



Estimation of loneliness in students with visual impairments

Procena usamljenosti studenata sa oštećenjem vida

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Abstract

Background/Aim. Loneliness is becoming more frequent, especially in young people. Some authors believe that visual impairments increase the risk of loneliness. Empirical data on its manifestation in persons with visual impairments are contradictory. The aim of this research was to determine the degree of loneliness in students with visual impairments and their peers from general population. **Methods.** A comparative research was conducted on a sample consisting of 36 visually impaired students and 101 students without visual impairments (control group). Students with visual impairments were divided into 3 subgroups with regard to the degree of visual impairments (students with low vision, legally blind, and totally blind students). University of California Los Angeles Loneliness Scale (which assesses the general loneliness) and Social and Emotional Loneliness Scale (which assesses social loneliness, family loneliness, and romantic loneliness) were used in our investigation. **Results.** The results showed that the general loneliness was significantly lower in the group of students with visual impairments than in the control group ($t = 2.121$; $p = 0.036$). There were no significant differences in the Social and Emotional Loneliness Scale between the group with visual impairments and the control group. No significant differences were determined in the level of loneliness among students with a different degree of visual impairments. There are significant differences in the manifestation level of social loneliness, family loneliness, and romantic loneliness (Wilk's lambda = 0.604; $p \leq 0.000$) in the group of students with visual impairments. Romantic loneliness was manifested the most, followed by social loneliness, while family loneliness was the least manifested. **Conclusion.** With regard to the results of our research, visual impairment alone is not a crucial factor of loneliness in students with visual impairments. Further studies on protective factors of loneliness can contribute to its prevention in young people with visual impairments.

Key words:

visual disorders; vision, low; students; loneliness; surveys and questionnaires.

Apstrakt

Uvod/Cilj. Usamljenost je sve učestalija, posebno u populaciji mladih. Neki autori smatraju da oštećenje vida povećava rizik od usamljenosti. Empirijski podaci o ispoljenosti kod osoba sa oštećenjem vida su kontradiktorni. Cilj našeg istraživanja bio je utvrđivanje stepena usamljenosti kod studenata sa oštećenjem vida i njihovih vršnjaka iz opšte populacije. **Metode.** Komparativno istraživanje je obavljeno na uzorku koji je činilo 36 studenata sa oštećenjem vida i 101 studenata bez oštećenja vida (kontrolna grupa). Na osnovu stepena oštećenja vida, studenti sa oštećenjem vida bili su podeljeni u tri podgrupe (slabovidni, praktično slepi i potpuno slepi). U našem istraživanju korišćeni su *University of California Los Angeles Loneliness Scale* (za procenu opšte usamljenosti) i *Skala socijalne i emocionalne usamljenosti* (za procenu socijalne, porodične i usamljenosti u ljubavi). **Rezultati.** Analiza rezultata je pokazala da je opšta usamljenost bila značajno manja u grupi studenata sa oštećenjem vida nego u kontrolnoj grupi ($t = 2.121$; $p = 0.036$). Na Skali socijalne i emocionalne usamljenosti nije utvrđena statistički značajna razlika između grupe studenata sa oštećenjem vida i kontrolne grupe. Takođe, nije utvrđena značajna razlika u nivou usamljenosti između studenata sa različitim stepenom oštećenja vida. U grupi studenata sa oštećenjem vida postojala je značajna razlika u stepenu ispoljenosti socijalne usamljenosti, usamljenosti u porodici i usamljenosti u ljubavi (Wilk's lambda = 0.604; $p \leq 0.000$). Najviše je bilo ispoljena usamljenost u ljubavi, sledi socijalna usamljenost, dok je usamljenost u porodici bila najmanja. **Zaključak.** Prema rezultatima našeg istraživanja, samo oštećenje vida nije presudni činiac usamljenosti kod studenata sa oštećenjem vida. Buduća istraživanja protektivnih faktora usamljenosti mogu doprineti prevenciji ove pojave kod mladih sa oštećenjem vida.

Ključne reči:

vid, poremećaji; vid, oslabljen; studenti; usamljenost; ankete i upitnici.

Introduction

Great technological advances, fast way of life, high aspirations and expectations are all associated with loneliness which is becoming more and more frequent, especially in young people. This may seem strange if we consider the increased exchange and availability of information, easier communication, and new jobs and vocations. Obviously, the main feature of loneliness is not the number of social contacts, but their quality¹.

Loneliness is defined as a negative experience mainly related to interpersonal relations and basic trust formed in the earliest childhood². It is also seen as a result of an unsuccessful social interaction³, i.e. subjective dissatisfaction with interpersonal relations due to changes in current social relations or changes in needs for social relations^{3, 4}, or as an unwanted feeling of lack or loss of friendship, an unpleasant aspect of the lack of certain relations and a certain quality level in different relations⁵.

Pinquart and Sörensen⁶ make a distinction between two types of definitions of loneliness. Definitions of the first type state the feeling of suffering which results from a lack of contact, while the second ones are socially-cognitive definitions which observe loneliness as a discrepancy between interpersonal relations an individual has and wants to have. A complete model of the cause of loneliness is given by Rokach⁷ through the following three-cluster model: lack of interpersonal relations; stressful events; personal and developmental variables (determined by the factor of developmental disability...).

While some believe that people differ only in the degree of loneliness, others think that there are different types of loneliness which differ both in their pre-conditions and in their characteristics. Weiss⁸ believes that loneliness primarily depends on an individual's perception that his/her needs in relations with others are not satisfied and that social and emotional loneliness are different experiences resulting from deficits in different types of relations. Social loneliness can be caused by the lack of meaningful friendship and unity and is accompanied by boredom and the feeling of social isolation. Emotional loneliness results from the lack of intimate devotion to another person, non-existence of a romantic relationship, and is accompanied by anxiety, distress and the feeling of emptiness. Social loneliness is caused by the lack of close friends, while emotional loneliness is caused by the lack of closeness with friends⁹. Although the differences are obvious, there are still many things which both types of loneliness have in common¹⁰. After verifying Weiss's⁸ distinction, Di Tommaso and Spinner^{11, 12} singled out 3 factors corresponding to the domain or the type of relations: family, romantic relationships, and friends.

Coping with visual impairments is a multidimensional process which requires an individual to adapt emotionally, physically and socially. Loneliness can reduce an individual's adaptability¹³. Adolescents with visual impairments are at a higher risk of social isolation, they have fewer friends, and inadequate social skills^{14, 15}. Visual impairments can be associated with depression, anxiety and

loneliness^{16, 17}. There are also beliefs that visual impairments alone need not always cause problems in psychosocial functioning¹⁸.

Bearing in mind general increase in the incidence of loneliness, the increased risk of loneliness in adolescence, and some authors' belief that visual impairment increases the risk of loneliness, as well as contradictory empirical data on the manifestation of loneliness in people with visual impairments, we decided that the subject of our research will be loneliness in university students with visual impairments.

The aim of this study was to determine whether there are differences between university students with and without visual impairments in the degree of loneliness and to determine the level of loneliness in students with visual impairments with regard to the degree of visual impairment.

Methods

The sample

Students with visual impairments (VI) were our target group. The control group (C) consisted of students who were at the same level/year of studies at the same faculties, and who are from the same cities (Belgrade or Novi Sad) as the students in the group with visual impairments. The research was conducted at Faculties of Social Sciences and Humanities at the University of Belgrade, Serbia and the University of Novi Sad, Serbia from July to December 2014.

The criteria for the selection of participants were: university students who meet all their pre-exam obligations, without a disability, except visual impairments in the VI group, or multiple disabilities and without mental health problems.

The additional selection criteria in the VI group were: visual impairment according to the definition of the World Health Organization, the formal status of students with a disability (they have records at the University Centre for Students with Disabilities, which provide them with the opportunity to be included in additional support programs). There were 60 such students at the time of our research. Seven students studying only for financial benefits were excluded.

The sample consisted of 137 participants in total, out of whom 36 were in the VI group, and 101 students who responded to an invitation on a certain day were in the C group. With regard to the degree of visual impairments, there were 12 (33.3%) students with low vision, 10 (27.8%) legally blind and 14 (38.9%) totally blind students.

There were 21 girls and 15 boys in the VI group, while there were 86 girls and 15 boys in the C group. The groups were equal regarding the participants' age. However, they were not equal with regard to the gender of the participants, since students of social sciences and humanities are mostly girls.

Participation was anonymous and voluntary. All the students, among whom there were 36 out of 60 students with VI, who agreed to participate and gave their written informed consent.

The following instruments were used in collecting data: University of California Los Angeles (UCLA) Loneliness Scale, short form. This short form of UCLA

Loneliness Scale was developed for the purpose of measuring general loneliness, i.e. loneliness as one-dimensional construct. Factor analysis really did single out only one factor¹⁹. Numerous studies support the stability of the previous versions of UCLA Loneliness Scale on samples of various ages, education levels, and socio-economic statuses^{20,21}. The advantage of UCLA short form is the fact that it is applicable to different groups of people since even with a smaller number of items, it has the same level of reliability as its previous versions¹⁹. This short form consists of 7 items, with responses given on a five-point Likert type scale (1 – I always feel this way; 2 – I often feel this way; 3 – I sometimes feel this way; 4 – I rarely feel this way; 5 – I never feel this way). Theoretical results may vary from 7 to 35. Cronbach's alpha in our research was 0.81.

Social and Emotional Loneliness Scale by Čubela-Adorić and Nekić²². The original instrument – Social and Emotional Loneliness Scale¹¹ was developed as a result of verifying Weiss's distinction between social and emotional loneliness. It consists of 3 subscales: the social loneliness subscale (13 items), the family loneliness subscale (11 items) and the romantic loneliness subscale (12 items), for which responses are given on a seven-point Likert type scale (1 – I completely disagree; 2 – I mainly disagree; 3 – I disagree to some extent; 4 – I neither agree nor disagree; 5 – I agree to some extent; 6 – I mainly agree; 7 – I completely agree). Theoretical results may vary from 13 to 91 on the subscale of social loneliness, from 11 to 77 on the subscale of family loneliness, and from 12 to 84 on the subscale of romantic loneliness. Cronbach's alpha reliability coefficient in our research was: 0.938 for social loneliness; 0.851 for family loneliness; 0.925 for romantic loneliness.

Data processing

Data obtained in this study were processed by SPSS, version 19. Arithmetic mean differences of groups in the degree of loneliness were checked by *t*-test for independent samples or univariate analysis of variance (ANOVA), and additionally by Welch's *F* statistics. We used Levene's Test of Homogeneity of Variances for checking variance homogeneity. From multivariate statistical procedures, we used multivariate analysis of variance (MANOVA) and Bonferroni post hoc test.

Results

Table 1 shows that the degree of general loneliness was significantly higher in students without visual impairments than in students with visual impairments.

On the Scale of Social and Emotional Loneliness, there were no statistically significant differences between groups in social, family and romantic loneliness including total loneliness too (Table 2).

The results of ANOVA showed that there were no significant differences in the degree of general loneliness among the subgroups of the VI group ($F(2.33) = 0.675$; $p = 0.516$).

ANOVA showed that there were no significant differences among the subgroups in romantic loneliness ($F(2.33) = 1.180$; $p = 0.320$) and in total loneliness ($F(2.33) = 1.592$; $p = 0.219$). Welch *F* statistic indicates that there were no significant differences in social loneliness (the significance of Levene's Test of Homogeneity of Variances was 0.010; $F(2.18.930) = 2.076$; $p = 0.153$) and in family loneliness

Table 1
Differences in the degree of general loneliness between the visual impairment (VI) and the control group (C)

Group	n	Degree of loneliness ($\bar{x} \pm SD$)	<i>t</i>	df	<i>p</i>
VI	36	11.22 ± 4.120	2.121	135	0.036
C	101	13.18 ± 4.951			

\bar{x} – arithmetic mean; SD – standard deviation; df – degree of freedom.

Table 2
Differences in the degree of loneliness on the Scale of Social and Emotional Loneliness between the visual impairment group (VI) and the control group (C)

Type of loneliness	Group	$\bar{x} \pm SD$	<i>t</i>	df	<i>p</i>
Social	VI	31.00 ± 17.509	-1.102	135	0.276
	C	27.51 ± 12.275			
Family	VI	21.69 ± 8.162	0.677	135	0.500
	C	22.84 ± 8.924			
Romantic	VI	38.44 ± 21.109	-0.340	135	0.734
	C	37.15 ± 18.872			
Total	VI	91.13 ± 37.382	-0.584	135	0.560
	C	87.51 ± 29.861			

For abbreviations see under Table 1.

among the subgroups of the group VI (the significance of Levene's Test of Homogeneity of Variances was 0.006; $F(2.15.292) = 3.039$; $p = 0.077$).

Table 3 shows average scores of different types of loneliness. Multivariate ANOVA (MANOVA) showed that there were significant differences among different types of loneliness (social loneliness, family loneliness, romantic loneliness) in the degree of their manifestation in the VI group (Wilk's Lambda = 0.604; $F(2.34)$; $p = 0.000$; Eta squared = 0.396).

Bonferroni post hoc test tested the significance of differences among three types of loneliness. Table 4 indicates that there were significant differences among all three types of loneliness in the degree of their manifestation in the VI group. Romantic loneliness was manifested the most, followed by social loneliness, while family loneliness was the least manifested.

und in the group of students without visual impairments. We can make assumptions about the causes of such a result. Students with visual impairments more often need support and are directed to other people whom they rely upon and with whom they communicate regularly, while typically developing students probably spend more time in performing activities on their own (e.g. using the internet, social networks...).

As for the results on three subscales of loneliness, there were no differences found between the VI and the C group. Both groups of students are equally satisfied with their relations with family members, friends, and partners. They probably have an adequate circle of people in their surroundings, who regardless of their number, make them feel satisfied, since loneliness is a subjective feeling which depends on the experience of the quality of relations.

Uneven distribution of the participants with regard to gender may have influenced the obtained results, indicating a

Table 3
Differences among different types of loneliness in the degree of their manifestation in the visual impairment group

Type of loneliness	Average score of loneliness $\bar{x} \pm SD$
Social	2.3846 \pm 1.34686
Family	1.9722 \pm 0.74200
Romantic	3.2037 \pm 1.75915

For abbreviations see under Table 1.

Table 4
Differences among three types of loneliness in the degree of their manifestation in visual impairment group

Type of loneliness	Degree of loneliness	
	DM	p
Social and family	0.412	0.039
Social and romantic	-0.819	0.029
Family and romantic	-1.231	0.000

DM – difference of means.

Discussion

Some authors have reported on the higher degree of loneliness in young people with visual impairments than in those without such impairments²³⁻²⁶. There is some empirical data which is contradictory²⁷. Although it was determined that 15% experience very strong feelings of loneliness, the research showed that adolescents with visual impairments experience strong feelings of happiness and that most of them are not very lonely²⁸. Some authors agree that blind adolescents experience loneliness more often than those with low vision^{27,29}.

The non-existence of a higher degree of loneliness in adolescents with visual impairments, when compared to their peers from the general population, is usually attributed to imprecise scales. However, there are also explanations that worse results associated with the psychosocial functioning of the blind and those with low vision are perhaps the result of stereotypes and stigmatization³⁰.

Our results show that there are significant differences between the VI and the C group with regard to general loneliness. Unexpectedly, a higher degree of loneliness was fo-

und in the group of students without visual impairments. We can make assumptions about the causes of such a result. Students with visual impairments more often need support and are directed to other people whom they rely upon and with whom they communicate regularly, while typically developing students probably spend more time in performing activities on their own (e.g. using the internet, social networks...).

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Uneven distribution of the participants with regard to gender may have influenced the obtained results, indicating a

higher degree of general loneliness in the control group and nonexistence of significant differences in the degree of loneliness as a multidimensional construct between groups VI and C. There are many more girls in the control group, and studies show that girls are significantly more lonely than boys. It is also possible that students with visual impairments who agreed to participate in this research are more open, communicative, and less lonely than those who refused to participate. We should also consider the possibility that students with visual impairments wanted to present themselves in as positive manner as possible. Why should these reasons be more important for the participants with visual impairments than for those from the control group? Participants with visual impairments are always aware that studies test the effects of visual impairments on..., and that they are "the centre of attention". Testing things that have a negative connotation, such as loneliness, may increase their censorship (giving suitable answers). Doubt in the anonymity of data may be increased by the manner of filling in questionnaires – a participant does it for them, while those who can see do it themselves.

Researches that compare loneliness of the blind and those with low vision are scarce. Huurre and Aro²⁹ state that blind adolescents feel lonely more often than those with low vision. According to same authors, people with low vision have more difficulties in making friends²³. Research conducted by Gold et al.³¹ dealt with emotional relationships of blind young people and those with low vision and showed that persons with low vision were involved in emotional relationships more frequently than the blind.

In the matter of all this, we expected significant differences in the degree of loneliness among the participants with different visual impairments in our research. Since there were no statistically significant differences found among those with low vision, legally blind and totally blind students either in general loneliness or in specific types of loneliness, our assumption was not confirmed. The methodological reason for this lack of differences could be a small number of participants in the subgroups. However, the arithmetic means are almost identical, which is in favor of the results accuracy. This finding is significant because it proves that visual impairment alone, i.e. the degree of the impairment, is not a crucial factor of loneliness in students with visual impairments.

Having analyzed the results, a significant difference was determined by the level of manifestation of different types of loneliness in students with visual impairments. The results showed that romantic loneliness is manifested the most, followed by social loneliness, while family loneliness is manifested the least. Some studies have dealt with similar problems. Gold et al.³¹ found that only 16% of youth with visual impairments aged between 25 and 29 are married, compared to 27% of general population. Young people with visual impairments face problems in starting and maintaining intimate relationships and probably enter into a relationship with a partner at an older age^{26,27}.

Visual impairments can affect making and keeping friends. Several studies have identified different barriers in social functioning of youth with visual impairments, which can cause the feeling of social loneliness in our research: rejection by their peers, negative reactions to visual impairments,

problems because of underdeveloped social skills and difficulties with mobility³¹⁻³³.

More attention should be paid to enabling students with visual impairments to participate in social activities which offer them opportunities to develop their social networks²⁷.

Students with visual impairments feel the least lonely within their family, which is not surprising since people with visual impairments largely rely on family members. This is also confirmed by other studies, where most adolescents with visual impairments have close relationships with their parents and have the biggest support from their family members^{15,18}.

Limitations of this research are a small number of students with visual impairments and unevenness between the VI and the C groups regarding the number and gender of the participants.

Conclusion

Loneliness must be considered seriously since it is a very common condition which leads to a depression. In people with visual impairments, loneliness impedes their adaptation which in many aspects represents a compromise between the requirements of social surroundings and the requirements of the impairment itself.

As a prevention from feeling left out and lonely, young people should have a good network of friends, access to social activities, and appropriate support, which will make further development of social networks easier. Participation in social activities can be achieved by organizing different workshops and creating opportunities for inclusive activities (e.g. interactive learning with mutual support, taking part in cultural performances). Further studies should include a wide range of contextual factors: social status, family size, type of household, family completeness, social support, etc. More qualitative studies need to be conducted on the relation between loneliness and the quality of relationships in persons with visual impairments. Understanding what "protects" youth and adults with visual impairments from loneliness can help both in solving problems when they appear, and their prevention.

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