**Conclusion** The present results suggest that light intensity PA may have an important role in weight control while greater moderate-intensity PA may be associated with lower uric acid concentration in individuals with obesity.

**Method** A cross-sectional population based survey was carried out in Campinas in the years 2008/09 (ISACamp 2008/09). Data of 929 adolescents from 10 to 19 years were obtained through household interviews. The analysis included prevalence ratio (PR) and 95% CI. Poisson regression was used for adjusted analysis.

**Results** 17.54% (CI 14.34 to 21.28) informed having one chronic disease and 1.62% (0.92 to 2.83) having more than one. Regarding health complaints 38.47% (31.98 to 45.39) referred not having any problem, 33.75% (29.55 to 38.21) informed one problem, 17.31% (15.46 to 20.58) two, 7.25% (5.27 to 9.53) three and 3.25% (1.88 to 5.56) four or more. Among the chronic diseases, asthma showed the higher prevalence: 7.59% (6.01 to 9.54). The most prevalent health complaints were: allergy 40.59% (34.90 to 46.15), frequent headache/migraine 24.83% (20.35 to 29.92), backache/column problems 11.84% (8.97 to 15.48) and emotional problems (anxiety and sadness) 10.65% (7.69 to 14.56). After adjusting for confounding the PR for chronic diseases were: 1.4 (1.06 to 1.82) for age over 15, 0.66 (0.46 to 0.99) for those still attending school, and 1.8 (1.06 to 3.18) for having children. The PR for health complaints were: 1.12 (1.01 to 1.24) for girls and 1.34 (1.11 to 1.62) for higher family income.

**Conclusion** Age from 15 to 19 years, not attending school and having children are associated with chronic diseases, and female adolescent and having a family income of over 4 minimum wages are associated with health complaints.

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**SP1-19 DIFFUSE REFLECTANCE SPECTRAL IMAGING: A NON-INVASIVE PROMISING TOOL FOR EARLY DIAGNOSIS AND SCREENING OF MALIGNANT CHANGES IN THE ORAL CAVITY**

**Background** Early detection is vital for improving the survival rate of oral cancer patients.

**Materials and Methods** Spectral data at 545 and 575 nm in diffuse reflectance (DR) spectra were imaged from oral lesions of 55 patients and 103 sites of 25 healthy volunteers with an electron multiplying charge coupled device (EMCCD) camera. A computer-generated algorithm based on pixel intensity of DR image ratio (R545/R575) was used for pseudo-colour mapping the entire oral lesion. Tissue biopsies of all patients were taken from selected sites with maximum malignant potential. Spectral data of ratio image were then compared against the histopathology results.

**Results** The mean age of patients and healthy volunteers were 55.7±12.0 years and 28±7.0 years, respectively. Majority of patients were tobacco users (43/55), while 23/55 were users of alcohol. The median pixel intensity value of the ratio-image was significantly lower (p<0.001) in the healthy group (0.87, IQR: 0.82–0.94) in comparison to pre-malignant (1.55, IQR: 1.13–1.67) and malignant group (2.44, IQR: 1.78–3.80). The area under the ROC curve (AUC) of healthy to pre-malignant, healthy to malignant, pre-malignant to malignant and healthy to pre-malignant/malignant comparisons were 0.94 (95% CI 0.86 to 1.00), 0.99 (95% CI 0.99 to 1.00), 0.84 (95% CI 0.73 to 0.95) and 0.97 (95% CI 0.94 to 1.00), respectively. The discriminant function analyses with leave-one-out classification differentiate healthy from pre-malignant/malignant lesions correctly in 84.2% occasions after cross-validation (Wilks’ λ=0.744, χ²=45.97 with degree of freedom=1, p<0.001).

**Conclusion** DR spectral imaging efficiently discriminates healthy tissues from oral malignant and pre-malignant lesions.