

Full Length Research Paper

The examination of sport's effects over high school students' resiliency levels

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The aim of this study was to examine the resiliency of high school education students and to compare it by athletic or non-athletic factors. A sample of 728 (284 girls, 444 boys) high school students who were chosen randomly among pupils studying in Gaziantep provided responses. High School Version of California Resiliency Rating Scale which was developed in 1999 by WestEd and Duerr Evaluation Resources, and adopted by Özcan (2005) into Turkish was used as data collection tool. In dependent samples t-test was used to test the statistical differences in mean scores by using SPSS 16.0 program. Analysis indicated that resiliency levels of all students involved in our studies are above average; and when it is evaluated from the point of doing sports, in male high school students it is showed that being athletic have positive affects over the increase of resiliency level; on the other hand, considering female students, it was determined that sport causes more increase in factors described as external resiliency traits of sport; however, it is stated that sport has no affect on internal resiliency traits. As a conclusion, gender variance does not have any influence over resiliency levels of high school sportsman pupils.

Key words: Sport, resiliency, high school education.

INTRODUCTION

Humans who are social being by nature; born, live and die in the web of relations. As human relations are effected by traits and interactions of individuals, also are influenced by social and physical environment in which he lives (Hortaçsu, 2003). To be able to struggle against life difficulties which humans face, a well psychological organism is required.

Resiliency-our study's main concept-has been described by many researchers in diverse ways. Joseph (1994) described this concept as pulling himself together during a bad or hard situation, being able to change and ability to overcome hardships. In another definition, resiliency is described as 'a successful orientation period's result, process and capacity despite an environment which includes threats and challenges. Generally, it is expressed that resiliency is a human-specific concept. Resiliency trait is evaluated in different ways and is seen as an individual trait, process or a result (Glantz and Sloboda, 1999).

Literature about resiliency showed that, it is the power to overcome difficulties, deficiencies and stress (Begun, 1993) or striving in this period together with the ability to be able to be normalized successfully despite harsh living conditions and achieving eventually (Masten, 2001). According to Newman (2005), it is the ability to be able to orient when encountered with a disaster, trauma, hardships, difficulties and ongoing specific life stress.

Toprak (2009) describes resilient individual from the point of clinical psychological way; he emphasizes that he has to have several traits such as improving social friendship, having effective communication skills, being able to use a language well, assertiveness, planning the events and controlling them; additionally it defines as having several traits as happiness, optimism, the power to check oneself and being aware of one's feelings, strong self-confidence in terms of emotional ways (Kırımoglu et al., 2012). In addition, Fletcher and Sarkar

(2012), mentions that, psychological resilient improves individual's effective communication skill and Reivich and Seligman (2011) mentions that, psychological resilient improves individual's social friendship.

Even if the researchers propound that these individuals have genetic tendencies like social tendencies, which contribute to their resiliency or physical attractiveness, Ogulmus (2001) indicates that rather than a series of innate personal traits, it is a process which is obtained by learning and many traits of resilient individuals can be gained by ordinary individuals, too. In accordance, Leipold and Greve (2009) discuss that resiliency is a kind of bridge between development and coping.

The link between resiliency and development has always affected each other and it reflects the continuous truth that has to be lived (Ahern et al., 2008). It is stated that resilient children and adolescents are more hopeful than the others in terms of the ability for producing good results and they are mediocre happy individuals (Kumpfer, 1999). On the other hand, Nezhad and Besharat (2010) mentioned that, "Resilience and hardiness positively affect sport achievement and psychological well-being".

Considering the aforementioned definitions, it can be stated that psychological solidity cannot be explained only with a point of view. However, all of the definitions have certain things in common. These common points include several facts such as psychological solidity fact's being a dynamic process, including developable features-coping with trauma and harsh living conditions effectively-healthy orientation or the process of being able to develop proficiency; individual's being exposed to risk or hardship so that psychological solidity can develop; gaining success in different aspects of life by orienting with the situation. When these are taken into account, it can be stated that resiliency level is made clear by harsh living conditions and that some elements like education, friends support and sport have positive affects as supportive factors (Öz and Yılmaz, 2009).

Resiliency level, which includes individual traits such as making the resistance of an individual increase and for strengthening to be able to cope with poor conditions of environment, is a new topic being researched in Turkey and there are a few available researches about its relation with sport. Sport is a broad concept which involves some terms as rivalry, interaction, motivation, stress, being stuck in a difficult situation, empathy etc. and when their physical-mental-spiritual roles over an individual was taken into consideration, investigation of the relation between doing sports and resiliency levels is crucial; because individuals who have traits of a resilient person, are expected to have high-self esteem, to solve problems, to show empathy, to cope with stress, to use effective interaction abilities and motivation on the high levels. It is stated that resiliency concept makes contribution to the development of the individuals more in sub-socioeconomic levels in which there are more negative environmental conditions (Joseph, 1994; Henderson and Milstein, 1996; Masten and Powell, 2003). From this point

of view, the purpose of this study was to examine high school education students' resiliency and to compare it with regards to athletic or non-athletic factors.

METHODS

This study was intended to determine the relation among secondary school students' resiliency levels and to compare it with respect to athletic or non-athletic factors and it depends on descriptive survey model. The participants were divided into two categories with respect to having a sport certification or not. The research sample was applied in 2010 to 2011 educational year and it consists of 284 girls and 444 boys, chosen randomly, who have been studying in high school institutions which are located in towns grown especially by migration and are known as low level in terms of socio-economic in Gaziantep. The average age of girls who were included in the research was 16.56 and the average age of boys was 16.73

High School Version of California Resiliency Rating Scale, which was developed by WestEd and Duerr Evaluation Resources in 1999, also adopted into Turkish by Özcan, has been used to gain research data. CRRS consists of eight sub-factors. The first factor is titled as protective relations and high expectations; the second factor is titled as protective relations in the family, high expectations and opportunities for significant participation; the third factor is titled as protective relations at school and high expectations; the fourth factor is titled as protective relations in friend groups; the fifth factor is titled as self-efficacy and self-awareness; the sixth factor is titled as empathy; seventh factor is titled as goals and longing; and the eighth one is titled as solving problem. Alpha levels for the reliability of CRRS are .85 for factor 1, .81 for factor 2, .77 for factor 3, .89 for factor 4, .66 for factor 5, .71 for factor 6, .61 for factor 7, .61 for factor 8, and .89 for total (Özcan, 2005). Onat (2010), in CRRS used in his study, total correlations of Cronbach's alpha is (0.93). For sub-dimensions, .82 for factor 1, .84 for factor 2, .77 for factor 3, .88 for factor 4, .78 for factor 5, .73 for factor 6, .66 for factor 7, .68 for factor 8, have been determined (Onat, 2010). These results indicate a high level of reliability of the scale. If it is $0.60 \leq \alpha < 0.80$, the scale is pretty reliable and has been evaluated as acceptable (Arslan and Şahbaz, 2012; Black and Porter, 1996; Tekez, 2004; Tuckman, 1999).

With the permission of Headships, scale was carried out after the goal and importance of working in class environment had been told. It was seen that scale was filled by students approximately in 30 min. Independent samples t-test were used to test the statistical mean differences by using SPSS 16.0 program.

FINDINGS

In Table 1, there is a matching of points taken by CRRS sub-factors in terms of male students' athletic and non-athletic factors. According to Table 1, there were statistically mean differences in support of athletic male students considering all of the sub-factors of the scale.

In Table 2, there is a matching of points taken by CRRS sub-factors in terms of female students' athletic and non-athletic factors. According to Table 2, in the sub-factors including high expectations and protective relations both at school and in society, also in sub-factors including protective relations in family and meaningful participation it has been encountered with meaningful difference in support of female students.

However, the analysis indicated that there were not any

Table 1. The comparisons of male high school students' resiliency levels by athletic and non-athletic factors.

Sub-factors	Variance	N	Mean	Sd.	t	p
Protective relations in society and high expectations	Sportsmen	128	17.8750	3.27962	3.537	.000
	Non-sportsmen	316	16.5949	3.52233		
Protective relations in family, high expectations and meaningful participation	Sportsmen	128	22.1875	4.42212	2.926	.004
	Non-sportsmen	316	20.7975	4.57843		
Protective relations at school and high expectations	Sportsmen	128	17.9375	3.10385	3.826	.000
	Non-sportsmen	316	16.6709	3.18218		
Protective relations in friend groups	Sportsmen	128	9.8125	2.13612	2.710	.007
	Non-sportsmen	316	9.1139	2.57947		
Self-efficacy and self-awareness	Sportsmen	128	16.8750	2.55645	4.302	.000
	Non-sportsmen	316	15.5443	3.09756		
Empathy	Sportsmen	128	9.3125	1.71032	2.813	.005
	Non-sportsmen	316	8.8101	1.70211		
Goals and missing	Sportsmen	128	10.2500	1.91142	2.635	.009
	Non-sportsmen	316	9.6962	2.04306		
Solving problem	Sportsmen	128	8.6875	1.96725	2.399	.017
	Non-sportsmen	316	8.1899	1.98455		

Table 2. The comparisons of female high school students' resiliency levels athletic and non-athletic factors.

Sub-factors	Variance	N	Mean	Sd.	t	P
Protective relations in society and high expectations	Sports women	68	17.8824	2.92967	3.975	.000
	Non-sports women	216	15.7407	4.12451		
Protective relations in family, high expectations and meaningful participation	Sports women	68	22.6818	5.09975	2.816	.012
	Non-sportswomen	216	20.5421	4.11238		
Protective relations at school and high expectations	Sports women	68	17.5294	3.50893	2.464	.014
	Non-sportswomen	216	16.2778	3.69747		
Protective relations in friend groups	Sports women	68	9.8235	2.33892	3.094	.002
	Non-sportswomen	216	8.7963	2.21896		
Self-efficacy and self-awareness	Sports women	68	16.5882	2.51702	1.991	.057
	Non-sportswomen	216	15.7593	3.12788		
Empathy	Sports women	68	9.1765	1.34875	-.651	.516
	Non-sportswomen	216	9.3148	1.99370		
Goals and missing	Sports women	68	10.4118	1.69490	.094	.925
	Non-sportswomen	216	10.3889	1.76178		
Solving problem	Sports women	68	8.3529	1.29020	-.176	.861
	Non-sports women	216	8.3889	1.94259		

Table 3. The comparisons of resiliency levels of high school athletes students in terms of gender variance.

	Gender	N	Mean	Sd.	t	P
Protective relations in society and high expectations	Male	128	17.8750	3.27962	-.015	.988
	Female	68	17.8824	2.92967		
Protective relations in family, high expectations and meaningful participation	Male	128	22.1875	4.42212	.409	.683
	Female	68	22.6818	5.09975		
Protective relations at school and high expectations	Male	128	17.9375	3.10385	.837	.404
	Female	68	17.5294	3.50893		
Protective relations in friend groups	Male	128	9.8125	2.13612	-.044	.743
	Female	68	9.8235	2.33892		
Self-efficacy and self-awareness	Male	128	16.8750	2.55645	.751	.453
	Female	68	16.5882	2.51702		
Empathy	Male	128	9.3125	1.71032	.568	.570
	Female	68	9.1765	1.34875		
Goals and missing	Male	128	10.2500	1.91142	-.586	.559
	Female	68	10.4118	1.69490		
Solving problem	Male	128	8.6875	1.96725	1.265	.208
	Female	68	8.3529	1.29020		

statistical differences in self-efficacy, self-awareness, empathy, goals-missing and solving problem subfactors with regard to being a sports women or non-sports women.

In Table 3, there is a matching of points taken by CRRS sub-factors in terms of gender variance of high school students doing sports. The results of analysis revealed no significant differences in high school athlete students' mean scores with regard to gender.

DISCUSSION AND CONCLUSION

In this research which was carried out for determining resiliency levels of students who study in high school education institutions in terms of athletic and non athletic factors, 284 girls and 444 boys who study in Gaziantep's secondary schools were included. The average age of girls is 16.56 and the average age of boys is 16.73.

At the conclusion of the research, male and female students' resiliency levels and their doing sports have been investigated separately; also, resiliency levels of sportsmen have been matched in terms of gender variance, too.

When we examined resiliency levels of male high school students in terms of athletic and non-athletic factors, in support of athletes, meaningful differences

have been detected. The points male students who do sports attained from resiliency scale's sub-factors are increasing in a meaningful way when compared with the non-athletes. Accordingly, it was determined that the resiliency levels of athlete male students were higher than the non-athletes.

This situation may result from biological, social and psychological effects of sport. For instance, according to Abakay (2010), sport not only increases an individual's self-confidence but also helps the individual get rid of stress resulting from social oppression, and helps control oneself, overcome the difficulties life presents him. Also, it is a vital for the governments to invest in sport in order to raise both physically and spiritually young people. In Sahin's (2011) qualitative data of the study which is about the interaction between sport and politics, in response to the question that which kind of functions the governments have to perform primarily; participants from diverse ministries had a detection: "governments should support human resources" and sport setup investments in a planned way the reason for this idea was that: Someone who has got sport education and culture not only makes himself noticeable in other branches but also he becomes braver and enterprising; his self-confidence is higher and he is more effective in two-way communications. The results of this study support our study's findings.

Considering female students doing sports, when their

resiliency levels are viewed, in three sub-factors (protective relations at school and high expectations, protective relations in family and meaningful participation, protective relations in friend groups) meaningful differences have been encountered in support of female athletes. Female athlete students' points which were got by resiliency sub-factors such as protective relations at school-in society, high expectations, protective relations in family and meaningful participations and protective relations in friend groups are increasing meaningfully in proportion to ones not doing sports.

In resiliency concept, external features are in the type of developmental supports, opportunities and protective factors; as to internal features are indicated as self-efficacy, self awareness, empathy, goals-missing, and solving problem factors (Constantine et al., 1999; Constantine and Benard, 2001). Based on this description, in the factors which include external features, it can be said that: Females doing sports get higher points than non-sports women and that sub-factors including internal features do not show differences in terms of female athlete students.

In terms of gender variance, the resiliency levels of high school students' sub-factors, any differences have not been able to be detected. It can be stated that both male and female students involved in this study, are in the same level and have resiliency levels over the average.

Özcan, in his study over high school students in 2005, detected a meaningful difference in support of female students only in empathy sub-dimension on the level of $p=.05$. However, there were no significant differences in other sub-factors as regarding to gender.

In a study-about coaches-carried out by Kırımoglu et al. (2012), in terms of gender variance, a meaningful difference were not found in resiliency levels. In another study of Kırımoglu et al. (2010) over physical education teachers, any differences were not encountered in terms of gender variance. Both working groups used in related studies and the group included in our study, are closely related to sport, because there were no difference in terms of gender variance in these three groups. It can be said that sport has an affect over both men and women's resiliencies equally.

In the studies, which are in literature and have been carried out over individuals who have diverse socio-economic profiles, it is emphasized that gender variance has no affect over resiliency level (Eitzen and Pratt, 1989; Ozcan, 2005; Gürgan, 2006; Gökden, 2007; Dayıoglu, 2008; Terzi, 2008; Karaymak, 2009; Choowattanapakorn et al., 2010).

As a result, the resiliency levels of all students who have taken part in our study, are over the average level and when it is evaluated by athletic and non-athletic factors, it has been determined that, sports have positive effects over resiliency levels in male high school students. In addition, it is clear that in female students, in the factors described as external resiliency traits, sport

results in more increase, as to in internal resiliency traits it has been stated that sport has no affect on these traits. Also, it was concluded that gender variance has no affect on high school athlete students' resiliency levels.

Resiliency concept can be described as a kind of risk and difficulty an individual experiences. Resiliency level is not a character feature which protects the individual from negative effects of environment (Gizir, 2007). Resiliencies are protective factors in psycho-social references and they have attitudes and abilities which enable environmental risk factors to decrease their effects. Protective factors describe the situations which develop individuals' abilities and healthy harmony; also they ease the effect of difficulty or risk – reduce or remove them- (Masten, 1994; Caffo and Belaise, 2003). In this study which is about the young in towns formed due to migration, it has been determined that sport activities that have protective factor feature are a determinant over the formation of resiliency level. The contribution of sport to resiliency level is stated in the related literature. Besides individual and parental protective factors, the diversity and multitude of resources presented by environment such as sport, culture, art and recreation activities make contribution to increase the psychological stability of the young who are at diverse risk (Wang et al., 1994; Mandleco and Perry, 2000).

The following suggestions have been developed considering the findings obtained from the research.

For future researches, individuals with diverse features—such as the ones who are in orphanages, experienced earthquake, live separately from parents or lost relatives—can be compared with each other. More comprehensive results can be reached by repeating similar studies in different cities which have dense migration population. More participation to sports activities should be supported so that resiliency feature of the disadvantaged young people can be constituted and developed. Sport facilities from which young children can benefit should be constituted especially in districts which emerged by migration. In addition, qualitative studies can be conducted for broader analysis.

REFERENCES

- Abakay U (2010). The Relation of Footballer-Coach Interaction with Success Motivation of Other Footballers' Who are in Different Status. Dissertation Thesis. Gazi Institute of Medical Sciences. Ankara.
- Arslan E, Sahbaz U (2012). A study to develop a scale for determining the social acceptance levels of special-needs students, participating in inclusion practices. *Educ. Res. Rev.* 7(29):651-662.
- Ahern NR, Ark P, Byers J (2008). Resilience and Coping Strategies in Adolescents. *Pediatr. Nurs.* 20(10):32-33.
- Black SA, Porter LJ (1996). "Identification of the critical factors of TQM", *Decis. Sci.* 27(1):1-21.
- Begun AL (1993). Human Behaviour and the Social Environment: The Vulnerability, Risk and Resilience Model. *J. Soc. Work Educ.* 29(1):26-35.
- Caffo E, Belaise C (2003). Psychological aspects of traumatic injury in children and adolescents. *Child Adoles. Psychiatr. Clin. North Am.* 12(3):493-535.

- Choowattanapakorn T, Alex L, Lundman B, Norberg A, Nygren B (2010). Resilience among women and men aged 60 years and over in Sweden and in Thailand. *Nurs. Health Sci.* 12(3):329-335.
- Constantine NA, Benar B (2001). California Healthy Kids Survey Resilience Assessment Module: Technical Report. Berkley CA: Public Health Institute and Oakland CA: WestEd.
- Constantine NA, Benard B, Diaz MD (1999). Measuring Protective Factors and Resilience Traits in Youth: the Healthy Kids Resilience Assessment. Paper Presented at the Seventh Annual Meeting of the Society for Prevention Research New Orleans.
- Dayıoglu B (2008). Resilience in University Entrance Examination Applicants: The Role of Learned Resourcefulness, Perceived Social Support and Gender. Master Thesis. Middle East Technical University Social Sciences Institute. Ankara.
- Eitzen DS, Pratt SR (1989). Gender Differences in Coaching Philosophy. The Case of Female Basketball Teams. *Res. Quart. Exercise Sport* 60(2):152-158.
- Fletcher D, Sarkar M (2012). A Grounded Theory of Psychological Resilience in Olympic Champions *Psychology of Sport and Exercise* 13(5):669-678.
- Glantz MD, Sloboda Z (1999) Analysis and Reconceptualization of Resilience. Glantz MD, Johnson JL (eds) Resilience and Development. Positive Life Adaptations, Plenum Publisher; New York pp.109-126.
- Gökden KN (2007). The Role of Self-Esteem Hope and External Factors in Predicting Resilience Among Regional Boarding Elementary School Students. Master Thesis. Middle East Technical University Social Sciences Institute. Ankara.
- Gürkan U (2006). Psychological Counselor's Effect in Groups over University Students' Resilience Levels. Dissertation Thesis. Ankara University Educational Sciences Institute. Ankara.
- Gızır CA (2007). A Literature Review Of Studies On Resilience, Risk, And Protective Factors. *Turk. Psychol. Couns. Guid. J.* 3(28):113-128.
- Henderson N, Milstein MM (1996). Resiliency in schools: Making it happen for students and educators. Corwin Press. Thousand Oaks.
- Hortaçsu N (2003). Relations in Childhood, Parents Siblings and Friends. Ankara: İmge Kitabevi.
- Joseph JM (1994). The Resilient Child: Preparing Today's Youth for Tomorrow's World. Insight Books. New York.
- Karairmak O (2009). Commitment Styles of Adults Who Experienced Earthquake and the Relation Among Their Resiliencies XVIII, National Education Sciences Congress Pronouncements 1-3 March 2009 Izmir.
- Kırımoglu H, Cokluk GF, Yıldırım Y (2012). Evaluation of Resilience Levels of the Turkish coaches, *Electronic J. Soc. Sci.* 11(39):115-127.
- Kırımoglu H, Yıldırım Y, Temiz A (2010). Examination of Resilience Levels of Physical Education and Sports Teachers Working in Primary and Secondary Schools (Hatay City Sample). *Nigde University J. Phys. Educ. Sport Sci.* 4(1):88-97.
- Kumpfer KL (1999). Factors and Processes Contributing to Resilience: The Resilience Framework. Glantz MD, Johnson JL (eds), Resilience and Development: Positive Life Adaptation, Plenum Publishers: New York pp.179-224.
- Leipold B, Greve W (2009). Resilience: A Conceptual Bridge Between Coping and Development. *Eur. Psychol.* 14(1):40-50.
- Masten AS (2001). Ordinary Magic: Resilience Processes in Development. *Am. Psychol.* 56(3):227-238.
- Masten AS, Powell JL. (2003). A resilience framework for research, policy, and practice. (Ed: Luthar S) Resilience and vulnerabilities: Adaptation in the context of childhood adversities. Cambridge University Press. New York.
- Masten AS (1994). Resilience in individual development: Successful adaptation despite risk and adversity. Lawrence Erlbaum Associates. Hillsdale.
- Mandleco BL, Peery JC. (2000). An organizational framework for conceptualizing resilience in children. *J. Child Adoles. Psychiatr. Nurs.* 13(3):99-111.
- Newman R (2005). APA's Resilience Initiative. *Professional Psychology. Res. Pract.* 36(3):227-229.
- Nezhad SMA, Besharat MA (2010). Relations of Resilience and Hardiness with Sport Achievement and Mental Health in A Sample of Athletes. *Procedia Soc. Behav. Sci.* 5:757-497.
- Ogulmus S (2001). Resilience as a Personality Trait. 1 National Child and Crime: Reasons and Prevention Works Symposium 29-30 March 2001 Pronouncements, Ankara.
- Öz F, Yılmaz BE (2009). An Important Concept in the Protection of Mental Health : Psychological Solidity . Faculty of Health Sciences , J. Nursery 16(3):82-89.
- Ozcan B (2005). Resilience Traits of High school Students Whose Parents Got Divorced and the Ones Whose Parents Are Together, and Comparison of Them in terms of Protective Factors. Master Thesis. Ankara University Educational Sciences Institute. Ankara.
- Onat G (2010). The Effects Of Parental Attitudes-Which Are Perceived As Democratic And Authoritarian-On First Class Of High School Students' Resiliency Level Investigated. Master Thesis. Maltepe University Social Sciences Institute. İstanbul.
- Reivich KJ, Seligman MEP, McBride S (2011). Master Resilience Training in the U.S. Army. *Am. Psychol.* 66(1):25-34.
- Sahin MY (2011). Interaction of Sport and Politics in Turkey. Dissertation Thesis. Gazi University Health Sciences Institute. Ankara.
- Terzi S (2008). The Relation Between the Power of Pulling Oneself Together and Internal Protective Factors Among University Students. Hacettepe University, J. Educ. Faculty 2008(35):297-306.
- Tekez S (2004). Learning Styles of High School Students, Postgraduate Thesis, University of Anatolia, Institution of Educational Sciences: Eskisehir.
- Toprak Z (2009). "Yabancı Emekli Yerleşiklerin Yerelde Kamusal Hayata Katılım İstekliliği ve Yerel Halkla İlişkileri: Antalya İçin Bir Yaklaşım" [Willingness of Foreign Retired Residents to Participate in Local Public Life and Relationship within the Local Community: Example of Antalya, Turkey] *Yönetim Bilimleri Dergisi* 7(2):99-137.
- Tuckman BW (1999). Conducting educational research. Belmont, CA: Wadsworth.
- Wang MC, Haertel GD, Walberg HJ (1994). Educational resilience in inner cities. Lawrence Erlbaum Associates. Hillsdale.