

## Agreement of Health Status Classification and Body Composition Differences in Asian Indian Students upon Residence in the United States

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### ABSTRACT

Obesity is one of the major health problems in the United States (U.S.). As Asian Indian students immigrate to the U.S., the effect of acculturation to the U.S. lifestyle is an area of concern. **PURPOSE:** The purpose of this study was two-fold: 1) examine the health-risk status of Asian Indians with respect to agreement in classifications of percent body fat (PF) and body mass index (BMI), and 2) examine the effects of U.S. residence duration on body composition of Asian Indian college students. **METHODS:** Forty-two Asian Indian males and females were divided into two groups according to length of residence. First year residents resided in the U.S. for  $\leq 4$  months, second year residents had resided in the U.S. for  $\geq 1$  year. Height and weight were recorded for BMI. PF was measured by whole body air displacement plethysmography. Percent agreement was determined between the health risk classifications of both BMI and PF. The effect of gender and U.S. residence duration were determined on both BMI and PF using Factorial ANOVA. **RESULTS:** The percent agreement between BMI and PF on classification of health status was 69.05%. Two exclusive 2 (gender)  $\times$  2 (residence duration) between subjects factorial ANOVAs were calculated comparing the BMI and PF by group and gender. For BMI, the main effect for gender was not significant ( $F(1,38)=0.023, p>0.025$ ). A significant effect for U.S. residence duration was found ( $F(1,38)=20.193, p<0.025$ ). Students of the second year demonstrated a higher mean BMI ( $m=26.52, sd=0.78$ ) than the first year ( $m=21.57, sd=0.78$ ). The interaction was not significant ( $F(1,38)=0.647, p>0.025$ ). Thus, the difference in BMI due to U.S. residence duration is not influenced by differences in gender. For PF, a significant main effect for the gender was found ( $F(1,38)=31.354, p<0.025$ ). A significant main effect for U.S. residence duration was found ( $F(1,38)=13.044, p<0.025$ ). Second year students demonstrated a higher mean PF ( $m=33.98, sd=1.61$ ) as compared to the first year ( $m=25.78, sd=1.61$ ). The interaction was not significant ( $F(1,38)=0.97, p>0.05$ ). The effect of gender was not influenced by residence duration. **CONCLUSION:** Agreement information indicates the discrepancy between the two methods of determining health status in Asian Indians. Additionally, this study demonstrates that as a result of one year in the U.S., second year students had higher body composition values than first year students.

