

Perceived Apparel Fit Issues of High School Adolescents: Comparison of Fit Differences
between Athletes and Non-Athletes Using 3D Body Scan Technology

Stephanie K. Hubert, M. S., Laurie M. Apple, Ph.D., & Kathleen R. Smith, Ed. D.
University of Arkansas-Fayetteville

Fit, Sizing, Athletes, 3D

Introduction

Athletes tend to have unique problems with fit of their clothing. It is common for athletes to have body changes as a result of their exercise regimens (Andreoli, et al., 2001). The sculpting of the body through exercise is what many athletes strive for, but the resulting fit issues of the clothing available through ready-to-wear markets can be problematic. This begins during the high school years, when the importance of body image and body satisfaction have a greater impact (Caglar & Asci, 2010). Tselepis and de Klerk (2004) reported that adolescents use clothing not only to fit in, but to also feel better about their bodies. Adolescents reported dissatisfaction with the fit of their clothing in the de Klerk and Tselepis, (2007) study.

Statement of the problem

According to Parker-Pope (2010), athletic involvement influences the student beyond their school performance and body image by changing their physical structure and lowering their weight, risk of diabetes and other health risks later in life. The apparel industry has not adapted to the increasingly difficult task of fitting athletic builds with a wide variety of garment types. The problems associated with athletic build and poorly fitting junior apparel make finding properly fitting apparel difficult for high school athletes. It is then necessary to determine if the problem of poorly fitting apparel unnecessarily increases the already problematic body satisfaction and body image problems of adolescents (Noles, Cash, and Winstead, 1985).

Objectives

The objectives of this study were to determine (1) whether high school students have the perception that they have problems finding clothing that fits; (2) if the problem is common among both athletes and non-athletes and (3) if body image and body satisfaction are related to athletes and non-athletes reporting problems with fit of ready-to-wear clothing.

Method and Results

The TC₂KX₁₆ 3D Body Scanner and a questionnaire including a four-part survey to measure body image were used to collect data. The four part survey included the Body-Image Ideals Questionnaire (Cash, 2000a), the Body Area Satisfaction Scale (Cash, 2000b), the Apparel Fit survey and body image comparison to a 3D body scan. School districts in a mid-southern state agreed to participate in the study. Participation was voluntary and parental permission was obtained prior to beginning the study. A total of 107 participants (male n=34, female n=73) completed the study. All participants were between 14 and 19 years of age and enrolled in ninth (n=59, 55%), tenth (n=18, 17%), eleventh (n=17, 16%), and twelfth (n=13, 12%) grades. A total of 70 athletes and 37 non-athletes completed the study. The TC₂KX₁₆ 3D Body Scanner was set up in a location providing privacy at all participating schools. Results failed to reject all of the

hypotheses except one, where athletes indicated a significantly more accurate body image than non-athletes. Perceived apparel fit issues were reported by 96% of all participants, but was not significant between the two groups. A chi-square test for apparel fit and body image did not indicate a statistically significant difference between athletes and non-athletes for this study. In addition, athletes did not show a significant difference in body satisfaction over non-athletes.

Limitations

Although there was only one significant difference found for this study, the researchers were able to determine there are significant fit issues for high school students. Further study includes collecting the same data from a larger sample and determining if there are actual fit issues as opposed to perceived fit issues with junior sized clothing. Revisions to body silhouette scale should be developed to improve body shape variations. This study was limited to a small geographical area of a mid-southern region of the United States. For increased significance of the results, other regions of the United States should be included in subsequent research to verify the results across the population of American high school students.

- Andreoli, A., Monteleone, M., Van Loan, M., Promenzio, L., Tarantino, U., & De Lorenzo, A. (2001). Effects of different sports on bone density and muscle mass in highly trained athletes. *Medicine & Science In Sports & Exercise* 33(4), 507-511. Retrieved from <http://www.acsm-msse.org>.
- Caglar, E., & Asci, F. (2010). Motivational cluster profiles of adolescent athletes: an examination of differences in physical-self-perception. *Journal of Sports Science and Medicine*, 9, 231-238.
- Cash, T. (2000a). Manual for the body-image ideals questionnaire. Informally published manuscript, Department of Psychology Old Dominion University, Retrieved from www.body-images.com
- Cash, T. (2000b). The multidimensional body-self relations questionnaire. Informally published manuscript, Department of Psychology Old Dominion University.
- De Klerk, H.M., Tselepis, T. (2007). The early-adolescent female clothing consumer: Expectations, evaluation and satisfaction with fit as part of the appreciation of clothing quality. *Journal of Fashion Marketing and Management*, 11(3), 413-428. Retrieved from: <http://www.emeraldinsight.com/journals.htm?articleid=1616033&show=html>
- Noles, S., Cash, T., & Winstead, B. (1985). Body image, physical attractiveness and depression. *Journal of Consulting and Clinical Psychology*, 53(10), 88-94.
- Parker-Pope, T. (2010). As girls become women, sports pay dividends. *New York Times*, February 16, 2010. Retrieved from: <http://www.nytimes.com/2010/02/16/health/16well.html?pagewanted=print>
- Tselepis, T., & de Klerk, H.M. (2004). Early adolescent girls' expectations about the fit of clothes; A conceptual framework. *Journal of Family Ecology and Consumer Sciences*. 32, pp. 83-93.