that are currently given in the social welfare system in Croatia based on the personal request of the patients/future service users. But, in any case, that cannot be the ultimate reason for such results. Research suggests that ophthalmologists who regularly refer patients to rehabilitation services tend to do so early in the visual impairment development process, while those who occasionally refer patients tend to do so later in the process (Overbury & Wittich, 2011), but this does not seem to apply in the present study. Early referral and knowledge about services are both crucial for giving people access to services. In this way, they have the option to choose themselves if the service is wanted or not, instead of having someone else making that decision for them without them having any knowledge about the services.

CONCLUSION

The results of this research identify critical groups of people with visual impairment who are not receiving prompt rehabilitation services that would prevent lowered quality of life. They are persons whose visual impairment developed over a period of time longer than 15 years and those who developed visual impairment before the age of 20. As the prevalence of visual impairment with time increases, so does the issue of quality of life for people with late-onset visual impairment. With the increase in visual impairment, increase in demand for service providers will also occur (Lam, 2013). Preparation for this increase in capacity of services providers is crucial for meeting the needs of people with visual impairment. Therefore it is crucial to intervene with people with initial symptoms indicating a progressive condition that could result in visual impairment by referring and informing them about the possibilities and benefits of rehabilitation services as early as possible. This may help them improve their quality of life faster by

providing them with support for their needs, since it is proven that rehabilitation improves all aspects of visual function in individuals who participated in a rehabilitation programme (Stelmack et. al., 2008). Access to rehabilitation services early in the disease development process could be achieved by optimising referral from ophthalmologists (Adam

& Pickering, 2007). Further research is necessary in determining other factors related to rehabilitation service access for adults with late-onset visual impairment in regards to accessing services in Croatia.

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PRISTUP REHABILITACIJSKIM USLUGAMA ZA KASNIJE OSLIJEPJELE ODRASLE OSOBE

Sažetak: Pravovremena intervencija nakon gubitka vida ključna je za prilagodbu na nastalo oštećenje vida i kvalitetu života slijepih osoba. Cilj ovog istraživanja bio je utvrditi postoje li razlike u pristupu rehabilitacijskim uslugama nakon gubitka vida prema dobi kod koje je nastao gubitak vida, duljini trajanja postepenog gubitka vida te spolu. Sudionici istraživanja bile su kasnije oslijepjele odrasle osobe (N =42, 18 žena, 24 muškarca) uključene u rehabilitacijske programe između 2011. i 2016. godine na Odjelu za psihosocijalnu rehabilitaciju kasnije oslijepjelih odraslih osoba Centra za odgoj i obrazovanje "Vinko Bek", iz čijih su sekundarnih izvora podataka prikupljeni podaci za ovo istraživanje. Rezultati pokazuju da je pristup rehabilitacijskim uslugama raniji kod osoba koje su postepeno, kroz period kraći od 15 godina, gubile vid u odnosu na one kod kojih je postepeni gubitak vida trajao duže od 15 godina. Pristup je također raniji kod osoba koje su izgubile vid prije 20-e godine života u odnosu na one koji su ga izgubile nakon te dobi. Trajanje postepenog gubitka vida kraće je kod osoba koje su do 10 godina nakon gubitka vida pristupile rehabilitacijskim uslugama, u odnosu na one koje su pristupile rehabilitacijskim uslugama 10 i više godina nakon gubitka vida. Muškarci i žene ne razlikuju se u pristupu rehabilitacijskim uslugama. Rezultati ovog istraživanja ukazuju na kritičnu skupinu kasnije oslijepjelih osoba koja ne dobiva pravovremeno rehabilitacijske usluge, a to su oni koji su izgubili vid nakon 20-te godine života i oni kod kojih je nastanak oštećenja bio manje postepen. Potrebna su daljnja istraživanja kojima bi se utvrdili čimbenici povezani s pristupom rehabilitacijskim uslugama, a time i s kvalitetom života kasnije oslijepjelih odraslih osoba.

Ključne riječi: kasnije oslijepjeli, pristup rehabilitacijskim uslugama, postepeni gubitak vida