



# First Annual Research Day

## Hunter College Schools of The Health Professions April 25th, 2007

### PROGRAM

3:00-4:15 pm	Poster exhibit in lobby
4:15-4:30 pm	Dean Sherwen welcome (Auditorium)
4:30-5:15 pm	Presentation: The Multicultural Quality of Life Index: Toward an Assessment of Positive Health Speakers: Dr. Neal Cohen & Dr. Juan Mezzich (Auditorium)
5:15-5:30 pm	Poster prizes (Auditorium) Reception to follow

Sponsored by:  
Dean L. Sherwen and the  
Office of Research and Grant Support

**HUNTER**

THE CITY UNIVERSITY OF NEW YORK

**FIRST ANNUAL RESEARCH DAY**  
**April 25, 2007**

**SCHOOLS OF THE HEALTH PROFESSIONS**  
**HUNTER COLLEGE, CUNY**

**Sponsored by:**  
**Dean Laurie Sherwen and the**  
**Office of Research and Grant Support (ORGS)**

**STUDENTS: 19 graduate, 7 undergraduate, and 13 faculty (26 posters)**

**Communication Sciences:**

**Speech-Language Pathology**

Graduate:

Catherine Azzara  
Emily Carlin  
Jessica Fernandez  
Jennifer Frias  
Erica Gale  
Meran Hollander  
Lauren Kent  
Danielle Neufeld

Dara Brzoska  
Mara Cole  
Maria Finley  
Lauren Friedwald  
Crystal Guerra  
Dana Karl  
Violeta Mastova

**Doctorate of Audiology (AuD)**

Irina Shterenberg

**Community Health Education, Urban Public Health**

Devon Claridge (Undergraduate Student)  
Tonya Johnson (Graduate Student)

Heidi Knoblauch (Undergraduate Student)  
Rachel Weiss (Graduate Student)

**Medical Laboratory Sciences**

Undergraduate:

Breck Chumley  
Julie Intrieri

Hyejeong Eom

**Nursing**

Christine M. Gilchrist (Graduate Student)  
Michelle Lawrence (Undergraduate Student)

Gina Derosina (Undergraduate Student)

**FACULTY and STAFF:**

**Brookdale Center for Healthy Aging & Longevity, Community Health Education**

Matthew Caron, M.S.  
Dana Friedman, M.P.H.

Marianne Fahs, Ph.D., M.P.H.  
Nina S. Parikh, Ph.D., M.P.H.

**Environmental and Occupational Health Sciences**

Julia Richmond Bryant, Ph.D.

**Nursing**

Judith Aponte, DNSc, RN, BC, CCM  
Kathleen M. Nokes, Ph.D., R.N., FAAN  
Donald G. Smith, PhD

Donna M. Nickitas, RN, PhD, CNA, BC  
Holly K. Shaw, RN, Ph.D.  
Elizabeth B. Simon, Ph.D., RN, CCRN, CEN

**Nutrition and Food Science, Urban Public Health**

Khursheed Navder, Ph.D.

**Physical Therapy:**

Susan E. Pivko, BPT, Cert. MDT, DPT

**COMMUNICATION SCIENCES (SLP)**

**AUTHORS:** Catherine Azzara, Janine Ell, Jessica Fernandez, Maria Finley, and Danielle Nascimento, Fran Scheffler

**FACULTY SPONSOR:** Fran Scheffler, Ph.D.

**TITLE:** Efficacy of research design: Control groups, bias, and reliability of measurements

Treatment efficacy research is central to evidence-based practice, in which it is imperative for clinical practices to be supported by valid, reliable, and relevant research findings (Apel & Self, 2003). However, not all clinical practices, specifically auditory integration training (AIT), are sufficiently supported by scientific evidence and the use of these unsubstantiated methods. AIT is a controversial treatment that claims to reduce distortions in hearing that contributes to behavioral and cognitive deficits by exposure to music modified in frequency and intensity (Zollweg, Palm, & Vance, 1997). The use of effective research designs, including control groups, guarding against bias, and reliability of measurements have been examined in order to determine the validity of AIT research and consequently the efficacy of the treatment method. Upon analyzing current research, few empirical studies on AIT have been published in peer-review journals and display a variety of methodological flaws in their design. The research on AIT is inconsistent, uncontrolled, and largely anecdotal; as a result, these findings do not warrant its use in clinical practice at this time.

**COMMUNICATION SCIENCES (SLP)**

**AUTHORS:** Dara Brzoska, Emily Carlin, Lauren Friedwald, Erica Gale, Violleta Mastova, Fran Scheffler

**FACULTY SPONSOR:** Fran Scheffler, Ph.D.

**TITLE:** Case studies and controlled experiments: An examination of their use in determining the validity of facilitative communication

Case studies and controlled experiments are two research methods used to examine therapeutic interventions employed by speech language pathologists. A case study is a descriptive method that involves an in-depth, longitudinal examination of a limited number of instances or events. The investigator is an observer who does not manipulate the testing environment. Controlled studies involve active manipulation of the independent and dependent variables by the investigator. Each method has advantages and disadvantages. Facilitative communication is a controversial therapy technique used with children with autism that has been studied using both of these methods. The purpose of this project is to discuss both case study and controlled experimental research methods as they were used to evaluate the efficacy of facilitative communication.

**COMMUNICATION SCIENCES (SLP)****AUTHORS:** Crystal Guerra, Danielle Neufeld, Frances Scheffler**FACULTY SPONSOR:** Fran Scheffler, Ph.D.**TITLE:** Red Flags and Prevention of Child Abuse: An Overview for the SLP

Our presentation, *Red Flags and Prevention of Child Abuse: An Overview for the SLP*, focuses on the types of abuses a child may encounter in his or her lifetime. It discusses what signs a speech-language pathologist should look for if treating a child who may be abused. We discuss the actions we are required to take if such a situation is suspected. Our presentation also introduces the many different ways a child may be affected due to abuse. These include areas within our scope of practice such as language and cognition but also physical and emotional growth.

**COMMUNICATION SCIENCES (SLP)**

**AUTHORS:** Mara Cole, Jennifer Frias, Meran Hollander, Dana Karl, Lauren Kent, Fran Scheffler.

**FACULTY SPONSOR:** Fran Scheffler, Ph.D.

**TITLE:** Exploring the Obstacles of Research Designs:  
Participant Selection, Experimenter Bias and Interpretive Bias  
Controversy Surrounding Fast ForWord

When conducting a research study, it is vital for experimenters to ensure the validity and reliability of their results. In order to do so, they must account for all obstacles that may present themselves throughout the different stages of the study. The methods, results, and discussion sections of a research study are highly susceptible to biases, often due to inadequate experimental designs and improper experimenter conduct. The purpose of this poster is to examine participant selection, experimenter bias, and interpretive bias and discuss the ways in which each affects experimental research. This poster will specifically examine the research surrounding Fast ForWord, a language intervention software program.

**COMMUNICATION SCIENCES (AuD)****AUTHORS:** Irina Shterenberg and Glenis Long**FACULTY SPONSOR:** Carol A. Silverman, Ph.D., M.P.H.**TITLE:** Influence of Outer/Middle Ear on DPOAE Fine Structure

To determine the effects of impedance change on DPOAE fine structure, DPOAEs were evaluated using logarithmically sweeping tones in subjects with excessive earwax, negative middle ear pressure and otitis media. All participants showed a pattern of peaks and valleys with wider spacing than DPOAE fine structure at the highest primary levels. Participants with mild hearing loss had a reduction of DPOAE amplitude across frequency. The change in DPOAE fine structure is an indicator of impaired transmission properties and can be a potential aid in differential diagnosis.



## COMMUNITY HEALTH

**AUTHOR:** Devon Claridge

**FACULTY SPONSOR:** Jessie Daniels, Ph.D.

**TITLE:** Digital Ethnography of Gender & the Built Environment

This poster presents research from a digital ethnography of gendered public space and the built environment, specifically gender binary bathroom space.

Using an innovative methodology of ethnographic field notes and digital photography, this poster presents a digital ethnography of the built environment with a particular focus on my experiences in women's bathrooms as a lesbian-identified woman, who is often interpreted by others as ambiguously gendered. The poster includes digital photos of bathroom entry ways and features, along with text describing the social context and my experiences of harassment at those locations. The poster analyzes which features of the built environment are most conducive to creating harassing environments and which features reduce the occurrence of harassment.

This research has important implications for health and health policy. In terms of health, gender binary bathroom space creates barriers for individuals who are transgendered, or whose appearance does not conform to conventional notions of binary gender, and who are often denied use of public toilets or are harassed when attempting to make use of these public accommodations. Restricted access to public toilets can also limit a person's ability to pursue employment, education, and recreation in places where the built environment demands conformity to a gender binary. In terms of health policy, this research suggests that the physical design and layout of bathrooms can alleviate these barriers to access.

## COMMUNITY HEALTH

**AUTHOR:** Tonya Johnson

**FACULTY SPONSOR:** Carol Roye, Ed.D.

**TITLE:** Attribution of Menopause Symptoms in HIV-infected or At-risk Drug Using Women

**Objective:** To examine the relationship of menopause status, HIV infection, and drug use with the attribution of menopause symptoms.

**Design:** In a cross-sectional study of peri- and post-menopausal women who were HIV-infected or at-risk for HIV, participants were interviewed to determine to what they attributed their hot flashes and vaginal dryness. Logistic regression analyses were used to assess adjusted odds ratios ( $OR_{adj}$ ) and 95% confidence intervals (CI) for factors associated with correct attribution of symptoms.

**Results:** Of 278 women, 70% were peri-menopausal, 54% were HIV-infected, and 52% had used drugs within the past five years. The overall mean age was  $47.1 \pm 5.25$  years; 46% of the women self-identified as black, 36% Hispanic, 13% white, and 5% other or mixed race. One hundred eighty nine women reported experiencing hot flashes and 101 reported experiencing vaginal dryness. Overall 69.8% correctly attributed hot flashes to menopause and 28.7% correctly attributed vaginal dryness to menopause. In bivariate analyses, age was associated with correct attribution of hot flashes and vaginal dryness, and menopause status and level of education were associated with correct attribution of vaginal dryness. In multivariate analyses, significant interactions between age and menopause status were found for both attribution of hot flashes ( $p = 0.019$ ) and vaginal dryness ( $p = 0.029$ ). Stratifying by menopause status, older age predicted correct attribution of hot flashes among peri-menopausal women ( $OR_{adj} = 1.2$ , 95% CI, 1.1-1.4), and older age predicted correct attribution of vaginal dryness among peri-menopausal women ( $OR_{adj} = 1.3$ , 95% CI, 1.1-1.6). There was also a trend toward  $\geq 12$  years of education predicting correct attribution of vaginal dryness among peri-menopausal women ( $OR_{adj} = 0.4$ , 95% CI, 0.1-1.3). There were no statistically significant associations of correct attribution among post-menopausal women or among HIV-infected women.

**Conclusion:** Since age, which is likely to be a marker of experience, was associated with correct attribution, and there was a trend for level of education to be associated with correct attribution of vaginal dryness, health education programs may be useful to increase the knowledge of menopause and its associated symptoms, especially as women approach menopausal age. Continued studies are warranted to further understand the menopausal transition in this population.

## **COMMUNITY HEALTH**

**AUTHOR:** Heidi Knoblauch

**FACULTY SPONSOR:** Jessie Daniels, Ph.D.

Although direct-to-consumer marketing of prescription drug treatments for HIV has become relatively common, little is known about history and potential consequences of this form of targeted marketing. This poster provides an overview of the history of HIV direct-to-consumer prescription drug advertisements and an overview of what is currently known about the effect of this particular type of targeted advertising on HIV perceptions and prevention behaviors. Specifically, I analyze HIV prescription drug advertisements in for content and ad placement and then compare the results to a review of the literature to explore the impact of these advertisements on perceived: (1) severity of being HIV positive; (2) benefits to engaging in safe-sex practices; and (3) susceptibility of HIV infection among individuals who view the advertisements. The analysis investigates the possible positive and negative consequences that direct-to-consumer HIV prescription drug advertising may have on HIV perceptions and prevention behaviors, as well as policy implications.

## COMMUNITY HEALTH

### AUTHORS:

Rachael Weiss, MPH Candidate<sup>a</sup>, Dhiman Das, Ph.D. Candidate<sup>a,b</sup>, Matthew Caron, MS<sup>a</sup>,  
and Marianne Fahs, Ph.D. MPH<sup>a,b,c</sup>

<sup>a</sup>*Brookdale Center for Healthy Aging and Longevity, Hunter College*

<sup>b</sup>*Program in Economics, Graduate Center, The City University of New York*

<sup>c</sup>*Professor, Urban Public Health, Hunter College*

**FACULTY SPONSORS:** Marianne Fahs, Ph.D., M.P.H., Matthew Caron, M.S.

**TITLE:** Neighborhood-Based Disparities in Diabetes and Obesity Prevalence  
among Older Adults in New York City

**Background:** Diabetes is a growing health concern in New York City where more than one in eight adults is affected. Prior research among adults reveals neighborhood-based socioeconomic inequalities play a significant role in disease burden, independent of individual determinants. This study focuses on adults over the age of 65 to estimate the magnitude of geo-spatial disparities in diabetes and obesity prevalence in NYC.

**Methods:** Results from the NYC Department of Health and Mental Hygiene's 2002 Community Health Survey were analyzed, estimating fixed effects logistic models of neighborhood characteristics on obesity and diabetes prevalence. All data were mapped using GIS software for geographical representation.

**Results:** Elderly individuals living in very high-risk neighborhoods are 2-3 times more likely to have diabetes than those in average-risk communities. The chance of having diabetes is reduced by two-thirds in low-risk areas compared to average-risk. These effects are significant ( $p \leq 0.05$ ) after controlling for sex, race/ethnicity, income, and education.

**conclusions:** Neighborhood-based characteristics have a profound effect on obesity and diabetes prevalence in older New Yorkers. Further research to identify the most influential variables is an important step in improving the overall health of adults over 65.

## COMMUNITY HEALTH

### AUTHORS:

Rachael Weiss, MPH Candidate<sup>a</sup>, Anahí Viladrich, Ph.D.<sup>a,b</sup>, Nancy Bruning, MPH<sup>a</sup>,  
and Ming-Chin Yeh, Ph.D.<sup>a,c</sup>

<sup>a</sup>*The Immigration and Health Initiative, Hunter College*

<sup>b</sup>*Faculty Member, Community Health Education, Urban Public Health, Hunter College*

<sup>c</sup>*Faculty Member, Nutrition and Food Science, Urban Public Health, Hunter College*

**FACULTY SPONSORS:** Anahí Viladrich, Ph.D and Ming-Chin Yeh, Ph.D.

**TITLE:** Shaping Views: Body Mass Index and Body Image among Latinas

**Background:** Body image has been shown to vary across gender and ethnicity, but research exploring the relationship between Body Mass Index (BMI) and body image in Latinas is limited. This pilot study examines whether body satisfaction in Latina women varied according to their BMI.

**Methods:** A sample of 44 Latinas completed questionnaires designed to measure height, weight, and current and ideal body shape ratings which ranged from very thin (1.0) to very heavy (9.0).

**Results:** Participants reported significantly heavier mean scores for their current body size ( $4.4 \pm 1.3$ ) compared to their desired shape ( $3.1 \pm 0.8$ ), the shape believed to be most attractive ( $2.9 \pm 0.7$ ), and the shape most attractive to men ( $2.8 \pm 0.9$ ). Also, results revealed significant variation in body shape rankings between normal weight (BMI <25) and obese (BMI  $\geq 30$ ) participants, and between overweight (BMI 25-29) and obese participants. In general, the normal and overweight women wanted to be smaller and felt that a lighter figure is more attractive than did the obese women.

**Conclusions:** These results suggest a significant difference between Latinas' reported weight and their desired body image, which draws questions for future research concerning negative self-image.

## MEDICAL LABORATORY SCIENCES

**AUTHORS:** Breck Chumley, Undergraduate Student and Dean Johnston, Faculty MLS Program  
**FACULTY SPONSOR:** Dean Johnston, Ph.D.

**TITLE:** Upregulating Inflammatory Immune Response with DHEA

**Background:** Dehydroepiandrosterone (DHEA) is the most prevalent steroid hormone circulating in human blood, yet its physiological functions and mechanisms remain largely unknown. DHEA is produced by the adrenal glands, is a precursor for both androgen and estrogen, and its serum concentration declines with age. Clinical evidence suggests that over the counter DHEA supplements might alleviate a broad range of maladies from cancer to obesity; however biological basis and mechanism of action for these effects remain elusive.

**Methods:** These experiments explore DHEA's effect on isolated human blood leukocytes *in vitro*. Specifically, we examined the response of innate immune release of inflammatory cytokines and chemokines stimulated by Toll-like receptor (TLR) activity. To accomplish this, human blood leukocytes were challenged with known TLR ligands in the presence and absence of DHEA. Response was measured by enzyme-linked membrane-bound antibodies to cytokine and chemokine inflammatory mediators. Further, flow cytometry gave direct analysis of TLR expression.

**Results:** Five independent blood samples indicated two to 10-fold increases in inflammatory cytokine and chemokine release in the presence of DHEA, a statistically significant effect. Flow cytometry showed increased TLR expression in lymphocytes and especially granulocytes. These results suggest that DHEA is up-regulating immune responses to TLR activation.

## MEDICAL LABORATORY SCIENCES

### AUTHORS:

Michel Steenport<sup>1</sup>, Hyejeong Eom<sup>1</sup>, Maiko Uezu<sup>1</sup>, Janet Schneller<sup>2</sup>, Raj Gupta<sup>3</sup>, Yulius Mustafa<sup>3</sup>, Randy Villanueva<sup>3</sup>, Eugene W. Straus<sup>2</sup> and R. D. Raffaniello<sup>1</sup>

<sup>1</sup>Hunter College-School of Health Professions, City University of New York, Medical Laboratory Sciences Program, 425 East 25<sup>th</sup> Street, New York, NY 10010; <sup>2</sup>Downstate Medical Center-SUNY, 450 Clarkson Avenue, Brooklyn, NY, 11201; <sup>3</sup>St. John's Episcopal Hospital, 327 Beach 19<sup>th</sup> Street, Queens, NY 11691

**FACULTY SPONSOR:** Robert Raffaniello, Ph.D.

**TITLE:** Association of polymorphisms in myeloperoxidase and catalase genes with precancerous changes in the gastric mucosa of patients at inner-city hospitals in New York

**Introduction:** Gastric carcinogenesis is a multistep process progressing from chronic gastritis, through glandular atrophy (GA), intestinal metaplasia (IM), and dysplasia. In the present study, the association between polymorphisms in the promoter regions of the myeloperoxidase (MPO -463G to A) and catalase (CAT -262 C to T) genes and the appearance of precancerous changes in the gastric mucosa of our patient population was examined.

**Methods:** Endoscopic samples were collected from 126 patients complaining gastrointestinal discomforts at Kings County Hospital in Brooklyn and St. John's Episocopal Hospital in Queens. PCR and RFLP methods were used to determine MPO and CAT genotypes.

**Results:** The MPO -463 A allele was associated with an increase in intensity of gastric atrophy in the fundic mucosa whereas CAT genotypes did not affect on the incidence or severity of precancerous lesions in the fundic or antral section of the stomach. Furthermore, the MPO -463 G/G genotype was associated with an increase in the occurrence of IM in the antrum in Hp infected patients whereas the A allele was associated with an increase in IM in the fundic region.

**Conclusion:** These findings suggest that different MPO genotypes are associated with IM in distinct regions of the stomach. However, the MPO -463 G/G genotype, which is associated with increased MPO expression and antral IM, may be a risk factor for gastric cancer (GC) since the majority of GC cases in our patients occur in the antrum.

**MEDICAL LABORATORY SCIENCES**

**AUTHORS:** Julie Intrieri, Ivan Kotchetkov, Kevin Lazo, Annelyn Torres-Reveron, Teresa A. Milner and Steven Einheber

**FACULTY SPONSOR:** Steven Einheber, Ph.D.

**TITLE:** Effects of Ritalin on Myelination

**Background:** This study examines the effects of methylphenidate (MPH), also known as Ritalin, on myelination. Ritalin is commonly prescribed for Attention Deficit Hyperactivity Disorder (ADHD) in children. Recent studies suggest that treatment of ADHD patients with psychostimulants, such as Ritalin, may affect white matter volume, and possibly myelin formation in the brain. The goal of the present study was to determine whether MPH affects the thickness of myelin sheaths in the corpus callosum of rats.

**Methods:** Two sets of rats were treated with MPH twice daily from 7 to 35 days of age, while sex-matched littermate control animals were treated with saline. At 35 days, immediately after their last treatment, one set of animals was sacrificed. The second set of animals was sacrificed at 135 days, or 3 months after their last treatment. The brains of the animals were fixed, removed, sectioned and processed for electron microscopy. Electron micrographs of transverse sections through the corpus callosa of the MPH-treated and control rats were then obtained and the thicknesses of the myelin sheaths (i.e., absolute thickness and number of myelin lamellae) around axons of various diameters were determined and compared.

**Results:** Measurements of myelin thickness as a function of axon diameter in control and treated animals will be presented. Statistical analyses are currently in progress.



## NURSING

**AUTHOR:** Christine M. Gilchrist, RN, BC

**FACULTY SPONSOR:** Carol Roye, Ed.D.

**TITLE:** Addressing Obesity with Portion Control and Convenience

**Significance:** The Centers for Disease Control and Prevention states that 30% of adults (over 60 million people) living in the United States are obese. The World Health Organization projects that worldwide in 2015, more than 700 million adults will be obese. Obesity is a risk factor for the development of coronary heart disease, type 2 diabetes, and stroke.

**Purpose/Aim:** The purpose of this literature review was to identify research supported tools that nurses could encourage adult clients/patients to use. A secondary aim was to find effective interventions that could be implemented at no to low cost.

**Methods:** A Cumulative Index to Nursing and Allied Health Literature search for “obes\*” (in title) and “intervention\*” within research studies conducted on adults yielded 79 “hits”. A search using the keywords “nurs\*” and “obesity” within peer reviewed journals that were research studies conducted on adults yielded 53 “hits.” A search of the World Wide Web was conducted to see what tools are currently available to individuals.

**Results/Interpretation:** Themes that emerged from the literature review were portion control and convenience. Weight Watchers (a program that offers psychosocial support) has been shown in peer reviewed journals to lead to greater sustained weight loss than programs that did not offer such support. The United States Department of Agriculture has a free online tool to assist an individual in tracking food intake and physical activity. Spark People is a commercially sponsored website that offers free nutrition and activity tracking as well as peer and professional support.

**Conclusions/Implications:** Portion control, convenience, and psychosocial support should be emphasized when working with an individual who is obese. Nurses should continue to conduct research on effective weight management tools. The websites My Pyramid Tracker and Spark People should be studied by nurse researchers.

## NURSING



**AUTHORS:** Michelle Lawrence, Gena Derosena, Cynthia Degazon  
**FACULTY SPONSOR:** Cynthia Degazon, Ph.D., RN

**TITLE:** The Blossoming of Excellence  
 Through the BEST Program  
 (Becoming Excellent Students in Transition to Nursing)

### BACKGROUND

The purpose of the BEST Program is to provide pre-entry preparation and retention activities for students from underrepresented racial/ethnic minority, disadvantaged, and first generation immigrant backgrounds. The project consists of three components: (1) a pre-entry preparation program for high school students, (2) a pre-entry preparation program for Hunter College (HC) students to transition to Hunter-Bellevue School of Nursing (HBSON), and (3) a retention program for students who transitioned from HC to HBSON to graduate to be successful in becoming culturally competent academically-prepared baccalaureate graduates. The program provides academic support services, such as individual and group tutoring, mentoring, counseling, stress-management and test-taking workshops, NLN Preadmission Readiness and NCLEX preparation, summer enrichment programs, monthly guest lectures, and financial support.

### OUTCOMES

- Increased accountability among students for their classroom behaviors
- Increased leadership and management skills
- Increased commitment of faculty and university administrators to the BEST program
- 100% retention and graduation
- 100% NCLEX success
- Over 60% inducted into Sigma Theta Tau International Honor Society
- Assume leadership in student and professional organizations

### CONCLUSION

In providing nursing educational opportunities for underrepresented racial/ethnic minorities, disadvantaged, and first generation immigrant backgrounds, the BEST Program is filling an important societal need for a diversified nursing workforce and for access and equality in the healthcare system.

### Funding

The program was funded by a three-year grant from the Division of Nursing, Bureau of Health Professions, Health Resources Services Administration.

[www.hunter.cuny.edu/schoolhp/nursing/BEST](http://www.hunter.cuny.edu/schoolhp/nursing/BEST)

**HUNTER**  
 www.hunter.cuny.edu

**FACULTY (BROOKDALE CENTER FOR HEALTHY AGING & LONGEVITY, COMMUNITY HEALTH EDUCATION)**

Dana Friedman, MPH, Nina S. Parikh, PhD MPH, Marianne C Fahs, PhD MPH

**TITLE:** Exercise Promotion to Combat Geriatric Depression: Identifying Target Populations

Dana Friedman, MPH

Research Associate, Brookdale Center for Healthy Aging & Longevity, Hunter College

Nina S. Parikh, PhD MPH

Senior Research Associate, Brookdale Center for Healthy Aging & Longevity, Hunter College

Marianne C. Fahs, PhD MPH

Professor of Community Health Education, Urban Public Health Program, Hunter College  
Rose Dobrof Acting Executive Director, Brookdale Center for Healthy Aging & Longevity, Hunter College

**Background:** Geriatric depression is a major public health problem that has received modest attention in the literature. Recent studies have demonstrated physical activity programs may minimize depressive symptoms and reduce the need for anti-depressants. As the older adult population becomes increasingly diverse, research is needed to determine demographic and socioeconomic characteristics associated with levels of physical activity and depression to develop targeted interventions.

**Methods:** Data are from a stratified sample of 483 older adults attending ten New York City senior centers. In-person interviews were conducted using standardized health status questions for physical activity and instruments such as the Patient Health Questionnaire-2 (PHQ-2) for depression.

**Results:** Bivariate analyses were conducted to assess the relationship between depression and physical activity controlling for various demographic (age group, gender, race/ethnicity, marital status, and country of origin) and socioeconomic status characteristics (level of education and income). Statistically significant associations using the chi-square test were found for older adults who were female ( $p \leq .01$ ), African American ( $p \leq .05$ ), Latino ( $p \leq .05$ ), separated/divorced ( $p \leq .01$ ), US/PR-born ( $p \leq .05$ ), high school graduates ( $p \leq .01$ ), and had an annual income of less than \$38,000 ( $p \leq .001$ ). Differences by age group were not found. Policy implications will be discussed.

**FACULTY (COMMUNITY HEALTH AND THE BROOKDALE CENTER FOR HEALTHY AGING AND LONGEVITY)**

Marianne Fahs, Ph.D., M.P.H. and Matthew Caron, M.S.

**TITLE:** Neighborhood-based Disparities in the Prevalence of Diabetes and Obesity in New York City

Marianne Fahs, Ph.D. MPH<sup>a,b</sup>, Matthew Caron, MS<sup>a</sup>,  
and Dhiman Das, Ph.D. Candidate<sup>a,c</sup>

<sup>a</sup>*Brookdale Center for Healthy Aging and Longevity, Hunter College*

<sup>b</sup>*Faculty Member, Community Health Education, Urban Public Health, Hunter College*

<sup>c</sup>*Program in Economics, Graduate Center, The City University of New York*

**Background:** More than 800,000 adult New Yorkers have diabetes. The objective of this research is to determine the magnitude of geo-spatial disparities in diabetes and obesity prevalence in NYC, controlling for socioeconomic and demographic characteristics.

**Methods:** From secondary analysis of data obtained from the NYC Department of Health and Mental Hygiene's 2002 Community Health Survey, fixed effects logistic models of neighborhood effects on diabetes and obesity prevalence are estimated. Models are corrected for intraclass correlation within neighborhoods. Neighborhood fixed effects results are presented geographically, using ArcView.

**Results:** Logistic regression models reveal significant neighborhood effects beyond those attributed to sociodemographic differences ( $p < .05$ ). Individuals living in high-risk neighborhoods have a 20-60% *higher* chance of having diabetes than those living in average-level neighborhoods. Individuals in low-risk areas have as much as a one-third *lower* chance.

**Conclusions:** The interaction of sociodemographic characteristics with adverse neighborhood characteristics points to groups at extremely high risk of diabetes. Many neighborhood features are modifiable; identifying changes in those aspects of neighborhood environments with the greatest influence on diabetes and obesity could become important in addressing health disparities in diabetes and obesity risk, improving health overall.

**FACULTY (ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES)**

Jennifer Richmond-Bryant, Ph.D.

**TITLE:** Transport of Exhaled Particulate in Airborne Infection Isolation Rooms  
Jennifer Richmond-Bryant, Assistant Professor,  
Environmental and Occupational Health Sciences

Computational fluid dynamics (CFD) simulations were performed to assess the risk of health care worker exposure to an infectious agent within an airborne infection isolation (AII) room. This study expanded on the work of Huang & Tsao (2005), who studied how ventilation conditions impact dispersion of pathogenic nuclei in an AII, by simulating a heated body (the health care worker) positioned in the vicinity of the patient. The study also extends Huang & Tsao's work through a careful quality assurance study of the computed airflow. Simulations were performed on a fine tetrahedral mesh with approximately  $1.3 \times 10^6$  cells, which was refined based on the velocity gradients to produce a grid convergence index of 0.05%. The time-step size of 0.1 s was selected based on memory limitations of the particle-tracking component of the simulation.  $1 \mu\text{m}$  diameter particles were released from a  $0.01225 \text{ m}^2$  area representing the nose and mouth. This particle size was selected to represent the dried viral nuclei upon contact with the air. Two cases were investigated during the current study: continuous exhalation of pathogen-laden air from the patient and expulsion of pathogenic particles by sneezing. For the first case, breathing was simulated with a velocity of 0.2 m/s, and the sneeze was represented by a one-time injection at 35 m/s. Both sets of simulation results demonstrated that no particles entered the breathing zone of the health care worker if s/he remained at the patient's bedside. However, high risk regions were identified directly above the patient's head and along the walls surrounding the head of the patient's bed, particularly behind the patient's head. This is consistent with wall-jet effects observed in the fluid dynamics literature and suggests that risk to the health care worker will increase if performing duties at the walls. From a practical perspective, these findings can help guide decisions about placement of health care equipment or patients' personal items to minimize the chance of exposure through entering high risk breathing areas that, even with an N95 respirator, pose some nominal risk.

**FACULTY (NURSING)**

Judith Aponte, DNSc, RN, BC, CCM and Donna M. Nickitas, RN, PhD, CNAA, BC

**TITLE:** Reaching an underserved population

Judith Aponte, DNSc, RN, BC, CCM and Donna M. Nickitas, RN, PhD, CNAA, BC

**Background:** East Harlem, an underserved population, faces health disparities that include but are not limited to diabetes, hypertension, and hypercholesterimia. Integrating service learning into a community with health disparities is an essential component in community-based education.

**Objectives:** ▪ Understand how a community was identified based on Health People 2010 health disparities. ▪ Understand how nursing students integrated culturally competent service learning as it affects nursing practice to an underserved population. ▪ Understand how health outreach initiatives were conducted in collaboration with health care participants.

**Presentation Content:** A thorough community assessment of East Harlem was conducted. A major focus of planning the East Harlem health fair was identifying health priorities and determining how to fulfill the needs of the community. The focus of the health fair centered on providing health promotion activities and management of chronic diseases that affect the largest ethnic groups in this community. During the planning stage the need to provide educational services in the form of exhibits, informational resources, and discussion sessions on specific diseases was obvious. The nursing students actively participated in the health fair enabling them to enhance and reinforce the skills at both the technical and conceptual level.

**Conclusion:** Community-based education allows nursing students to provide continuity of care for patients in outpatient settings (especially those with chronic illnesses); practice health promotion and disease prevention strategies; develop patient communication and negotiation skills; and deal with social, financial and ethical aspects of care.

## **FACULTY (NURSING)**

Donna M. Nickitas, Ph.D., RN

**TITLE:** Lessons From Nightingale: Then And Now  
Donna M. Nickitas, PhD, RN, CNAA, BC

For today's nurse leaders to become 21<sup>st</sup> Century Nightingales they must have the strength to care for clients during times of war, disaster, and crisis; they must have the commitment to remain involved in pursuing education throughout their careers and they must have the compassion it takes to provide client care wherever that care is needed. Florence Nightingale's power and influence transformed nineteenth century England and the world. She was an intellectual genius and her vision and inspiration are still needed as much now as they were in her own times. This poster abstract demonstrates how one nurse leader applied "Nightingale's power and life's work of social action through civic engagement and community service. Nurse leaders must move beyond the traditional clinical practice setting and boardroom to promote professional nursing. By using local media outlets such as radio, cable television, newspapers (letters to the editor, opinion editorials and monthly columns), and advocacy/lobbying of elected officials; nurse leaders can influence health and public policy.

### **OBJECTIVES:**

1. Compare and contrast Nightingale's power and influence in 19 Century England to 21<sup>st</sup> Century America.
2. Provide a case example through civic engagement and community service activities how one nurse leader made a difference in health and public policy.
3. Illustrate ways nurse leaders can leverage their own power and influence beyond their traditional clinical practice setting to promote professional nursing.

### **REFERENCES:**

Clements, P. T. & Averill, J. B. (2006). Finding patterns of knowing in the work of Florence Nightingale. *Nursing Outlook* 54, (5) p. 268- 274.

Dorsey, B.M., Beck, DM, Selanders, L. C. & Attewell, A. (2005). A. *Florence Nightingale Today: Healing, Leadership, Global Action*. Washington, DC: Nursesbooks.org.

McDonald, L. (2006). *Florence Nightingale and Public Health Policy: Theory, Activism and Public Administration*. Retrieved March 31, 2007 from The Collected Works of Florence Nightingale <http://www.sociology.uoguelph.ca/fnightingale>.

## FACULTY (NURSING)

Kathleen M. Nokes, Ph.D., R.N., FAAN

**Project Title:** Health literacy and health outcomes in HIV Seropositive Persons

**Project Dates:** 6-month period during 2002-03

**Project Team:** Kathleen M. Nokes, PhD,RN,FAAN, Christopher Lance Coleman, PhD,MPH, APRN-BC, ACRN, Margaret Cashen, PhD,RN, Pamela Dole, EdD, MPH, FNP, Elizabeth Sefcik, PhD,RN, CS, Mary Jane Hamilton, PhD,RN, Kenn M. Kirksey, RN, PhD, APRN, BC, Emily Hai Huang, BS, Jumpamool, Apinya, PhD, RN, and William Holzemer, PhD,RN,FAAN.

**Background of the Project:** Research has found that health literacy significantly influences health outcomes. The purpose of this study was to determine whether health literacy was associated with the following health outcomes: body change distress, depressive symptoms, and HIV symptom intensity.

**Target Population:** Self-report data were collected from convenience samples of 489 community-living HIV seropositive adults receiving services at infectious disease clinics or community based organizations in San Francisco and Fresno, California; Richmond, Virginia; New York City, New York; and Corpus Christi, Texas. The study participants were African Americans ( n = 246, 50%), Hispanic / Latino ( n = 125, 25%), White/Anglo (non-Hispanic) (n = 97 , 20%), Native American Indian (n = 10, 02%), Asian Pacific Islander (n = 5, 01%) and six self-identified as other. The demographic data indicated a majority of the participants (n = 197, 40%) attended high school, and (n = 145, 30%) had obtained education beyond high school. The majority of the participants (n = 263, 54%) reported their income was barely adequate, and 37% (n= 181) reported having no health insurance. A greater proportion (n = 288, 59%) were HIV seropositive, and (n = 182, 37%) were diagnosed with AIDS.

**Project Description:** descriptive research study using multivariate analysis. Health literacy was measured with the Rapid Estimate of Adult Literacy in Medicine (REALM).

**Outcomes:** Bivariate correlations were used to select variables for three stepwise multiple regression analysis with body change distress, depressive symptoms, and HIV symptom intensity as the three dependent variables. The analysis revealed health literacy explained 1% of the variance in body change distress, and with being Latino explained 14% of depressive symptoms, and 2% of HIV symptom intensity. Unexpectedly, the analysis indicated that those with higher health literacy scores reported more body change distress, depressive symptoms, and HIV symptom intensity. Being Latino and higher health literacy scores were associated with poorer health outcomes.

**Implications for Policy:** These results challenge the utility of the REALM Health Literacy Scale to examine the proposed relationship between health literacy and adverse health status.



**FACULTY (NURSING)**

Holly K. Shaw, RN, Ph.D.

**TITLE:** Beyond the grief: The Impact of the death of a High School Peer

Holly K. Shaw, RN, Ph.D.

Associate Professor, Hunter College, Hunter-Bellevue School of Nursing, CUNY

**Introduction:** The death of a peer is an increasing global phenomenon and may represent a risk to healthy adolescent growth and development. Little is known about the long-term impact of this experience, and the way in which it contributes to future development.

**Objective:** This qualitative study examines the impact of the death of a high school peer (DOHSP) at the end of the first year following the death, and develops a description of the fundamental structure of the impact of the DOHSP experience.

**Methods:** Participants (17-18 years old) were interviewed towards the end of the first year following the sudden, unanticipated death of a high school peer. Interviews were audiotaped and transcriptions and field notes were developed into written protocols and analyzed using the phenomenological methodology as described by Colaizzi. The data analysis was organized into major themes and sub-categorical themes, which focused on the nature of this powerful experience during adolescence, a critical stage of development.

**Results:** The findings are conceptualized within the context of the ecology of human development theory (Bronfenbrenner) and Lifton's theory of trauma survival. Interestingly, the impact appears not to be based on the circumstances of the death or the nature of the relationship to the deceased, but on the developmental stage in which the individual experienced the loss. The DOHSP during adolescence has a powerful impact on participants' lives, particularly in relation to perceptions of the self and others.

**Conclusion:** Natural disasters, war, homicide, disease, accidents and suicide result in an increase in adolescent deaths throughout the world, and touch the lives of myriad teenage peers and friends. Nurses and mental health professionals can mediate the life long impact of this catastrophic experience with developmentally-based intervention approaches that prevent dysfunction and promote resilience.

**FACULTY (NURSING)**

Elizabeth B. Simon, Ph.D., RN, CCRN, CEN

**TITLE:** Nursing Faculty role as a Collaborator in Corporate-wide nursing education and practice

Elizabeth B. Simon, Ph, D, RN, CCRN, CEN

School of Nursing, Hunter College, City University of New York, New York, NY, USA

**Purpose:** A significant disparity was evident among critical care nursing educational support system within 11 acute care hospitals of Health and Hospital Corporation (HHC). To address this disparity, Corporate Nursing Services launched an initiative to offer corporate-wide critical care nursing education to improve job satisfaction, enhance professional practice, provide forums for net working, collaborative learning, motivation for excellence, and positive patient outcome.

**Description:** The Vice President of Nursing identified facilities that were in need of additional educational support related to critical care nursing. A consultant, who is a full time academic faculty, was hired in January, 2006 to facilitate corporate-wide critical care nursing education. Needs assessment with involvement of other members of the health care team and nursing leaders were conducted to plan educational programs. Consultant presented the critical care series in coordination with approval of provider status from American Association of Critical Care Nurses (AACN) in March. Attendance was excellent as RNs were invited to participate corporately at facility sites. The positive feedback from the nurses led to repeated lectures to capture the remainder of the nurses. Instructors and directors throughout the network evaluate the competencies as a follow up measure. A nursing collaborative involving directors and educators from the 11 HHC facilities was formed in June to enhance this educational initiative. A CCRN and CEN review team was formed to maximize the clinical resources utilization. Essentials of Critical Care Orientation (ECCO) were introduced to enhance self-directed learning. A critical care nursing residency program for nursing students is in the planning phase.

**Outcome:** Nursing practice will improve to the level of AACN standards. This will be measured by pre/post tests and competencies at the bedside. Job satisfaction of the critical care nurses as evidenced by an increase in the recruitment and retention rate will be monitored.

**FACULTY (NURSING)**

Donald G. Smith, Ph.D.

**TITLE:** Self-Assessment of Competency Skills in Disaster Preparedness  
for Air Force Reserve and Civilian Nurses

Donald G Smith, PhD, Assistant Professor, Hunter School of Nursing  
Barbara Delmore, PhD, NYUMC

This research sought to assist the Air Force Reserve (AFR) in evaluating the state of nursing Readiness and the self-competency perspective from their civilian position in determining its connection to disaster preparedness.

**Specific Aims:**

To understand 1. Characteristics of the AFR nurses Readiness skill level and disaster preparedness skill levels for civilian nurses. 2. Relationship between wartime and civilian disaster preparedness skills.

**Research Design:**

Using survey design 405 AFR nurses were surveyed with READI-R-AFN, a validated self-assessment instrument for AF nurse Readiness. Demographic data collected included deployment, Reserve time, rank, unit. Data analyzed at the alpha .05 significance.

**Findings:**

- Deployed AFR nurses feel more competent than those not deployed.
- Validated the need for Reserve nurses to be Critical Care*
- Reserve nurses can serve a purpose in civilian disasters.

**Project Implications:** These findings provide recommendations for improvement in the training for AFR while providing information to use in validating/changing training. This study will add to the body of nursing research on the validity and reliability of self-reported skill level.

**FACULTY (NUTRITION AND FOOD SCIENCE, URBAN PUBLIC HEALTH)**

Khursheed Navder, Ph.D.

**TITLE:** Effect Of Tofu As A Fat Replacer On The Texture  
Of Shortened Cakes

Power L; Williams, C; Fremont, J; Gupta, N; Samuel, L and Navder, K.P

**Learning Objectives:** To evaluate the role of silken tofu as a fat replacer on the textural and sensory attributes of reduced fat shortened cakes.

Fat replacement in baked goods poses distinct challenges due to the critical role fat plays in the development of optimal texture and flavor. This study was conducted to explore the possibilities of using silken tofu at levels of 25, 50 and 75 per cent fat substitution (w/w) in shortened cakes. The moisture contribution from the tofu resulted in higher water activities of the batter at increasing levels of fat replacement. A concomitant decrease in the batter viscosities were also quantified by the line spread tests. Texture analysis of the cakes was done using the TA.XT Plus Texture Analyzer (Texture Technologies Corp., Scarsdale, NY). Uniaxial compression was performed with a 25 mm cylindrical probe and the resulting force-deformation curve was analyzed to quantify stiffness, toughness and tenderness. Tenderness of the cakes decreased while stiffness and toughness increased with increasing levels of fat substitution. However, in-house sensory analyses of the products did not reveal any detrimental effects up to 50% fat replacement by tofu on texture. Sensory scores were also high for color, flavor, and overall eating quality with fat substitution up to 50% level. The amount of fat per serving reduced from 9 grams in the full-fat cake to 5.1 grams in the 50% fat-substituted cake, which resulted in a 43% reduction of total fat and 39% reduction of saturated fat. This study revealed that silken tofu can be used to replace up to 50% fat in shortened cakes without compromising the sensory acceptability. Such products would also have the added isoflavones and improved protein profiles that are characteristic of tofu itself.

**FACULTY [PHYSICAL THERAPY (PT)]** Susan E. Pivko, BPT, Cert. MDT, DPT

**TITLE:** The prerequisites, practice and perceptions of the Academic Coordinator of Clinical Education (ACCE) / Director of Clinical Education (DCE) in emerging Doctorate of PT programs

**Purpose:** The purpose of this descriptive study is to address two questions: 1) who is the ACCE/DCE in the new academic environment of entry-level doctorate programs? and 2) what perceptions and preferences do the ACCE/DCEs have about the practice and expectations of Teaching, Scholarship, Service and Administration in their academic institutions? **Background:**

Physical therapy education is undergoing rapid change as the profession embraces the transition to an entry-level doctorate degree. The ACCE/DCE has historically been perceived differently from traditional faculty. Current CAPTE evaluative criteria place the ACCE/DCE as second only to the program Director in volume of expectations. The requirements of Teaching, Scholarship and Service align the ACCE/DCE with core faculty while continuing the responsibility of administration of all student clinical education experiences in an enhanced DPT curriculum. There is a need to understand the scope and perspectives of the practice of this complex position. With this knowledge, academic programs can assist the ACCE/DCE in faculty development initiatives. **Subjects:** From a sample of convenience compiled of

Academic Institutions accredited by CAPTE in 2005, 209 acting ACCEs/DCEs were invited to participate this research. **Methods:** The ASSET survey software was used to create a national, online, 68-item questionnaire. Questions were designed to collect the following information: 1) demographic data 2) present annual workloads of teaching, scholarship, service and administration; 3) preferred workload allocations and expectations of the ACCE/DCE position and 4) description of any perceived changes in how the ACCE/DCE position is valued in emerging DPT programs. Responses were collecting on a 5-point Likert scale with access to narrative descriptions where desired. A pilot survey testing content and face validity was distributed among twenty clinical education field experts with feedback incorporated into the final survey design. **Analyses:** The ASSET Survey tool collected the demographic, ordinal and ratio data into both excel spreadsheet format for anonymous individual scrutiny as well as an SPSS soft wear program. Descriptive statistical analyses included frequencies, percentages and Chi square tests. Where ratio data permitted, means , paired t-tests and ANOVAs were performed. **Results:** Questionnaires were returned by 106 ACCEs/DCEs currently employed in the 209 contacted institutions (50.7% response rate). Of the respondents, 45% have a current degree at the clinical or academic doctoral level. This demonstrates a major shift from the 12% previously reported. Eighty-one percent have four or more years in the position of ACCE/DCE with 95% PT-licensed more that ten years. The majority of respondents (80%) have been at their academic institution from four to eleven years with 70.8% of those institutions at a DPT level, and 80% of the institutions now requiring a doctoral degree for the ACCE/DCE position. Currently 61.3% of subjects hold faculty appointments with 35.2% being tenured or tenured-tracked. ACCEs/DCEs identified major differences between actual and perceived criteria for prerequisites in computer knowledge (43%); research education /experience (45.3%); and legal contract negotiation (44.9%). A majority of subjects (58%) reported the expectation level for scholarly endeavors to be equivalent to that of other faculty. Sixty-eight percent of respondents carry the title ACCE and 34% carry the title DCE. Thirty –five percent perceive a difference in the titles “ACCE” and “DCE”, while 18.6% were undecided, and 36.1% disagreed. Thirty-eight text responses were entered to define the differences in perceptions. **Conclusions:** The challenge of the ACCE/DCE is to create a seamless blend of clinical and administration cultures within an academic environment demanding achievement in teaching, scholarship and service. The duties of the ACCE/DCE parallel the core faculty in institutional expectations of teaching, and service with the need to develop independent research agendas with limited research experience while developing legal expertise and computer program management to manage the administrative load of the clinical education coordination/directorship. The ACCE/DCE continues to meet the faculty requirements