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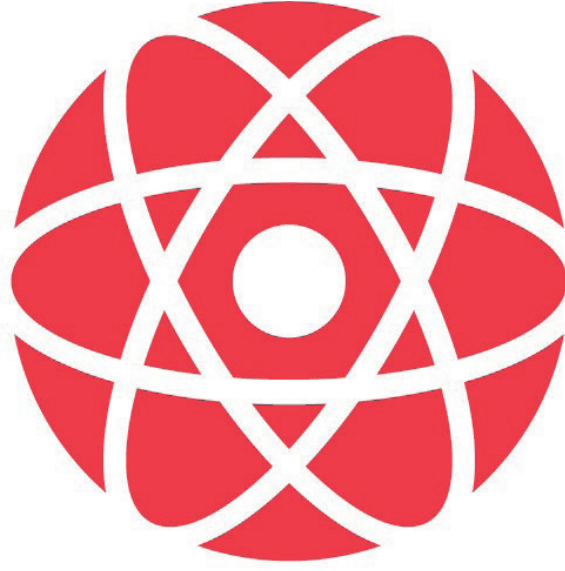
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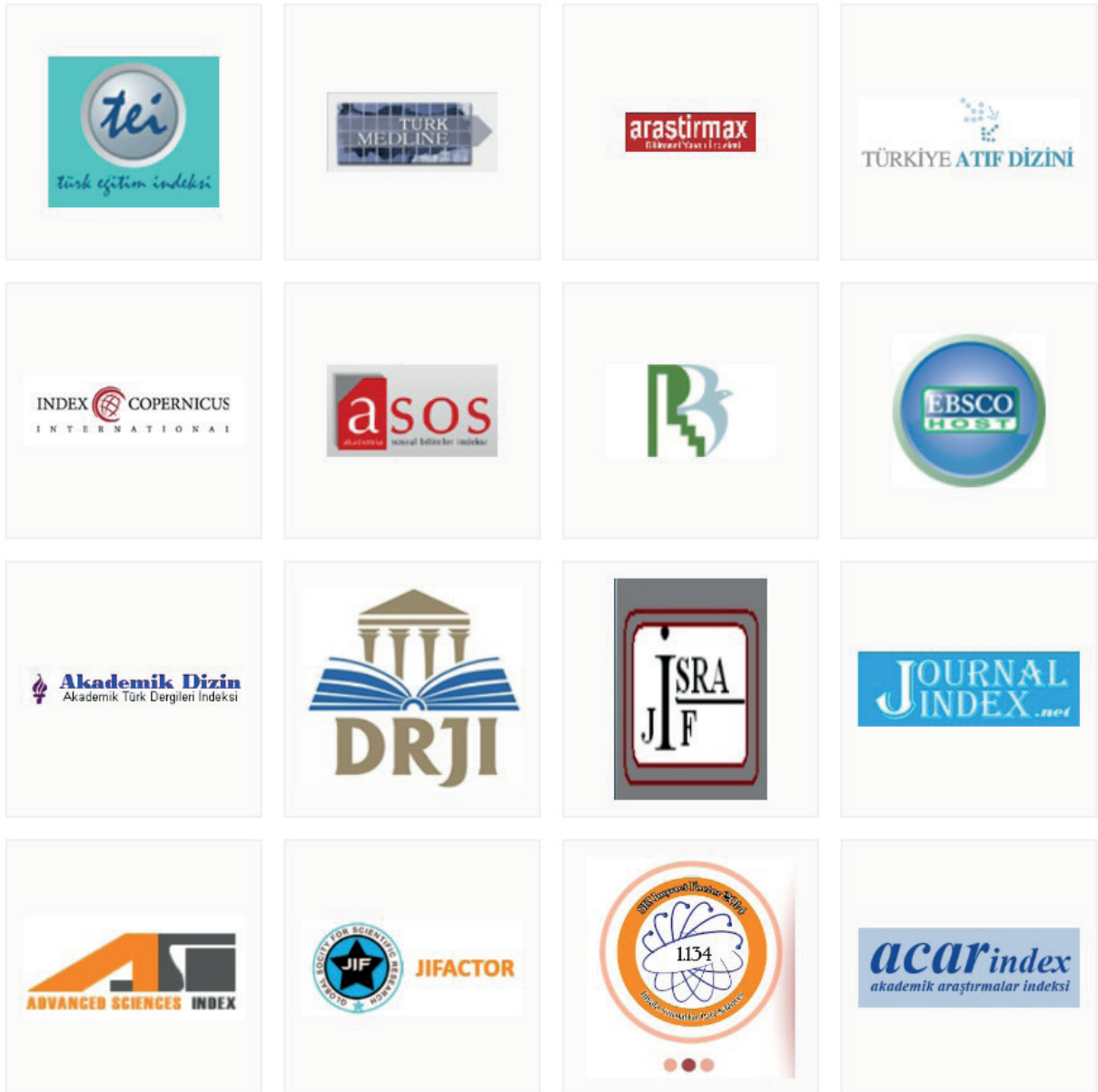
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JOB SATISFACTION LEVELS OF PRIMARY HEALTH CARE NURSES
AND MIDWIVES WORKING IN THE DISTRICTS OF ADAPAZARI,
SERDIVAN AND ERENLER IN SAKARYA¹SAKARYA İLİNE BAĞLI ADAPAZARI, SERDİVAN, ERENLER
İLÇELERİNDE BİRİNCİ BASAMAK SAĞLIK HİZMETLERİNDE
ÇALIŞAN HEMŞİRE VE EBELERİN MESLEKİ DOYUMLARIHamide ZENGİN¹, Ayşe ÇEVİRME², Özge ERTÜRK³¹ Sakarya University, Institute of Health Sciences, Sakarya / Turkey²⁻³ Sakarya University, Faculty of Health Sciences, Nursing Department, Sakarya / TurkeyORCID ID: 0000-0002-2389-6466¹, 0000-0001-7116-2523², 0000-0001-9238-490X³

Öz: Amaç: Bu çalışma, birinci basamak sağlık hizmetlerinde hemşire, ebe ve Aile Sağlığı Elemanı (ASE) olarak çalışan sağlık personellerinin mesleki doyumu ve etkileyen faktörlerini belirlemek ve bazı değişkenler açısından incelemek amacı ile yapıldı. **Yöntem:** Tanımlayıcı ve analitik tipteki araştırmanın örneklemini üç Toplum Sağlığı Merkezi (TSM) ve 41 Aile Sağlığı Merkezinde (ASM) çalışan araştırmaya katılmayı kabul eden 100 hemşire, ebe ve ASE'ler oluşturdu. Veriler, "Soru Formu" ve "Minnesota İş Doyum Ölçeği" kullanılarak toplandı. Verilerin değerlendirilmesinde sayı, yüzde, ortalama, Kruskal Wallis Testi, Mann-Whitney U Testi, Independent t Testi, One-Way ANOVA ve Pearson Korelasyon Katsayısı kullanıldı. **Bulgular:** Katılımcıların %52,5'inin TSM'de çalıştığı, %47,5'inin ASM'de çalışmaktadır. Genel iş doyumu "yeterli" düzey olarak saptanmıştır. Genel iş doyumu puanı bakımından birinci basamakta çalışılan yerler arasında istatistiksel olarak anlamlı bir farklılık bulunduğu (p<0,05) ASM'de çalışanların genel iş doyumu puanı TSM'de çalışanlara göre anlamlı derecede yüksek olduğu saptandı. ASM'de çalışanların dış faktörler puanı TSM'de çalışanlara göre anlamlı derecede yüksek olduğu belirlendi. Yaş değerleri ve hizmet süresi arttıkça genel iş doyumu, iç faktörler puanı ve dış faktörler puanı azaldığı belirlendi. **Sonuç:** Bu çalışmada, mesleği isteyerek seçmenin iş doyumu üzerinde olumlu etkisinin olduğunu; bu faktörü gidermek için meslek seçiminden önce öğrencilere meslek ile ilgili bilgilendirmelerin yapılmasını, halen aktif olarak çalışan meslektaşlarımıza hizmet içi eğitimlerin yapılması, görev tanımının uygulanması, personel eksikliği, fiziki şartların düzenlenmesi gerektiği sonucuna ulaşıldı.

Anahtar Kelimeler: Aile Sağlığı Elemanı, Birinci Basamak Sağlık Hizmetleri, Ebe, Hemşire, İş Doyumu

Abstract: Purpose: This study was conducted in order to determine the professional satisfaction of nurses, midwives and Family Health Staff(FHS) working in Primary Health Care Services and to evaluate the related factors in terms of some variables. **Method:** Being a descriptive and an analytical one, this research had a sample of 100 voluntary nurses, midwives and FHS working in three different Public Health Center(PHC) and 41 Family Health Center(FHC). Data were collected via a "questionnaire" and "Minnesota Satisfaction Questionnaire(MSQ)". For the evaluation of the data, number, percentage, mean, Kruskal-Wallis test, Mann-Whitney U test, Independent t-test, One-Way ANOVA and Pearson correlation coefficient were used. **Results:** A total of 52.5% worked in PHC and 47.5% worked in FHC. Job satisfaction in general was found as "sufficient" level. As for the scores of job satisfaction in general, there was a statistically significant difference among the places they worked (p<0,05); the people who worked in FHCs had a significantly higher score of job satisfaction in general compared to the ones who worked in PHCs. It was seen that as the age and total working period increased, general job satisfaction, internal and external factor scores decreased. **Conclusion:** It was concluded in this study that choosing a job willingly had a positive effect on job satisfaction. It should be better to inform the students on this issue before they choose a job, recent staff should be given the opportunity of in-service training as much as possible, job definitions should be made, and lack of staff and insufficient physical conditions should be remedied.

Key Words: Family Health Staff, Job Satisfaction, Midwife, Nurse, Primary Health Care Services

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INTRODUCTION

Job satisfaction is described as the level of physical, mental and social satisfaction or the emotional reactions of the employee upon an evaluation of his job and his business environment (Duxbury, 1984: 97-101; Durmus, 2007: 139-146; Kahraman, 2011: 12-18). The most important aspect of employee success, comfort and productivity is job satisfaction (Duxbury, 1984: 97-101; Aytekin, 2014: 51-58; Durmus, 2007: 139-146). Factors affecting job satisfaction are personal factors and organizational factors. Age, gender, educational status, marital status, occupational status, length of service, socio-cultural environment and personality traits are individual factors and the job done and its nature, management and control, fees, promotion opportunities, the physical conditions and social environment of the workplace are organizational or environmental factors (Aksu, 2002: 271–282; Asegid, 2014; Aytekin, 2014: 51-58; Cetin, 2013: 145-163; Erbil, 2004: 3; Kaya and Bilgin, 2015: 1).

Job satisfaction is essential in any job. Factors such as severe working conditions, low pay, and lack of respect for the profession can lead to poor job satisfaction among nurses and midwives in health care (Durmus, 2007: 139-146).

While job satisfaction of nurses and midwives and Family Health Staff (FHS) working in preventive health services leads to physical, social and mental well-being, a high quality of care and a high level of community health (Aydın and Akan, 2010: 1; Hampton, 2012: 2; Senbounsou, 2013: 233-241; Kaya and Bilgin, 2015: 1), a low level of job satisfaction or dissatisfaction results in a deceleration in the work done, constant complaints, lack of concentration, thinking about leaving work and an increase in problems and errors related to business discipline (Tekin et al., 2014: 135-139; Kaya and Bilgin, 2015: 1).

Organizations offering health care services, structured and among the most complex organizations in terms of function (Erat et al., 2011: 48-77). Quality and sufficiency in requested and given health services; It is the most prominent indicator of the socio-economic development level of that country (Korkmaz and Yılmaztürk, 2011: 77-96). In order to make health care services accessible and available to everyone, it is needed to reinforce primary health care services by ensuring high levels of job satisfaction among the staff (Tekin et al., 2014: 135-139).

Family Health Staff (FHS) in Family Health Centers (FHC) in our country have the duties and responsibilities of giving care and treatment, laboratory services, secretarial services, mobile health services, maternal and child



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health, reproductive health, assisting family doctors in house visits, attending in-service training. Not every FHS do all these jobs. There are groups in FHCs such as A, B, C, D and E (out of classifications) determined by the Ministry of Health. In the groups of A, B, C there should be a staff other than FHS, whereas there should be one more health staff for Group A FHCs.¹

Nurses and midwives working in Public Health Centers have the duties and responsibilities such as records, statistics, control of infectious and non-infectious diseases, reproductive health services, national programs, forensic services, emergency medical services, prevention from accident and injuries, imaging and laboratory services, environmental health services, occupational health and safety services, disaster services, improving health and promoting health education services, public areas and school health services, social work services.²

There are a number of studies concerning the primary care nurses, midwives and FHS (Tekin et al., 2014: 135-

139; Erbil, 2004: 3; Kaya and Bilgin, 2015: 1, Doğan et al., 2013: 112-5). Our study dif-

fers from the others in terms of focusing on the staff in both PHCs and FHCs together and also by considering various FHC groups. This study also fulfils a need to compare the job satisfaction of the staff working as nurses and midwives in PHCs and as FHS working in FHCs and also between FHSs working in different FHC groups.

OBJECTIVE

This study was performed as a descriptive and sectional one in order to detect job satisfaction levels and the affecting factors of health staff working as primary care nurses, midwives and Family Health Staff (FHS).

MATERIAL and METHOD

The population consisted of primary care nurses, midwives and FHS (n=1059) working in 16 PHCs and 94 FHCs in Sakarya. The data were collected in 2016 from three Public Health Centers (PHC) and forty-one Family Health Centers (FHC) in three districts of Sakarya. FHCs were chosen by using random number charts. To detect the number of samples, the item number of 20-item Minnesota Job Satisfaction Questionnaire (MSQ) were multiplied by five; sample number was found as 100. The sample of the universe consisted of 100 nurses, midwives and FHS who volunteered to participate in the study. The data from a participant who did not complete the form was omitted and the data from 99 partic-

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ipants were evaluated. The nurses, midwives and FHS who volunteered, had no communication problems and worked actively were included in the study.

Data Collection Tools

A questionnaire, consisting of two parts, was used in order to detect the job satisfaction levels of participants and also face-to-face sessions were included. In the first part, an identifying information form of 13 items which aimed to determine the personal, socio-demographic and occupational features of nurses, midwives and FHS. In the second part, a 20-item Likert type Minnesota Job Satisfaction Questionnaire (MSQ) was used to find out about the job satisfaction levels. The most widely used job satisfaction scale MSQ, which was developed by Weiss, Dawis, England and Lofquist, has two types; the longer type consists of 100 items, and the shorter one has 20 items. The longer type has two versions; one is 1967 and the other is

1977 (Mercanlıoğlu, 2012: 121-138; Baycan, 1985). The question form involves propositions to detect the satisfaction / dissatisfaction of employees on various dimensions of their jobs. It was translated into Turkish, its validity- reliability studies were performed by A.F. Baycan from Boğaziçi University in 1985. Baycan tested the scale he had adapted in four different areas including health sector

(Baycan, 1985). MSQ can detect the internal (12 items) and external (8 items) satisfaction factors and it's designed as Likert type scoring. The questionnaire consists of 20 items ranging from 1 to 5 expressing "strongly dissatisfied", "dissatisfied", "no opinion", "satisfied", "strongly satisfied". For the evaluation of the scale, the total score from the items is divided by 20 in order to find the general satisfaction score (Derin, 2007). The highest score is 100, the lowest is 20. Scores between 20-39 are "very low", 40-59 are "low", 60-79 are "sufficient", 80-100 are "high" levels of satisfaction.

Evaluation of Data

Data collected were evaluated by SPSS 20 on computer. Shapiro Wilk's was used to search for the availability of variables to the normal distribution. While evaluating the results, the level of significance was given as 0,05; when $p < 0,05$, variables are out of normal distribution and when $p > 0,05$, the variables are of normal distribution. Independent t Test and One-Way ANOVA are used when evaluating the differences between the groups. When there were significant differences in One-Way ANOVA and the groups had homogenous variances, Tukey HSD was used. When the variances were not homogenous, Tamhane's Analysis was used. When analyzing the differences between the groups if the variables are out of normal distribution



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Mann Whitney U and Kruskal Wallis-H tests were used. Since number of units are more than 20, standardized z values were given for Mann Whitney U test. When there were significant differences in Kruskal Wallis_H test, Post-Hoc comparison test was used in order to determine the groups with differences. When analyzing the correlation between the variables out of normal distribution, Spearman's Correlation Coefficient was used. For the evaluation of correlation between the variables confirming with the normal distribution, Pearson Correlation Coefficient was used. When assessing the results, significance level was taken as 0,05; if $p < 0,05$ there was a significant correlation and if $p > 0,05$ there was no significant correlation.

Ethical Considerations

After necessary consents were obtained for ethical considerations, nurses, midwives and FHS participating in the study were informed and the voluntary ones were included in the study.



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RESULTS

Table 1. The Distribution of Participants According to Personal Information

The average age of the participants was 35,99 \pm 8,31 (the youngest=19, the oldest=60), the average working time was 15,44 \pm 8,76 (the least=6 months, the most=38 years).

Features		n	%
Marital Status	Single	7	7,07
	Married	88	88,89
	Widowed / Separated	4	4,04
Monthly income-expense	Less income than expenses	39	39,39
	Equal	47	47,47
	More income than expenses	13	13,13
Level of education	Health high school	23	23,23
	Associate degree	45	45,45
	License degree	29	29,29
	Graduate degree/doctorate	2	2,02
Choosing the profession willingly	Yes	61	61,62
	No	38	38,38
	Total	99	100
Working Unit	Family Health Center	47	47,47
	Public Health Center	52	52,53
	Total	99	100
FHC type	A	25	53,19
	C	5	10,64
	D	10	21,28
	E	7	14,89
	Total	47	100

A total of 47 out of 99 participants (47,5 %) who filled in the questionnaire were working in FHC, a total of 52 (52,5 %) were work-

ing in PHC. Among the FHS, a total of 25 (53,19 %) were working in Group A, and 10 were working (21,28%) in Group D. Since



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random sampling was used, Group B FHS were not included in our study. A total of 45 participants (45,45 %) were associate degree graduates, a total of 29 (29,29 %) were of license degree and 88 of them (88,89 %) were married. A total of 61 (61,62 %) participants chose their profession willingly and 47 of

them (47,47 %) stated that their income and expenses were equal to each other.

There is no statistically significant correlation between marital status, monthly income and expense and educational status and general job satisfaction scale and its subscales ($p>0,05$).

Table 2. The Distribution of Participants According to the Average Scores of General Job Satisfaction Scale and Subscales Internal Factors and External Factors

Subscales	X \pm SS	Min	Max
General Job satisfaction	67,85 \pm 11,3	34	95
Internal Factors	41,89 \pm 6,91	25	58
External Factors	25,96 \pm 5,36	9	38

Table 2 shows the average scores of participants from the subscales of job satisfaction scale. Participants got an average score of (41,89 \pm 6,91) from internal satisfaction sub-

scale and an average score of (25,96 \pm 5,36) from external subscale. Total average score from job satisfaction scale is 67,85 \pm 11,3.



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Table 3. The Average Scores of Participants from General Job Satisfaction Scale and Its Subscales According to Some Socio-Demographic Features

		The state of choosing the profession willingly			
		n	X ± SS		p
General Job Satisfaction	yes	61	69,28 ±	9,77	0,138*
	no	38	65,55 ±	13,21	
	Total	99	67,85 ±	11,3	
Internal Factors	yes	61	42,48 ±	5,83	0,328*
	no	38	40,95 ±	8,36	
	Total	99	41,89 ±	6,91	
External Factors	yes	61	26,8 ±	4,86	0,044**
	no	38	24,61 ±	5,9	
	Total	99	25,96 ±	5,36	
General Job Satisfaction	FHC	47	70,6 ±	10,88	0,021*
	PHC	52	65,37 ±	11,19	
	Total	99	67,85 ±	11,3	
Internal Factors	FHC	47	43,19±	6,82	0,056**
	PHC	52	40,71±	6,84	
	Total	99	41,89±	6,91	
External Factors	FHC	47	27,4±	5,22	0,008**
	PHC	52	24,65±	5,2	
	Total	99	25,96±	5,36	

* Independent t Test ** Mann Whitney U Test

There is no statistically significant difference between the status of choosing the profession willingly in terms of external factors score ($p < 0,05$). External factors score is significantly higher in the ones who chose the

profession willingly when compared to the ones who did not. There is a statistically significant difference between the primary work places in terms of general job satisfaction ($p < 0,05$). General job satisfaction scores of the ones who work in FHCs are significantly higher than the ones who work in PHCs. In terms of external factors, there is a statisti-



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cally significant difference between the work places in the primary level ($p < 0,05$). External factor scores of the ones who work in FHCs

are higher than the ones who work in PHCs (Table 3).

Table 4. Average Scores of Participants According to FHC Types; General Job Satisfaction Scale and Its Subscales

		The Type of FHC			
		N	X ± SS		p
General Job Satisfaction	A	25	68,36 ±	11,24	0,042*
	C	5	74,2 ±	5,93	
	D	10	67,6 ±	10,28	
	E	7	80,29 ±	7,99	
	Total	47	70,6 ±	10,88	1-4
Internal Factors	A	25	45 ±	6,88	0,018**
	C	5	44 ±	3,36	
	D	10	39 ±	6,55	
	E	7	49 ±	4,69	
	Total	47	45 ±	6,82	1-4, 3-4
External Factors	A	25	26,24 ±	5,67	0,236*
	C	5	29,6±	3,05	
	D	10	27,2±	4,85	
	E	7	30,29 ±	4,42	
	Total	47	27,4±	5,22	

* One Way ANOVA, ** Kruskal Wallis H Test

In terms of general job satisfaction scores, there is a statistically significant difference between the types of FHCs ($p < 0,05$). The scores of general job satisfaction of the ones who work in E type FHCs are higher than the ones who work in A type FHCs. In terms of internal factor scores, there is a statistically

significant difference between the types of FHCs ($p < 0,05$). E type FHC staff have higher internal factor scores than the ones who work in A type and D type FHC staff. In terms of external factors, there is no statistically significant difference between the types of FHCs ($p > 0,05$) (Table 4).



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Table 5. The Correlation Between Age and Total Working Period and General Job Satisfaction Scale and Its Subscales

		Age	Total Working Period
Total Working Period	r	0,956	
	p	0,001	
	n	99	
General Job Satisfaction	r	-0,113	-0,102
	p	0,267	0,313
	n	99	99
Internal Factors	r	-0,075	-0,068
	p	0,462	0,505
	n	99	99
External Factors	r	-0,122	-0,101
	p	0,229	0,318
	n	99	99

There is no statistically significant correlation between age, total working period and general job satisfaction score, internal factors score and external factors score ($p>0,05$). These results are not statistically significant but it is seen that as the age and total working period raise, general job satisfaction, internal factors score and external factors score decrease.

DISCUSSION

General job satisfaction score and external factors score are significantly higher in the ones working in FHCs as primary health staff compared to the ones working in PHCs (Table 3). General job satisfaction scores of the participants are at “sufficient” level. In

the study by Tekin (Tekin et al., 2014: 135-139) carried out by FHS, job satisfaction levels were found at medium level. This may be because FHS have clear job descriptions and fixed working places while PHS are sent to different places to work temporarily, they are supported to work in the units other than their own and their inappropriate physical working conditions.

In FHCs, Group E staffs were found to have significantly higher job satisfaction levels compared to the ones working in Group A staff. While Group A FHCs have better physical conditions and more clearly defined duty and responsibilities, Group E FHCs are just



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the opposite (No proper physical conditions, giving patients clinic numbers, injections, dressings, blood taking, monitoring pregnant, babies, children, women between 15-49, obesity controls, document registrations all take place in Group E FHCs.³

This can only be explained as Group E FHC staff work with a holistic approach. As a result of correlation analysis between age and total working periods of primary care nurse, midwives and FHS, a statistically significant correlation was found ($p < 0.05$). Although there was no significant correlation between age and total working period and job satisfaction scale, as age and working periods got higher, job satisfaction decreased (Table 5). In the study by Kaya et al. in Çankırı (Kaya and Bilgin, 2015: 1) it was stated that the more working periods were, the more job satisfaction was. In another study carried out with midwives in Mersin, in opposition to our study it was found out that there was a positive correlation between working periods and job satisfaction (Aydın and Akan, 2010: 1). Another study displayed similar results to our study (Tekin et al., 2014: 135-139).

There was no statistically significant correlation between total working periods and general job satisfaction scores, and between in-

ternal factor scores and external factor scores of participants ($p > 0.05$).

CONCLUSION and RECOMMENDATIONS

In our study performed by 99 midwives, nurses and FHS working in primary health care institutions in Sakarya, the following conclusions were reached:

There was no statistically significant correlation between marital status, monthly income-expense, level of education, age, total working period and general job satisfaction, external factor scores and internal factor scores ($p > 0.05$).

In terms of general job satisfaction scores, primary health care institutions, family health centers and external factor scores, there was a statistically significant difference between the state of choosing the profession willingly and the places of work at primary level ($p < 0.05$). It was found out that the staff working in FHCs and Group E FHCs in general have higher job satisfaction levels and also FHS have higher job satisfaction than PHS.

With respect to these results, it was recommended that;

There should be legislation and policies that would help graduate midwives and nurses choose their working units, as working areas are the factors influencing job satisfaction,

³ <http://ailehekimligi.gov.tr/component/content/article/102-gorusler/2372-aile-hekimlii-uygulama-yoenetmelii.html>



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and working conditions should be physically appropriate for the staff.

The staff's physiological, psychological and social needs should be supported.

Secondments for nurses and midwives working in PHCs should be omitted, their working hours should be arranged, their safety should be guaranteed and more efficient and satisfactory work performance of health workers should be ensured.

This study is suggested as a source of data for other similar studies aiming to evaluate the factors affecting job satisfaction levels of staff.

REFERENCES

DUXBURY, M.L., ARMSTRONG, G.D., DREW, D.J., HENLI, S.J., (1984). Head nurse leadership style with staff nurse burnout and job satisfaction in neonatal intensive care unit. *Nursing Research*, 33(2): 97-101

DURMUŞ, S., GÜNAY, O., (2007). Hemşirelerde iş doyumunu ve anksiyete düzeyini etkileyen faktörler. *Erciyes Tıp Dergisi*, 29(2). 139-146

KAHRAMAN, G., ESRA, ENGİN, E., DÜLGERLER, Ş., ÖZTÜRK, E., (2011). Yoğun bakım hemşirelerinin iş doyumları ve etkileyen faktörler. *Dokuz Eylül Üni-*

versitesi Hemşirelik Fakültesi Elektronik Dergisi, 4(1): 12-18

AYTEKİN, A., YILMAZ, KURT, F.Y., (2014). Yenidoğan Yoğun Bakım Kliniği'nde çalışan hemşirelerde iş doyumunu ve etkileyen faktörler. *İzmir Dr. Behçet Uz Çocuk Hastanesi Dergisi*, 4(1): 51-58

AKSU, G., ACUNER, A.M., TABAK, R.S., (2002). Sağlık Bakanlığı merkez ve taşra teşkilatı yöneticilerinin iş doyumuna yönelik bir araştırma (Ankara örneği). *Ankara Üniversitesi Tıp Fakültesi Mecmuası*, 55(4): 271-282

ASEGID A., BELACHEW, T., YIMAM, E., (2014). Factors influencing job satisfaction and anticipated turnover among nurses in sidama zone public health facilities, south Ethiopia. *Nursing Research and Practice*, 2014: 1-26. Doi: <http://dx.doi.org/10.1155/2014/909768>

ÇETİN, H., AYGEN, ZETTER, Z., TAŞ, S., ÇAYLAK, M., (2013). İş doyumunu ve çalışanların demografik özellikleri arasındaki ilişkilerin belirlenmesi: Antalya Atatürk Devlet Hastanesi Örneği. *Akdeniz İktisadi ve İdari Bilimler Fakültesi Dergisi*, (26): 145-163

ERBİL, N., BOSTAN, Ö., (2004). Ebe ve hemşirelerde iş doyumunu, benlik saygısı ve etkileyen faktörler. *Atatürk Üniversitesi*



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www.sstbdergisi.com

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(TRADEMARK)

(2015/04315- 2015-GE-18972)

Hemşirelik Yüksekokulu Dergisi, 7(3):
1-11

KAYA, N.T., BILGIN, S., (2015). Çankırı il merkezinde birinci basamak sağlık kuruluşlarında çalışan ebe ve hemşirelerde iş doyumu düzeyi ve etkileyen faktörlerin değerlendirilmesi. Hacettepe University Faculty of Health Sciences, 1(1): 1-24

AYDIN, M., AKAN, N., (2010). Mersin Büyükşehir Belediyesi sınırları içinde çalışan ebelerin mesleki doyumu. Mersin Üniversitesi Sağlık Bilimleri Dergisi, 3(1)

HAMPTON, G.M., PETERSON, R.T., (2012). Job satisfaction of certified nurse midwives: an examination. Administrative Issues Journal: Education, Practice, and Research, 2(2): 112-126

SENBOUNSOU, KHAMLUB, S., OR-RASHID, M.H., SARKER, M.A.B., HI-ROSAWA, T., OUTAVONG, P., et. al., (2013). Job satisfaction of health-care workers at health centers in Vientiane Capital and Bolikhamsai Province, Lao PDR. Nagoya Journal of Medical Science, 75(3-4): 233-241

TEKİN, Ç., BOZKIR, Ç., SAZAK, Y., ÖZER, A., (2014). Malatya il merkezinde çalışan aile hekimleri ile aile sağlığı

elemenlerinin, aile hekimliği uygulaması hakkındaki görüşleri, iş doyumu düzeyleri ve etkileyen faktörler. Fırat Tıp Dergisi, 19(3): 135-139

ERAT, Ş., KORKMAZ, M., ÇİMEN, M., YAHYAOĞLU, G., (2011). Hemşirelerin iş yaşam kalitesinin motivasyona etkisi. Uluslararası Hakemli Akademik Spor Sağlık ve Tıp Bilimleri Dergisi, 1(1): 48-77

KORKMAZ, M., YILMAZTÜRK, A., (2011). Sağlık harcamalarının yıllara göre karşılaştırılması ve sağlık harcamalarını etkileyen faktörlerin incelenmesi. Uluslararası Hakemli Akademik Spor Sağlık ve Tıp Bilimleri Dergisi, 1(1): 77-96

DOĞAN, N., ŞENSOY, N., MARDİN, E.E., UÇUR, İ., ÖZBALCI, T., (2013). The prospects of family health center personnel about family practice. Journal of Clinical and Analytical Medicine, 4(2): 112-115

MERCANLIOĞLU, Ç., (2012). Demografik değişkenler bazında iş tatmini boyutlarında oluşan farklılıklar: Okmeydanı Eğitim ve Araştırma Hastanesi personele yönelik bir araştırma. Öneri Dergisi, 10(37): 121-138

BAYCAN, A., (1985). An Analysis of the several aspects of job satisfaction between



SSTB

www.sstbdergisi.com

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(TRADEMARK)

(2015/04315- 2015-GE-18972)

different occupational groups. Doktora Tezi, Boğaziçi Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul

DERIN, N., (2007). Devlet hastanelerinde çalışan sağlık personelinin iş doyum düzeyleri ve etkileyen faktörler. Yüksek Lisans Tezi, Eskişehir Osmangazi Üniversitesi Sağlık Bilimleri Enstitüsü, Eskişehir

INTERNET SOURCES

[Http://ailehekimligi.gov.tr/toplum-sal-merkezi.html](http://ailehekimligi.gov.tr/toplum-sal-merkezi.html) accessed 12.02.2016

[Http://ailehekimligi.gov.tr/component/content/article/102-gorusler/2372-aile-hekimlii-uygulama-yoenetmelii.html](http://ailehekimligi.gov.tr/component/content/article/102-gorusler/2372-aile-hekimlii-uygulama-yoenetmelii.html) accessed 12.02.2016

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AN EXAMINATION OF YOUTH ATHLETES' PERFORMANCE
INDICATORS IN TERMS OF CHRONOLOGICAL AGE AND
BIOLOGICAL MATURITY¹YILDIZLAR SEVİYESİNDEKİ ATLETLERİN PERFORMANS
GÖSTERGELERİNİN KRONOLOJİK YAŞ VE BİYOLOJİK OLGUNLUK
AÇISINDAN İNCELENMESİ

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Öz: Bu çalışmanın amacı, yıldızlar seviyesindeki sporcuların seçilmiş antropometrik özellikleri ve performans değişkenlerindeki farklılıkları ve ilişkileri takvim yaşı ve biyolojik olgunluk açısından incelemektir. Araştırma grubu, atlama (erkek = 18, kadın = 19) ve sprint branşındaki (erkek = 17, kadın = 22) toplam 76 yıldız atletten oluşmuştur. Takvim yaşı, müsabaka performansı, boy uzunluğu, vücut ağırlığı, oturma boyu, bacak boyu uzunluğu, 30 metre sürat, kavrama kuvveti, bacak kuvveti, dikey sıçrama ve esneklik yetilerine ait değerler deneklerden elde edilmiştir. Ayrıca vücut kütle indeksi (BMI), zirve hızlı boy uzama yaşı (PHV), anaerobik güç (AP) değerleri hesaplanmış, müsabaka sonuç değerleri IAAF puanlama sistemine dönüştürülmüştür. Branş ve cinsiyet gruplarının istatistiksel analizleri Mann Whitney-U testi kullanılarak gerçekleştirilmiştir. Spearman korelasyon katsayıları (ρ), parametreler arasındaki ilişkileri ifade etmek için kullanılmıştır. Esneklik değerleri dışında atlama ve sprint branşındaki sporcuların cinsiyetlerine göre antropometrik özellikleri ve seçilen performans değerlerinde farklılıklar olduğu bulunmuştur. Ayrıca, değişkenler ile atletlerin yaşları ve biyolojik olgunluk seviyeleri arasındaki ilişkiler gözlemlendi. Aynı yaş grubundaki sporcular, yaşlarına ve PHV'ye göre farklı korelasyon değerleri gösterdiler. Bu noktada, yıldız sporcularının antrenörleri, spor yaralanmalarından kaçınarak, sporculara bireysel antrenman programı hazırlamak ve uygulamak istiyorsa, sporcuların olgunluk seviyesini belirlemelidir.

Anahtar Kelimeler: IAAF Puan, Olgunluk, PHV, Takvim Yaşı, Yıldız, Atlama, Sprint

Abstract: The purpose of this study was to examine differences and relationships between selected anthropometric features and performance variables of youth athletes in terms of chronological age and biological maturity. The research group was composed of total 76 track and field athletes, jumping events (male=18, female=19) and sprint events (male=17, female=22). Chronological age, competition performance, body height, body weight, sitting height, leg length, 30 meters speed, hand grip, leg strength, vertical jump and flexibility ability values were obtained from athletes. Also body mass index (BMI), age of peak height velocity (PHV), anaerobic power (AP) values of the athletes were calculated, and their competition results were converted to IAAF scoring system point. Statistical comparison of the events and gender groups was carried out using Mann Whitney-U test. Spearman's correlation coefficients (ρ) were used to express the relationships between parameters. It was found that there are differences in selected anthropometric and performance values with regard to gender for jumping and sprint event athletes, except the values of flexibility ability. Furthermore, the relationships between variables and athletes' age as well as biological maturity levels were observed. The athletes who are in the same age group have different correlation values according to their age and PHV between the variables. In this point, the coaches of youth athletes should be identify maturity level of their athletes, if they would like to prepare and to apply individual training program to them, with refrain from injury.

Key Words: IAAF Score, Maturity, PHV, Chronological Age, Youth, Jump, Sprint

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INTRODUCTION

In recent years, researchers have focused on the biological maturity level of children because growth and maturation levels do not occur to a linear increasing by the years for each person. In other words, the children who are at the same chronological age may obviously differ in their level of biological maturity (Armstrong, 2007: 2). There is a dilemma at this point owing to the fact that the general approach of talent identification, training programs and national or international competitions which have been arranged according to chronological age of athletes. Thus maturity levels are unfortunately neglected for youth athletes.

Chronological age gives poor information in the evaluation of growth and maturation. There are several methods for assessment of maturation. Age of peak height velocity (PHV) is the most frequently employed indicator of the biological maturity (Malina et al., 2015: 854, Cossio-Bolaños et al. 2015: 12086). Girls ordinarily attain PHV about 12 years and boys around 14 years of age. But, the timing of this event in relation to chronological age shows great variance. When PHV has been identified, children can be ranked by biological maturity age (years from PHV) rather than chronological age (Armstrong, 2007: 11).

The current study was applied to youth athletes of the sprinting and jumping events. Sprinters have moderate stature, generally possess a low relative lower limb length. Whereas jumpers are among the tallest of elite athletes, with a high relative lower limb length. Because both events are power events and require rapid power generation, they should have naturally with a high proportion of fast-twitch muscle fibres (Ackland et al., 2009: 259).

The movements in these sports are explosive and of short duration and use high loads; in other words, they require maximum strength and power. A high level of relative strength is important in track-and-field sprints and jumps (Bompa and Buzzichelli, 2015: 40). Since the sprinting and jumping events of track and field are anaerobic system-dominant sports, the training methods are similar (Bompa and Buzzichelli, 2015: 160).

Flexibility is crucial to sprinting and hurdling, as well as to jumping. Good technique in sprint events depends on excellent flexibility ability. Also in the jumping events, jumpers should have superior level of flexibility in all part of body to show good performance (Ackland et al., 2009: 262–263).

In the current study, chronological age, competition performance, body height, body weight, sitting height, leg length, 30 meters



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speed, hand grip, leg strength, vertical jump and flexibility ability values were obtained from sprinters and jumpers. Also BMI, PHV, AP values of the athletes were calculated. The purpose of this study was to examine differences and relationships between selected anthropometric features and performance variables of youth athletes in terms of chronological age and biological maturity.

METHODS

The research group was composed of total 76 track and field athletes, jumping events (male=18, female=19) and sprint events (male=17 , female=22). The measurements and tests were applied during the Turkish U18 National Team training camp in 2015 indoor season. Athletes have competed in two consecutive competitions one week in between, and the tests were applied on Wednesday between the competitions. The best performances of athletes from the two competitions were evaluated in the study. The competition results were converted to IAAF scoring system point (Spiriev, 2017) for each athlete. The anthropometrics values which are the stature (BH) and body mass (BM) were assessed using a Seca stadiometer and weighing scales (Seca Instruments Ltd., Hamburg, Germany). Sitting height (SH) was measured using a Holtain stadiometer (Holtain Ltd., Crosswell, Wales, U.K.). The BMI was calculated as a ratio of the BM (kg) and squared

BH (m). Right-left hand grip strength (HG) and leg strength (LS) tests were performed by dynamometers (Baseline dynamometer, Fabrication Enterprises, USA). The HG total value was obtained with sum of the right and left hand results. All strength test results were calculated as relative strength values, dividing the test performance by the athlete's body weight. In order to determine the subjects' sprint ability, running tests of 30 meters were performed. All results were recorded using photoelectric timing gates (Smartspeed, Fusionsport, Australia). Flexibility of the athletes were determined with using modified sit-and-reach test by normalized arm length (Baseline sit-reach scale, Fabrication Enterprises, USA). Jumping mat device for counter movement jump (CMJ) test was utilized (Smartjump, Fusionsport, Australia). In determining anaerobic power (AP) with Lewis nomogram, the subjects' CMJ heights (d) and body weight were calculated by using the jump formula (given below).

$$AP = [(\sqrt{4,9 \times \text{Weight}}) \times \sqrt{d}]$$

The PHV was calculated by the predictive equations of Mirwald et al. (2002: 691-692) for each gender. The equations require such data as the chronological age (Chr-Age),



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body mass (BM), standing height, seated height and leg length of subjects.

Statistical Analysis

General characteristics of the participants were presented as means and standard deviations (\pm SD). Statistical comparison of the events and gender groups was carried out using Mann Whitney-U test. Spearman's correlation coefficients (ρ) were used to express the relationships between parameters. Interpretation of correlation coefficients was as follows: $r \leq 0.49$ weak relationship; $0.50 \leq r \leq 0.74$ moderate relationship; and $r \geq 0.75$ strong relationship (Portney and Watkins, 2015: 524-525). A p value less than 0.05 was considered statistically significant.

RESULTS

The variables of the jumping events athletes were compared to gender in Table 1, the athletes of sprint events were in Table 2, as well. The IAAF-score of athletes and their ages mean values have shown similarities both by gender and events. It was found that there are differences in selected anthropometric and performance values with regard to gender for jumping and sprint event athletes, except the values of flexibility ability.

This comparisons were also utilized between events for male (Table 3) and female (Table 4) athletes. It was found differences between male jumpers and sprinters for the sitting height values. Besides that it was observed that there are differences in terms of biological maturity, leg length and hand grip values between female jumpers and sprinters.

Spearman's correlation coefficients were used to express the relationships between the selected variables and Chr-Age as well as PHV for the athletes by gender and events. These results were presented in Table 5. According to the findings, there were found the moderate significant relationships between IAAF-score, AP and both age and PVH for male jumpers, it is likewise found between relative HG and Chr-Age as well as PHV for male sprinters. It was found that there is a moderate relation between Chr-Age and AP for sprinters both gender, but this relationship was not found for PHV. For the male sprinters, there were moderate relationships between PHV and IAAF point, relative LS, whereas the same relation was not found in terms of Chr-Age. The weak significant relationships between Chr-Age and IAAF-score were shown with reference to female jumpers ($\rho=0.47$, $p<0.05$).



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Table 1. Comparison of Jumping Event Athletes' Variables by Gender

Jumping Events							
	Gender	n	Mean	SD	Mean Rank	Sum of Ranks	p
IAAF-score	M	18	759,6	88,3	18,25	328,5	0,68
	F	19	770,2	102,4	19,71	374,5	
Chr-Age (year)	M	18	15,8	0,7	21,06	379,0	0,26
	F	19	15,4	1,0	17,05	324,0	
PHV (year)	M	18	1,1	0,7	18,92	340,5	0,96
	F	19	1,0	1,2	19,08	362,5	
Body Mass (kg)	M	18	62,3	6,3	28,08	505,5	0,00
	F	19	51,4	3,2	10,39	197,5	
Height (cm)	M	18	174,4	5,7	27,67	498,0	0,00
	F	19	163,4	4,0	10,79	205,0	
Sitting Height (cm)	M	18	91,5	3,5	27,11	488,0	0,00
	F	19	85,8	2,2	11,32	215,0	
Leg Lenght (cm)	M	18	82,7	3,3	26,00	468,0	0,00
	F	19	77,7	2,9	12,37	235,0	
BMI (kg/m^2)	M	18	20,5	1,6	22,94	413,0	0,03
	F	19	19,2	1,1	15,26	290,0	
Flexibility (cm)	M	18	49,7	5,9	19,11	344,0	0,95
	F	19	49,3	5,1	18,89	359,0	
Relative HG	M	18	1,3	0,2	26,28	473,0	0,00
	F	19	1,0	0,1	12,11	230,0	
Relative LS	M	18	2,4	0,3	26,36	474,5	0,00
	F	19	1,8	0,3	12,03	228,5	
CMJ (cm)	M	18	50,5	4,8	28,44	512,0	0,00
	F	19	37,5	3,3	10,05	191,0	
AP (kgm/s)	M	18	98,2	13,5	28,39	511,0	0,00
	F	19	69,5	5,0	10,11	192,0	
0-30 m (s)	M	18	4,03	0,16	9,67	174,0	0,00
	F	19	4,50	0,14	27,84	529,0	



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Table 2. Comparison of Sprint Event Athletes' Variables by Gender

Sprint Events							
	Gender	n	Mean	SD	Mean Rank	Sum of Ranks	p
IAAF-score	M	17	783,8	65,3	18,79	319,5	0,56
	F	22	799,9	54,8	20,93	460,5	
Chr-Age (year)	M	17	15,6	1,0	23,62	401,5	0,08
	F	22	15,1	1,0	17,20	378,5	
PHV (year)	M	17	1,2	0,6	27,21	462,5	0,00
	F	22	0,2	0,7	14,43	317,5	
Body Mass (kg)	M	17	64,7	4,1	30,88	525,0	0,00
	F	22	48,9	5,1	11,59	255,0	
Height (cm)	M	17	175,5	3,0	30,85	524,5	0,00
	F	22	160,7	5,7	11,61	255,5	
Sitting Height (cm)	M	17	92,8	2,2	30,38	516,5	0,00
	F	22	85,1	2,8	11,98	263,5	
Leg Length (cm)	M	17	82,8	1,8	29,97	509,5	0,00
	F	22	75,6	4,0	12,30	270,5	
BMI (kg/m ²)	M	17	21,0	1,3	27,26	463,5	0,00
	F	22	18,9	1,8	14,39	316,5	
Flexibility (cm)	M	17	48,0	5,6	18,44	313,5	0,45
	F	22	48,8	4,9	21,20	466,5	
Relative HG	M	17	1,3	0,1	27,71	471,0	0,00
	F	22	1,1	0,1	14,05	309,0	
Relative LS	M	17	2,4	0,6	26,71	454,0	0,00
	F	22	1,8	0,4	14,82	326,0	
CMJ (cm)	M	17	51,0	5,5	31,00	527,0	0,00
	F	22	37,6	3,4	11,50	253,0	
AP (kgm/s)	M	17	102,1	8,2	31,00	527,0	0,00
	F	22	66,3	7,6	11,50	253,0	
0-30 m (s)	M	17	3,93	0,14	9,12	155,0	0,00
	F	22	4,45	0,18	28,41	625,0	



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Table 3. Comparison of Male Athletes' Variables by Events

Male							
	Event	n	Mean	SD	Mean Rank	Sum of Ranks	p
IAAF-score	J	18	759,6	88,3	17,47	314,5	0,75
	S	17	783,8	65,3	18,56	315,5	
Chr-Age (year)	J	18	15,8	0,7	19,33	348,0	0,43
	S	17	15,6	1,0	16,59	282,0	
PHV (year)	J	18	1,1	0,7	17,39	313,0	0,72
	S	17	1,2	0,6	18,65	317,0	
Body Mass (kg)	J	18	62,3	6,3	15,14	272,5	0,09
	S	17	64,7	4,1	21,03	357,5	
Height (cm)	J	18	174,4	5,7	15,58	280,5	0,15
	S	17	175,5	3,0	20,56	349,5	
Sitting Height (cm)	J	18	91,5	3,5	14,75	265,5	0,04
	S	17	92,8	2,2	21,44	364,5	
Leg Lenght (cm)	J	18	82,7	3,3	18,00	324,0	1,00
	S	17	82,8	1,8	18,00	306,0	
BMI (kg/m^2)	J	18	20,5	1,6	16,28	293,0	0,31
	S	17	21,0	1,3	19,82	337,0	
Flexibility (cm)	J	18	49,7	5,9	19,72	355,0	0,31
	S	17	48,0	5,6	16,18	275,0	
Relative HG	J	18	1,3	0,2	17,53	315,5	0,77
	S	17	1,3	0,1	18,50	314,5	
Relative LS	J	18	2,4	0,3	18,61	335,0	0,72
	S	17	2,4	0,6	17,35	295,0	
CMJ (cm)	J	18	50,5	4,8	17,97	323,5	0,99
	S	17	51,0	5,5	18,03	306,5	
AP (kgm/s)	J	18	98,2	13,5	15,11	272,0	0,09
	S	17	102,1	8,2	21,06	358,0	
0-30 m (s)	J	18	4,03	0,16	20,92	376,5	0,08
	S	17	3,93	0,14	14,91	253,5	



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Table 4. Comparison of Female Athletes' Variables by Events

Female							
	Event	n	Mean	SD	Mean Rank	Sum of Ranks	p
IAAF-score	J	19	770,2	102,4	19,92	378,5	0,59
	S	22	799,9	54,8	21,93	482,5	
Chr-Age (year)	J	19	15,4	1,0	23,63	449,0	0,19
	S	22	15,1	1,0	18,73	412,0	
PHV (year)	J	19	1,0	1,2	25,47	484,0	0,03
	S	22	0,2	0,7	17,14	377,0	
Body Mass (kg)	J	19	51,4	3,2	24,37	463,0	0,09
	S	22	48,9	5,1	18,09	398,0	
Height (cm)	J	19	163,4	4,0	23,84	453,0	0,16
	S	22	160,7	5,7	18,55	408,0	
Sitting Height (cm)	J	19	85,8	2,2	22,79	433,0	0,37
	S	22	85,1	2,8	19,45	428,0	
Leg Length (cm)	J	19	77,7	2,9	25,05	476,0	0,04
	S	22	75,6	4,0	17,50	385,0	
BMI (kg/m ²)	J	19	19,2	1,1	22,29	423,5	0,52
	S	22	18,9	1,8	19,89	437,5	
Flexibility (cm)	J	19	49,3	5,1	21,29	404,5	0,89
	S	22	48,8	4,9	20,75	456,5	
Relative HG	J	19	1,0	0,1	16,32	310,0	0,02
	S	22	1,1	0,1	25,05	551,0	
Relative LS	J	19	1,8	0,3	20,66	392,5	0,86
	S	22	1,8	0,4	21,30	468,5	
CMJ (cm)	J	19	37,5	3,3	20,03	380,5	0,63
	S	22	37,6	3,4	21,84	480,5	
AP (kgm/s)	J	19	69,5	5,0	24,26	461,0	0,10
	S	22	66,3	7,6	18,18	400,0	
0-30 m (s)	J	19	4,50	0,14	23,79	452,0	0,17
	S	22	4,45	0,18	18,59	409,0	



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Table 5. The Correlations Between Variables and Chr-Age as Well as Biological Maturity for the Athletes

			IAAF- score	Flexibility	Relative HG	Relative LS	CMJ	AP	0-30 m
Male Jumper (n=18)	Chr-Age	rho	0,67*	0,05	0,28	0,43	0,45	0,58*	-0,26
		p	0,00	0,84	0,25	0,08	0,06	0,01	0,30
	PHV	rho	0,61*	0,30	0,23	0,27	0,33	0,62*	-0,22
		p	0,01	0,24	0,36	0,29	0,19	0,01	0,39
Male Sprinter n=17)	Chr-Age	rho	0,41	0,06	0,56*	0,30	0,33	0,52*	-0,33
		p	0,11	0,81	0,02	0,24	0,20	0,03	0,20
	PHV	rho	0,73*	0,06	0,57*	0,52*	-0,05	0,28	-0,04
		p	0,00	0,83	0,02	0,03	0,85	0,28	0,87
Female Jumper (n=19)	Chr-Age	rho	0,47*	0,07	-0,25	-0,29	0,34	0,33	-0,42
		p	0,04	0,79	0,31	0,23	0,16	0,17	0,07
	PHV	rho	0,36	0,15	0,00	-0,10	0,37	0,41	-0,44
		p	0,13	0,54	0,99	0,70	0,12	0,08	0,06
Female Sprinter (n=22)	Chr-Age	rho	0,42	0,23	-0,10	0,31	0,25	0,50*	0,03
		p	0,05	0,30	0,67	0,16	0,27	0,02	0,89
	PHV	rho	-0,11	0,27	0,19	0,08	-0,16	-0,14	-0,01
		p	0,63	0,23	0,39	0,71	0,48	0,53	0,95

DISCUSSION

The study compares the selected variables which are age, PHV, anthropometric features, strength, jump, anaerobic power, speed and flexibility abilities by gender and events in track and fields athletes. Besides that the relationships between selected variables and Chr-Age as well as biological maturity for the athletes were examined.

The IAAF-score, which is an indicator of athletes' performance, and their ages mean values have shown similarities both by gender and events. It may show that the study group is homogeneous in terms of athlete performance levels and their ages. It was observed that there were differences in anthropometric features and biomotoric performance abilities in terms of gender for jumping and sprint event athletes as expected, except flexibility ability since men and women differ physio-



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logically. The average male is approximately 13 cm higher and 15 kg heavier than average female. Likewise, there are strength differences between gender due to higher production of the hormone testosterone in males (Ackland et al., 2009: 129).

In the comparison of events by gender, the sitting height values have shown differences for male jumpers and sprinters. Additionally, there were differences in biological maturity, leg length and hand grip values between female jumpers and sprinters. Ackland et al. (2009: 95–96) have declared that the jumpers should have a high lower limb/trunk ratio but a low lower limb/trunk ratio for the sprinters. The findings of current study are coherent with them.

The relationships between selected variables and Chr-Age for the youth athletes by gender and events were examined in this study. Also the same correlation coefficient was used to express relations between these variables and PHV values of the athletes. According to the study findings, the competition performance levels of male sprinters have correlated with their PHV values ($\rho=0.73$, $p<0.05$), but a relation between their Chr-age and performance values was not found. Also this situation is likewise for leg strength ability for male sprinters ($\rho=0.52$, $p<0.05$). Whereas, statistically significant moderate relationships between AP and Chr-age (not with

PHV) for male and female sprinters were found ($\rho=0.50$ - 0.52 , $p<0.05$, respectively).

The findings of the current study have demonstrated that youth athletes' performance indicators have not the same correlations with their age and PHV, especially for sprint event athletes. The literature review on this matter has clearly shown that the same chronological age may be conspicuously different concerning biological maturity (Bayraktar et al., 2016: 1894–1902; Jones et al., 2000: 57-65; Lloyd et al., 2014: 1454; Yaman et al., 2016: 94–108). The athlete who is less mature when they have competed with the same age group peers will be disadvantageous, even if the athlete is technically talented than others (Malina et al., 2012: 1715). Because the level of strength, power, speed and jump abilities are identified in accordance with maturity status of youth athletes (Malina et al., 2004: 556-61).

In this case, early matured athlete seems super talented and late matured athlete will be early sport specialized because of same training program with the same age group. Therefore early sport specialization can lead to be expose to higher volumes of training and overuse injury as well as burnout (Lloyd et al., 2014: 1462).

In conclusion, the present study has found differences in selected anthropometric features



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values and selected performance indicators of athletes between genders and events. Furthermore, the relationships between variables and athletes' age as well as biological maturity levels were observed. The athletes in the same age group have different correlation values according to their age and PHV between the variables. In this point, the coaches of youth athletes should be identify maturity level of their athletes, if they would like to prepare and to apply individual training program to them, with refrain from injury.

REFERENCES

- ACKLAND, T. R., ELLIOTT, B., BLOOM-FIELD, J., (2009).** Applied Anatomy and Biomechanics in Sport (2nd ed.). Human Kinetics
- ARMSTRONG, N., (2007).** Paediatric exercise physiology [electronic resource] / edited by Neil Armstrong ; foreword by N.C. Craig Sharp. Edinburgh ; New York : Churchill Livingstone, 10–25
- BAYRAKTAR, I., YAMAN, N., ZORBA, E., YAMAN, M., GÜNAY, M., (2016).** The Analysis of Certain Differences in Motor Skills of Sedentary Male Children in the 9-14 Age Group Based on the Biological Maturity. Universal Journal of Educational Research, 4(8), 1894–1902. <https://doi.org/10.13189/ujer.2016.040820>

BOMPA, T. O., BUZZICHELLI, C., (2015). Periodization Training for Sports (3rd ed.). Human Kinetics

COSSIO-BOLAÑOS, M., CAMPOS, R. G., ANDRUSKE, C. L., FLORES, A. V., LUARTE-ROCHA, C., OLIVARES, P. R., GARCIA-RUBIO, J., DE ARRUDA, M., (2015). Physical Growth, Biological Age, and Nutritional Transitions of Adolescents Living at Moderate Altitudes in Peru. Int. J. Environ. Res. Public Health 2015, 12, 12082-12094; doi:10.3390/ijerph121012082

JONES, M. A., HITCHEN, P. J., STRATTON, G., (2000). The importance of considering biological maturity when assessing physical fitness measures in girls and boys aged 10 to 16 years. Annals of Human Biology, 27(1), 57–65; <http://dx.doi.org/10.1080/030144600282389>

LLOYD, R. S., OLIVER, J. L., FAIGENBAUM, A. D., MYER, G. D., CROIX, M. B. A. D. S., (2014). Chronological age vs. biological maturation: implications for exercise programming in youth. The Journal of Strength & Conditioning Research, 28(5), 1454–1464; doi:10.1519/JSC.0000000000000391

MALINA, R., EISENMANN, J., CUMMING, S., RIBEIRO, B., AROSO, J., (2004). Maturity-associated variation



SSTB

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(2015/04315- 2015-GE-18972)

in the growth and functional capacities of youth football (soccer) players 13-15 years. *European Journal of Applied Physiology*, 91(5–6), 555–562. <https://doi.org/10.1007/s00421-003-0995-z>

MALINA, R. M., COELHO E SILVA, M. J., FIGUEIREDO, A. J., CARLING, C., BEUNEN, G. P., (2012). Interrelationships among invasive and non-invasive indicators of biological maturation in adolescent male soccer players. *Journal of Sports Sciences*, 30(15), 1705–1717. <http://dx.doi.org/10.1080/02640414.2011.639382>

MALINA, R., ROGOL, A., CUMMING, S., COELHOESILVA, M., FIGUEIREDO, A., (2015). Biological maturation of youth athletes: assessment and implications. *Br J Sports Med*, (49), 852–859. <https://doi.org/10.1136/bjsports-2015-094623>

MIRWALD, R. L., BAXTER-JONES, A. D., BAILEY, D. A., BEUNEN, G. P., (2002).

An assessment of maturity from anthropometric measurements. *Medicine and Science in Sports and Exercise*, 34(4), 689–94

PORTNEY, L. G., WATKINS, M. P., (2015).

Foundations of clinical research. Applications to practice (3rd ed.). F. A. Davis Company, Philadelphia

SPIRIEV, B., (2017). IAAF Scoring Tables of Athletics. (A. Spiriev, Ed.) (2017 Revis). International Association of Athletics Federations. Retrieved from <https://www.iaaf.org/news/iaaf-news/scoring-tables-2017> E.T.11.12.2016

YAMAN, N., ZORBA, E., (2016). The Effect of Biological Maturity on Gender- Related Motor Skills at Talent Selection That Is Made According To Chronological Age in Sports. *SSTB International Refereed Academic Journal of Sports*, (21), 94–108; doi:10.17363/SSTB.20162124011

EFFECTS OF PREPARATORY PERIOD TRAININGS ON SOME
PHYSIOLOGICAL AND MOTORIC FEATURES OF U19 SOCCER
PLAYERS ¹U19 FUTBOLCULARDA HAZIRLIK DÖNEMİ ANTRENMANLARININ
BAZI FİZYOLOJİK VE MOTORİK ÖZELLİKLERİ ÜZERİNE ETKİSİBartış BAYDEMİR¹, Gürhan SUNA², Mahmut ALP³¹ Celal Bayar University, High School of Physical Education and Sports, Coaching Training Dep.
Manisa / Turkey^{2,3}Süleyman Demirel University, Faculty of Sports Sciences, Sport Sciences Dep. Isparta / TurkeyORCID ID: 0000-0002-8653-0664¹, 0000-0002-2125-9105², 0000-0002-1263-2633³

Öz: Amaç: Bu çalışmanın amacı, U19 profesyonel futbolcularda hazırlık dönemi antrenmanlarının bazı fizyolojik ve motorik özellikleri üzerine etkisini incelemektir. **Yöntem:** Araştırmaya Çanakkale Dardanel Spor A.Ş. U19 takımı sporcuları toplamda 32 futbolcu çalışmaya gönüllü olarak katıldı. Futbolcuların yaş ortalamaları 18.5±.5 yıl, boy ortalamaları 179.5±4 cm, vücut ağırlıkları ortalamaları ise 70.1±3.9 kg olarak tespit edildi. Hazırlık dönemi antrenmanları 8 hafta, haftada 4 gün, günde en az 120 dk uygulandı. Araştırmada bir maksimal kuvvet (1 RM), Yo-Yo İntermittent Koşu testi ve çeviklik testi uygulandı. Elde edilen verilerin istatistiksel analizinde istatistik paket programı kullanılarak, bağımlı gruplar arası "Paired t testi" uygulandı. **Bulgular:** Antrenman dönemi öncesi ve sonrası sporcuların bir maksimal kuvvet, dinlenik ve maksimum kalp atım sayısı, Yo-Yo koşu testinde kat edilen mesafe, MAXVO2 ve çeviklik testleri değerlerinin karşılaştırılmasında bütün ölçümler arasında istatistiksel olarak anlamlı fark bulundu (p<0.05). **Sonuç:** Sonuç olarak, hazırlık dönemi içerisinde uygulanan antrenman programının U19 kategorisi futbolcuların bazı motorik ve fizyolojik özelliklerini olumlu etkilediği söylenebilir.

Anahtar Kelimeler: Futbol, Oyuncu, Motorik, Fizyolojik

Abstract: Aim: This study aims to examine the effect of preparatory period trainings on some physiological and motoric features of U19 soccer players. **Method:** A total of 32 players from Çanakkale Dardanel Spor A.Ş. U19 team volunteered to participate in the study. The mean age of the players was 18.5±.5 years; mean height, 179.5±4 cms; and mean body weight, 70.1±3.9 kgs. Preparatory practices were made for 8 weeks, 4 days a week, at least 120 minutes a day. A maximal force (1 RM), a Yo-Yo Intermittent Running test and an agility test were applied in the study. In the statistical analysis of the obtained data, "Paired t-Test" was applied between dependent groups using a statistical package program. **Findings:** A statistically significant difference (p <0.05) was found between all the measurements in the comparison of maximal force, resting and maximum heart rate, distance covered in Yo-Yo running test, MAXVO2 and agility test values of the soccer players before and after the period of practice. **Conclusion:** As a result, it can be said that the practice program applied during the preparatory period positively affected some motoric and physiological characteristics of U19 soccer players.

Key Words: Soccer, Player, Motoric, Physiological

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INTRODUCTION

Soccer is one of the most popular sports branches in the world and when played at the elite level, the physical sanctions expected from the athletes are high. The success and efficiency of players depend on many factors. In order to improve performance, soccer skills, tactics and to prevent injury; soccer training is essential (Gümüşdağ et al., 2013: 1). Soccer is a sports branch that involves high intensity, intermittent loads, durability, quick sprints, ball skills, coordination, stable decision making and balance (Uğraş and Özkan, 2002: 242).

In order for athletes to adapt to the conditions of long and high-tempo soccer games, body composition is tried to be perfected while improving strength, endurance, speed, coordination and flexibility through training programs applied during the preparatory period (Albay et al., 2008: 12).

It is clear that all motor skills should develop well considering that elite-level soccer players run at a density close to the anaerobic threshold for approximately 10 kms at 80-90% heart rate during the match, and that they use speed, ball kicking and power factors frequently in this running distance (Stolen et al., 2005: 503). Additionally, agility is a physical component necessary for a successful performance in a team sport like soccer. Agility is a

control and coordination skill that allows the body and joints to be in the right position in space during very fast changes of direction during a series of movements (Shephard and Young, 2006: 920). Agility can be seen in attempts to escape from the opponent, or during the movement reaction to the ball (Young et al., 2001: 315).

A number of field and laboratory tests used to determine the physiological characteristics of athletes in team sports, such as soccer, assist coaches and sports scientists in identifying the athletes' abilities, providing strength development, providing information for the practice program, and determining changes in physiological and physical characteristics that are a consequence of the training sessions (Yilmaz et al., 2012: 96).

This study, in line with the information obtained from the literature, aims to examine the effect of preparatory stage trainings on a number of physiological and motor characteristics of U19 soccer players.

MATERIALS and METHODS

A total of 32 players from Çanakkale Dardanel Spor A.Ş. U19 team volunteered to participate in the study. It was explained that the personal information and findings obtained during and after the research would be kept strictly confidential. An “informed Consent



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Form” was taken from the athletes who volunteered to participate in the research.

Height and Body Weight: The values of athletes were measured with bare feet and only shorts on them using a SECA brand height and weight scale having an accuracy of 1 mm and 20 gr. Height was recorded in “cm”, and body weight in “kg”.

Maximal Force Measurements (1 RM): 1 maximal forces were taken on Precor (USA) brand Biceps Curl, Triceps Curl, Vertical Row, Bench Press, Squat, Leg Press and Leg Curl fitness equipment. The athletes practiced for 15 minutes with an ergometric bicycle before strength measurements. After the athletes got a proper sitting and holding position on the fitness tool, the maximum weight lifted was recorded in “kg” following the determination of estimated maximum weight to be lifted through a preliminary test without weight.

Yo-Yo Intermittent Recovery 2 Test: The test was carried out on a 20-m straight track in Çanakkale Dardanel Spor facilities, with markings placed at the beginning and at the end of the track, and the athletes were given audio signals from a signaling device. The athletes were asked to be within the area in front of the start and finish lines on each signal. The runs were designed to include 6 athletes at the same time. The speed was increased gradually in accordance with the test

protocol. Each signal caught by the athletes was recorded as a run, and every run in which they could not catch the signal was regarded as an error. The test was terminated when the athlete made two errors consecutively.

Number of heartbeats: The heart rate was recorded with a Polar brand heart rate monitor when resting and maximal values were on stable level.

MaxVO2 Formula: This formula was estimated using the estimated formula developed by Bangsbo et al. according to the Yo-Yo IR2 test protocol (Bangsbo et al., 2008: 48).

VO2max (ml/min/kg) = IR2 distance (m) x 0.0136 + 45.3

Agility Test: The test was carried out on the training ground of Çanakkale Dardanel Spor facilities. The athletes were tested with the soccer boots worn during the match. The times were measured by a Voit 8073 chronometer. 4 cones were placed on the track for the “T test” as follows. The athletes ran straight from cone A to cone B and touched the cone with their right hands. Then, they touched cone C on the left with a side run. After that, they touched cone D on the right with right hand; and then touched cone B with left hand, and finished the test with a backward-run to cone B. Each athlete made 3 trials and their best scores were recorded.



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Data Analysis: A statistical package program was implemented for data analysis. The dependent within-group “Paired t-Test” was applied in order to determine whether there was any difference before and after preparatory

training sessions in the athletes. The results were evaluated according to a significance level of “0.05”.

FINDINGS

Table 1. Physical Characteristics of Soccer Players

	N	Minimum	Maximum	Mean ± SS
Age (year)	32	18.00	19.00	18.50±.50
Height (cm)		174.00	190.00	179.50±4
Weight (kg)		63.00	80.00	70.10±3.90
Body Mass Index (kg/m ²)		19.90	23.90	21.70±.80

Players’ mean of age was 18.50±.50 years, mean of height was 179.50±4 cm and mean

of weight 70.10±3.90 kg and mean of BMI was 21.70±.80 kg/m².

Table 2. Paired Samples t-Test Results of Players’ Agility Pre and Post Test Means

AGILITY TEST	Test Sequence	Mean ± SS	t	p
T Test (sec)	Pre Test	8±,4	10,63	,000*
	Post Test	7,50±,4		

Differences found to be statistically significant as a result of comparison of players’ agility pre and post test values (p<0.05)*.



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Table 3. Paired Samples t-Test Results of Players' 1 RM Pre and Post Test Means

1 Repetation of Maximum	Test Sequence	Mean \pm SS	t	p
Biceps Curl	Pre Test	19.80 \pm 3.8	-23.67	.000*
	Post Test	25.50 \pm 3.5		
Triceps Curl	Pre Test	14.90 \pm 1.7	-19.39	.000*
	Post Test	21.10 \pm 2.3		
Bench Press	Pre Test	48 \pm 6.6	-10.41	.000*
	Post Test	54.60 \pm 7.8		
Vertical Row	Pre Test	47 \pm 3.9	-18.16	.000*
	Post Test	52.20 \pm 3		
Squat	Pre Test	96.50 \pm 8.8	-16.21	.000*
	Post Test	103.70 \pm 8.3		
Leg Press	Pre Test	80.40 \pm 14.9	-17.57	.000*
	Post Test	86.50 \pm 15.3		
Leg Curl	Pre Test	37.50 \pm 4.2	-24.67	.000*
	Post Test	42.40 \pm 4		

There were found significant differences as a result of comparison of players' 1 repetition of maximum strength pre and post test values ($p < 0.05$)*.

Table 4. Paired Samples t-Test Results of Players' Yo-Yo Pre and Post Test Means

ENDURANCE TEST	Test Sequence	Mean \pm SS	t	p
Resting Heart Rate (beat/min)	Pre Test	69.50 \pm 10.5	8.52	.000*
	Post Test	67.90 \pm 10.5		
Maximum Heart Rate (beat/min)	Pre Test	194.30 \pm 5.7	18.28	.000*
	Post Test	186.30 \pm 6		
Yo-Yo IR2 Test (m)	Pre Test	1109 \pm 300.2	-12.07	.000*
	Post Test	1286.8 \pm 263		
MaxVO ₂ (ml/kg/dk)	Pre Test	60.30 \pm 4	-6.82	.000*
	Post Test	63.10 \pm 3.7		



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Differences found to be statistically significant as a result of comparison of players' resting and maximum heart rate, distance and MaxVO₂ values in Yo-Yo pre and post test values ($p<0.05$)*.

DISCUSSION

This study aims to examine the effect of preparatory stage trainings on a number of physiological and motor characteristics of U19 soccer players. A total of 32 players from Çanakkale Dardanel Spor A.Ş. U19 team volunteered to participate in the study.

In our study, the agility pre-test values of the soccer players were 8 ± 4 sec, and the final test values were 7.5 ± 4 sec. There was a statistically significant difference in the comparison of agility test before and after training ($p<0.05$). It was clearly indicated that the improvement of agility will come out as a factor that distinguishes the performance in terms of quality of the movements such as direction changes at high speeds, sudden acceleration and stopping movements.

In our study, a statistically significant difference was found when comparing the maximal strength pre- and post-test values of soccer players ($p<0.05$). We believe that the improvement of maximal strength parameters in soccer players is due to the involvement of strength exercises in the training program applied. We think that the increase in strength

values will provide a significant benefit in performing stronger technical shots and in tackles.

In a study investigating the relative strength values in some team and individual sports, the biceps curl of the soccerers was found as 47.8 ± 6.6 kg, bench press as 75 ± 15.9 kg, squat as 98.3 ± 22.8 kg. We think that the fact that some of the strength values in this study are different than those in ours is due to the higher average age of the athletes and their having higher level of physical characteristics.

Özcan (2011), in his study in which he investigated the effect of two different methods of training in basic technical tennis training on technical biomotoric and physiological properties, found significant differences in values in the comparison of strength tests of induction (Staged Technical Instructional Training) and deduction groups (Holistic Technical Instructional Training) ($p<0.05$). Although there is an interdisciplinary difference between this study and our study, there is a similarity in terms of a significant increase in the strength values in the training practices.

Alp et al. (2016) examined the preparation period trainings' effects on biomotoric features of 10-12 age male tennis players. As a result of comparison of physiologic and motoric features, they found significant differences



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($p < 0,05$). They stated that technic and coordination improvement training drills applied to players and contained true loading densities increased the biomotoric performance.

In Aziz et al. (2005)'s study, coaches opt to implement field tests that they can measure indirectly without using an oxygen analyzer in the laboratory to determine the maximum oxygen consumption. To this end, the most common test used in soccer to determine the maximum oxygen consumption is the Yo-Yo endurance test. The Yo-Yo test is a test that covers going and coming movements at various speeds and sudden turns. Gümüşdağ et al. (2013) examined the Yo-Yo intermittent recovery test as an assessment of aerobic-anaerobic fitness and game-related endurance in soccer. They found that Yo-Yo intermittent test performance also had significantly VO_{2max} , and better soccer dribbling endurance (Hoff test) and 30m sprint times. Aziz et al. (2005) examined the movements included in soccer, and these movements are considered to be soccer-specific movements and are also used in the determination of maximum oxygen consumption. In this study, which was conducted in this context, we noticed a statistically significant difference ($p < 0,05$) in the comparison of Yo-Yo intermittent running pre- and post-test resting heart rate, maximum heart rate, Yo-Yo running distance and $MaxVO_2$ values. After the training ses-

sions conducted, we can say that the positive changes in the Yo-Yo intermittent running performance values have improved the soccer players' durability and maximum oxygen consumption capacity.

Saygın et al. (2016) aimed to examine the effects of 8-week Zumba and Step-Aerobics exercises on the health-related physical fitness components, blood pressure and resting heart rate. They found significant differences of $MaxVO_2$ values of both exercises.

Alemdaroğlu (2012), in his study conducted on soccer players, reported that the maximum number of heart beats was $196,69 \pm 4,70$ bpm, $MaxVO_2$ was $58,65 \pm 2,40$ ml/kg/min, the distance covered was $2649,23 \pm 288,9$ m. In their study of soccer in which they investigated the relationship between 35-meter maximal anaerobic sprint and vertical jump and standing jump scores.

Kamar et al. (2003) found that $MaxVO_2$ was $53,03 \pm 4,57$ ml/kg/min after a shuttle run.

In a study conducted by Akcakaya (2009), comparing some motoric and anthropometric characteristics of athletes from different branches, the values were calculated as 46.1 ± 5.7 ml/kg/min for basketballers, 55.3 ± 3.3 ml/kg/min for soccer players, and 50.9 ± 4.2 ml/kg/min for track and field athletes. We think that the low $MaxVO_2$ values are due to the shuttle run test performed or



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the fact that the athletes were not subjected to any training program. As the literature review suggests, there are similar and dissimilar studies to ours.

RESULTS

In the light of the data obtained, it was determined that the preparatory period training sessions applied to the soccer players had a positive effect on strength and some physiological characteristics and thus improving the performance.

Considering the characteristic feature of the game of soccer, and the fact that it continues throughout the year; it is suggested that this type of research should be done more frequently in different stages of the year so that the structural and conditioning properties of the athletes can be observed more clearly. It is thought that our study may contribute to the sports scientists and trainers in the future who practise preparatory period trainings in soccer game in terms of the optimum performance as a reference value.

REFERENCES

AKÇAKAYA, İ., (2009). Trakya Üniversitesi Futbol, Atletizm ve Basketbol Takımlarındaki Sporcuların Bazı Motorik ve Antropometrik Özelliklerinin Karşılaştırılması. Trakya Üniversitesi, Sağlık Bilimleri Enstitüsü, Beden Eğitimi

ve Spor Anabilim Dalı, Yüksek Lisans Programı. Edirne. s.28

ALEMDAROĞLU, U.B., (2012). Investigation Of The Performance Responses Of Yo-Yo And Shuttle Run Tests With The Treadmill Run Test In Young Soccer Players. Pamukkale Journal of Sport Sciences, 3(3), 104-112

ALP, M., SUNA, G., BAYDEMİR, B., (2016). Effects Of The Preparation Period Trainings On Biomotoric Features Of 10-12 Age Male Tennis Players. SSTB International Refereed Academic Journal of Sports, Health & Medical Sciences, (18): 89-97

AZİZ, A.R., FRANKIE, H.Y., TAN AND KONG, C.T., (2004). Physiological Attributes of Professional Players in the Singapore Soccer League. Journal of Sports Sciences 22, 522-523

AZİZ, A.R., FRANKIE H.Y., TAN AND KONG, C.T., (2005). A Pilot Study Comparing Two Field Tests With The Treadmill Run Test in Soccer Players. Sports Medicine & Research Center, Singapore Sports Council, 15 Stadium Road, National Stadium, Kallang, Singapore

BANGSBO, J., IAİA, F.M., KRUSTRUP, P., (2008). The Yo-Yo intermittent recovery test. Sports medicine, 38(1), 37-51



SSTB

www.sstbdergisi.com

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(TRADEMARK)

(2015/04315- 2015-GE-18972)

CASTAGNA, C., BELARDINELLI, R.V. ABT. G., (2003). Cardiorespiratory Responses of Regional Level Soccer Players to a Progressive Maximal Intermittent Field Test. In: Book of Abstracts, 5th World Congress on Science and Soccer, April, Portugal, p:72-73

ALBAY DUYUL, M., TUTKUN, E., AĞAOĞLU, Y.S., CANIKLI, A., ALBAY, F., (2008). Hentbol, Voleybol ve Futbol Üniversite Takımlarının Bazı Motorik ve Antropometrik Özelliklerinin İncelenmesi. Spormetre Beden Eğitimi ve Spor Bilimleri Dergisi. 6(1):13-20

AYDOS, L., KARAKUŞ, H.H., (2004). Bazı Takım ve Ferdi Sportlarda Rölatif Kuvvet Değerlerinin Araştırılması. Gazi Üniversitesi Kırşehir Eğitim Fakültesi, Cilt 5, Sayı 2,305-315

ERITH, S.J., (2004). An Overview of Fitness Testing Within English Professional Soccer Clubs. Journal of Sports Sciences 22, p:247

GÜMÜŞDAĞ, H., ÜNLÜ, C., ÇİÇEK, G., KARTAL, A., EVLİ, F., (2013). The Yo-Yo Intermittent Recovery Test As An Assessment Of Aerobic-Anaerobic Fitness And Game-Related Endurance In Soccer. International Journal of Academic Research, 5(3)

KAMAR, A., GÜNGÖRDÜ, O., YÜCEYILMAZ, B., ATAMAN YANCI, H.B., ÇAVUŞOĞLU, B., ŞAHİN, M., (2003). Futbol Oyuncularına 35 Metre Maksimal Anaerobik Sprint ile Dikey Sıçrama ve Durarak Uzun Atlama Skorları Arasındaki İlişkinin İncelenmesi. İstanbul Üniversitesi Spor Bilim Dergisi, 11;3(ÖS)147-150

ÖZCAN, S., (2011). Temel Tenis Teknik Öğretiminde İki Farklı Antrenman Metodunun Teknik Biyomotorik ve Fizyolojik Özellikler Üzerine Etkisinin Araştırılması, Süleyman Demirel Üniversitesi Sağlık Bilimleri Enstitüsü Spor Bilimleri Anabilim Dalı, Yüksek Lisans Tezi, Isparta

REILLY, T., (1996). Science and soccer. Chapman & Hall: London

REILLY, T., BANGSBO, J., FRANKS A., (2000). Anthropometric And Physiological Predispositions For Elite Soccer. Journal Of Sports Sciences, 18, 669-683

SAYGIN, Ö., OKTAY, G., CEYLAN, H.İ., (2016). Examining The Effects Of 8-Week Zumba And Step-Aerobic Exercises On Health-Related Physical Fitness Factors In Women. SSTB International Refereed Academic Journal of Sports, Health & Medical Sciences, (19): 12-31



SSTB

www.sstbdergisi.com

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SHEPPARD, J.M., YOUNG, W.B., (2006).

Agility Literature Review: Classifications, Training And Testing. *Journal of sports sciences* 24.9: 919-932

STØLEN, T., CHAMARI, K., CASTAGNA, C., WISLØFF, U., (2005). Physiology of Soccer, *Sports Medicine*, 35(6): 501–536

TORTOP, Y., TÜRKMENOĞLU, İ., OCAK, Y., (2009). Güreşçi ve Futbolcuların Diz Eklemi Fleksiyon ve Ekstansiyon Kas Kuvvetlerinin İzokinetik Dinamometrede Değerlendirilmesi. *Gazi Beden Eğitimi ve Spor Bilimleri Dergisi*, XIV(4), 33-47

UĞRAŞ, A., ÖZKAN, H., (2002). Bilkent Üniversitesi Futbol Takımının 10 Haftalık

Ön Hazırlık Sonrasındaki Fiziksel ve Fizyolojik Karakteristikleri. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi* Cilt 22, Sayı 1. 241-252. Ankara

YILMAZ, A., MÜNİROĞLU, S., KİN İŞLER, A., AKALAN, C., (2012). Aerobik ve Anaerobik Performans Özelliklerinin Tekrarlı Sprint Yeteneği İle İlişkisi *Sporometre. Beden Eğitimi ve Spor Bilimleri Dergisi* X(3) 95-100

YOUNG, W.B., MCDOWELL, H.M., SCARLETT, B.J., (2001). Specificity Of Sprint And Agility Training Methods. *Journal of Strength and Conditioning Research*, 15(3), 315–319

THE INVESTIGATION OF RELATIONSHIP BETWEEN GAME SKILLS
AND ATTENTION OF THE KINDERGARTEN STUDENTS ¹ANAOKULU ÖĞRENCİLERİNİN OYUN BECERİLERİ İLE DİKKATLERİ
ARASINDAKİ İLİŞKİNİN İNCELENMESİ*Meryem ALTUN**Ömer Halisdemir University, School of Physical Education and Sports, Niğde / Turkey***ORCID ID: 0000-0003-1224-7927**

Öz: Amaç: Bu çalışmada, anaokulu öğrencilerinin oyun becerileri ile dikkatleri arasındaki ilişkinin incelenmesi amaçlanmıştır. **Yöntem:** Bu araştırmanın modeli, ilişkisel tarama modelidir. Araştırmaya, Kırşehir 80. Yıl Anaokulunda 2016-2017 eğitim öğretim döneminde öğrenim gören 6 yaş grubu 50 kız, 50 erkek olmak üzere toplam 100 öğrenci gönüllü olarak katılmıştır. Ölçme aracı olarak Oyun Becerileri Değerlendirme Ölçeği ve Frankfurter Dikkat Testi kullanılmıştır. Verilerin analizinde; SPSS 21 paket programı kullanılmıştır. Oyun becerileri puanları ve hesaplanan dikkat puanları veri setine girilip ölçek puanlarının normal dağılıma uygunluğunu test etmek için Kolmogrow-Smirnov testi kullanılmıştır. Cinsiyet değişkeni için Independent Samples t-testi, iki değişken arasındaki ilişkinin incelenmesinde de Pearson Korelasyon testi kullanılmıştır. Demografik özelliklerde ise yüzde, frekans ve aritmetik ortalamalara bakılmıştır. **Bulgular:** Yapılan analizler sonucunda çocukların Oyun Becerileri ile Dikkat puan ortalamaları cinsiyet değişkenine göre anlamlı farklılık göstermektedir. Bu farklılık bayanların lehine görülmektedir. Oyun Becerileri puanları ile Dikkat puanları arasında pozitif yönde anlamlı bir ilişkinin olduğu bulunmuştur. **Sonuç:** Okul öncesi öğrencilerinin oyun becerileri ile dikkatleri arasında güçlü bir ilişki olduğu söylenebilir.

Anahtar Kelimeler: Anaokulu, Altı Yaş, Dikkat, Oyun Becerileri

Abstract: Aim: In this research, it is aimed to examine the relationship between play skills and attention of kindergarten students. **Method:** The model of this study is the relational search model. A total of 100 students (50 girls, 50 boys) participated in the research as a volunteer in the 6th year group of the Kırşehir 80th Year Nursery School during the 2016-2017 education period. The Game Ability Assessment Scale and the Frankfurter Attention Test were used as the measurement tools. In the analysis of the data; SPSS 21 package program was used. The Kolmogrow-Smirnov test was used to test the game performance scores and the calculated attention scores into the data set and to test the suitability of the normal distribution of scale scores. It was used Independent Samples t-test for gender variables, Pearson Correlation test for the relationship between two variables. In the demographic characteristics, the percentages, frequencies and arithmetic averages are examined. **Results:** The results of the analyses show that, the mean scores of the children's game skills and Attention score are significantly different according to the gender variable. This difference is favored by ladies. As a result of the analysis made to determine whether there is a meaningful relationship between the game skills scores and the Attention scores, it was found that there is a meaningful relationship between them in the positive direction. **Conclusion:** According to this, it can be said that there is a strong relation between play skills and attention of pre-school students.

Key Words: Kindergarten, Six Age, Attention, Playing Skills

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INTRODUCTION

Attention, which has an important place in all aspects of human development and learning, is particularly necessary for the continuation of the learning process. Careful attention to detail can be kept in the individual's memory (Frommer, 1993: 7). It is seen that the concepts of collecting attention and attention are used synonymously in daily literature as well as scientific literature. The general tendency is to accept attention as an upper form of attention. Attention collecting is "the skill of consciously collecting the attention of the individual to a certain point" and in this process the individual's mental development, age, individual characteristics play an important role (Özdoğan, 2004: 24).

Aydın (1999: 49) Some negative variables that affect attention in school are as follows: Problems in the functioning of intelligence, perception and memory processes, the cognitive skills of the student and the psychomotor skills are not at the appropriate level, the internal (lack of nutrition and sleep, fatigue etc.) and external (heat, light, sound etc.) physical stimuli that the organism is in, excessive or insufficient motivation, inadequacy of feedback, worry about failure, extreme anxiety and tension, teacher-centered teaching strategies dominate education, empathic perception deprivation in classroom interaction, over-standardized success measures and an

understanding of student performance evaluation, failure to meet the student's integrity and autonomy requirements in teaching, lack of a democratic, participatory and flexible teaching approach in education.

There are some techniques to get rid of this deprivation. At the beginning of these techniques is the game. As the Greeks have said about 2500 years ago: "*Mens sano in corpore sano*" - "*A healthy mind in a healthy body.*" They have revealed this close relationship to the extent that they can observe what they are doing. In recent studies; that gymnastics exercises not only allow you to recover from excess pounds, correct your body lines, make you feel good, but at the same time you can think healthier and more importantly, delay aging in your brain (McCleary, 2009: 145).

In the Chinese people's community, participating in activities such as reading, writing, puzzle-solving, playing cards, playing card games, participating in group discussions and playing musical instruments, participated in these activities, 5% reduction in the risk of loss occurrences. The majority of the activities that increase the score in the positive direction are due to the habit of reading books and a Chinese Dominos called mahjong (McCleary, 2009: 161).

Young children are faced with new information every day and associating them with



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concepts that they have already acquired or developing new concepts. It is necessary to support the multi-faceted development of the kindergarten (6 years old) children and to present them with a systematic and conscious education process which is the foundation of the life-long learning. Beginning to study is one of the most important steps that affect families, especially in their lives. Many important steps have been taken in this period, especially in the mental development of the child, and the education has been shifted to a more systematic, more concrete and necessary stage. If the child has not received pre-school education; to move away from the family, to adapt to the new orientation, and to become academically adept. Problems and level differences at the attention levels are evident in this period. Attention problems, which is an important issue to learn, emerge from the beginning of this period. These problems, which are known to be over a hundred years old, have begun to be discussed intensively in our country in recent years. There are educational games to support attention

development that allow children to learn by playing. It is ensured that the behavior of the child playing with the selected games continues to be active in a certain period of time in line with the directions for the purpose of the game. The game on this counts; It can contribute to children's perception, attention and solution to problems.

METHOD

This study was done at the request of the schoolmaster. In this study, a relational search model was used to examine the relationship between play skills and attention of kindergarten students. Relational search model; Is a research model aimed at determining the presence and / or extent of exchange between two or more variables (Karasar, 2014: 77). A total of 100 students (50 girls and 50 boys) participated in the study in the Kırşehir 80th Year Nursery School during the 2016-2017 education period.

The demographic characteristics of the participants are given in table 1.



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Table 1. Demographic Characteristics of Students

		Frequency (N)	Percentage %
Class	Daisies	21	21,0
	Smurfs	19	19,0
	Ladybirds	23	23,0
	Stars	15	15,0
	Strawberries	22	22,0
	Total	100	100,0
Gender	Female	50	50,0
	Male	50	50,0
	Total	98	100,0
Age	6	100	100,0

When the above frequency table is examined, it is seen that 50% of men and 50% of women are in terms of sex change.

Data Collection Tools

The data were collected using the Game Ability Assessment Scale and the Frankfurter Attention Test.

Game Skills Assessment Scale: The Skills Assessment Scale developed by Fazlıoğlu, Ilgaz and Papatağa (2013) is composed of 27 items using a 5-point Likert-type rating in order to determine what kind of playful skills the 6 year old children have during the game and to ensure that these skills are revealed by the parents. The Cronbach Alpha internal consistency coefficient of the scale was .93.

Frankfurter Attention Test. (FTF-K) (Concentration-Attention Collecting Test for children 5-6 years old): Developed by Raatz and

Möhling (1971) and intended to measure children's attention-gathering skills, children are required to find and mark pears within 90 seconds of mixed apples and pears (Kuscu, 2010). In Turkey, this test has been applied to 30 children aged five to six years in terms of understanding and applying the tests in Clinical Psychology Practice course by the senior students of Ankara University Faculty of Educational Sciences. The reliability of the FTF-K test was determined by the test-retest method. The correlation between test 1 and test 2 is $r = 0.79$. The scale was administered individually by each researcher to each child (Kaymak, 1995). The FTF-K Attention Collecting Test is administered by the researcher to each child individually or in small groups. In the test, the pears drawn by the child in 90 seconds form the raw score. At the same time this scale has been used in many studies in Turkey (Kaymak, 1995; Koçyiğit, Kayılı



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and Erbay, 2010; Kayılı and Arı, 2011; Erbay, 2013).

Data Collection and Analysis

The Game Skills Assessment Scale, which was used as a data collection tool in the study, was evaluated by the parents of the students. The Frankfurter Attention Test was administered to students.

In the analysis of the data; SPSS 21 package program is used. Game skills scores and calculated attention scores were entered into the

data set and the fitness of normal distribution of scale scores was tested by the Kolmogorov-Smirnov test. Büyüköztürk (2012) recommends the use of the “Kolmogorov-Smirnov” test if the number “n” is over 50 and above. Independent Samples t-test for gender variables and Pearson Correlation were used for the relationship between two variables. In the demographic characteristics, the percentages, frequencies and arithmetic averages are examined.

FINDINGS

Table 2. Results of Tests of Children According to the Genders of Game Skills and Attention Levels

	Gender	N	X	S	F	P
Game Skills	Male	50	2914,60	887,41	3,912	,014
	Female	50	34,29,66	1150,34		
	Total	100				
Attention	Male	50	26,36	6,34	2,028	,002
	Female	50	30,90	7,88		
	Total	100				

According to Table 2, it was found that the difference between the results of the t test for the independent samples made to determine whether the level of attention and gaming

skills of the children differ significantly according to the gender variable. This difference seems to be in favor of the ladies ($p<.05$).



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Table 3. Results of Relative Correlation Analysis between Children’s Play Skills and Their Attention

Game Skills			
Attention	r		856**
	p		,000
	n		100

**. Correlation is significant at the 0.01 level (2-tailed).

According to 3 A Pearson correlation analysis was conducted to determine whether there is a significant relationship between Play Skills scores and Attention scores and found a significant positive correlation between them ($r=.856$, $p<.01$). According to this, it can be said that there is a strong relation between play skills and attention of pre-school students.

DISCUSSION

In this study, the relationship between the attention of kindergarten students and play skills was investigated. According to the results of the research, the children ‘s game skills and attentiveness levels are significantly different according to gender. This difference seems to be in favor of the ladies.

As a result of numerous researches, children’s genders affect their gaming behaviors, that the gender variable is even effective in selecting a playmate, it was determined that boys preferred physical games more and

girls more preferred “play like” (Colwell and Lindsey, 2005; Connell and Prinz, 2002; Ger-rits, Goudena and van Aken, 2005; Gleason, 2005; Lindsey and Mize, 2001a; Zachopoulou, Trevlas and Tsikriki, 2004). In addition, Uylaş, Yalçın, Panda Sari and Scarboro (2014) The gender variable determines the place of play, the size of the playgroup, the level of control, conflict resolution strategies and the justice standards applied to these solutions.

As a result of the analysis made to determine whether there is a meaningful relation between the game skill scores and the attention scores, it was found that there was a meaningful relation between them in the positive direction. According to this, it can be said that there is a strong relation between play skills and attention of pre-school students.

According to Mackey, Hill, Stone, Bunge (2011); and that the cognitive processes such as reasoning and processing speed can be changed and improved by game training are consistent with the results of the study. Benigno ve Farrar (2012), according to research



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findings on 32 siblings of the game the game played through siblings reached the conclusion that it affected the attention development.

According to the results of the research by Seer and zmen (2015) on the effects of attention-gathering activities on the thinking and attention-gathering skills of pretextual preschool children ; it has been said that the activities of improving the attention collecting skill (play, etc.) applied to the children of the experimental group reduce the number of errors of the children and increase the attention collecting ability. aydın et. al. (2016) in the Zeka Investigation of the effects of brain teasers on attention spans of pre-school children of study; it was noted that there was a significant difference in the level of attention among the six-year-olds who were studying intelligence games and the six-year-old children who were educated according to the Ministry of Education Preschool Education Program in favor of the experimental group.

CONCLUSION

As a result of the analyzes made, the mean scores of the children's game skills and Attention score are significantly different according to the gender variable. This difference is favored by ladies. As a result of the analysis made to determine whether there is a meaningful relationship between the game

skills scores and the Attention scores, it was found that there is a meaningful relationship between them in the positive direction. According to this, it can be said that there is a strong relation between play skills and attention of pre-school students.

REFERENCES

- ALTUN, M., HAZAR, M., HAZAR, Z., (2016).** Investigation of the effects of brain teasers on attention spans of pre-school children. *International Journal Of Environmental and Science Education*, 11(15); 8112-8119
- AYDIN, A. (1999).** *Gelişim ve Öğrenme Psikolojisi*. Ankara: Anı
- BENIGNO, J. P., FARRAR, M. J., (2012).** Determinants of Joint Attention in Young Siblings' Play, *Infant and Child Development Inf. Child. Dev.* 21, *Published online 31 August 2016 in Wiley Online Library*
- COL, Ş. (2012).** *Sosyal bilimler için veri analizi el kitabı: İstatistik, araştırma deseni, spss uygulamaları ve yorum*. (16. Baskı). Ankara: Pegem
- COLWELL, M. J., LINDSEY, E. W., (2005).** Preschool children's pretend and physical play and sex of play partner: Connections to peer competence. *Sex Roles*,



SSTB

www.sstbdergisi.com

International Refereed Academic Journal of Sports, Health and Medical Sciences

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52(7-8), 497-509. Doi: 1 0 . 1 0 0 7 / s11199-005-3716-8

CONNELL, C. M., PRINZ, R. J., (2002).

The impact of childcare and parent–child interactions on school readiness and social skills development for low-income African American children. *Journal of School Psychology, 40*(2), 177-193. Doi: 10.1016/S0022-4405(02)00090-0

ERBAY, F., (2013). Dikkat toplama ve okuma olgunluğu değişkenlerinin altı yaş çocuklarının işitsel muhakeme ve işlem becerilerini yordama gücü. *Kuram ve Uygulamada Eğitim Bilimleri, 13*(1), 422-429

FAZLIOĞLU, Y., ILGAZ, G., PAPATĞA, E., (2013). Oyun becerileri değerlendirme ölçeğinin geçerlik ve güvenirlik çalışması. *Trakya Üniversitesi Sosyal Bilimler Dergisi, 15*(1), 239-250

FROMMER, W., (1993). *Yönlendirilmeden düşünerek yaşama.* (E. Duygulu, Çev.). İstanbul: Düşünen Adam

GERRITS, M. H., GOUDENA, P. P., VAN AKEN, M. A., (2005). Child–parent and child–peer interaction: Observational similarities and differences at age seven. *Infant and Child Development, 14*(3), 229-241. Doi: 10.1080/0300443011660108

GLEASON, T. R., (2005). Mothers’ and fathers’ attitudes regarding pretend play in the context of imaginary companions and of child gender. *Merrill-Palmer Quarterly, 51*(4), 412-436. Doi: 10.1353/mpq.2005.0022

KARASAR, N., (2014). *Bilimsel Araştırma Yöntemi.* (26. Basım). Ankara: Nobel

KAYILI, G., ARI, R., (2011). Examination of the effects of the Montessori Method on preschool children’s readiness to primary education. *Educational Sciences: Theory and Practice, 11*(4), 2104-2109

KAYMAK, S., (1995). Yuvaya giden beş yaşındaki çocuklarla dikkat toplama çalışmaları. Yüksek Lisans Tezi. Ankara Üniversitesi Sosyal Bilimler Enstitüsü, Ankara

KOÇYİĞİT, S., KAYILI, G., ERBAY, F., (2010). Montessorri yönteminin beş-altı yaş çocuklarının dikkat becerilerine etkisinin incelenmesi. *Çağdas Eğitim Dergisi, 35*(371), 16-21

KUSCU, Ö., (2010). Orff-Schulwerk yaklaşımı ile yapılan müzik etkinliklerinin okulöncesi dönemdeki çocuklarının dikkat becerilerine etkisi. Yüksek Lisans Tezi. Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Konya



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www.sstbdergisi.com

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(TRADEMARK)

(2015/04315- 2015-GE-18972)

LİNDSEY, E. W., MİZE, J., (2001). Contextual differences in parent–child play: Implications for children’s gender role development. *Sex Roles*, 44(3-4), 155-176. Doi: 10.1023/A:1010950919451

MACKEY, A. P., HİLL, S. S., STONE, S. I. BUNGE, S. A., (2011). Differential effects of

reasoning and speed training in children. *Developmental Science*, 14(3), 582-590

<http://onlinelibrary.wiley.com/doi/10.1111/j.1467-7687.2010.01005.x>, sayfasından erişilmiştir.

MCCLEARY, L., (2009). *Beyin geliştirme programı.* (A. Durmuş, Çev.). İstanbul: Crea

ÖZDOĞAN, B., (2004). *Çocuk ve oyun: Çocuğa oyunla yardım.* Ankara: Anı

SEÇER, Z., ÖZMEN, S. K., (2015). Dikkat toplamayı geliştirici etkinliklerin içt-episel okul öncesi ç o c u k l a r ı n düşünme ve dikkat toplama becerilerine etkisi. *K. Ü. Kastamonu Eğitim Dergisi* 23(4), 1803-1816

UYLAŞ, S., YALÇIN, H., PANDAMSARI, A., SCARBORO, A., (2014). “Can fatma come out and play?” gender and play in İstanbul. *International Journal of Global Education*, 3(1), 25-30

ZACHOPOULOU, E., TREVLAS, E., TSİKRİKİ, G., (2004). Perceptions of gender differences in playful behaviour among kindergarten children. *European Early Childhood Education Research Journal*, 12(1), 43-53. Doi: 10.1080/1350293048520930

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* BOOKS

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*CHAPTERS IN A BOOK

TAŞKIN, L., YANIKKEREM, E., (2014). Aile planlaması. İçinde Kadın Sağlığı Hemşireliği, 12. Baskı, Ankara, Türkiye: Özyurt Matbaacılık, ss.527-545

SEVİL, Ü., YANIKKEREM, E., (2008). Adölesan dönemi. İçinde A. Şirin (Ed.), Kadın Sağlığı , İstanbul, Türkiye: Bedray Basın Yayıncılık, ss.57-90

BAYIK, A., SEVİL, Ü., (2004). Hemşirelik disiplini ve araştırma. İçinde İ. Erefe (Ed.), Hemşirelikte Araştırma İlke Süreç ve Yöntemleri, 3. Baskı, İstanbul, Türkiye: Odak Baskı Ofset, ss.13-26

* ARTICLES

EGELİOĞLU, N., MUSLU, G.K., ŞEN, S., GÜNERİ, S.E., BOLİŞİK, B., SARUHAN, A., (2014). Ege Bölgesinde doğum sonu dönemde uygulanan geleneksel uygulamalar. Uluslararası Hakemli Hemşirelik Araştırmaları Dergisi (UHD), 1(1):22-35. Doi: 10.17371/UHD.2014018935

ÖZCAN, B., KOCAMAN, H., (2016). Eşler Arasındaki Yaş Farkının Boşanmalar Üzerindeki Etkisi, ACED Dergisi, 10:1-17 Doi: 10.17359/ACED.20161024262

ŞEN, E., GÜNERİ, S.E., YANIKKEREM, E., HADIMLI, A., KAVLAK, O., ŞİRİN, A., et, al., (2012). Determination of knowledge requirements and health practices of adolescent pregnant women. International Journal of Caring Sciences, 5(2):171-178

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12. What is the duty of the science and advisory board?

The science and advisory board is responsible for solving the incompatibility problems that the referees experience; the board gives the final decision independently, and they act actively to solve such problems. The decisions of the science and advisory board are accepted without questioning. The decisions are applied accordingly. Their decisions cannot be changed and offered to be changed.

13. Is an author allowed to submit his/her paper to the science and advisory board in a negative situation?

This situation is out of the question. Functionality of science and advisory board occurs only with the approval of the editor-in-chief.

14. If an author submits her/his paper simultaneously to another journal for consideration, and the paper is accepted in that journal too, what kind of procedures is taken?

The executive board and editorial board give the final decision in such cases. As the publication board does not regard such attitudes as ethical, even if the paper has been published, it is removed from the system on condition that refutation is published, necessary institutions are informed, and the rights are reserved. However, in order to avoid such problems, the guidelines for the authors should be read carefully and the appropriate papers should be submitted. Our journal's all rights are kept reserved under the guidance of journal's

legal advisors within the framework of Turkish Commercial Law and Law on Intellectual and Industrial Rights in such negative conditions. It defends its material and moral rights within the framework of Laws of Turkish Republic.

15. Does your journal accept papers from other languages?

Currently, the language of our journal is Turkish and English. However, studies in English and other languages are also accepted.

16. Is an author allowed to get information about referees evaluating her/his paper?

It is out of question. The names of the referees will never be revealed to the authors even if they want to learn. The author cannot recommend a referee for the paper s/he sent. Only the editor-in-chief, assistant editors, field editor and system editor can decide on this. It is also out of the question to assign a referee outside those boards and to give information.

17. Is an author allowed to give a name of a referee that s/he does not want her/his paper to be evaluated by?

If such a problem occurs, and the referee is in the journal list, on condition that the process is confidential, the author should submit the necessary explanations and reasons in an official document to the editor-in-chief. If this is approved by the chief editor, necessary steps are taken; otherwise, common procedures and standard working are carried out.

18. Is an author allowed to suggest a referee to contribute to the evaluation process?

It is out of question. The field and system editors decide on the issue. Authors cannot interfere in this process.

19. Are the authors to sign the transfer agreement or publishing transfer contract?

This situation is stated on the main page of the journal in the section titled publication principles. All the submitted papers are accepted to be transferred to the journal with exclusive rights. The author is not asked to **sign the document** concerning the submission. However, in some cases the author should sign the contract, required by the field editors or administrative board and submit it to the chief editor officially. Otherwise the paper will not be published.

20. Is an author allowed to withdraw his/her paper when desired?

If the evaluation process has started, papers cannot be withdrawn. The paper can only be withdrawn in case of plagiarism and scientific disquality and if the author sends an official letter, explaining the situation to the chief editor. The journal acts unilaterally in this issue.

21. What is the process in papers requiring the approval and report of ETHICS BOARD?

As in “Media Organs” of National and International journals, author(s) has to upload “Date of Report”, “Report Information-Report Number” to “Ethics Board Report Information”

part of the publication submission system of the journal in “EXPERIMENTAL, CASE STUDY and INSTITUTIONAL” works requiring ETHICS BOARD approval and report. The chief editor has the right to ask for the original report if deemed necessary with an official approval of the institution. In such cases, if the chief editor doesn’t get the ethics board report despite the request made, the manuscript cannot be included in the system and published even if it has obtained referee approval and completed the publication process. The paper is rejected with the decision of chief editor and other editors. In this case, author(s) cannot make a demand for right. This information isn’t necessary for the papers not requesting ethics board report or being lack of this report. However, this information should be uploaded to the system by author(s) for the papers requesting and having the ethics board report. Author(s) are held responsible for this situation. Our journal doesn’t accept any liability and responsibility regarding this matter. The whole responsibility in legal process belongs to author(s). Otherwise, our journal cannot bear any legal, spiritual and material responsibility. Journal management and referees cannot be imposed any liability in this matter. In case of a possible negative condition, our journal unilaterally reserves its legal rights.

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