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## English Language Acculturation and Academic Achievement Among Junior Year Nursing Students

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SCHOOL OF NURSING**

**MASTER'S PROGRAM PROJECT OPTION (PLAN B)  
PROJECT SIGNATURE FORM**

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SEMESTER ENROLLED Spring 2009  
TITLE OF PROJECT ENGLISH LANGUAGE  
ACCULTURATION AMONG JUNIOR  
YEAR NURSING STUDENTS

NAME OF JOURNAL JOURNAL of NURSING  
EDUCATION

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# ***English Language Acculturation And Academic Achievement Among Junior Year Nursing students***

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**Diane Stuenkel, EdD, RN**

**Mark Crider, PhD, RN**

## ***Abstract***

Efforts to alleviate the current nursing shortage have focused on recruitment and retention of diverse nursing students. Language acculturation has been identified in the literature as one predictor of academic achievement (Salamonson et al, 2008) **PURPOSE:** This study examined the relationship between pathophysiology and pharmacology grades and scores on the English Language Acculturation Scale (ELAS) survey for junior-level nursing students (N = 65). The relationship between years living in the United States (U.S.) and pathophysiology and pharmacology grades was examined also. **RESULTS:** ELAS scores ranged from 7-25, with a mean of 22 (SD = 4.27). No statistically significant correlation was found between pathophysiology or pharmacology grades and ELAS score. A weak correlation was identified between length of time lived in the U.S. and pathophysiology grades ( $r = .260, p < .05$ ) and pharmacology grades ( $r = .288, p < .05$ ). For this sample, success in pharmacology and pathophysiology coursework paralleled linguistic competence.

English Language Acculturation and  
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## Abstract

Efforts to alleviate the current nursing shortage have focused on recruitment and retention of diverse nursing students. Language acculturation has been identified in the literature as one predictor of academic achievement (Salamonson et al, 2008) PURPOSE: This study examined the relationship between pathophysiology and pharmacology grades and scores on the English Language Acculturation Scale (ELAS) survey for junior-level nursing students (N = 65). The relationship between years living in the United States (U.S.) and pathophysiology and pharmacology grades was examined also. RESULTS: ELAS scores ranged from 7-25, with a mean of 22 (SD = 4.27). No statistically significant correlation was found between pathophysiology or pharmacology grades and ELAS score. A weak correlation was identified between length of time lived in the US and pathophysiology grades ( $r = .260$ ,  $p < .05$ ) and pharmacology grades ( $r = .288$ ,  $p < .05$ ). For this sample, success in pharmacology and pathophysiology coursework paralleled linguistic competence.

## English Language Acculturation and Academic Achievement Among Junior Year Nursing Students

In the foreseeable future the composition of the United States (U.S.) will change. By the year 2050, the non-Hispanic White culture is projected to decline to 46.3% of the U.S. populace and culturally distinct minority groups will increase to make up 53.6% of the U.S. populace (U.S. Census Bureau, 2000). This statistic has implications for our society and health care infrastructure, which is entrusted with providing access to quality health care for all (U.S. Department of Health and Human Services (HHS), 2000, p.16). Increasing minority representation in the health professions is based on studies showing that minority health professionals “ are likely to serve in areas with high proportion of underrepresented racial and ethnic groups and to practice in or near health care shortage areas.”(Healthy People 2010, n.d., focus area 1-8, para 4) The proposition that diverse healthcare providers must be an integral part of health care delivery to a diverse citizenry is encapsulated in nursing schools’ desire to recruit and retain diverse nursing students (Davidhizar & Shearer, 2005; Guhde, 2003; Schwartz, 2008; Kennedy, Fisher, Fontaine, & Marin-Holland, 2008). Creative teaching strategies, innovative curricula, and ethnically diverse faculty will be vital to ensure the academic success of students with unique cultural and linguistic abilities (Yoder, 2001).

Given the increasing presence of diversity among nursing students, consideration of the interrelationships between English language proficiency and academic subject achievements is warranted (Davidhizar & Shearer, 2005; Lujan, 2008; Salamonson, Everett, Koch, Andrew, & Davidson, 2008). As a first step, nursing programs should be prepared to assess for academic

English language proficiency and recognize barriers to its attainment. The purposes of this study were threefold: (a) to describe the degree of English language acculturation as measured by the English Language Acculturation Scale (ELAS) for a subset of junior-level nursing students, (b) to determine if a statistically significant correlation existed between ELAS scores and pathophysiology and pharmacology grades, and (c) to determine if there was a statistically significant correlation between years residing in the United States and academic achievement as measured by pathophysiology and pharmacology grades.

## SECOND LANGUAGE AND ACCULTURATION

An outcome of multiculturalism is a phenomena referred to in social psychology literature as acculturation. Redfield, Linton, and Herskovits (1936) defined the process of acculturation as “those phenomena, which result when groups of individuals having different cultures come into continuous first-hand contact.” (as cited in Noels, Pon, & Clement, 1996, p.247). Embedded amid the multifactorial experience (e.g. customs behaviors, and participation in the native community) of acculturation is the variable of second-language competence and its position as a strong indicator of “linguistic acculturation and...mediator of the stresses of acculturative contact.” (Noels et al, p.249).

Second language learning, according to Cummins' model of language acquisition, is divided into everyday conversational speech (BICS) and cognitive academic language (CALP). Within institutions of higher education academic English is highly valued and functions to facilitate discipline specific discourse (Scarcella, 2003). English as Second Language (ESL) learners, according to Scarcella (2003) often lack sufficient academic English proficiency to compete

successfully in post-secondary institutions. Assessment of English language proficiency is mandated for California public school students in grades K-12 (Solorzano, 2008). Extending this mandate, Scarcella (2003) emphasized that academic English must be fostered in the elementary and secondary grades and students who live in communities where CALP is not taught or spoken will have no occasion to acquire this skill set.

Academic language is seen as a barrier for ESL nursing students and the academic achievements of the ESL student can be impeded if appropriate support and teaching strategies are not created (Abriam -Yago, Yoder, & Kataoka-Yahiro, 1999; Lujan, 2008; Boshier & Bowles, 2008). Salamonson et al. (2008) found that academic performance of ESL nursing students was related to their English Language Acculturation Scale (ELAS) scores and that length of residence was also related to ELAS scores. High stakes tests for ESL learners are considered difficult, flawed and linguistically biased due to test item construction (Lujan; Boshier & Bowles). ESL learners are difficult to quantify and identification of ESL students at California State University campuses is accomplished using placement tests, self-identification, and visa information (Intersegmental Committee of Academic Senates (ICAS) Task Force, 2006). Students who encounter under preparedness in English language skills, including but not limited to comprehension, orthology, grammar, and semantics, will have to surmount many real world obstacles once they are finished with their education and prepare for licensing examinations. Higher education is obliged to address language disparities to ensure that future students in the U.S. have a solid foundation from which to be effective health practitioners.



## Methods

### *Design*

A descriptive design was used to quantitatively measure the linguistic preferences of a subset of diverse nursing students. Measurement scores were calculated and subjected to statistical analysis using a two-tailed Pearson's coefficient correlation. Means and standard deviations were also obtained for dependant and independent variables.

### *Sample and Setting*

A convenience sample of junior level nursing students (N=79) in a Baccalaureate Nursing program at a public university in northern California were invited to participate. Recent completion of pathophysiology and pharmacology courses established the inclusion criteria. Sixty-five students completed a paper/pencil survey during the Spring 2009 semester (81% response rate).

## INSTRUMENT

The ELAS (Salamonson et al., 2008) survey, along with a questionnaire requesting demographic data (age, gender, ethnicity, years in U.S, employment) were distributed. A 5-item survey instrument, the ELAS has a reported Cronbach's alpha of .89 (Salamonson, Everett, Koch, Andrew, & Davidson, 2008). Permission to use the 5-item ELAS instrument was obtained from Dr. Yenna Salamonson (2008) for education and research purposes, excluding any modification or revisions. ELAS was adapted from a larger, validated acculturation scale, the Short Acculturation Scale for Hispanics (Salamonson et al, 2008). The 5-item survey consisted

of the following questions: (a) In general, what language(s) do you speak? (b) In general, what language(s) do you read? (c) What language(s) do you usually speak at home? (d) In which language(s) do you usually think? (e) What language(s) do you usually speak with friends? Each question had five responses from which to choose only one answer: (a) Only non-English language(s); More non-English than English; (c) Both non-English and English equally; (d) More non-English than English; (e) Only non-English language(s). Values were assigned to each response, ranging from 1-5 (1/low= *Only non-English language(s)* to 5/high= *Only English language(s)*). Possible ELAS scores ranged from 5-25.

Students self-reported pharmacology and pathophysiology grades from the prior semester.

### *Procedure*

University Institutional Review Board for Human Subjects approval was obtained. Prior to the collection of data the investigator informed the students of the purpose and features of the study and measurement instrument. Written consent was obtained and participants completed the surveys after their regular skills lab session.

## Results

### *Description of Sample*

Females accounted for 84% of the participants. Ages ranged from 20-49 years with a mean of 24.7 years. Mean grade point average (GPA) for pharmacology was 3.4 with a mode of 4.0; mean GPA for pathophysiology was 3.15 with a mode of 3.0. Seventy-five percent of the participants were born in the U.S. Approximately 35% were non-Hispanic White students, 27.7%

were Filipino, 21.5% Asian pacific islander, 6.2% African- American, and Hispanic/Latinos made up 9.6%.

#### *Description of ELAS Scores and Correlations to Grades*

After summing the values for each item, ELAS scores were grouped into thirds: Low (5-13), Medium (14-18), and High (19-25) ranges. For the sample (n= 64, 1= missing data) surveyed, ELAS scores ranged from 7-25 ( $X = 22$ ,  $SD = 4.27$ ). Four students (6.2%) scored in the Low range (5-13), eight (12.6%) in the Medium range (14-18), and fifty-two students (81.2%) were in the high range (19 – 25). No statistically significant correlation was found between ELAS scores and pathophysiology, and ELAS scores and pharmacology.

#### *Description of Years Lived in United States (U.S.) and Correlation to Grades*

Seventy-five percent (N= 49) of the students surveyed were born in the U.S. The mean number of years lived in the U.S. was 22.5 (6.9). A weak correlation was found between pathophysiology grades and years lived in the U.S. ( $r = .260$ ,  $p < .05$ ) and a weak correlation was found between pharmacology grades and years lived in the U.S. ( $r = .288$ ,  $p < .05$ ).

#### *Description of English Fluency*

When asked to list language fluency in terms of speaking, reading, and writing, 90.6% speak English fluently, 92% read English fluently, and 95.3% write English fluently.

### Discussion

The first research question this study sought to answer was the level of language acculturation for a sample of junior year nursing students, as measured by the ELAS survey. The ELAS

(Salamonson et al., 2008) is a measurement tool of language preference and language usage frequency. The results of the ELAS survey confirmed high levels of English language acculturation and English language use among this cohort. Moreover, greater than 90% of the sample considered themselves fluent in English reading, writing and speaking. At the University, English language proficiency is assessed using English language placement tests and is a criterion of admission. Early identification of English under preparedness is intended to improve recruitment and retention. The assessment of language readiness for university coursework can be achieved using more precise robust tools of measurement.

No statistically significant correlation between course grades in pathophysiology and pharmacology subjects and levels of language acculturation was found. Not surprisingly, high levels of English language acculturation parallels academic success for this sample of junior year nursing students. Language skill competence is a factor in predicting psychological and cultural adjustment into the dominant culture and is supported by theoretical and empirical studies (Kang, 2006; Noels et al., 1996). English language proficiency exceeds other cultural factors in predicting cultural adjustment. However, to what extent language acculturation correlates to academic success is unclear. Salamonson and colleagues (2008) found that language acculturation levels were statistically related to course failure among ESL students in one baccalaureate-nursing program. Research by Sowden (2003) argued that study habits of international students do not imitate Western students' practices. These students were often unsuccessful because their native culture did not stimulate self-directed learning and critical thinking skills according to Western standards (Sowden). Scarcella (2003) pointed out that students who develop academic English language skills also possess sufficient background

knowledge that," helps fill in gaps in communication and interpret ambiguous messages."(p.25). Factors such as motivation, time management, educational resources, and socio-economic status are known to influence academic success.

The final research question explored the correlation between length of time lived in the US and course grades. A weak statistical correlation was identified between pathophysiology ( $r = .260, p < .05$ ) and pharmacology ( $r = .288, p < .05$ ) grades and length of time lived in the U.S. ( $X=22$ years,  $SD=6.91$ ). For this sample, approximately 9% of the variance in course grades was accounted for by length of time in the U.S. In aforementioned research, language acculturation levels, as measured by the ELAS scores were positively correlated to length of residence among first year nursing students in Australia (Salamonson, 2008).

#### Limitations

Results from this study should be generalized with caution. This study used convenience sampling without identification of ESL status. Comparing success rates between ESL and non-ESL nursing students may yield different results. Moreover, completion of the ELAS survey and reporting of pathophysiology/pharmacology grades took place one semester after the courses were finished. Students' perceptions of individual language acculturation may have changed during the intervening time.

## Conclusions

Language acculturation as measured by language preference and usage is considered a factor in academic language proficiency and, ostensibly, contributes to academic achievement.

Reaching out to ESL students and employing traditional and innovative teaching/learning strategies will assist students in using English effectively in their academic work. Reducing language difficulties and improving communication competence will help overcome language barriers for ESL students.

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**Phyllis Connolly**

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**Cc:** Phyllis Connolly  
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The manuscript is submitted and the manuscript number is: [REDACTED]. User name is [REDACTED]

See you soon---well, not to soon.

Again, thank you so very much for devoting a part of your summer to helping me reach my goal.

sincerely,

Leah

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