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## High-school's neighborhood environment in relation with anthropometric indices of girl students living in north-west of Iran

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**Background/Objectives:** Adolescence is a critical period of life for studying the effects of living environment on weight status; because at this stage, teenagers begin to experience independence for mobility outside home in the neighborhood and outside school<sup>(1)</sup>. The aim of this study was to assess the high school's neighborhood environment characteristics and its association with anthropometric indices of girl students living in Urmia, north-west of Iran.

**Methods:** In this cross-sectional study, 380 female adolescents aged 16–18 years selected from two major ethnic groups (Azeri and Kurd) in Urmia city selected by stratified cluster sampling method. Thirteen high schools (9 public and 4 private) were selected across all municipality zones of Urmia city. Body Mass Index for Age Z-Score (BAZ) was calculated by Anthro-Plus software. Neighborhood characteristics of their schools was obtained by a validated 22-items neighborhood and health observational checklist. Principal component analysis was used to define dominant neighborhood environment. Obesity was defined based on WHO cut-off. The association of school's neighborhood characteristics with obesity was analyzed by logistic regression model.

**Results:** Two common neighborhood environments were identified: “Modern, affluent and safe” (highly loaded for modern buildings and neighborhood, easy access to physical activity facilities, playgrounds parks and police stations) “Centrally located neighborhood with high access to social services such as mosques, public transports, commercial centers located in moderate socioeconomic districts labeled as “Central-high access”. These two factors explained 53.14% of total variance. Living in “Central-high access” neighborhoods increased the chance of obesity in the studied adolescents (OR = 2.71, 95% CI: 1.06–6.93) ( $p < 0.05$ ). Living in “Modern and affluent” neighborhoods was significantly related with lower chance of overweight and obesity but it was not significant (OR = 0.89, 95% CI: 0.70–4.01). Adjustment of socioeconomic status of student's households, energy intake and physical activity did not change the results.

**Discussion / Conclusion:** Findings showed that the possibility of obesity was higher in adolescents studying in schools located in neighborhoods with lower access of physical activity facilities and moderate socioeconomic status. In accordance of our findings, several studies approved that living in the deprived neighborhoods was related with higher BMI<sup>(2)</sup>. In conclusion, findings suggest an strong association between neighborhood characteristics and obesity in the studied girl adolescents.

### References

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### Disclosure of Interest

None Declared