



## EVALUATION OF HEALTHY LIFESTYLE BEHAVIORS OF B2-B3 VISUALLY IMPAIRED PEOPLE DOING SPORTS

Ibrahim Dalbudak<sup>1i</sup>,

Şihmehmet Yiğit<sup>2</sup>

<sup>1</sup>Dr., Isparta University of Applied Science,  
Atabey Vocational School,  
Turkey

<sup>2</sup>Dr., Tekirdağ University of Namık Kemal,  
Turkey

### Abstract:

The main purpose of this study was to determine of healthy life style behaviors of B2-B3 visually impaired individuals doing sports, and the second purpose was to test the relationship between these two variables. The sample group of the study consisted of 112 (44 male, 68 female) visually impaired individuals classified B2-B3 doing sports. Individuals in good health, with or without disabilities will provide a balanced life with themselves with their environment. So, the healthy individuals will be able to have a good communication with their environment and they will enjoy life. And this will cause these people to be conscious of being healthy. As a data collection tool, a scale was used which was developed by Walker et al. in 1987 based on Pender's health promotion model, that measures health promoting behaviors in relation with individual's healthy life style. The scale was revised in 1996 and named as "Healthy Lifestyle Behaviors Scale". Regarding the validity and reliability of the scale, "Healthy Lifestyle Behaviors Scale II" was used which was made by Bahar et al. in 2008. Healthy lifestyle behaviors scale consists of 52 items. In order to evaluate the expressions in the scale, 4-point Likert-type scale was used (1: never, 2: sometimes, 3: frequently, 4: regularly). The scale has six subscales which are spirituality, nutrition, physical activity, health responsibility, interpersonal relationship and stress management. Mean, standard deviation, frequency, t-test for independent samples and one way analysis of variance test (One Way ANOVA) were used in the research, in order to determine the scores obtained from the scale used in the study. All these data were obtained, calculated and recorded by using the statistical program named SPSS 22.00. Cronbach's Alpha value was calculated to determine the reliability of the scale used in the study. There was no significant difference between the mean scores of the participants according to their gender, income level, education level, sports branch, disability status,

<sup>i</sup> Correspondence: email [dalbudakibo@hotmail.com](mailto:dalbudakibo@hotmail.com)

vision degree ( $p>0.05$ ). According to this result, we can say that there is no difference in healthy life style behaviors among the participants, and also there is an increase in satisfaction of healthy life. Additionally, due to the same answers given about the healthy living in the scale, we can state that the expectations are also the similar. As a result, it has been determined that the participation in physical activities, staying away from the things deranging the health in their lives, all kinds of motivating factors that are beneficial to them are the most important healthy life style behaviors for visually impaired individuals, so they live their lives long and healthy like non-disabled people.

**Keywords:** B2-B3 visually impaired, athlete, health promotion, healthy lifestyle behavior scale (HLBS)

## 1. Introduction

Health is one the most overemphasized concepts, since the beginning of humanity. Health can be thought as a process containing different levels from the highest level of well-being to death (Aksoy & Uçar, 2014). According to the definition of the World Health Organization, health is not only the absence of disease or disability, but a state of being completely all right physically, mentally and socially (WHO, 2019). On the other hand, healthy lifestyle behaviors (HLB) are a whole of behaviors that the individuals believe and apply in order to stay healthy and being protected from diseases (Erzincanlı et al., 2015). Healthy lifestyle is defined as the ability of individuals to control their behaviors that can affect their health and to choose the suitable behaviors for their health status while organizing their daily activities. The individuals who transform these behaviors into the attitudes, can maintain their state of health and they can improve their health, as well. Nutrition, stress management, exercise, spirituality, interpersonal relationship and health responsibility are thought among healthy lifestyle behaviors (Bozhüyük, 2010).

On the other hand, individuals showing differences from their peers in a negative way physically or mentally and get attention due to these differences are defined as disabled. Disabled people who are 10% of the world population are grouped under four groups: visually impaired, hearing impaired, physically impaired and mentally disabled people (Özer, 2001). In his study, Hargreaves (2000) stated that this ratio is around 14% in Turkey. There are more than 161 million visual disabled people worldwide. Among these people, 188.5 million of them have low vision and 217 million of them have moderate or severe vision. And 36 million people are blind (WHO, 2019). According to the results of Turkey Disability Survey, the visually impaired people constitute 0.60% of the population (Prime Ministry State Institute of Statistics & Prime Ministry Administration for Disabled People, 2004). Many definitions of visual impairment were made. Visually impaired who has complete or partial loss of vision is defined as blind.

Sports provides a highly important function for “integration” which is aimed to be reached in special education by enabling disabled individuals to come together with

both disabled and non-disabled individuals. In such environment, the disabled individuals develop a positive attitude towards themselves by observing the problems of other disabled individuals, their creativity gets stimulated, their feeling of loneliness gets minimized, their environment enlarges and these individuals get a chance of living a more meaningful life (Özer, 2001). There are 220,000 visually impaired people in Turkey. There are 4,218 male and 1,297 female licensed athletes, existed within Turkey Federation of the Visual Impaired People. The sports branches such as Futsal B2-B3, Football, Goalball, Athletics, Weightlifting, Chess, Swimming, Wrestling, Cycling, Judo are taken place (Gesfed, 2019; Gsb, 2019). The International Federation of Blind Sports, IBSA, is responsible for a wide range of sports for visually impaired or partially sighted athletes. IBSA has been established in April 1987, by gathering the representatives of 30 countries at the UNESCO headquarters in Paris. IBSA has made a classification including three categories in an international competition for the athletes who are partially or completely blind. Each class performs the sports that visually impaired people can do between each other. These are as following:

- Sports Class B1: Visual acuity less than LogMAR 2.60.
- Sports Class B2: Visual acuity ranges from LogMAR 1.50 to 2.60 (inclusive); and/or, the visual field is constricted to a diameter of less than 10 degrees.
- Sports Class B3: Visual acuity ranges from LogMAR 1 to 1.40 (inclusive); and/or, the visual field is constricted to a diameter of less than 40 degrees. (IBSA, 2006; IBSA, 2019).

IBSA has divided each sport branch according to the degree of vision. Every visual impaired athlete does the sports as licensed of sports branch, according to the degree of vision.

This study is very important in terms of analyzing the impacts of sports on healthy lifestyle behaviors of B2-B3 visually impaired individuals who do sports and it is also important in terms of attracting attention of other disabled or non-disabled individuals, as it will affect many studies. Additionally, it is recommended that a new study should be conducted between the groups who do sports and who do not sports, in order to evaluate the healthy lifestyle behaviors of other disabled individuals.

## 2. Material and Methods

In order to obtain the data, “Healthy Lifestyle Behaviors Scale” and, “Personal Information Form” about demographic characteristics were used. Personal Information Form was prepared by the researcher.

The research consists of two parts. First part includes a personal information form about B2-B3 group visually impaired individuals who do sports (age, gender, education status, sports branch, disability status, level of vision, income status).

And the second part includes healthy lifestyle behaviors scale which was developed by Walker et al., in 1987. The scale was revised in 1996 and named as healthy lifestyle behaviors scale II (Walker & HGill-Polerecky, 1996). Healthy lifestyle behaviors scale consists of 52 items. In order to evaluate of the expressions in the scale, 4 point

Likert type scale (1: never, 2: occasionally, 3: frequently, 4: regularly) was used. The scale has six subtitles: Spirituality: it determines the life purpose of individual, his/her ability to develop himself/herself, what extent the individual knows himself/herself and is satisfied. (Spirituality subscale item numbers: 6, 12, 18, 24, 30, 36, 42, 48, 52). Nutrition: it determines the selection and regulation of individuals' meals and values of their food selection. (Nutrition subscale item numbers: 2, 8, 14, 20, 26, 32, 38, 44, 50). Physical Activity: it shows, as an invariable element of healthy life, what level of exercise was performed by individual. (Physical activity subscale item numbers: 4, 10, 16, 22, 28, 34, 40, 46). Health Responsibility: it determines the level of responsibility of the individual on his/her own health, and, in what level of his/her participation is. (Health responsibility subscale item numbers: 3, 9, 15, 21, 27, 33, 39, 45, 51). Interpersonal Relationship: it determines the level of communication of the individual with his/her immediate environment and its continuity.(interpersonal relationship subscale items: 1, 7, 13, 19, 25, 31, 43, 49). Stress Management: it determines the level of recognition of stress sources of the individual and his/her stress control mechanisms. (Stress management subscale item numbers: 5, 11, 17, 23, 29, 35, 41, 47), (Bozhüyük 2010). The study about validity and reliability of the scale in our country was conducted by Bahar et al., in 2008.

### 3. Analysis of Data

All these data has been obtained, calculated and recorded by using SPSS 22.00 statistical program. Mean, Standard deviation, frequency, T-test for independent samples and One Way Variance Analysis (One Way ANOVA) were used. The total Cronbach's alpha value of the healthy life scale was found as 0.859.

**Table 1:** Demographic Characteristics

		n	%
Gender	Male	44	39.3
	Female	68	60.7
Income Level	1000-2000	61	54.5
	2000-...	51	45.5
Level of Education	Primary Education	46	41.1
	High school	42	37.5
	University	24	21.4
Sports Branch	Individual	29	25.9
	Team	83	74.1
Disability Status	Congenital	55	49.1
	Later	57	50.9
Level of Vision	b2	57	50.9
	b3	55	49.1

**Table 2: T-test Findings by Gender**

	Gender	N	X	S	Sd	t	p
Spirituality	Male	44	2.8131	.60564	110	-.916	.362
	Female	68	2.9052	.45642			
Nutrition	Male	44	2.1035	.26402	110	-1.657	.100
	Female	68	2.2302	.45981			
Physical Activity	Male	44	2.4119	.48718	110	-.912	.364
	Female	68	2.5368	.81813			
Health Responsibility	Male	44	2.1641	.43694	110	-.834	.406
	Female	68	2.2386	.47656			
Interpersonal Relationship	Male	44	2.7323	.45042	110	-.678	.499
	Female	68	2.7908	.44383			
Stress Management	Male	44	2.3381	.45317	110	-1.168	.245
	Female	68	2.4430	.47140			
Total	Male	44	2.4292	.31840	110	-1.414	.160
	Female	68	2.5255	.37223			

(p> 0.05).

According to the t-test findings, no significant difference was found in the Healthy Living Scale and in all sub-factors according to gender.

**Table 3: T Test Findings by Income Level**

	Income Level	N	X	S	Sd	t	p
Spirituality	1000-2000	61	2.9016	.48986	110	.725	.470
	2000-...	51	2.8301	.55527			
Nutrition	1000-2000	61	2.1585	.41498	110	-.637	.526
	2000-...	51	2.2067	.37933			
Physical Activity	1000-2000	61	2.5656	.83467	110	1.278	.204
	2000-...	51	2.3946	.50706			
Health Responsibility	1000-2000	61	2.2131	.45420	110	.095	.925
	2000-...	51	2.2048	.47317			
Interpersonal Relationship	1000-2000	61	2.7577	.41301	110	-.262	.794
	2000-...	51	2.7800	.48508			
Stress Management	1000-2000	61	2.4098	.46667	110	.199	.842
	2000-...	51	2.3922	.46772			
Total	1000-2000	61	2.5016	.34455	110	.453	.651
	2000-...	51	2.4710	.36719			

(p> 0.05).

According to the findings of the t- test, no significant difference was found in Healthy Living Scale and in all sub-factors by income level.

**Table 4: Mean Scores by Education Level**

		N	X	S
Spirituality	Primary education	46	28.068	.59648
	High school	42	29.259	.45095
	University	24	28.889	.47931
	Total	112	28.690	.51949

Nutrition	Primary education	46	21.329	.34156
	High school	42	22.483	.42308
	University	24	21.528	.45141
	Total	112	21.804	.39810
Physical Activity	Primary education	46	25.489	.94225
	High school	42	25.149	.52976
	University	24	23.229	.37029
	Total	112	24.877	.70690
Health Responsibility	Primary education	46	21.594	.42979
	High school	42	22.275	.50469
	University	24	22.731	.44683
	Total	112	22.093	.46084
Interpersonal Relationship	Primary education	46	27.077	.48254
	High school	42	28.386	.40339
	University	24	27.593	.44162
	Total	112	27.679	.44533
Stress Management	Primary education	46	23.342	.45572
	High school	42	24.554	.43636
	University	24	24.375	.53161
	Total	112	24.018	.46512
Total	Primary education	46	24.486	.38481
	High school	42	25.372	.32613
	University	24	24.760	.34196
	Total	112	24.877	.35375

**Table 5: One-Way Analysis of Variance by Education Level**

		Sum of Squares	df	Mean of Squares	F	P
Spirituality	Between groups	.324	2	.162	.595	.553
	In-groups	29.632	109	.272		
	Total	29.956	111			
Nutrition	Between groups	.316	2	.158	.998	.372
	In-groups	17.275	109	.158		
	Total	17.592	111			
Physical Activity	Between groups	.855	2	.428	.853	.429
	In-groups	54.612	109	.501		
	Total	55.467	111			
Health Responsibility	Between groups	.226	2	.113	.528	.591
	In-groups	23.348	109	.214		
	Total	23.574	111			
Interpersonal Relationship	Between groups	.378	2	.189	.953	.389
	In-groups	21.635	109	.198		
	Total	22.014	111			
Stress Management	Between groups	.361	2	.181	.832	.438
	In-groups	23.652	109	.217		
	Total	24.013	111			
Total	Between groups	.177	2	.088	.702	.498
	In-groups	13.714	109	.126		
	Total	13.890	111			

(p&gt; 0.05).

According to the findings of one-way analysis of variance, there was no significant difference in Healthy Living Scale and in all sub-factors by education level.

**Table 6:** T Test Findings by Sports Branch

	Sports Branch	N	X	S	Sd	t	P
Spirituality	Individual	29	2.8314	.56079	110	-.452	.653
	Team	83	2.8822	.50720			
Nutrition	Individual	29	2.1571	.48022	110	-.365	.716
	Team	83	2.1886	.36814			
Physical Activity	Individual	29	2.3578	.48149	110	-1.152	.252
	Team	83	2.5331	.76760			
Health Responsibility	Individual	29	2.1226	.54703	110	-1.179	.241
	Team	83	2.2396	.42628			
Interpersonal Relationship	Individual	29	2.7701	.46758	110	.032	.975
	Team	83	2.7671	.44023			
Stress Management	Individual	29	2.4095	.49988	110	.103	.918
	Team	83	2.3991	.45551			
Total	Individual	29	2.4436	.40720	110	-.777	.439
	Team	83	2.5031	.33444			

( $p > 0.05$ ).

According to the results of T test, there was no significant difference in Healthy Life Scale and in all sub-factors, according to the sports branch.

**Table 7:** T Test Findings by Disability Status

	Disability Status	N	X	S	Sd	t	P
Spirituality	Congenital	55	2.8606	.53425	110	-.168	.867
	Later	57	2.8772	.50947		-.168	.867
Nutrition	Congenital	55	2.1859	.35785	110	.141	.888
	Later	57	2.1752	.43658		.142	.888
Physical Activity	Congenital	55	2.5455	.85573	110	.848	.398
	Later	57	2.4320	.52720		.841	.403
Health Responsibility	Congenital	55	2.1980	.46491	110	-.255	.799
	Later	57	2.2203	.46076		-.255	.799
Interpersonal Relationship	Congenital	55	2.7192	.46939	110	-1.138	.258
	Later	57	2.8148	.41961		-1.135	.259
Stress Management	Congenital	55	2.4773	.44298	110	1.702	.092
	Later	57	2.3289	.47811		1.704	.091
Total	Congenital	55	2.4972	.36451	110	.279	.781
	Later	57	2.4785	.34604		.279	.781

( $p > 0.05$ ).

According to the t-test findings, there was no significant difference in Healthy Life Scale and in sub-factors, according to the disability status.

**Table 8:** T Test Findings by the Level of Vision

	Level of Vision	N	X	S	Sd	t	p
Spirituality	b2	57	2.9045	.49843	110	.733	.465
	b3	55	2.8323	.54259		.732	.466
Nutrition	b2	57	2.1871	.37980	110	.181	.857
	b3	55	2.1735	.41962		.180	.857
Physical Activity	b2	57	2.5395	.85766	110	.787	.433
	b3	55	2.4341	.50852		.794	.429
Health Responsibility	b2	57	2.1949	.41430	110	-.335	.738
	b3	55	2.2242	.50805		-.334	.739
Interpersonal Relationship	b2	57	2.8031	.38719	110	.852	.396
	b3	55	2.7313	.49952		.848	.398
Stress Management	b2	57	2.3991	.53891	110	-.061	.951
	b3	55	2.4045	.37881		-.062	.951
Total	b2	57	2.5061	.34650	110	.559	.578
	b3	55	2.4686	.36331		.558	.578

(p&gt; 0.05).

According to the findings of the t-test, no significant difference was found in the Healthy Life Scale and in all sub-factors by the Level of Vision.

**Table 9:** Scale Item Mean and Standard Deviation

	N	X	S
1. I discuss my concerns and problems with people close to me	112	27.500	.91533
2. I prefer a diet with low-fat and low-cholesterol	112	18.929	.83134
3. I will share with a doctor or medical professional about the unusual signs and findings in my body	112	25.179	.86973
4. I perform a regular exercise program	112	25.000	.83827
5. I sleep enough	112	26.607	.78904
6. I feel that I am changed and improved	112	27.232	.84053
7. I appreciate people for their success	112	30.893	.90597
8. I limit sugar and desert	112	21.875	.91564
9. I watch health promotion programs on television and read books on these topics	112	19.286	.85650
10. I exercise at least three times a week for 20 minutes and /or longer (fast walking, cycling, aerobics, dancing)	112	27.411	.98407
11. I take time for relaxing everyday	112	26.429	.86844
12. I believe that my life has an aim	112	29.018	.91000
13. I maintain meaningful and fulfilled relations with people	112	27.946	.83976
14. I eat 6-11 meals of bread, cereal, rice and pasta every day	112	18.304	.84777
15. I ask questions to the health personnel to get their recommendations	112	22.232	.80213
16. I do exercise in light or moderate level (I walk 5 times a week or more, for instance )	112	25.714	.91744
17. I accept the things I cannot change in my life	112	23.571	.97590
18. I look into the future with hope	112	28.214	100.641
19. I spend time with my close friends	112	30.268	.86431
20. I eat 2-4 fruit portions per day	112	21.964	.70824



21. I consult with other health personnel when I have questions about the recommendations of the health personnel I always visit	112	19.732	.75289
22. I do entertaining physical activities such as swimming, dancing and cycling in my free times	112	22.679	.74715
23. I think of nice things before I go to sleep	112	25.179	.85931
24. I feel at peace with myself and I feel qualified	112	27.768	.89754
25. It is easy for me to show interest, love and sympathy to others	112	26.071	.89400
26. I eat 3-5 vegetable portions per day	111	19.640	.64566
27. I consult my health problems to a health personnel	112	23.750	.83962
28. I do muscle strengthening exercises at least three times a week	112	22.589	.96558
29. I use some appropriate methods to manage my stress	112	23.482	.81329
30. I work for long-term purposes in my life	112	29.107	.85481
31. I embrace people I love	112	30.714	.83520
32. I eat yogurt, cheese or milk 3-4 times a day	112	23.482	.84587
33. I check my body at least once a month for physical changes, dangerous signs	112	20.000	.86992
34. I exercise during daily works (for example, I walk to diner, I use stairs instead of elevator, I park my car away)	112	26.786	.92234
35. I balance work and entertainment	112	23.482	.74386
36. I find different and interesting things to do everyday	112	21.250	.77256
37. I try to make close friends	112	21.875	.84396
38. I eat 3-4 portions of meat, chicken, fish, legumes, eggs and nuts everyday	112	19.821	.74715
39. I consult a health personnel about how to take better care of myself	112	21.429	.76943
40. I control my heart rate and pules while exercising	112	21.607	.88586
41. I do applications 15-20 minutes a day in order to unwind and ease	112	22.232	.90752
42. I am aware of the things which are important for my life	112	30.000	.88021
43. I get support from the people having similar problems	112	25.089	.86987
44. I read the labels on food packages in order to learn the nutrient, fat and sodium substances they content	112	23.393	104.454
45. I participate in individual health care training programs	112	20.000	.86992
46. I exercise until my heart rate is accelerated.	112	23.750	.93119
47. I protect myself from getting tired	112	21.161	.93718
48. I believe in the existence of a divine power	112	33.482	.96525
49. I resolve conflicts by speaking and reconciling	112	28.750	.76081
50. I do breakfast	112	28.839	100.221
51. I get advice and guidance from other when I need it	112	27.232	.84053
52. I am open to new experiences and situations	112	32.143	.81017

#### 4. Discussion and Conclusion

In this study, 112 (44 males, 68 females) b2-b3 visually impaired individuals doing sports in different sports clubs in İzmir and other provinces, were examined in order to determine their healthy lifestyle behaviors.

According to t-test results used in the study, there was no significant difference found in Healthy Living Style Behaviors Scale and in all sub-factors by gender ( $p>0.05$ ). In a study conducted with the students in a university in Hong Kong, no significant

difference was found in other subscales (Rlt, Ajyt, 2005). Again, healthy lifestyle behaviors of the university students in Sivas were examined by Yıldırım and as a result of it there was no significant difference found in Healthy Lifestyle Behaviors Scale and in all subscales according to the gender (Yıldırım, 2005). No significant difference was found in the healthy lifestyle behavior scale and other subscales, as a result of the research conducted in the students of Çukurova University (Bozhüyük, 2010). In the research of Kaya et al., 2008, they found no significant difference between the healthy lifestyle behaviors of faculty members and gender. Also, Cihangiroglu and Deveci (2011) in their study in Elazig Health School students of Firat University, there was no significant relationship between the healthy lifestyle behaviors and gender. But, as a result of Savcı et al. (2006), there was a significant difference according to gender. In the literature, according to gender, although there are similar results with our study, there are also different results, as well. In our study, when the differences were examined between the male and the female athletes, in HLBS and in sub-scales, there was no statistically significant difference was found. We think that the reason that we did not found difference in our study is because the individuals in our research are visually impaired. There is no difference between the males and females, because the disabled people are more carefull about healthy life than non-disabled people, they make themselves felt and they make themselves accepted in society, they accept their disability and they take more care of their lives. We can say that they have similar thoughts about healthy life.

As a result of the findings of t-test, there was no significant difference in healthy lifestyle behaviors and in all sub-scales according to income level ( $p>0.05$ ). Ünalın et al. (2007) couldn't find a significant difference between the mean scores of students, in HLBS and sub-scales, according to their monthly income. According to the thesis of Balliel (2009), there was no significant difference between mean scores of the nurses, in HLBS and in sub-scales according to their income. According to the results of another study of Ayaz et al. (2005) with Nursing School students, nutrition scores of the students with good socio-economic level were higher than the ones with moderate and inadequate level of income. In the study of Özbaşaran et al. (2004) in students of Celal Bayar University School of Health, they found that the in the income levels come status of the students affected their HLBS scores significantly. Because monthly and annual income is close to each other in literature, besides the similar results with ours, there were also the different results, as well. Although the visually impaired athletes have incomes in different levels, we can say that they give more importance to their health life than non-disabled people, because they are with disabilities. Regardless of their economic level, it is important for the people with disabilities to have the knowledge of health, to know what they should do or what they should not do, so that they can contribute to their life, they can live longer and healthy.

In the study, according to the findings of one-way analysis of variance, no significant difference was found in the Healthy Lifestyle Behavior Scale and all sub-factors by education level ( $p>0.05$ ). In Balliel's thesis (2009), according to education level of nurses, the mean scores of HLBS and subscales are not statistically significant. In the

study of Zaybak et al. (2004), there was no significant relationship between the factors affecting health promotion behavior of university students studying in different departments and the departments. According to the study of Karadeniz et al. (2008), there was no significant difference between HLB of students per class differences. In his study, Yıldırım (2005) found no significant difference between HLB of students according to class differences. On the other hand, in the study conducted by Cihangiroğlu and Deveci (2011), a significant difference was found between HLB of students according to class differences. In the literature, besides the studies with similar results with ours, there are also the studies with different results, as well. We can say that although the visual impaired athletes have different levels of education, they have a common point that they can remain healthy and continue their healthy lives. The purpose of the mankind is to live as long and healthy as possible. Therefore, he should take good care of himself, in order to live healthy consciously. To actualize it, he/she should stay away from the harmful habits which endanger his/her health about nutrition or physical activity.

According to the findings of t-test, there was no significant difference in Healthy Lifestyle Behaviors Scale and all sub-factors, according to the sports branch ( $p>0.05$ ). And therefore, we can say that there is no difference between visually impaired individual athletes and visually impaired team athletes. Visually impaired individuals who are engaged in individual and team sport have a healthy lifestyle, because they have a better eating habits, they do regular exercises and stay away from stress. The common point of all sport branches for visually impaired athletes is to make them feel their presence in the society, to make society accept them, to show that they are healthy, to make them accept their disability. These are effective to make them comprehend the importance of healthy lifestyle. The importance of the sport is more for the impaired people, because they know that a sedentary lifestyle can be a destruction for them. Such a lifestyle can cause all kinds of diseases and their body structure will be able to deteriorate faster comparing the non-disabled people. They know the benefits of sport as both physically and spiritually. Therefore, they understand well the importance of sports. Sports is a lifestyle for the people with disabilities. Sport extends the lives of disabled people. They gain socialization through sports. Again through sports, they represent their country. We can say that the situation that there is no difference between the team players and individual players is due to this reason. There are no other similar studies in the literature about visual impaired athletes engaged in individual or team sports.

According to t-test results in the study, no significant difference was found in Health Lifestyle Behaviors and in all sub-factors according to the disability status ( $p>0.05$ ). It seems that the expectations from healthy life of visually impaired athletes do not change, due to their congenital or subsequent visual impairment. We can say that having a congenital or subsequent visual impairment does not affect the healthy life. So, both of them have the same expectations from health life. In order to continue their lives as long and healthy as possible, in terms of health responsibility, the disabled people should take good care of themselves, they should do regular exercises, they should stay

away from stressful life, cigarette, alcohol and other harmful substances, they should live their life in the healthy environment and they should follow a healthy diet. So, we can say there is no significant difference between them in terms of health responsibility. There are no similar studies in the literature regarding visually impaired people's disability status which is congenital or later.

As a result of t-test findings, in Healthy Lifestyle Behaviors Scale and in all sub-factors, there was no significant difference according to visual acuity ( $p>0.05$ ). The visually impaired athletes do not need to have different expectations, according to their visual acuity which is b2 or b3. Because, the common expectation of all visually impaired individuals from life is to live a healthy and long life without needing anybody else. Some of the visually impaired athletes are farsighted and some others are short-sighted. We can say that both of them have the same expectations from life. Healthy living is an indispensable way of life for people with disabilities. The longer they stay healthy, the longer they will be able to go on living without needing anyone. The longer their bodies stay healthy and the longer they protect their health, their soul will also be healthy and long-lasting, as well. As in the well-known proverb saying in Turkey "*the iron which is forged does not keep rust*". There are no similar studies in the literature regarding the vision acuity of visually impaired athletes.

## 5. Conclusion

According to the results of our study, the statistical differences between the visually impaired athletes who are in b2-b3 groups, were examined. We think that the reason that there is no difference between these statistical results is because the visually impaired individuals are actively dealing with sports. An individual needs to eat and live healthy, in order to be able to do the sports. And in order to eat healthy and live healthy, the individual should have the necessary knowledge about it. Every creature alive wants to live long. There are points to be done and to be avoided in order to live a long life. Visually impaired individuals take good care of themselves, because they know the rules of living healthy, and they accept that they are disabled, so that they can live their lives without need of other people. They are not retracted although they are disabled. They are at peace with life and they are active in life. They have proven themselves by representing their country, in the Paralympics. They join society. They continue their lives like non-disabled individuals and are very social. Their education levels are high. They can easily start a family. Their communications are very good. As a result of my own article and other articles by other authors related to the sports of visually impaired individuals, we can say that the sport is very effective on individuals with disabilities. Sports provide the disabled individuals to connect to life. Sport is in direct proportion to healthy life. The disabled individuals give more importance to healthy living and nutrition than other non-disabled individuals. The more they protect their health, the more they will be physically and spiritually healthy.

## References

- Aksoy, T., & Uçar, H. (2014). Hemşirelik Öğrencilerinin Sağlıklı Yaşam Biçimi Davranışları. *Hacettepe Üniversitesi Hemşirelik Fakültesi Dergisi*, 1(2), 53-67.
- Ayaz, S., & Tezcan, S., & Akıncı, F. (2005). Hemşirelik Yüksekokulu Öğrencilerinin Sağlığı Geliştirme Davranışları. *Cumhuriyet Üniversitesi Hemşirelik Yüksekokulu Dergisi*, 9(2), 26-34.
- Bahar, Z., & Beşer, A., & Gördes, N., & Ersin, F., & Kıssal, A. (2008). Sağlıklı Yaşam Biçimi Davranışları Ölçeği II'nin Geçerlik ve Güvenirlik Çalışması. *Cumhuriyet Üniversitesi Hemşirelik Yüksekokulu Dergisi*, 12(1), 1-13.
- Ballıel, N. (2009). Ankara Üniversitesi İbni Sina Hastanesi hemşirelerinde sağlığı geliştirici yaşam biçimi davranışları ve ilişkili faktörler (Doctoral dissertation, Yüksek Lisans Tezi, Ankara Üniversitesi Sağlık Bilimleri Enstitüsü, Ankara).
- Bozhüyük, A. (2010). Çukurova üniversitesi sağlık bilimleri öğrencilerinin sağlıklı yaşam biçimi davranışlarının değerlendirilmesi, Uzmanlık Tezi, Tıp Fakültesi Aile Hekimliği Anabilim Dalı, T.C. Çukurova Üniversitesi, Adana.
- Cihangiroğlu, Z., & Devenci, S. E. (2011). Fırat Üniversitesi Elazığ Sağlık Yüksekokulu Öğrencilerinin Sağlıklı Yaşam Biçimi Davranışları ve Etkileyen Faktörler. *Fırat Tıp Dergisi*, 16(2), 78-83.
- Enstitüsü, D. İ., & Başkanlığı, Ö. İ. (2004). Türkiye Özürlüler Araştırması 2002. Devlet İstatistik Enstitüsü Matbaası, Ankara. <https://kutuphane.tuik.gov.tr/pdf/0014899.pdf>, Erişim tarihi: 25.07.2019.
- Erzincanlı, S., & Zaybak, A., & Khorshud, L.(2015). Hemşirelik Öğrencilerinin Sağlıklı Yaşam Biçimi Davranışları ve Zaman Yönetimi Becerileri. *Ege Üniversitesi Hemşirelik Fakültesi Dergisi* 31 (2): 8-25.
- Görme Engelliler Spor Federasyonu. (2019). Spor Branşları ve Lisanslar. <http://www.gesf.org.tr/anasayfa>, Erişim tarihi: 25.07.2019.
- Hargreaves, J. (2013). *Heroines of Sport: The Politics of Difference and Identity*. Routledge.
- IBSA. (2006). *Capable of Everything*. International Blind Sports Federation, Madrid, Spain.
- IBSA. (2018). IBSA Classification Rules. <http://www.ibsasport.org/classification/> Erişim tarihi: 25.07.2019.
- Karadeniz G., & Uçum EY., & Dedeli Ö., & Karaağaç Ö.,(2008). Üniversite Öğrencilerinin Sağlıklı Yaşam Biçimi Davranışları. *TAF Preventive Medicine Bulletin*; 7(6): 497-502.
- Kaya, F., & Ünüvar, R., & Bıçak, A., & Yorgancı, E., & Çınar, B., & Öz, F., & Kankaya, F. C. (2008). Öğretim Elemanlarının Sağlığı Geliştirme Davranışları ve Etkileyen Etmenlerin İncelenmesi. *TSK Koruyucu Hekimlik Bülteni*, 7(1), 59-64.
- Lee, R. L., & Loke, A. J. Y. (2005). Health-Promoting Behaviors and Psychosocial Well-Being of University Students in Hong Kong. *Public Health Nursing*, 22(3), 209-220.

- Özbaşaran, F., & Çetinkaya, A. Ç., & Güngör, N. (2004). Celal Bayar Üniversitesi Sağlık Yüksekokulu Öğrencilerinin Sağlık Davranışları. Atatürk Üniversitesi Hemşirelik Yüksekokulu Dergisi, 7(3), 43-55.
- Özcan, S., & Bozhüyük, A. (2016). Çukurova Üniversitesi Sağlık Bilimleri Öğrencilerinin Sağlıklı Yaşam Davranışları. Çukurova Medical Journal, 41(4), 664-674.
- Özer, D. (2001). Engelliler için beden eğitimi ve spor. Ankara: Nobel Publishing.
- Savcı, S., & Öztürk, M., & Arıkan, H., & İnce, Dİ., & Tokgözoğlu, L.(2006). Üniversite öğrencilerinin fiziksel aktivite düzeyleri. Türk Kardiyol Dern Arfl - Arch Turk Soc Cardiol; 34,166-172.
- Türkiye Cumhuriyeti Gençlik ve Spor Bakanlığı. (2019). İstatistikler. <http://sgm.gsb.gov.tr/Sayfalar/Istatistikler>, Erişim tarihi: 25.07.2019.
- Ünalın, D., & Şenol, V., Öztürk, A., & Erkorkmaz, Ü. (2007). Meslek Yüksekokullarının Sağlık ve Sosyal Programlarında Öğrenim Gören Öğrencilerin Sağlıklı Yaşam Biçimi Davranışları ve Öz-Bakım Gücü Düzeyleri Arasındaki İlişkinin İncelenmesi. İnönü Üniversitesi Tıp Fakültesi Dergisi 14(2) 101-109.
- Zaybak, A., & Fadiloğlu, Ç. (2004). Üniversite Öğrencilerinin Sağlığı Geliştirme Davranışı ve Bu Davranışı Etkileyen Etmenlerin Belirlenmesi. Ege Üniversitesi Hemşirelik Yüksek Okulu Dergisi, 20(1), 77-95.
- Walker, S. N., & Hill-Polerecky, D. M. (1996). Psychometric evaluation of the health-promoting lifestyle profile II. Unpublished manuscript, University of Nebraska Medical Center, 120-26.
- World Health Organization. (2019). WHO definition of health. Erişim: <https://www.who.int/about/who-we-are/frequently-asked-questions>, Erişim tarihi: 25.07.2019.
- World Health Organization.(2019). WHO Blindness and vision impairment. <https://www.who.int/en/news-room/fact-sheets/detail/blindness-and-visual-impairment>, Erişim tarihi: 25.07.2019.
- Yıldırım, N. (2005). Üniversite öğrencilerinin bazı sosyo-demografik özelliklerinin sağlıklı yaşam biçimi davranışlarına etkisi. Yüksek Lisans Tezi. Cumhuriyet Üniversitesi. Sağlık Bilimleri Enstitüsü, Hemşirelik Programı, Sivas.

Creative Commons licensing terms

Authors will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Physical Education and Sport Science shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflict of interests, copyright violations and inappropriate or inaccurate use of any kind content related or integrated on the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).