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#### School Assembly Agenda Tuesday April 23, 2024

- 1. Dean's update
- 2. Research and faculty advancement update, Mike McClean
- 3. Staff senate, school survey results
- 4. Faculty senate, school survey results
- 5. Spotlight on a Department, Scarlett Bellamy
- 6. Spotlight on Think. Teach. Do., Salma Abdalla
- 7. Spotlight on Think. Teach. Do., Phillip Hwang
- 8. Other

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#### 1. Dean's update

Dean Sandro Galea (sgalea@bu.edu) shared school-wide update

## School Assembly

April 23, 2024

Boston University School of Public Health



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Think. Teach. Do. For the health of all.



ANXIETY

Extending Medicaid Coverage After Birth May Increase Postpartum Treatment for Depression, Anxiety

A study found that extending Medicaid eligibility for birthing people increases treatment for perinatal mood and anxiety disorder by more than 20 percentage points, compared to birthing

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CLINICAL RESEARCH

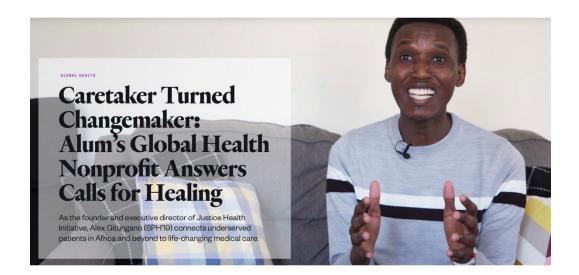
# Leveraging Data to Make a Difference

Imani Decaille-Hodge, a senior clinical outreach associate at OpenBiome and part-time master's student in epidemiology, plans to apply her degree to research at the nonprofit, which provides investigational treatments to patients with life-threatening infections.



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#### 2. Research and faculty advancement update

Dean Mike McClean (<u>mmcclean@bu.edu</u>) shared school-wide research and faculty advancement updates.

Update on Research & Faculty Advancement

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#### **Updates**

- 1. Resources for promotion
- 2. Grant writing workshops
- 3. Faculty development seminar series
- 4. Research administration
- 5. idea hub // pilot awards
- 6. Other

#### 1. Resources for Promotion

**Promotion Information Session** 

- Every semester
- · Participants include:
  - Assoc Dean of RFA (me)
  - Recently promoted faculty on various tracks
- Recording of past session available

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#### 1. Resources for Promotion

Mid-Rank Review Program

- Faculty may submit materials to the SPH A&P Committee for feedback on progress toward promotion
- Offered solely for purpose of faculty development it is optional and non-evaluative
- Program details in Faculty Handbook

#### 1. Resources for Promotion

Additional resources for faculty:

- A&P Guidelines (in Faculty Handbook)
- A&P Archive
- Representative to A&P Cmt
- Representative to Faculty Development Cmt
- Mentors (formal and informal)
- Department Chair
- Assoc Dean for RFA (me)

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#### 2. Grant writing workshops

- SPH Grant Writing Workshop
- Program for Early Research Career Development (PERC)
- Career Development Award Grant Writing Workshop
- R01 Proposal Writing Workshop

#### 2. Grant writing workshops

SPH Grant Writing Workshop

- Provides guidance and support while preparing a grant application
- Ten 2-hour sessions from mid-May through mid-August, led by Professor Bernie Harlow
- · Combination of lectures, feedback, and a mock study section
- Information session in March, enrollment complete for this year

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#### 2. Grant writing workshops

Program for Early Research Career Development (PERC)

- Helps early career researchers (asst profs, postdocs) develop a roadmap for advancing independent research careers
- Offered Spring and Fall, consists of seven 2-hour sessions
- Applications for Fall announcement expected soon

#### 2. Grant writing workshops

Career Development Award Grant Writing Workshop

- For example: K01, K08, K23, foundation career development award
- Offered Spring and Fall, consists of seven 2-hour sessions
- Applications for Fall announcement expected soon

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#### 2. Grant writing workshops

R01 Proposal Writing Workshop

- For faculty planning to submit first R01 in October 2024
- Seven sessions from June to September with a mock study section
- Applications due April 29

#### 3. Faculty development seminar series

- A single source of seminars and faculty development opportunities at the:
  - Department-level
  - o School-level
  - University-level
- SPH Today note at the beginning of each month, summarizing the opportunities for that month
- · Recordings of sessions will be archived (when available)

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#### 4. Research administration

Central staffing includes:

- · Brandon Ruggeiro, Assistant Director
- Emeka Madubuike, Senior Research Administrator
- · Noelle Sevoian, Research Administrator

Currently in development:

- · School-wide best practices
- Onboarding guide for new grants managers
- Library of templates and resources

#### 4. Research administration

Building Research Teams (new section of Faculty Handbook)

- · Research staff
  - Academic Research Job Family (eg postdocs, research scientists)
  - Non-academic Support Positions (eg RAs, data analysts)
- BEDAC
- · Doctoral students
- · Masters students
- Undergraduate students

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#### 5. idea hub, pilot awards

- Pre-doctoral Research Ignition Award
- Post-doctoral Research Ignition Award
- Early Career Catalyst Award
- Established Investigator Innovation Award
- Educational Innovation Award
- Practice Innovation Award
- CFAR Developmental Grant Award
- Carlin Foundation Award for Public Health Innovation
- Strategic Direction Spark Award
- Training Grant Development Award
- TTD Protected Time Award

#### 5. idea hub, pilot awards

#### Predoctoral Research Ignition Awards

Amanda Davis (HLPM) Understanding the Effectiveness of Health Plan Care Coordination on Chronic Condition Management among Beneficiaries Enrolled in a Dual-Eligible Special Needs Plan

Yareliz Diaz (HLPM) The Mental Health of Crisis Migrant Families: A Longitudinal, Mixed-Methods Study of Puerto Rican Child-Parent Migrants in the post-Hurricane María Years

**Christina Freibott (HLPM)** Opioid overdose prevention in U.S. higher education settings: in-depth interviews with institutional leaders

**Lauren Linde (EPI)** Risk of tuberculosis transmission and development of disease among contacts after wildfire smoke exposure

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#### 5. idea hub, pilot awards

#### Predoctoral Research Ignition Awards

**Sharonda Lovett (EPI)** Building a Framework to Understand Residential Segregation and Fertility

Adlin Pinheiro (BIO) Constructing novel features of the digital clock drawing test to detect cognitive impairment

**Jih-Cheng Yeh (HLPM)** Alcohol Outlet Density, HIV Treatment Outcomes, and Polysubstance Use among Women: A Mixed-Methods Approach

#### 5. idea hub, pilot awards

#### Postdoctoral Research Ignition Awards

**Quanshun Mei (BIO)** Improved Polygenic Risk Score Prediction Accuracy by Leveraging Multi-omics Data

Samantha Schildroth (EPI) Unraveling the Threads: Understanding Women's Fashion as a Hazardous Exposure in a North American Preconception Cohort

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#### 5. idea hub, pilot awards

#### Practice Innovation Award

Elaine Nsoesie (GH) Rethe: Developing Research Capacity for Health Data Science in Africa

#### **Educational Innovation Awards**

**Veronica Wirtz (GH)** Development of a student toolkit and recommendations to promote continuous learning about decolonization and anti-racism in public health

Kathy Lunetta (BIO) & Laura White (BIO) Building A Reproducible Research Pathway in the PhD Progressions Training Platform

#### 5. idea hub, pilot awards

#### Strategic Direction Spark Award

Meredith Brooks (GH), Helen Jenkins (BIO), Leo Martinez (EPI) PEDiatric TuBerculosis COllaborative Research Efforts (PED-TB-CORE)

#### Established Investigator Innovation Award

Stephanie Ettinger de Cuba (HLPM) Heat extremes, energy insecurity, and intergenerational health among very young children and their mothers in urban areas

Danielle Haley (CHS) Demonstrating the link between HIV status, cannabis use disorder, and clinical outcomes in the era of cannabis legalization and commercialization

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#### 5. idea hub, pilot awards

#### Early Career Catalyst Awards

**Jonathan Buonocore (EH)** Trace Gases from Anthropogenic Methane Sources and Health (TRASH)

**Cristina Gago (CHS)** Closing the Gap: Stakeholder Perspectives on Post-WIC Household Nutrition

**Kipruto Kirwa (EH)** A Pilot Study of Indoor Air Pollution and Reproductive and Birth Outcomes

#### 5. idea hub, pilot awards

Next deadline: September 1, 2024

Applications accepted on a rolling basis:

- · Fast-track funding
- · Training grant development award
- TTD protected time award

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#### 6. Other

#### Ongoing:

- Faculty mentoring program
- Faculty incentive program
- Sabbatical program

#### Systems in development:

- A&P management system
- SPH committees database
- Faculty coverage system

Questions?

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#### 3. Staff Senate

Denise Joseph (<u>dejoseph@bu.edu</u>) provided the school with updates from Staff Senate including staff survey results.

# **BUSPH Staff Senate.**

BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH
April 23, 2024

Boston University School of Public Health

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#### **SPH New Hires**

Name	Position Title	Dept.
Vikas Barnwal	Postdoctoral Associate	Biostatistics
Menghan Jin	Research Scientist	Biostatistics
Noelle Sevoian	Research Administrator	Research Administration
Andrea Squires	Instructional Designer	Environmental Health

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# Staff Survey Results & Key Findings.

Staff Senate Survey Committee

Boston University School of Public Health

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# **Staff Survey Committee**



Matt Bullard BEDAC Rep



Tenbit Mitku At Large Rep



Eric Delgizzo At Large Rep



Kwesi Essilfie At Large Rep

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# **Agenda**

#### Staff Survey 2023

- · Who Responded
- · School Culture
- · Department Culture
- Professional Development & Supervision



# **Survey Respondents**

Total BUSPH Staff	Count Completed Survey	% completed survey
259	127	49%

SPH Role	Total Count in role	Count Completed survey	% completed survey
Student Facing	31	20	16%
Research or Grant Funded	156	62	49%
Administrative	71	39	31%
Other		6	5%

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# **School Culture**

Strength | Opportunities for Improvement | Survey Data Results

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# **School Culture Key Findings**

#### Strengths

- Sense of belonging within the BUSPH community
- Staff feel engaged at the School. Ex., School Assembly, school retreat
- · Flexible work schedule/hybrid work is appreciated

#### **Opportunities for Improvement**

- · Have clear long-term career path
- · Provide training tailored to staff roles
- Improve school-level onboarding process for new hires

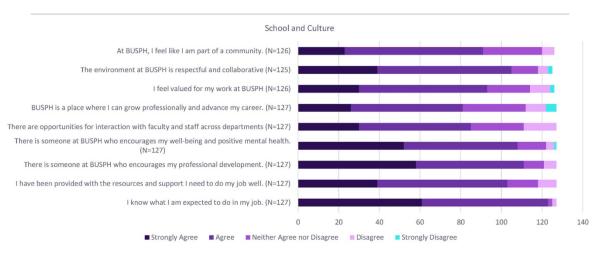
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# **Key Findings**



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# **Department Culture**

Strength | Opportunities for Improvement | Survey Data Results

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# **Department Culture Key Findings**

#### Strengths

- Staff feel valued for their input
- · Strong collaborative culture within department

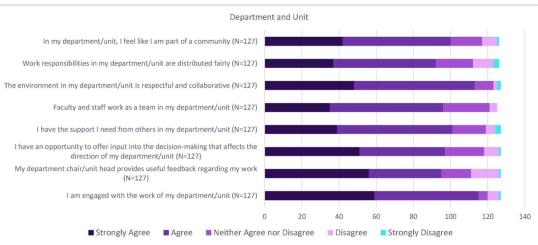
#### **Opportunities for Improvement**

- · Increase faculty-staff collaboration
- Managerial training on delegating labor and conflict management skills
- Continue to find ways to highlight/celebrate the work of staff

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# **Key Findings**



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# Professional Development & Supervision

Strength | Opportunities for Improvement | Survey Data Results

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# Professional Development & Supervision Key Findings

#### Strengths

- · Positive work environment
- Supervisors are supportive and value staff input

#### **Opportunities for Improvement**

- Create pathways for promotion within departments
- Provide training on developing strategic goals and practical skills related to their responsibilities and a deeper understanding of new frontiers like AI

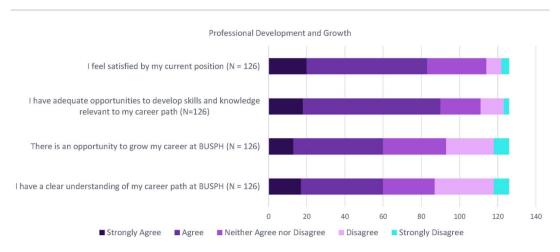
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# **Key Findings**



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## **Themes**

#### Strengths

- · Sense of belonging
- · Staff feel engaged

#### **Opportunities for Improvement**

- · Have clear long-term career path
- Improve onboarding process
- · Training opportunities

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#### **Staff Senate**

Representatives	Constituency
Denise Joseph, Senate Chair	Education Offices
Heatherly Mitch, Vice Chair	Global Health
Ashley Scott	EPI/Biostats
Selene Vences	Environmental Health
Skylar Karzhevsky	Health Law, Policy & Management
Matt Bullard	BEDAC
Sarah Lawrence	Community Health Sciences
Megan Jones	Central Admin & Service Offices
Tenbit Mitiku	At Large rep
Kwesi Essilfie	At Large rep
Kimberly Graham	At Large rep
Eric DelGizzo	At Large rep
Aboli Goghari	At Large rep

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# **May Staff Senate Meeting**

Tuesday, May 21

11:30pm-1:00pm

Founders Room Talbot 307C

Lunch provided

Hybrid

Join us

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#### 4. Faculty Senate

Professor Danielle Haley (<u>dfhaley@bu.edu</u>) provided the school with updates from Faculty Senate including faculty survey results.

# Faculty Senate: 2023 Faculty Survey Results

SPH School Assembly April 23, 2024

Boston University School of Public Health



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School Assembly 4/23/24 | 2

#### Annual BUSPH Faculty Survey\*

- Opportunity for faculty to voice perspectives and identify areas of strength and improvement
  - Climate (Department, BUSPH, BU)
    - Communal space (new 2023)
  - Teaching and Advising
  - Research and Scholarship
  - Development
    - Mentoring and Support
    - Promotion

\*Subset of data presented today

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School Assembly

4/23/24 3

## Respondent Characteristics (n=125)

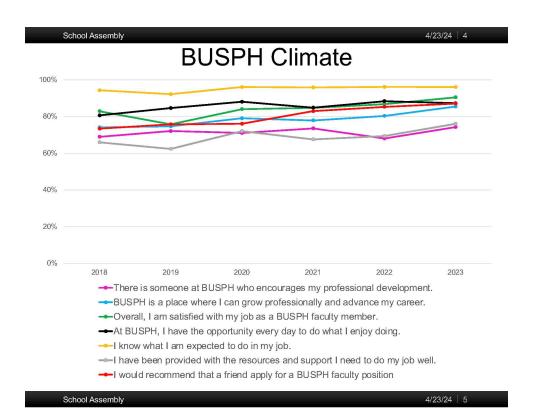
- 114 primary appt (62% response rate)
- Track: unmodified (80%), clinical (10%), research (10%)
- Rank: Full (38%), Associate (36%), Assistant (26%)
- Department: HLPM (24%), all other depts (15%)



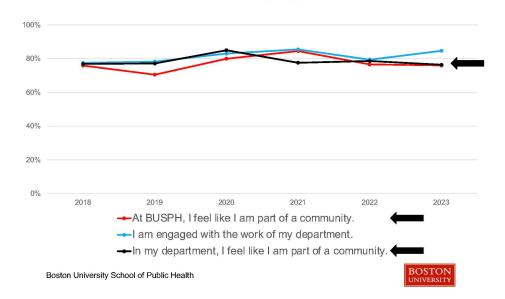
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# Sense of Engagement



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School Assembly

4/23/24 | 6

#### A communal space would...

- Improve working experience (68%)
- Foster stronger relationships outside department (82%)
- Be a reason to come to campus (52%)

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School Assembly

4/23/24

### Critical elements of communal space

- Tables to meet with students, colleagues (inside and outside of BUSPH)
- Have natural light
- Café/coffee bar
- Serve as a central meeting space for SPH community

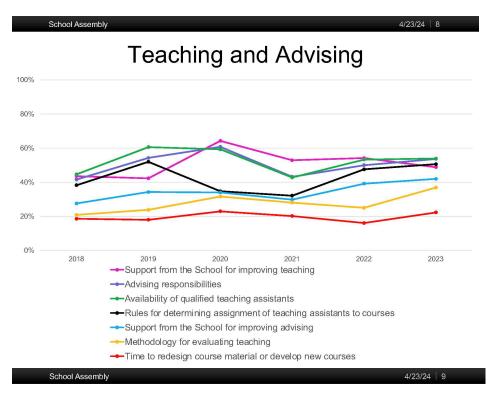
I think it is really important, especially as departments are separated at BUSPH... and Crosstown and Talbot are not super close to each other and we do not run into each other at all. This is definitely one of our disadvantages. Spontaneous conversations could start very important work in academia.

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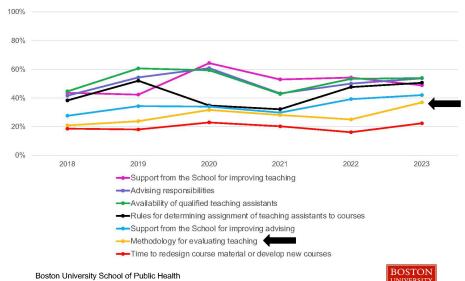
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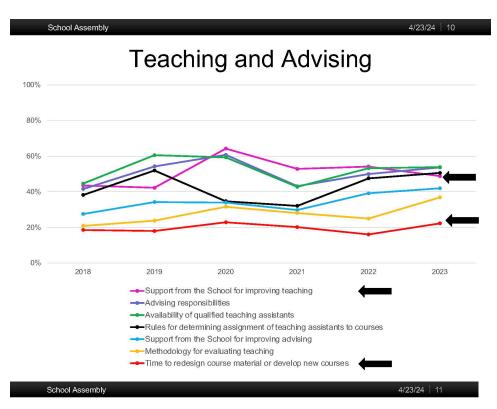
# Teaching and Advising



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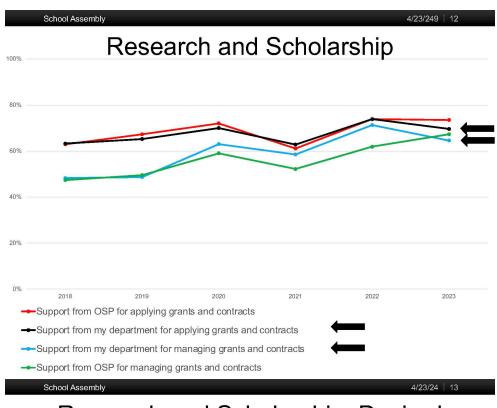
#### Recommendations

- Development opportunities (reflected in multiple survey items)
  - BUSPH-specific training/workshops focused on pedagogy, student mentoring
  - Peer mentoring/evaluation of teaching
- Coverage for course development and updates
- Course cancellation
  - Clarity on process of decision-making
  - Process for seeking exceptions for doctoral level or other time-sensitive offerings

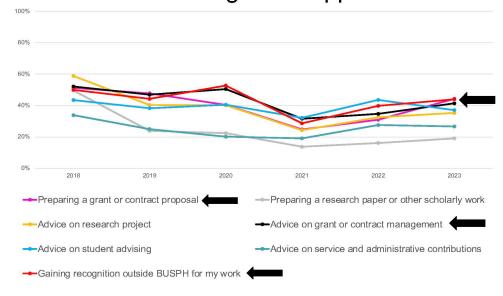


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# Research and Scholarship: Desired Mentoring and Support



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School Assembly 4/23/24 | 14

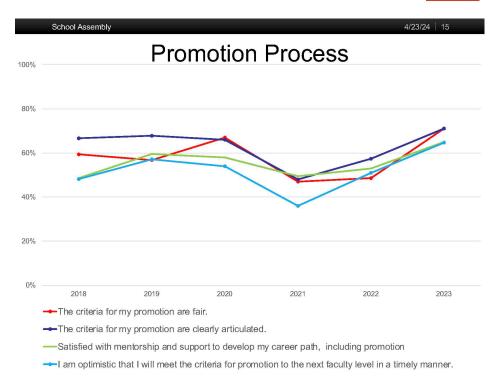
#### Recommendations

- Formalize midcareer mentoring
- Support for research activities related both to skill development and additional human capital (reflected in multiple survey items)

More (expert, high quality) grants management support; I hesitate to go to our current (amazing!) grants manager for smaller questions and help with more daily grants management because [they have] so much on [their] plate.

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School Assembly

4/23/24 | 16

## Recommendations

Promotion process is clear and well structured; mid-rank review is a helpful addition to the process

- Tracking system (similar to journals)
- Evaluation of time to promotion by gender and race/ethnicity

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School Assembly

4/23/24 17

## Thank you to all who completed the Annual Faculty Survey. It informs our priorities for the year.

**Next Faculty Senate Meeting** TODAY! At 12:30pm

HYBRID: Talbot Board Room or Zoom https://bostonu.zoom.us/j/98205629146?pwd=a21valJqcXple nVJQjcrOTZCQ2NFdz09



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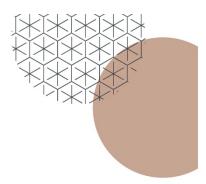
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## 5. Spotlight on a Department, Scarlett Bellamy

Professor Scarlett Bellamy (<u>bellamys@bu.edu</u>) provided the school with updates from the Department of Biostatistics.





## Scarlett Bellamy, ScD



Professor and Chair of Biostatistics Boston University, School of Public Health

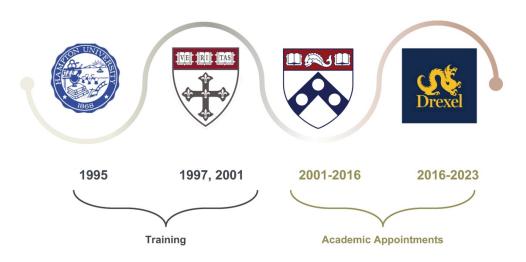
. About our department Our Mission Who we are · Areas of Strength

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# **Outline** . What's next for biostatistics at BUSPH?

## **My Journey**



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#### **Vision & Mission**

#### Vision

The Department of Biostatistics at BUSPH leads interdisciplinary research teams, designing studies and analyzing data for biomedical research, and advancing health equity. We develop novel statistical methods to address complex research questions to improve human health. We prioritize student development and learning, thus cultivating future quantitative biomedical leaders.

#### Mission

The mission of the **Boston University School of Public Health (BUSPH)** is to improve the health of local, national, and international populations, particularly the disadvantaged, underserved, and vulnerable, through excellence and innovation in education, research, and service.

#### The Department of Biostatistics fulfills the mission of BUSPH by:

- 1. Developing and evaluating novel quantitative methods and strategies for rigorous study design and analysis:
- 2. Teaching and mentoring students on the proper conduct of research through rigorous study design and the use of appropriate statistical methods, ensuring the validity of conclusions drawn from data; and
- 3. Collaborating on research projects to ensure that studies are properly designed, appropriately analyzed, and suitably interpreted.

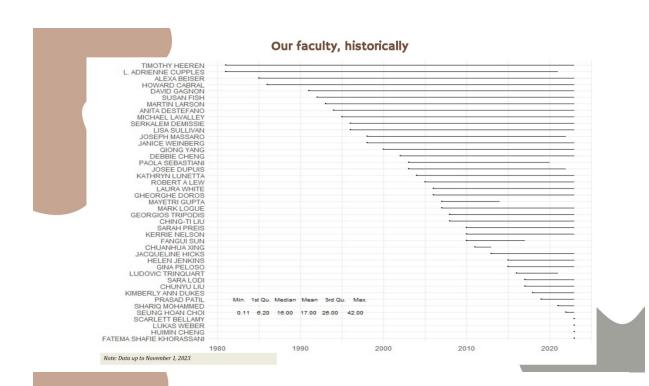
## **Department Commitments and Expectations**

- Foster an environment of respect
- Practice active listening
- Exhibit an openness to new ideas
- Be supportive and understanding of one another
- Practice intentional inclusion
- Have each other's back
- Honest in our service
- Practice intentional self-awareness
- Practice tolerance for different styles and stories

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### Faculty, by the numbers

	Adjuncts	Assistant Professors	Associate Professors	Professors	Total without Adjuncts	Total with Adjuncts
	14 (29.17%)	6 (12.50%)	9 (18.75%)	19 (39.58%)	34 (100%)	48 (100%)
Female N (%)	7 (50.00%)	2 (33.33%)	8 (88.89%)	11 (57.89%)	21 (61.76%)	28 (58.33%)
Race N (%)						
Black/African American	0 (0.00%)	0 (0.00%)	1 (11.11%)	2 (10.53%)	3 (8.82%)	3 (6.25%)
White	7 (50.00%)	1 (16.67%)	6 (66.67%)	15 (78.95%)	22 (64.71%)	29 (60.42%)
Asian	2 (14.29%)	4 (66.67%)	2 (22.22%)	2 (10.53%)	8 (23.53%)	10 (20.83%)
Unknown	5 (35.71%)	1 (16.67%)	0 (0.00%)	0 (0.00%)	1 (2.94%)	6 (12.50%)
Hispanic	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Time at BUSPH Mean (SD)	5.70 (4.99)	1.43 (1.60)	9.37 (5.87)	24.71 (10.19)	16.54 (12.62)	13.38 (11.98)

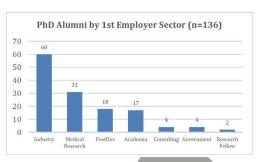
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### Our students, by the numbers

	MSB	MSAB	MPH	PhD	Total
	37 (7.79%)	17 (3.58%)	376 (79.16%)	45 (9.47%)	475
Female N (%)	25 (67.57%)	11 (64.71%)	312 (82.98%)	24 (53.33%)	372
Race N (%)					
Black/African American	3 (8.11%)	1 (5.88%)		0 (0.00%)	4
White	10 (27.03%)	4 (23.53%)		18 (40.00%)	32
Asian	23 (62.16%)	9 (52.94%)		25 (55.56%)	57
Unknown	0 (0.00%)	2 (11.76%)		0 (0.00%)	2
Data Not Available	1 (2.70%)	1 (5.88%)		0 (0.00%)	378
Hispanic	0 (0.00%)	0 (0.00%)		2 (4.44%)	2 (0.42%)



### **Areas of Strength**

Research
Bayesian Methods
Clinical Trials
Correlated data analysis
Pharmaco-Statistics
Risk Prediction
Snatial Statistics

Methodological

Spatial Statistics Statistical Computing Statistical Genetics Surveillance Survival Analysis Time Series Analysis Longitudinal Analysis

#### Collaborative Research Areas of Application

Addiction
Aging
Cancer
Cardiovascular health
Environmental epidemiology
Genetics
Infectious disease
Pharmaco-Epidemiology
Veterans Health

#### Collaborative Research Studies

Alzheimer's Disease Research Black Women's Health Framingham Heart Study MAVERIC Superfund Research Project Urban ARCH Consortium



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France AY 2024-2025

## Highlights (a few)

## Researchers Identify Novel Genetic Variants Associated with Alzheimer's Disease

A new study applied whole genome sequencing to pinpoint specific genes and genetic changes of interest in genetic regions previously associated with Alzheimer's disease, aiming to inform future treatment and prevention strategies

"Prior genome-wide association studies using common variants have identified regions of the genome, and sometimes genes, that are associated with Alzheimer's disease," says study co-senior author Anita DeStefano, professor of biostatistics. "Whole genome sequence data interrogates every base pair in the human genome and can provide more information about which specific genetic change in a region may be contributing to Alzheimer's disease risk or systemics."

Dr. DeStefano is also currently a university Graduate Affairs Faculty Fellow for Diversity and Inclusion (1 of 2)

#### Debbie Cheng, ScD,



Laura Forsberg White, PhD,



2023 American Statistical Association Fellow

Dr. Cheng serves as Director of the Population Health Data Science Program. Her research focuses on the application of innovative statistical methods for studies of substance use and its effect on HIV disease progression. Another area of Dr. Cheng's research is the design and analysis of randomized clinical trials. particularly for studies of substance use and HIV.

Dr. White serves as the Associate Director of the Population Health Data Science Program. Her research has focused on the development and application of innovative statistical methods for research on substance use disorders and infectious diseases, particularly tuberculosis. She co-directs the Interdisciplinary Training Grant in Biostatistics and is a co-Director of the graduate program in biostatistics.

## Highlights

Strategic Spark Award: "PEDiatric TuBerculosis COllaborative Research Efforts (PED-TB-CORE); (Pis: Helen Jenkins (biostatistics) & Leonardo Martinez (epidemiology)

# DATA SCIENCE SHAPING GLOBAL POPULATION HEALTH The Population Health Data Science Program promotes the development and quality of health data science research. We aim to create new interdisciplinary research synergies between health data science researchers, provide opportunities for education and training in data science, and ultimately facilitate the generation of new insights from large data sources to advance population health worldwide.



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- Statistical methods for unsupervised analyses and differential comparisons in highthroughput genomic
- Collaborative projects in neuroscience and cancer biology
- Applications of spatial statistics
- Benchmarking, software infrastructure, and analysis workflows Open science



- Data Integration for Time-to-Event Outcomes
- Surrogate Paradox RiskApplications to health disparities

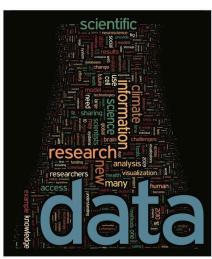
### What's next?

- Visibility
- Enhancing our community
  - Diversifying our faculty, staff, and students
- Community building (integration)
  - Incl. Initiating a faculty search
- Continually assessing the adequacy of our training programs in meeting the needs of
- Strengthening connections with quantitative groups across campus (BEDAC, Hariri, etc.)

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## Thank you







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## 6. Spotlight on Think. Teach. Do., Salma Abdalla

Professor Salma Abdalla (<u>abdallas@bu.edu</u>) provided the school with updates on her current work and research.

## School Assembly Presentation

Salma Abdalla, MBBS, MPH, DrPH

**Boston University** School of Public Health



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## Core research interests

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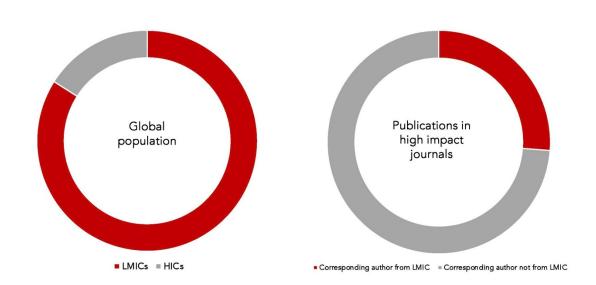




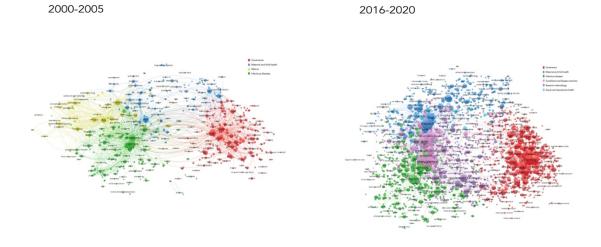
"An area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide"

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Ghani, Marium, et al. "Geographic, subject, and authorship trends among LMIC-based scientific publications in high-impact global health and general medicine journals: a 30-month bibliometric analysis." Journal of Epidemiology and Global Health 11.1 (2021): 92.



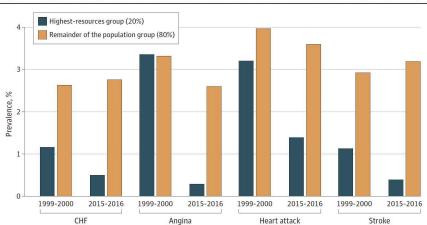
Abdalla, S.M., Solomon, H., Trinquart, L. and Galea, S., 2020. What is considered as global health scholarship? A meta-knowledge analysis of global health journals and definitions. BMJ global health, 5(10), p. e002884

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## 1. Macrosocial forces and global health equity

- Cross-country comparisons of disruptions to determinants of health using data from eight countries during the first year of the Covid-19 pandemic.
- Income and educational inequities in the prevalence of cardiovascular disease.



 $Figure \ 3. \ Comparison \ of \ Age-Standardized \ Prevalence \ in \ 1999-2000 \ vs \ 2015-2016, \ Stratified \ by \ Income \ Group$ 

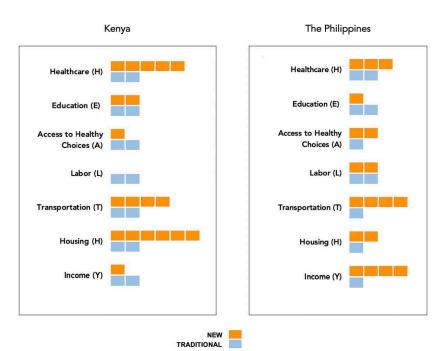
The prevalence of all CVD indicators decreased among the richest 20%. The prevalence either increased or remained constant among the poorest 80%.

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# 2. Using novel data to understand the social determinants of health in the global context

- Mapping the universe of data that can be used to understand and act on determinants of health in different countries.
- Using novel survey methods (RIWI) to understand public sentiments around determinants of health in eight countries.

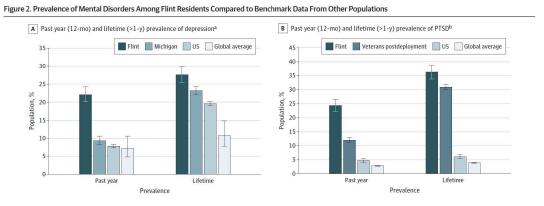


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## 3. Trauma and global population mental health

- Understanding the role mass traumatic events play in shaping population mental health including:
  - The Covid-19 pandemic in eight countries.
  - Mass shootings in the seven locations in the US.
  - Natural (Hurricane Harvey) and human-made (Flint) disasters.
- Using agent-based modelling to estimate the effectiveness and costeffectiveness of mental health interventions.
- Mapping the literature around gender-based trauma and mental health.

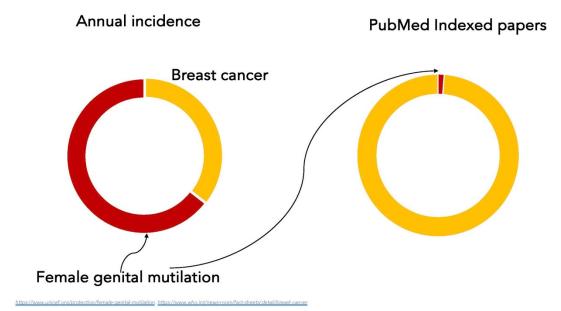


Reuben, A., Moreland, A., Abdalla, S.M., Cohen, G.H., Friedman, M.J., Galea, S., Rothbaum, A.O., Schmidt, M.G., Vena, J.E. and Kilostrick, D.G., 2022. Prevalence of Decreasion and Postsraumatic Stress Disorder in Flint, Michigan, 5 Years After the

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## Uganda Reopens Schools After World's Longest Covid Shutdown

Many countries have closed classrooms on and off, but Uganda had kept more than 10 million students at home since March 2020. Critics say it took a heavy toll.

Translational work

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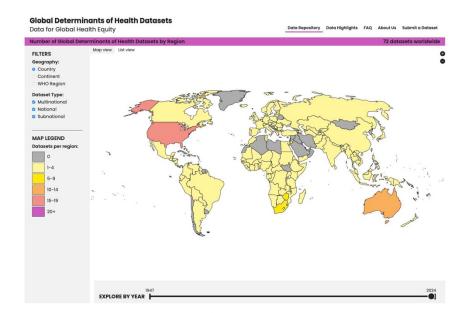












https://dataforhealthequity.org

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# Partnership for Healthy Cities



## Global Social Determinants Survey



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## **Teaching**

- Individual, Community, and Population Health core course (PH720).
- Leadership and Management for Public Health core course (PH718) (as a doctoral student).
- Guest lecturer on policy evaluation, population mental health, and determinants of health.

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## **Funders**

- NIH
- US Department of Justice
- Rockefeller Foundation
- Robert Wood Johnson Foundation
- Bloomberg Philanthropies
- World Health Organization

abdallas@bu.edu

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## 7. Spotlight on Think. Teach. Do., Phillip Hwang

Professor Phillip Hwang (phhwang@bu.edu) provided the school with updates on his current work and research.

## Promoting healthy and resilient cognitive aging throughout the life course

Phillip H. Hwang, PhD, MPH
Assistant Professor
Department of Epidemiology
Boston University School of Public Health
April 23, 2024

Boston University School of Public Health



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## New beginnings

- Started as Assistant Professor in Department of Epidemiology in January 2023
- Research, teaching, mentoring, and service
- Became a dad in December 2022



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## Life before coming to BU





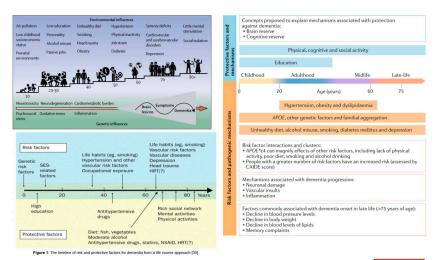
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## Dementia Risk and Protective Factors Across Life Course



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## Dementia prevention, intervention, and care: 2020 report of @ 🔭 📵 the Lancet Commission

Gill Livingston, Jonathan Huntley, Andrew Sommerlad, David Ames, Clive Ballard, Sube Banerjee, Carol Brayne, Alistair Burns, Jiska Cohen-Mansfield, Claudia Cooper, Sergi G Costafreda, Amit Dias, Nick Fox, Laura N Gitlin, Robert Howard, Helen C Kales, Mika Kivimaki, Eric B Larson, Adesola Ogunniyi, Vasiliki Orgeta, Karen Ritchie, Kenneth Rockwood, Elizabeth L Sampson, Quincy Samus, Lon S Schneider, Geir Selbæk, Linda Teri, Naaheed Mukadam

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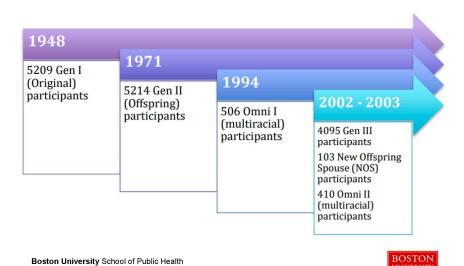
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### **FHS Timeline**



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Exam Dates and Age Ranges as of 04/24/2014 Original Cohort						
Exam	Exam Date Range	Age Range	Mean Age	Attendees		
Exam 1	1948 - 1953	28 - 74	44	5209		
Exam 2	1950 - 1955	31 - 65	46	4792		
Exam 3	1952 - 1956	32 - 67	48	4416		
Exam 4	1954 - 1958	34 - 69	50	4541		
Exam 5	1956 - 1960	37 - 70	52	4421		
Exam 6	1958 - 1963	38 - 72	54	4259		
Exam 7	1960 - 1964	40 - 74	55	4191		
Exam 8	1962 - 1966	42 - 76	57	4030		
Exam 9	1964 - 1968	44 - 78	59	3833		
Exam 10	1966 - 1970	46 - 80	61	3595		
Exam 11	1968 - 1971	49 - 81	62	2955		
Exam 12	1971 - 1974	50 - 83	64	3261		
Exam 13	1972 - 1976	53 - 85	66	3133		
Exam 14	1975 - 1978	55 - 88	68	2871		
Exam 15	1977 - 1979	57 - 89	69	2632		
Exam 16	1979 - 1982	59 - 91	70	2351		
Exam 17	1981 - 1984	61 - 93	72	2179		
Exam 18	1983 - 1985	63 - 94	74	1825		
Exam 19	1985 - 1988	65 - 96	75	1541		
Exam 20	1986 - 1990	67 - 97	77	1401		
Exam 21	1988 - 1992	69 - 99	79	1319		
Exam 22	1990 - 1994	72 - 101	80	1166		
Exam 23	1992 - 1996	73 - 101	81	1026		
Exam 24	1995 - 1998	76 - 103	83	831		
Exam 25	1997 - 1999	78 - 104	84	703		
Exam 26	1999 - 2001	79 - 103	86	558		
Exam 27	2002 - 2003	82 - 104	87	414		
Exam 28	2004 - 2005	84 - 104	89	303		
Exam 29	2006 - 2007	85 - 102	91	218		
Exam 30	2008 - 2010	88 - 102	92	141		
Exam 31	2010 - 2011	90 - 99	92	91		
Exam 32	2012 - 2014	93 - 106	96	40		

	Offspring	Cohort (idtype = 1)		•				
Exam	Exam Date Range	Age Range	Mean Age	Attendees				
Exam 1	1971 - 1975	5 - 70	36	5124				
Exam 2	1979 - 1983	17 - 77	44	3863				
Exam 3	1983 - 1987	18 - 77	48	3873				
Exam 4	1987 - 1991	22 - 81	52	4019				
Exam 5	1991 - 1995	26 - 84	55	3799				
Exam 6	1995 - 1998	29 - 86	59	3532				
Exam 7	1998 - 2001	33 - 90	62	3539				
Exam 8	2005 - 2008	40 - 93	67	3021				
Exam 9	2011 - 2014	46 - 98	71	2430				
Generation 3 Cohort (idtype = 3)								
Exam	Exam Date Range	Age Range	Mean Age	Attendees				
Exam 1	2002 - 2005	19 - 72	40	4095				
Exam 2	2008 - 2011	24 - 78	47	3411				
Exam 3	2016 - 2019	32 - 84	54	3171				
	New Offspring Spo	use NOS Cohort (id	type = 2)					
Exam	Exam Date Range	Age Range	Mean Age	Attendees				
Exam 1	2003 - 2005	47 - 85	65	103				
Exam 2	2008 - 2011	53 - 90	70	68				
Exam 3	2016 - 2019	60 - 93	75	56				
	Omni Col	nort 1 (idtype=7)						
Exam	Exam Date Range	Age Range	Mean Age	Attendees				
Exam 1	1994 - 1998	27 - 78	52	506				
Exam 2	1999 - 2001	33 - 83	55	405				
Exam 3	2007 - 2008	39 - 89	62	298				
Exam 4	2011 - 2014	44 - 88	66	301				
Omni Cohort 2 (idtype=72)								
Exam	Exam Date Range	Age Range	Mean Age	Attendees				
Exam 1	2003 - 2005	20 - 80	43	410				
Exam 2	2009 - 2011	25 - 85	48	321				
Exam 3	2016 - 2019	32 - 89	54	294				



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Receivest: 26 July 2022 | Revised: 19 December 2022 | Accepted: 20 December 2022 |

DOI: 10.1002/Julz.12940 | Alzheimer's & Dementia\*

RESEARCH ARTICLE | THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

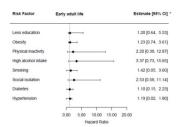
## Examination of potentially modifiable dementia risk factors across the adult life course: The Framingham Heart Study

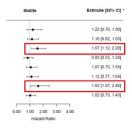
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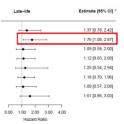


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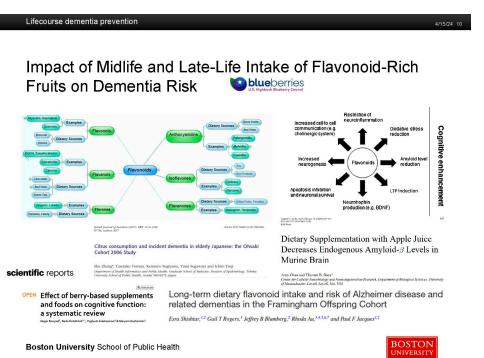
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**Table 3.** Associations between cumulative total fruit intake in midlife and late-life groups and risk of all-cause dementia

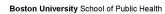
	Midlife (85 all- dementia case participan	s/1,642	Late-life (238 all-cause dementia cases/1,148 participants)	
Total fruit intake percentile	Hazard ratio (95% CI)	p-value	Hazard ratio (95% CI)	p-value
Binary categorical				
≤30 <sup>th</sup> percentile (Low)	1.00 (Reference)		1.00 (Reference)	
>30 <sup>th</sup> percentile (High)	0.72 (0.44 – 1.17)*	0.19	1.13 (0.85 – 1.52)*	0.40
	0.56 (0.32 – 0.98) <sup>†</sup>	0.04	1.10 (0.79 – 1.55) <sup>†</sup>	0.56

CI: Confidence interval

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<sup>†</sup>Adjusted for age, sex, education, body mass index, physical activity, smoking, diabetes, hypertension, stroke, ApoE genotype, and total energy intake

\*\*Manuscript under review\*\*





<sup>\*</sup>Unadjusted model

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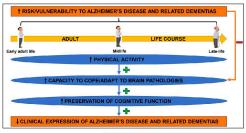


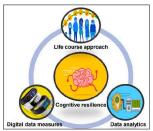
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#### NIA K01 award

"Physical activity over the adult life course and cognitive resilience to Alzheimer's disease and related dementias"







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### Overview of Aims

- Aim 1: To evaluate the relationship between daily physical activity across the adult life course and incident dementia
- Aim 2: To examine daily physical activity as a moderator of the relationship between neurodegeneration and cognition across the adult life course
- <u>Aim 3</u>: To develop a predictive model for cognitive resilience based on specific domains and dimensions of physical activity across the adult life course



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#### Overview of Aims

- Aim 1: To evaluate the relationship between daily physical activity across the adult life course and incident dementia
- To be presented at the 2024 Alzheimer's Association International Conference (Philadelphia, PA)

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## Preliminary results from Aim 1

- Greater physical activity associated with decreased risk of all-cause dementia in midlife and late-life groups
  - Midlife HR = 0.72 (0.54 0.94); p = 0.02
  - Late-life HR = 0.63 (0.45 0.87); p = 0.005
- No association between physical activity and dementia risk in early adult life group
  - HR = 1.00 (0.53 2.26); p = 0.81



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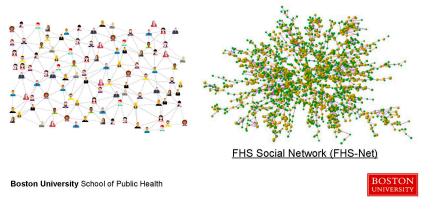
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## Alzheimer's Association Research Fellowship



 "Social networks over the adult life course and cognitive resilience"



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### Overview of Aims

- Aim 1: To evaluate the relationship between social networks across the adult life course and incident dementia
- Aim 2: To examine social networks as moderators of the relationship between neurodegeneration and cognition across the life course
- Aim 3: To develop a predictive model for cognitive resilience based on specific social network attributes across the adult life course



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## Thank you!

E-mail: phhwang@bu.edu



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Next school assembly May 14,10:00am In-person + zoom