## UCONN | UNIVERSITY OF CONNECTICUT

CENTER FOR MHEALTH AND SOCIAL MEDIA

# P R O G R E S S R E P O R E S S JULY 2020-JULY 2021





## MISSION

The mission of the UConn Center for mHealth and Social Media is to advance the science of digital health by exploring novel applications of digital technologies to health problems, using technology to increase the impact and reach of health interventions, leveraging technology to gain a deeper understanding of health issues, and developing new methodologies with digital health tools to conduct clinical research. The Center's priorities are in the areas of research methodology and training.

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# THE YEAR IN REVIEW

It was a busy year for research at the Center! We began working on Building Habits Together, an R34 to develop and test the feasibility of a mobile app and social network weight loss intervention, working with Dr. Bengisu Tulu at Worcester Polytechnic Institute and the development team at Programination.

Our team also began a single arm trial of a multi-component commercial digital weight loss program with WW (formerly known as Weight Watchers). Drs. Pagoto and Waring were awarded funds from the NCI to conduct a social media research ethics study which aims to identify and investigate knowledge gaps and areas lacking consensus among researchers in this field. Dr. Pagoto and Waring also received funding from the NSF to examine the impact of the move to remote courses during the pandemic on undergraduate education in STEM.

Drs. Pagoto and Xu also submitted an R01 to develop and test the feasibility of a social media campaign for parents of children who play sports along with two R01 subcontracts with Klein Buendel, Inc to address vaccine hesitancy. This year, Dr. Pagoto's team wrapped up their work on two R01s and an R21 and Dr. Waring wrapped her R34.

The Center ramped up its training efforts in the past year, hosting monthly webinars on topics like "How to Move your Behavioral Research Online" and "How Did You Get That Job? A Digital Health Industry Career Panel." These webinars attracted over 700 live attendees and have garnered 4500+ views on YouTube. The entire catalog of Center webinars is available for on-demand viewing.

The year's training efforts concluded with our 5th Annual Conference, *The COVID19 Pandemic: Media, Misinformation, and Science Communication,* a two-day virtual event featuring five keynote speakers, six panelists, six paper presenters, and 34 video posters. We were honored to accept sponsorship from JMIR Infodemiology for this conference. Thank you to our distinguished speakers and all who attended.

# **Core Faculty**



**Sherry Pagoto, PhD** Director Professor Allied Health Sciences



**Molly Waring, PhD** Director of Methodology Core Associate Professor Allied Health Sciences



**Ran Xu, PhD** Assistant Professor Allied Health Sciences

# **Affiliate Faculty**



**Kim Gans, PhD, MPH** Professor Human Development and Family Studies



**Loneke Blackman Carr, PhD, RD** Assistant Professor Nutrition



Joel Salisbury, MFA Assistant Professor Web and Interactive Media Design



**Anne Oeldorf-Hirsch, PhD** Assistant Professor Communication



**Debs Ghosh, PhD, MPhil** Associate Professor Geography



**Jolaade Kalinowski, EdD** Assistant Professor Human Development and Family Studies



**Tricia Leahey, PhD** Associate Professor Allied Health Sciences



Shiri Dori-Hacohen, PhD Assistant Professor Computer Science and Engineering



**Eileen Carter, PhD, RN** Assistant Professor Nursing

We welcomed Dr. Jolaade Kalinowski, Dr. Shiri Dori-Hacohen, and Dr. Eileen Carter to our Center this year! We are eager to feature their expertise in our monthly webinar series.

## Staff



Kaylei Arcangel, MS Research Coordinator



Haley Troy Research Coordinator



**Joseph DiVito** Research Coordinator



**Jessica Deojay** Program Assistant



**Abiodun Atoloye, PhD** Post Doctoral Fellow

## **Graduate Assistants**



**Jared Goetz** Doctoral student Health Promotion Sciences



**Laurie Groshon, MS** Master's conferred 2021 Health Promotion Sciences



Matthew Schroeder, MS Master's conferred 2021 Health Promotion Sciences



**Richard Bannor, MPH** Doctoral student Health Promotion Sciences



Christie Idiong, MS Doctoral student Health Promotion Sciences

#### Graduate Thesis Spotlight: Laurie Groshon

This year, Laurie Groshon successfully defended her Master's thesis entitled *A Content Analysis of Indoor Tanning Twitter Chatter During COVID-19 Related Shutdowns*. Ms. Groshon conducted a directed content analysis of tweets posted during pandemic-related statewide shutdowns that discussed indoor tanning.



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## Graduate Thesis Spotlight: Matthew Schroeder

This year, Matt Schroeder successfully defended his Master's these entitled *Tweeting the Blues Away.* His thesis project involved a conventional content analysis of the viral hashtag, #HowlFightDepression. He examined 1000+ tweets with the hashtag and aimed to examine if the tweets mentioned adaptive or maladaptive coping strategies for depression. Tweeting the Blues Away: A Content Analysis on the Viral Hashtag #HowlFightDepression

# **Undergraduate Students**

#### Pagoto Research Mentees

Stephen Aledort Sananya Bankwalla Alisha Chhabra Justin Jones Lourdes Leguiza Tiffany Sancelemente Makayla Urquhart Katherine Brown Savanna Hathiramani Conrad Poole Deevena Annavarjula Kristen Dean Monique Kern Cindy Pan Laslian Vallejo Bucheli

#### Waring Research Mentees

Grace Heersping Lauren Rudin Alexa Horkachuck Quamyia Foye Breajah Tyson Emanuela Pinci

#### **Xu Research Mentees**

Fangzhou Yu Runshu Wang Evelyn Johnson Natalie Ranelli

#### Cindy Pan Awarded Summer Undergraduate Research Funds (SURF)

This summer, Cindy Pan, one of our undergraduate students, was awarded funding to conduct a qualitative analysis of participant responses to weekly weigh-in posts from Dr. Pagoto's previous K24-funded projects. Cindy's work will help the Center identify news ways to maximize participant engagement in an online weight loss interventions. Cindy is a rising senior majoring in Molecular Cell Biology and Philosophy. She is also part of UConn's FastTrack MPH program.



**Feeling Festive:** This year, our annual winter holiday lunch was virtual. Sherry Pagoto kept the spirit alive by mailing prizes to everyone on the team! This was also our farewell to our former Program Director, Jess Bibeau!

## Newly Funded Projects: \$1,831,418

NHLBI R34HL145439 (PI: Pagoto) \$709,18009/01/20-08/31/23Building Habits Together: Feasibility trial of an integrated mobile and social network weight<br/>loss intervention09/01/20-08/31/23

We propose to build upon our previous work to create a behavioral weight loss program in which integrated technologies facilitate meaningful participant engagement and the execution of evidence-based behavioral strategies for weight loss.

CAHNR Seed Grant (PI: Xu) \$60,00010/01/20-09/30/23Developing a food image recognition technique to evaluate the nutrition information of<br/>restaurant foods and community food environment.

In this proposal we plan to (1) extend and develop a deep-learning-based food image recognition technique for nutrition assessment of restaurant foods, and (2) apply it to assess the community food environment in the Hartford area, (3) validate the deep-learning results with structured interviews and surveys at local restaurants.

**NIH 1R01CA192652-01** (PI: Buller, Sub-PI: Pagoto) \$25,364 09/01/20-08/31/21 Competitive Revision for Likes Pins and Views: Engaging Moms on Teen Indoor Tanning Thru Social Media

We propose to conduct a new study with the original sample of mothers to test the impact of social media messaging on COVID-19 mitigation (i.e., social distancing behaviors) and vaccination to examine the impact of different sources frequently providing this information.

**WW AG200853** (PI: Pagoto) \$335,890 01/01/21-12/31/21 Single arm trial of a multi-component commercial digital weight loss program

The goal of the proposed research project is to evaluate the feasibility, acceptability, and preliminary outcomes of an online multicomponent commercial weight loss program and to understand the relationship between program engagement and outcomes.

**Supplement NIH 1R01CA221854** (PI: Manne, Sub-PI: Pagoto) \$38,371 08/01/20-07/31/21 Facebook Intervention for Young Onset Melanoma Patients and Families: Supplement title: An examination of knowledge gaps regarding ethical practices in social media research

The goals of the proposed research are to 1) identify knowledge gaps and areas lacking in consensus among researchers about various uses of social media in clinical trials research, 2) examine the nature of the variation in opinions, and 3) identify researcher characteristics associated with knowledge gaps.

## **Ongoing Projects**

USDA/CAHNR Capacity Grant (PI: Waring) \$19,994 10/01/19-09/30/22 How mothers evaluate and spread information related to child nutrition on social media

We will explore how mothers evaluate the veracity of child nutrition information they encounter on social media and examine factors influencing the spread of child nutrition misinformation in online social networks.

**NIH Renewal: 5K24HL124366-02** (PI: Pagoto) \$662,613 04/01/20-03/31/25

Mentoring in mHealth and Social Networking Interventions for CVD Risk Reduction This mid-career development award is designed to support mentoring in digital health research for cardiovascular disease prevention.

**NIH/NHLBI R34HL136979** (PI: Waring) \$731,438 05/15/17-03/31/21 Delivering a Post-Partum Weight Loss Intervention via Facebook vs In-Person Groups: a Feasibility Pilot Trial

This project is testing a feasibility trial for post-partum weight loss being delivered inperson vs Facebook.

NIH 1R01DK115545 (PI: Jaser, Sub-PI: Pagoto) \$373,92107/01/18-06/30/23Communication and Coping: Addressing Mothers' Needs to Improve Outcomes in<br/>Adolescents with T1D

The aims of this study are to: 1) evaluate the effects of the Communication & Coping intervention on diabetes- related outcomes; 2) evaluate the effects of the Communication & Coping intervention on psychosocial outcomes; and 3) explore the differential impact of the intervention across demographic factors.

**NIH 1R01CA221854** (PI: Manne, Sub-PI: Pagoto) \$499,364 06/01/18-06/30/23 Facebook Intervention of Young Onset Melanoma Patients and Families

This project involves a social media delivered intervention for melanoma patients and families.

**NIH 1R01CA218068-01** (PI: Stapleton, Sub-PI: Pagoto) \$486,807 07/15/17-05/31/22 Randomized Trial of a Social Media-Delivered Intervention Targeting Indoor Tanning Users

This project aims to develop an intervention for indoor tanning users that is delivered via secret groups using the social media site Facebook.

NIH 1R01AI158818-01 (PI: Buller, Sub-PI: Pagoto) \$54,56904/01/21-03/31/24Preventing COVID-19 with a Social Media Intervention: Vaccine Acceptance and PhysicalDistancing

The goal of this project is to increase adults aged 18-64 COVID19 prevention behaviors, specifically social distancing behavior and vaccine intentions, using a social media campaign designed to a) promote COVID19 NPIs and vaccination using principles of risk communication, b) improve adults' media literacy for digital messages to combat critical information and misinformation, and c) improve family communication on COVID19 NPIs and vaccination.

NIH R01CA210259 (PI: Buller, Sub-PI: Pagoto) \$133,91708/01/17-07/31/22Using Technology to Scale-up an Occupational Sun Protection Policy Program

This project is testing sun protection practices for outdoor workers using an in-person vs. web-delivered intervention.

**USDA/CAHNR Capacity Grant** (PI: Duffy; Co-I: Waring) \$30,000 10/01/18-09/30/21 Tailored messages for health promotion and obesity prevention using e-health and mhealth

We will evaluate a nutrition and health message program delivered via internet and mobile technologies that is tailored to the individual's usual behaviors and the availability of healthy foods for obesity prevention in children in a clinical setting, middle-school students, and college students.

#### **Completed Projects**

**NIH 5R01DK103944-02** (PI: Pagoto) \$2,666,387 09/25/15-07/31/20 Get Social: Randomized Trial of a Social Network Delivered Lifestyle Intervention

The purpose of the study is to conduct a randomized controlled trial to compare the efficacy of an online social network delivered intervention to a traditional in-person groupbased lifestyle intervention. We hypothesize that an online social network intervention will not be inferior to the traditional delivery approach.

NIH 1R21CA226133-01 (PI: Pagoto) \$376,782 04/01/18-03/31/21 Using a Narrative-Based Approach to Reducing Indoor Tanning

The purpose of this project is to develop and test the feasibility of a narrative-based social media intervention for indoor tanning that will ultimately be implemented by Skin Smart Campus, a national initiative co-chaired by the PI to promote skin cancer prevention policy and education on university campuses nationwide.

NIH 1R01CA192652-01 (PIs: Buller, Pagoto) \$812,48306/01/15-12/31/20Likes Pins and Views: Engaging Moms on Teen Indoor Tanning Thru Social Media

This study proposes to develop and evaluate the effectiveness of a social media indoor tanning campaign to decrease mothers' permissiveness for, and prevalence of, indoor tanning by daughters and increase mothers' support for policy restrictions on indoor tanning by minors to improve the effectiveness of indoor tanning regulations.

NIH K24HL124366 (PI: Pagoto) \$491,31004/07/15-03/31/20Mentoring in mHealth and Social Networking Interventions for CVD Risk Reduction

This mid-career development award is designed to support a mentorship plan in mHealth research for cardiovascular disease prevention.

**NSF 2028341** (PIs: Pagoto, Waring) \$71,408 05/01/20-04/30/21 RAPID: Differential Impacts of the COVID-19 Pandemic on Undergraduate STEM Education by Student Gender, Race/Ethnicity, and Socioeconomic Status

We propose a mixed-methods study to describe in a representative sample of undergraduate STEM students from varied backgrounds: 1) the transition away from campus, 2) the challenges experienced, 3) the degree to which challenges affected attendance, academic performance, withdrawal rates, and college dropout rates, and 4) factors that facilitated success or failure among underresourced and underrepresented students.

**NIH 3R01CA218068-03S1** (PIs: Arroyo, Stapleton) \$55,469 06/01/19-05/31/21 Participant Engagement and Sharing of Misinformation in a Cancer Prevention Facebook Group for Moms

The purpose of this diversity supplement is to conduct a mixed-methods analysis of participant engagement data from a large randomized trial (N=972) of a Facebook-delivered cancer prevention intervention. Findings will advance the field of social media interventions for cancer control by revealing insights on how to design effective prevention messages.

#### **Pending Projects**

NIH R01CA269918 (PI: Pagoto) \$1,207,000

04/01/22-03/31/25

Pilot and Feasibility Trial of a Facebook-Delivered Parent-Focused Sunburn Prevention Intervention for Youth Soccer Players

The proposed study will develop and pilot test a social media campaign to activate parents to help their sport-engaged adolescents to build good sun safety habits.

## Peer-Reviewed

1. Adrian A, Francisco O, Xavier T, Perchoux, C, Balkau, B, Pagoto, S, Harding, JL, Czernichow, T, Fagherazzi, G. Insulin pricing and other major diabetes-related concerns in the USA: A study of 46,407 Tweets between 2017 and 2019. BMC Open Diabetes Research and Care. 2020; doi: 10.1136/bmjdrc-2020-001190. PMID: 32503810. PMCID: PMC7282343

2. Amante, D, Harlan, DM, Lemon, SC, McManus, DD, Olatain, OO, Pagoto, S, Gerber BS, Thompson, MJ. Evaluation of a diabetes remote monitoring program facilitated by connected glucose meters for patients with poorly controlled type 2 diabetes: A randomized crossover trial. JMIR Diabetes, 2021 Mar 11;6(1):e25574. doi:10.2196/25574. PMID: 33704077 PMCID: PMC7995078

3. Asare, AK, Bannor, R, Yawson, RM, Bawole, JN. Healthcare System Innovation – The Case of Adoption of Telemedicine in Ghana. Int. J. Business and Systems Research. 2021, in press.

4. Bamgbade, BA, Sanghai, SR, McManus, DD, Lessard, D, Waring, ME, Forrester, S, Pierre-Louis, I, Saczynski, JS. Psychosocial and cognitive multimorbidity and health-related quality of life and symptom burden in older adults with atrial fibrillation: the Systematic Assessment of Geriatric Elements in Atrial Fibrillation (SAGE-AF) cohort study. Archives of Gerontology and Geriatrics. 2020 Sep-Oct: 90:104117. doi: 10.1016/j.archger.2020.104117. PMID: 32474170. PMCID: PMC7434686

5. Bannor, R, Asare, AK, Sackey SO, Osei-Yeboah, R, Nortey, PA, Bawole, JN, & Ansah, V, (2020). Sleeping Space Matters: LLINs Usage in Ghana. Pathogens and Global Health. https://doi.org/10.1080/20477724.2020.1776920

6. Borrelli, B, Endrighi, R, Quintiliani, L, Hughes, R. Pagoto, S. Facebook usage, participation patterns, and social support from Facebook activity among smokers with mobility impairments. Translational Behavioral Medicine, 2021, Mar 12; ibab005. doi: 10.1093/tbm/ibab005.PMID: 33710308.

7. Buller DB, Buller MK, Meenan R, Cutter GR, Berteletti J, Eye R, Walkosz BJ, Pagoto S. Design and baseline data of a randomized trial comparing two methods for scaling-up an occupational sun protection intervention. Contemp Clin Trials. 2020 Oct; 97:106147. Epub 2020 Sep 15. doi: 10.1016/j.cct.2020.106147 PMID: 32942054; PubMed Central PMCID: PMC7490282

8. Buller, D, Pagoto, S, Baker, K, Walkosz, BJ, Hillhouse, J, Henry, KL, Berteletti, J, Bibeau, J. Results of a social media campaign to prevent indoor tanning by teens: A randomized controlled trial. Preventive Medicine Reports. 2021 Jun; 22: 101382. doi: 10.1016/j.pmedr.2021.101382. eCollection 2021 Jun. PubMed PMID: 33996394; PubMed Central PMCID: PMC8100627

9. Busch, AB, Conroy, DE, Pagoto, S. Reaching intermittent tobacco users with technology: A comment on Mays et al. American Journal of Public Health, in press.

10. Busenbark, J, Frank, KA, Maroulis, SJ, Xu, R, Lin, Q. (accepted for publication). Quantifying the Robustness of Empirical Inferences in Strategic Management: The Impact Threshold of a Confounding Variable and Robustness of Inference to Replacement. Research Methodology in Strategy and Management.

## **Peer-Reviewed**

11. Courtney, J, Handley, E, Pagoto, S, Russell, M, Conroy, D. Alcohol use as a function of physical activity and golfing motives in a national sample of United States golfers. Nutrients, 2021 May 29; 13(6): 1856. doi: 10.3390/nu13061856. PMID: 34072398

12. Frank, KA, Lin, Q, Maroulis, SJ, Mueller, AS, Xu, R, Rosenberg, JM, Hayter, CS, Mahmoud, RA, Kolak, M, Dietz, T, Zhang, L. (2021). Hypothetical case replacement can be used to quantify the robustness of trial results. Journal of Clinical Epidemiology, 134, 150-159. doi: 10.1016/j.jclinepi.2021.01.025.

13. Jake-Schoffman DE, Brown SD, Baiocchi M, Bibeau JL, Daubenmier J, Ferrara A, Galarce MN, Hartogensis W, Hecht FM, Hedderson MM, Moran PJ, Pagoto SL, Tsai AL, Waring ME, Kiernan M. Methods-Motivational Interviewing approach for enhanced retention and attendance. American Journal of Preventive Medicine. In press.

14. Kwasnicka D, Luszczynska A, Hagger MS, Quested, E, Pagoto, S, Verboon, P, Robinson, S, Januszewicz, A, Idziak, P, Palacz, I, Naughten, F. Theory-based digital intervention to promote weight loss and weight loss maintenance (Choosing Health): Protocol for a randomised controlled trial. BMJ Open 2020 Nov 23; 10(11):e040183. doi: 10.1136/bmjopen-2020-040183. PubMed PMID: 33234638; PubMed Central PMCID: PMC7684829.

15. Lee, H, Henry, KL, Buller, DB, Pagoto, S, Baker, K, Hillhouse, J, Berteletti, J, Bibeau, J. Mutual influences of mother's and daughter's mental health on the closeness of their relationship: An actor-partner interdependence model. Journal of Child and Family Studies. 2021, In press.

16. Lee, SY, Waring, ME, Park, CL, Blake, EC. Do Depressive Symptoms Predict Blood Pressure Control in US Veterans? J Gen Intern Med. 2021 Mar 26. doi: 10.1007/s11606-021-06709-5. Epub ahead of print. PMID: 33772439.

17. Lubitz, SA, Faranesh, AZ, Atlas, SJ, McManus, DD, Singer, DE, Pagoto, S, Pantelopoulos, A, Foulkes, A. Rationale and design of a large population study to validate software for the assessment of atrial fibrillation from data acquired by a consumer tracker or smartwatch: The Fitbit Heart Study. American Heart Journal, 2021 Apr 15; 238: 16-26. doi: 10.1016/j.ahj.2021.04.003. PMID: 33865810

18. Mailhot, T, McManus, DD, Waring, ME, Lessard, D, Goldberg, R, Bamgbade, BA, Saczynski, JS. Frailty, Cognitive Impairment and Anticoagulation Among Older Adults with Non-Valvular Atrial Fibrillation. JAGS. 2020 Dec; 68(12): 2778-2786. doi: 10.1111/jgs.16756. PMID: 32780497.

19. Manne, S, Kashy, D, Buller, D, Devine, K., Heckman, C, Pagoto, S., Frederick, S, Mitarotondo, A. Sun Safe Partners Online: A pilot randomized controlled clinical trial, JMIR J Med Internet Res 2020;22(9):e18037 doi: 10.2196/18037 PMID: 32673215 PMCID: 7530684

20. McKee, S.L., Gurganus, E.A., Atoloye, A.T., Xu, R., Martin, K., Schwartz, ME. Pilot testing an intervention to educate and promote nutritious choices at food pantries. J Public Health (Berl.) (2021). https://doi.org/10.1007/s10389-021-01570-6

21. Mejia, C, Libby, BA, Bracken, ML, Shanley, B, Holovatska, MM, Wanik, J, Shanley, E, Waring, ME. Interest in digital dietary support among adults with kidney failure receiving hemodialysis. Journal of Renal Nutrition. 2020 Jul 22; S1051-2276(20)30161-8. doi: 10.1053/j.jrn.2020.06.004. PMID: 32712067.

## Peer-Reviewed

22. Neuhouser, ML, Wertheim, BC, Perrigue, MM, Hingle, M, Tinker, LF, Shikany, JM, Johnson, KC, Waring, ME, Seguin-Fowler, RA, Vitolins, MZ, Schnall, E, Snetselaar, L, Thomson, C. Associations of Number of Daily Eating Occasions with Type 2 Diabetes Risk in the Women's Health Initiative Dietary Modification Trial. Curr Dev Nutr. 2020 Jul 21;4(8):nzaa126. doi: 10.1093/cdn/nzaa126. PMID: 32832844. PMCID: PMC7431012.

23. Pagoto, S, Conroy, D. Revitalizing adolescent health behavior after the COVID19 pandemic. JAMA Pediatrics. 2021 May 3. doi: 10.1001/jamapediatrics.2021.0547. Online ahead of print.

24. Pagoto, S, Tulu, B, Waring, ME, Goetz, J, Bibeau, J, DiVito, J, Groshon, L, Schroeder, M. Slip Buddy for weight management: A randomized feasibility trial of a dietary lapse tracking app. JMIR mHealth and uHealth. 2021 Apr 1;9(4):e21219. doi: 10.2196/24249. PMID: 33792547

25. Pbert, L, Trivedi, M, Druker, S, Bram, J, Olendzki, B, Crawford, S, Frisard, C, Andersen, V, Waring, ME, Clements, K, Schneider, K, Geller, AC. Supporting families of children with overweight and obesity to live healthy lifestyles: Design and rationale for the Fitline cluster randomized controlled pediatric practice-based trial. Contemp Clin Trials. 2021 Mar 8;104:106348. doi: 10.1016/j.cct.2021.106348. Epub ahead of print. PMID: 33706002.

26. Schwartz, M, Xu, R, Martin, K (2020). Food Pantries Select Healthier Foods After Nutrition Information is Available on their Food Bank's Ordering Platform. Public Health Nutrition. 1-22. doi: 10.1017/S136890020004814.

27. Sedney, C, Abu, HO, Trymbulak, K, Mahawej, J, Wang, Z, Waring, ME, Saczysnki, J, McManus, DD. Sociodemographic, behavioral, and clinical factors associated with low atrial fibrillation knowledge among older adults with atrial fibrillation: the SAGE-AF study. Patient Education and Counseling. 2021 Jan; 104(1): 94-200. doi: 10.1016/j.pec.2020.07.008. PMID: 32690396. PMCID: PMC7749812.

28. Wang, ML, Libby, BA, Moore Simas, TA, Waring, ME. Sugar sweetened beverage consumption and sleep duration and quality among pregnant women. Journal of Nutrition Education & Behavior. 2021 Apr 13 Epub ahead of print. doi: 10.1016/j.neb.2021.02.010. PMID: 33858771

29. Wang, Y, Xu, R, Schwartz, M, Ghosh, D, & Chen, X. (2020). COVID-19 and Retail Grocery Management: Insights from a Broad-based Consumer Survey. IEEE Engineering Management Review.

30. Xu, R, & Cavallo, D. (2021). Social Network Analysis of the Effects of a Social Media–Based Weight Loss Intervention Targeting Adults of Low Socioeconomic Status: Single-Arm Intervention Trial. Journal of Medical Internet Research, 23(4), e24690. doi: 10.2196/24690.

31. Xu, R, Lakeh, AB, & Ghaffarzadegan, N. (2021). Examining the characteristics of impactful research topics: A case of three decades of HIV-AIDS research. Journal of Informetrics, 15(1), 101122. doi: 10.1016/j.joi.2020.101122.

## Public Facing, News, and Popular Media

Staunchly committed to science communication, Dr. Pagoto regularly contributes to news stories and media pieces on a wide range of topics.

<u>Breaking the mask habit: Why some people find it hard to let go.</u> CT Post. May 29, 2021

Teens' physical activity declines during pandemic, substance use persists. Healio. May 28, 2021

<u>Rethinking How We Talk About Obesity.</u> Connecticut Public Radio. April 8, 2021

Doctors and techies are clashing at digital health companies, and one start-up exec is seeking a fix. CNBC. March 5, 2021

<u>12 Little Things That Will Improve Your Health in Just One Minute.</u> Health. March 5, 2021

Dr. Sherry Pagoto discusses COVID-19 vaccine safety, efficacy. UConn Daily Campus. March 1, 2021

Body image: News 12 talks to clinical psychologist about Zoom and body dysmorphia. News12 CT. February 26, 2021

Experts: Zoom meetings could cause body image issues. CT Post. February 16, 2021

Could athlete vaccinations help America beat the pandemic? Yahoo News. December 29, 2020

How influencers are being recruited to promote the Covid-19 vaccine. VOX. December 14, 2020

Meaningful engagement key to weight-loss success in social media intervention programs. Healio. November 17, 2020

<u>Q&A: Social Media Affects Psoriasis Education, Acceptance.</u> Healio. November 4, 2020

<u>UConn Researcher Receives CDC Grant to Develop Social Media-Based Intervention to Prevent Gun</u> <u>Injury.</u> UConn Today. October 20, 2020

An Open Letter to University Leadership. Inside Higher Ed. October 15, 2020

<u>As QAnon Conspiracy Theories Draw New Believers, Scientists Take Aim at Misinformation Pandemic.</u> NewsWeek. October 14, 2020

<u>US Colleges Struggle to Balance COVID-19 With Classes.</u> Voices of America. October 7, 2020

<u>15 Things Therapists Do When They're Anxious Watching The Debates.</u> HuffPost. October 7, 2020

Coronavirus conversation: Why the pandemic matters in the 2020 election. CT Mirror. October 6, 2020

What To Do If Family Or Friends Shares Misinformation On Facebook. HuffPost. September 22, 2020

<u>Colleges vs. parties.</u> Axios. August 30, 2020

Will Shame Make Students Stop Socializing? Inside Higher Ed. August 21, 2020

<u>Higher Ed's Moment of Truth.</u> Inside Higher Ed. August 18, 2020

Screen College Students for COVID Every 2 Days, Researchers Advise. Voices of America. August 12, 2020

The class of Covid-19: can US college students really go back? Financial Times. August 5, 2020

As UConn plans for reopening in midst of coronavirus pandemic, students prepare for new college experience. Hartford Courant. July 27, 2020

<u>A novel idea: Ask students what they think about returning to campus.</u> The Hechinger Report. July 17, 2020

After Cruise Ships and Nursing Homes, Will Universities Be the Next COVID-19 Tinderboxes? TIME. July 9, 2020

# Trainings

In the 2020-2021 academic year, the Center hosted 10 free webinars. We plan to offer future webinars on a monthly basis in the upcoming year. See the upcoming webinars on our website, <u>mhealth.inchip.uconn.edu</u>.



**Representation in research: Recruiting black adults in health research.** Presented by Loneke Blackman Carr, PhD, RD. Friday, June 25th. https://youtu.be/CLqqfL3Ae78

Access to care and ethical issues in the use of mHealth for HIV prevention in LMICs: A case example from Malaysia. Presented by Roman Shrestha, PhD, MPH. Friday, March 19th. https://youtu.be/Uyga4Jn9JWQ

Introduction to social network analysis in mHealth and social media research. Presented by Ran Xu, PhD. Tuesday, February 23rd. https://youtu.be/lqWfQltFOs8

What is a "K" career development award and how to get one funded. Presented by Sherry Pagoto, PhD. Wednesday, January 27th. https://youtu.be/Pgmo5h6NcIs

**Using Rtweet and NCapture to gather Twitter data.** Presented by Molly Waring, PhD. Wednesday, December 9th. https://youtu.be/cNZmuLy8NVg

**Health tech is tech: What you should know as you transition into an industry role.** Presented by Gina Merchant, PhD. Tuesday, November 10th. https://youtu.be/\_k7XgRZfM6g

Who will use it, choose it, and pay the dues for it? Understanding stakeholder needs in healthcare. Presented by Kate Wolin, PhD. Wednesday, October 21st. https://youtu.be/uxvuFsuLrCs

How did you get that job? A career path panel. Moderated by Sherry Pagoto, PhD. Panelists included Dr. Heather Cole-Lewis, PhD, MPH, Dr. Chad Rethorst, PhD, Dr. Beth Linas, PhD, MHS, Wednesday, September 30th. Please note this event was live-only; a recording of the panel is not available.

**How to turn your science into a short video.** Presented by Matthew Schroeder and Laurie Groshon. Monday, August 31st. **https://youtu.be/xX77xUoOfE8** 

**Moving your behavioral research online.** Presented by Jess Bibeau, MA, PMP and Kaylei Arcangel, MS. Monday, July 27th. https://youtu.be/jskjtn1C4Tg

# Appearances

## **Regional/National/International Meetings**

1. Waring, M., Brown, N. P., Pagoto, S. "Undergraduate STEM education and 2020: differential impacts by gender and race", part of "Tools for Purposeful Action During and Post-Pandemic: Investigating, Addressing & Imagining Strategies for Undergraduate Women in STEM During and Post Pandemic" conference hosted by the Big Ten Academic Alliance for Advancing Undergraduate Women in STEM Working Group, Rutgers, the State University of New Jersey. Virtual. 15 Jan 2021.

2. Waring, M. "Use of Social Media in Health Research: Methods & Considerations for Observational Studies and Intervention Research" Mobile & Electronic Health ARC (ME-ARC), Boston University, Boston, MA (virtual). 19 March 2021.

3. Waring, M. "Lessons learned from the shift to remote research" Society of Behavioral Medicine (SBM) Behavioral Informatics & Technology Special Interest Group (BITSIG) Twitter chat. 25 March 2021. https://www.sbm.org/newsroom/twitter-chats/chats/lessons-learned-from-the-shift-to-remote-research

4. Idziak, P., Palacz-Poborczyk, I., Januszewicz, A., Naughton, F., Luszczynska, A., Quested, E., Hagger M. S., Pagoto SL, Robinson, S., & Kwasnicka, D. "Using Intervention Mapping to improve weight loss intervention content" [Give Me Five Minutes presentation]. EHPS 2021. 23-27 August 2021.

5. Palacz, I, Kwasnicka, D, Idziak, P, Naughton, F, Luszczynska, A, Quested, E, Hagger, M, Pagoto, S, Chamberlain, K. "What does it mean to choose health? A photo-elicitation study (2021, August). Paper presented at the European Health Psychology Society. August 2021.

6. Goetz, J.M., Pagoto, S.L., Waring, M.E., and Arroyo, K.M. (2021). Activities associated with dietary lapses occurring during conditions of stress, hunger, and satiety. Presented as a video presentation at the 42nd Annual Meeting of the Society of Behavioral Medicine, Virtual Conference.

#### **Invited Talks**

1. Xu, R. Identify contagion effects in dynamic social networks: A latent-space adjusted approach. Statistics colloguia, Department of Statistics, University of Connecticut, 2021.

2. Pagoto, S. Undergraduate STEM education in 2020: Impacts by gender and race. Invited talk for the Big 10 Academic Alliance Working Group on Advancing Undergraduate Women in STEM. Rutgers University, January, 2021.

3. Pagoto, S. Things we must keep: Growth serves us in the now and guides us as to what is next. Invited panelist at FabChange20 by the Academic of Fabulous Stuff, London, England.

# Appearances

## Invited Talks

4. Pagoto, S. Leveraging social media for health behavior change. Invited speaker at The Obesity Society Annual Conference, 2020.

5. Pagoto, S, The Impacts on STEM Student Experiences of Higher Education's response to COVID-19: Resilience and Innovation in Online Learning and STEM Progression. Invited panelist by the National Academy of Sciences and National Science Foundation. September 2020.

6. Pagoto, S. Panel to the People: Innovators and Leaders in Mental Health. Invited panelist by the Coronavirus Visualization Team. September 2020.

#### **Conference Presentations**

1. Miller, C.A., Schroeder, M.W. & Pagoto, S. A Comparison of Older Adults' Exposure to and Sharing of Health-Related Messages on Facebook by Chronic Condition Status. Interactive poster presented at the virtual PRISM Health Symposium, December 2020 (virtual).

2. Foye, Q., Horkachuck, A., Waring, M.E. Mothers' experiences with food pantries during the COVID 19 pandemic and interest in mobile food pantries. Poster presentation by Q Foye at Frontiers, Undergraduate Research Online Exhibition, University of Connecticut,22-26 March 2021, Storrs, CT. Video available at: https://www.youtube.com/watch?v=UoTYIVXxtIA&t=29

3. Rudin, L.R., Tetreault, L., Xu, R, Libby, B.A., Herrera, V., Pham, J., Piera, P., Bauer, K., Duffy, V.D., Pagoto, S.L., Waring, M.E. Where mothers get information about child nutrition and how credible they find information sources by maternal health literacy. Poster presentation by L Rudin at Frontiers, Undergraduate Research Online Exhibition, University of Connecticut,22-26 March 2021,Storrs, CT. Video available at: https://www.youtube.com/watch?v=YlnyCHqqZtl

4. Rudin, L.R., Dunn, L., Lyons, K., Livingston, J., Waring, M.E., Pescatello, L. (October 2020).Professional Exercise Recommendations for Healthy Women Who Are Pregnant: A Systematic Review. Poster presentation by LR Ruding at the Annual Meeting of the New England American College of Sports Medicine (NEACSM).15-16 October2020, virtual.

5. Pierre-Louis, IC, Bamgbade, BA, Abu, H, Waring, M.E., Lessard, D, Goldberg, RJ, Helm, RH, McManus, DD, Saczynski, JS. Sociodemographic, clinical, geriatric, and psychosocial characteristics associated with low health-related quality of life in older adults with atrial fibrillation. Poster presentation by IC Pierre-Louis at the American Publication Health Association (APHA)Annual Meeting, 24-28 October 2020, virtual.

6. Goetz, J.M., Pagoto, S.L., Waring, M.E., Arroyo, K.M. Activities associated with dietary lapses occurring during conditions of stress, hunger, and satiety. Research Spotlight (video poster) by JM Goetz at the 42nd Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine (SBM), 12-16 April 2021, virtual.

# Appearances

## **Conference Presentations**

7. Groshon, L., Schroeder, M.W., Arroyo, K.M., Goetz, J.M., & Pagoto, S. Extra, Extra, Read All About It? The Media Narrative of Health-Related Social Media Research. Research spotlight video presented at the 42nd Annual Meeting of the Society of Behavioral Medicine (SBM), 12-16 April 2021, (virtual).

8. Miller, C.A., Schroeder, M.W. & Pagoto, S. A Comparison of Older Adults' Exposure to and Sharing of Health-Related Messages on Facebook by Chronic Condition Status. Research spotlight video presented at the 42nd Annual Meeting of the Society of Behavioral Medicine (SBM), 12-16 April 2021, (virtual).

9. Gershman, H., Harris, J., Waring, M.E., Duffy, V.D. Feasibility of using a private Facebook group to promote healthy feeding practices by parents of toddlers. Research Spotlight (video poster) by H. Gershman at the 42nd Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine (SBM),12-16 April 2021, virtual.

10. Rudin, L.R., Tetreault, L., Xu, R, Libby, B.A., Herrera, V., Pham, J., Piera, P., Bauer, K., Duffy, V.D., Pagoto, S.L., Waring, M.E. Sources of Information about Child Nutrition and Perceived Credibility of Sources by Maternal Health Literacy. Research Spotlight (video poster) by L R Rudin at the 42nd Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine (SBM), 12-16 April 2021, virtual.

11. Waring, M.E., Pagoto, S.L., Rudin, L.R., Kapoor, I., Zimmer, E., Ho, C., Foye, Q., Tyson, B. Factors Associated with COVID-19 Vaccine Hesitancy among Mothers of Children 0-12 Years Old. Video poster presentation by ME Waring at the 5th Annual UConn Center for mHealth & Social Media Conference, 13-14 May 2021, Storrs, CT (virtual).

12. Idiong, C.I., Bannor, R., Pagoto, S. Prevalent themes surrounding COVID-19 and vaccinerelated disinformation the Disinformation Dozen on Twitter: A Content Analysis Video poster presented at the 5th Annual UConn Center for mHealth and Social Media Conference, Storrs, CT. 13-14 May 2021, (virtual).

13. Bannor, R., Xu, R., Waring, M.E., Pagoto, S.L. Unfriended, blocked, and reported: when and why Facebook friendships end. Video poster presentation by R Bannor at the 5th Annual UConn Center form Health & Social Media Conference, 13-14 May 2021, Storrs, CT (virtual).

14. Schroeder, M.W., Groshon, L.C., Poole, C., Goetz, J.M., Arroyo, K.M. & Pagoto, S. Preliminary Findings of a Content Analysis of a Viral Hashtag #HowlFightDepression. Poster presented at Center for Digital Health Virtual Conference: Leveraging Digital Health for the Post-Pandemic World, June 2021 (virtual).

# **Annual Conference**



The COVID-19 pandemic has made it abundantly clear how misinformation on the internet can have dire public health consequences and the important role scientists have in communicating to the public. At this two-day conference we discussed how scientists, clinicians, public health professionals, and patients can work together to counteract the infodemic. JMIR Infodemiology sponsored the Opening Keynote and Video Poster Awards. The virtual format also allowed the Center to record and publish each talk for on-demand viewing.

#### Keynotes

Dear Pandemic: Nerdy Girls Navigating the COVID-19 Overwhelm. **Alison Buttenheim, PhD** (University of Pennsylvania)

Collaborating with Patient Advocacy Groups on Social Media to Research the Long-term Health Impacts of COVID-19. **Natalie Lambert, PhD** (Indiana University)

Speak to the Wounds: (Re)coding Behavioral Health Equity & Advancing Radical Healing Among Black Males. **Wizdom Powell, PhD** (UConn Health)

COVID Mis/disinformation and Communication: Overcoming Hurdles on the Uphill Climb to Herd Immunity. **Scott Ratzan, MD, MPA, MA** (CUNY Public Health)

#### Panelists

Monica Wang, ScD, MS (Boston University) Jessica Gold, MD, MS (Wash U St. Louis) Eleanor Murray, ScD (Boston University) Eugenia South, MD, MSHP (Penn) Natalie Shook, PhD (UConn) Jasmin Tiro, PhD (University of Texas)

#### Paper Presenters

Michael P Lynch, PhD (UConn) Yuki Lama, PhD (NIH) Michael Haupt, MS (UC San Diego) David Buller, PhD (Klein Buendel) Alec Calac, BS (UC San Diego) Alexandra Kenefake, MBS (UI Chicago)

## Audience

262 Registrants from 127 Institutions, 31 US States, 21 Countries, and 6 Continents

# **Annual Conference**

#### The COVID-19 Pandemic: Media, Misinformation, and Science Communication, May 13-14, 2021

The conference also featured six oral paper presentations and 34 video posters. Attendees viewed these two-minute video posters at their leisure and participated in informal breakout discussions with the poster authors over zoom. Affiliate faculty member Roman Shrestha, MPH, PhD and JMIR Infodemiology Editor-in-Chief Tim Mackey, MAS, PhD selected seven video poster authors and attendees to receive awards; each recipient received 500 JMIR Karma credits or an invitation to publish in a JMIR journal. All video posters are available for viewing on our <u>YouTube playlist</u>.

#### JMIR Infodemiology Editor's Picks

Zoya Adeel, McMaster University, Press Before Peer Review: Tracking Media Coverage of COVID-19 Science. <u>https://youtu.be/ZF419hOCrro</u>

Christie Idiong and Richard Bannor, University of Connecticut, A Qualitative Analysis of the Disinformation Dozen on Twitter and Prevalent Themes Surrounding COVID-19 and Vaccine-Related Disinformation. <u>https://youtu.be/cZT1hUEGlfc</u>

#### Best Student Video

Samuel Mendez, Harvard University, Lessons Learned from Rapid COVID-19 Health Communication with Community Health Centers in Massachusetts. <u>https://youtu.be/R5sfg-TcZ40</u>

#### Best Videos

Molly Waring, University of Connecticut, Factors Associated with COVID-19 Vaccine Hesitancy among Mothers of Children 0-12 Years Old. <u>https://youtu.be/8y0twaYJcBQ</u>

Arcana Krishnan, University of Albany (SUNY), Documenting Disparities in Technology Access, Information-Seeking and Vaccine Hesitancy during the COVID-19 Pandemic in New York's Capital Region. <u>https://youtu.be/66gA\_kJjN-c</u>

#### Most Viewed Video

Mayank Sakhuja, University of South Carolina, Communicating online with patients during a pandemic: An analysis of Covid-19 information on outpatient clinic websites. <u>https://youtu.be/GW5NIBqhqBk</u>

#### Most Engaged Conference Attendee

Anne Oeldorf-Hirsch, University of Connecticut

## Save the Date: May 19-20, 2022 6th Annual Virtual Conference