

# **Tension between Jews and Arabs increases risk to health: variance in Heart rate variability among Jewish and Muslim women in Afula and Nazareth\***

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## **Abstract:**

Studies show that ethnic groups' autonomous nervous system respond to exposure to discrimination. We test responses of Muslim and Jewish women to exposure to alien ethnic environments increasing by thus risk to health.

In field experiment study, we tested 72 young and healthy Muslim and Jewish women measuring their HRV in intra and inter-ethnic park, town center and residential neighborhood in an Arab and Jewish adjacent towns. The subjects stayed half an hour in each of the six environments contributing eight HRV measurements in each environment and measurements of exposure to thermal load, CO, and noise. Levels of HRV were higher among Jewish women in their intra-ethnic environments.

For both groups' levels of HRV increased once crossing ethnic boundaries. However, some ethnic differences emerged: Muslim experienced higher increase in LF/HF while crossing boundaries. Muslim experienced higher risk for health in residential neighborhoods than in town centers. Jewish women experienced higher levels of risk for health in town centers relative to residential neighborhoods.

Muslim and Jewish women differently activated their sympathetic and parasympathetic systems in response to environmental exposures. Higher correlations between HF and LF among Muslims means that the sympathetic and the parasympathetic tones are working in more harmony among Muslim women helping them better adopt to environmental challenges. In conclusion, there are ethnic differences in response to crossing alien ethnic boundaries. A further study is needed to understand the causes of these differences, whether they are associated with differences in lifestyle, discrimination and physiology.

\*This research was supported by the Ministry of Science & Technology, Israel, the Porter School of the Environment and Earth Sciences, the, Department of Environmental studies, the Faculty of Exact Sciences, Tel Aviv University, Foundation of Smaller and Winikob for outstanding environmental character collaboration, the Jewish National Fund L'Israel, and Tami Stienmetz for Peace Research, Tel Aviv University.