

Contact: Sandra P. Arévalo, PhD; sandra_arevalogarcia@uml.edu; 617-799-3225

Title of Poster:

Plasma PLP Concentration and Depressive Symptomatology, over time, in older Latino Adults

Authors:

Sandra P. Arévalo, PhD;^a Tammy Scott, PhD, MPH;^b; Luis M. Falcón, PhD;^c Katherine L. Tucker, PhD^a

^a Postdoctoral Research Associate, Department of Clinical Laboratory and Nutritional Sciences, University of Massachusetts at Lowell, 3 Solomont Way, Suite 4, Lowell, MA 01854-3092

^b Assistant Professor, Psychiatry, Tufts University School of Medicine, 150 Harrison Avenue, Boston, MA 02111

^c Dean, College of Fine Arts, Humanities and Social Sciences, University of Massachusetts at Lowell, 820 Broadway Street, Lowell, MA

^a Professor, Department of Clinical Laboratory and Nutritional Sciences, University of Massachusetts at Lowell, 3 Solomont Way, Suite 4, Lowell, MA 01854-3092

Abstract:

Background: Low vitamin B-6 status has been linked to depressive symptomatology. However, most studies have been cross-sectional and may not have controlled for relevant confounders. Few studies have examined this association in Latino populations at high risk for major depression.

Design: We used two-level hierarchical linear regression models (HLM) for continuous outcomes. Level-1 data included three measures of participant's depressive symptomatology collected at baseline, 2y follow-up and 5y follow-up. Participants constituted level-2 data. Vitamin B-6 was associated with depressive symptomatology across these time points.

Objective: We examined the longitudinal association of vitamin B-6 status with depressive symptomatology across 3 time points over ~ 5-7 y in a cohort of older Puerto Rican adults, a population previously identified to be at high risk for depressive symptomatology and clinical depression.

Results: Plasma pyridoxyl-5'-phosphate (PLP) concentration, a time-varying predictor, was significantly associated with depressive symptomatology. Study participants with PLP deficiency, vs. optimal PLP, had higher baseline depressive symptoms (22 ± 14 , vs. 20 ± 13); this differential remained constant over time and persisted after controlling for age, sex, education, BMI, smoking and alcohol use, other relevant nutritional factors, perceived stress, stressful life events and allostatic load; and use of antidepressant medication. However, PLP concentration was not associated with the rate of change in depressive symptomatology over time.

Conclusions: Suboptimal plasma PLP is associated with higher depressive symptomatology in older Puerto Rican adults and this appears to persist over time. Our data suggest that identification and treatment of vitamin B-6 deficiency may be a useful preventive and intervention approach in this population.