# **ARC '16**

مؤتمر مؤسسة قطر السنوى للبحوث **OATAR FOUNDATION** ANNUAL RESEARCH CONFERENCE

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## Health and Biomedical Pillar

http://dx.doi.org/10.5339/gfarc.2016.HBPP1572

# Analysis of the Relationship between Physical Self-Concept and Body **Composition**

Zsuzsanna Kneffel, Suhair Saleh, Wajiha Ghazi, Deema Qawassmi, Lina Majed

Qatar University, College of Arts and Science, QA

Email: zs.kneffel@qu.edu.qa

Body image is a psychological construct which refers to self-concept including self-image and feelings an individual perceives regarding his or her body. Several studies have examined how women subjectively perceive their bodies in Western cultures compared to objective measures. However, limited studies have examined this relationship among women in the Gulf region (e.g., Qatar) in which Islamic traditional clothing (i.e., Abaya) is typically adopted and possible differences in the judgment of a healthy body shape might be found. The purpose of this study was to see whether there is a connection between the objective body composition measures [i.e., body weight (BW), body height (BH), body mass index (BMI)] and the subjective measures of physical self-description. We expect to find a tendency among females in this study to estimate a thinner body image compared to their current/measured one.

### Methods

97 female volunteers (18–26 years) were recruited from Qatar University. We measured their body composition (i.e., BW, BH and BMI). We used the short version of the Physical Self-Description Questionnaire (PSDQ), a multidimensional physical self-concept instrument with 11 original subscales including: body fat, health, appearance, global physical self-concept. The collected data for all variables were analyzed using Statistical software (v.12, DELL) for correlations using Pearson's coefficients.

#### Results

Based on the BMI results, 25.7% of the participants were classified as overweight or obese (12.3% and 13.4%, respectively). Results indicated a significant negative moderate correlation between the global physical self-concept on one side and BMI (r=-0.27) and BW (r=-2.0) on the other. Furthermore, the perceived body fat showed significant

Cite this article as: Kneffel Z, Saleh S, Ghazi W, Qawassmi D, Majed L. (2016). Analysis of the Relationship between Physical Self-Concept and Body Composition. Qatar Foundation Annual Research Conference Proceedings 2016: HBPP1572 http://dx.doi.org/10.5339/qfarc.2016.HBPP1572.



negative correlation with BMI (r=-0.57) and with BW (r=-0.52). The inter-correlation within the subscales showed that the perceived body fat was significantly correlated with appearance (r=0.25), health (r=0.16) and global physical score (r=0.34).

#### Conclusion

Our results indicated a clear and logic relationship between perceived global physical self-concept scores and participants` body composition (i.e., negative correlation). However, an interesting result in line with our hypothesis and concerning the way participants perceived their own body fat indicates a negatively correlation with BMI and BW. In the studied population, a possible interpretation could be done based on the positive link revealed between perceived body fat, perceived appearance, perceived health and global physical score. Indeed, this could indicate that the ideal perceived body might be different and higher than norms presented in the World Health Organization classification. To get further insights on the nature of these relationships, we have started new investigations on the relationship between the other subscales of physical self-description and a comprehensive physical fitness test (ALPHA-FIT Test, UK).

#### **Keywords**

physical self-concept, body image, body composition, Qatar

This publication was made possible by UREP grant #17-044-3-011 from the Qatar national research fund (a member of Qatar foundation). The statements made herein are solely the responsibility of the authors.