Examination of Turkish Secondary School Students' Health-Related Fitness Knowledge on the Basis of Gender and Provinces

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INTRODUCTION

Physical inactivity and sedentary behaviors during the childhood and youth are among the important contributors to obesity epidemic.*

The deficiency of Health-related fitness (HRF) knowledge was considered one of the determinants of the ongoing obesity epidemic among secondary school youth.**

Physical education (PE) classes might be the first step for establishing students' HRF knowledge at an early age.***

*Prentice-Dunn & Prentice- Dunn, 2012; Strong et al., 2005; WHO, 2010
**Zapata, Bryant, McDermott, & Hefelfinger, 2008
***Castelli & Williams, 2007; Keating et al., 2009

The Turkish physical education curriculum have stressed development of health related fitness and related conceptual knowledge in school-aged children (NASPE, 2004; MoNE, 2013). However, research on HRF knowledge of students for the Turkish context is limited (Hunuk, Ince and Tannehill, 2013; Cengiz and Ince, 2014; Serbes, S., Cengiz, C., Sivri, M., & Filiz, T., 2017). There is a need to provide information about the HRF knowledge of students and their needs.

Purpose: This study aimed to examine Turkish secondary school students' HRF knowledge on the basis of gender and three provinces representing the country's eastern, central and western regions.

METHOD

Participants

The participants of this cross-sectional study were 7th grade (12-13 years old) students from three provinces of Central, West & East Regions of Turkey.

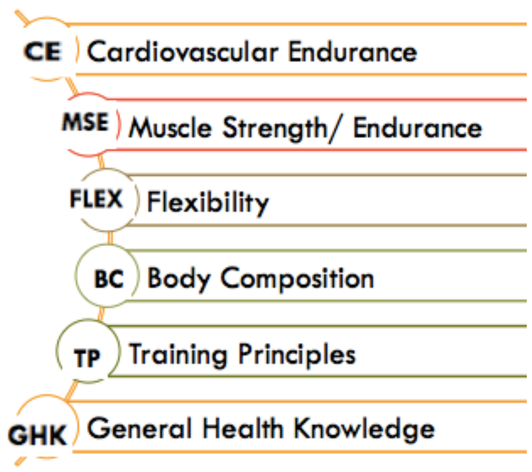
Table 1. *Number of Participants by Provinces*

	Province & Location			
	Ankara	**Elazığ**	**Balıkesir**	
Gender	Central	West	East	Total (N)
Girls	176	213	308	697
Boys	180	170	351	701
Total (N)	356	383	659	1398

Data collection instrument

The 'Health-Related Fitness Knowledge Test for Secondary School Students' was used to collect data for this study.

- It was modified from the 'Superkids-Super Fit Knowledge Test' developed by Mott, Virgilio, Warren and Berenson (1991).
- The Turkish version of the test was adapted and validated by Hunuk and Ince (2010) according to the Turkish physical education curriculum for secondary school students HRF Knowledge standards.



RESULTS

Independent samples t-test results indicated that a significant difference between the boys' and girls' HRF Knowledge for all components;

- cardiovascular endurance t (1383) = 2.47,
- muscle strength/endurance t (1396) = 2.03,
- flexibility t (1396) = 2.15,
- body composition t (1388) = 4.28,
- training principles t (1395) = 2.16,
- general health knowledge t (1389) = 3.11, p <.05.

Table 2. *Descriptive Statistics of Independent Samples t-test*

	Gender	M (SD)
CE	Girls	15,94 (4,56)
	Boys	15,31(5,00)
MSE	Girls	9,88 (3,91)
	Boys	10,29 (3,79)
FLEX	Girls	7,97 (3,79)
	Boys	8,41 (3,96)
BC	Girls	7,45 (3,17)
	Boys	6,69 (3,43)
TP	Girls	7,12 (3,36)
	Boys	6,72 (3,49)
GHK	Girls	12,23 (4,24)
	Boys	11,50 (4,56)

One-way ANOVA results showed a significant difference among provinces in students' HRF knowledge components except flexibility and body composition knowledge;

- cardiovascular endurance F (2, 1395) = 13.55, η^2= .02;
- muscle strength/endurance F (2, 1395) = 8.11, η^2= .01;
- training principles F (2, 1394) = 21.29, η^2= .03;
- general health knowledge F (2, 1395) = 11.23, η^2= .02, p <.05.

Table 3. *Descriptive Statistics of ANOVA*

	Province	**M (SD)**
CE	Central	15,96 (4,58)
	West	**16,46 (4,69)**
	East	14,95 (4,83)
MSE	Central	9,85 (3,94)
	West	**10,76 (3,59)**
	East	9,82 (3,91)
TP	Central	7,47 (3,39)
	West	**7,48 (3,41)**
	East	6,29 (3,37)
GHK	Central	12,19 (4,52)
	West	**12,54 (4,36)**
	East	11,29 (4,33)

CONCLUSION

In this study, there was a gender difference in favor of girls in terms of health related fitness knowledge level of students similar to the studies in the literature.

Results also showed that there was a significant difference among provinces (west, central and east) in students' HRF knowledge components in favor of west province. In the future studies, the difference on students' HRF knowledge levels among the provinces should be examined socio-ecologically by using qualitative research methods.

The results of this study can also guide physical education teachers when designing their instructions on the learning domain including HRF knowledge components. Moreover, professional development programs of physical education teachers should be designed accordingly.

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