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PAPERS AND POSTERS

- A Community-Based Approach to HIV Prevention in Rural Guatemala 1
Victoria Orrego Dunleavy, Elena Chudnovskaya, and Jazmyne Vanecia Simmons
- A Content Analysis of Health Communication Interventions Designed to Eliminate Racial and Ethnic Health Disparities 2
Carolyn Stroman, Roberta Hollander, Jae Eun Chung, Wei Sun, and Sean Upshaw
- A Simple Solution? The False Promise of Diabetes Management in Direct-to-Consumer Pharmaceutical Advertisements 3
Staci Defibaugh
- A Systematic Review of Medical Mistrust Measures 4
Lillie D. Williamson and Cabral A. Bigman
- A Transdisciplinary Framework for Designing eHealth Interventions to Support Cancer Prevention and Patient Self-Management 5
Mia Liza A. Lustria
- Adapting an Online Decision Aid to Older Cancer Patients' Needs: Effectiveness of Audiovisual and Narrative Information Provision****.# 6
Melanie de Looper, Olga Damman, Ellen Smets, Danielle Timmermans, and Julia van Weert
- An Analysis of Parents' Self-Reported Vaccine-Hesitant Beliefs 7
Jessica Hample
- Application of the Extended Parallel Processing Model to Promote HPV Vaccination among Hispanics 8
Jenna Reno and Amanda Dempsey
- Are Commercially Sponsored Health Mobile Apps Credible? The Role of Visual Attention to App Interfaces and Persuasion Knowledge 9
Anastasia G Kononova, Xiaoyu (Rachel) Zhao, Jing Yang, Eunsin Joo, Shaheen Kanthawala, and Tong Xie
- Assessing College Students' Oropharyngeal Cancer Knowledge and Screening Intentions to Develop Campus Communication and Education 10
Kimberly Walker
- Benefits Ambassadors: Leveraging Coworker Relationships to Encourage Participation in University Workplace Wellness Initiatives 11
Evan Perrault and Grace Hildenbrand
- Better be safe than sorry later!: People's Contrasting Views Regarding Medical Tests When Informed about "Overtesting" 12
Eimi Lev, Nurit Guttman, Ronen Bareket, and Amnon Lahad
- Beyond the "Angelina Effect": Celebrity Breast Cancer Disclosures' Impact on the Public's Breast Cancer Information Seeking 13
Susan M. LoRusso and Rebekah H. Nagler

Body or the Brain? Communicating the Risks of Adderall <i>Joseph McGlynn III and Sara Champlin</i>	14
Cancer Beliefs and Perceptions among a Sample of Appalachian Kentucky Residents as Compared to National HINTS Respondents <i>Robin Vanderpool, Quan Chen, Meghan Johnson, Autumn Rice, Kristin O'Leary, Lauren Shelton, and Devin Montgomery</i>	15
Cannabidiol in the News: Nature of Coverage, Inclusion of Health Effects, and Use of Exemplars <i>Holli Seitz and Barbara Kaplan</i>	16
Children as Informal Health Advocates: Implications of Intergenerational Information Seeking for Communication Privacy Management <i>Carmen Gonzalez, Beth Bollinger, Jason Yip, Laura Pina, and Carolina Nieto Ruiz</i>	17
Clickbait Headlines and Cancer News: How Streamlining Headline Content Influences Cancer-Related Knowledge and Beliefs <i>Nick Carcioppolo, Soroya Julian McFarlane, and Zoe Tian</i>	18
Collegiate Athletes' Vestedness in Perceived Concussion and Head Impact Risks <i>Bradley Adame, Jiun-Yi Tsai, Scott Ruston, Joshua S. Beaumont, Yanqin Liu, Karlee Postehar, Jessica K. Kamrath, and Steve Corman</i>	19
Communicating with Patients About Gene-Based Cancer Therapies: The State of the Research <i>Chelsea L. Ratcliff, Jingsong Zhao, Emily B. Peterson, Wen-Ying Sylvia Chou, and Kimberly A. Kaphingst</i>	20
Comparing the Results of a Longitudinal Social Norms Campaign with Results from the CDC Behavioral Risk Factor Survey Outcomes <i>Youjin Jang, Larry Hembroff, Dennis Martell, Sandi Smith, and Kami Silk</i>	21
The Comparison of the Effects of #Fitspiration and #Thinspiration Instagram Images on College Females' Sexual Behaviors <i>Thipkanok Wongphothiphan, Karikarn Chansiri, and Autumn Shafer</i>	22
Complementary Channels for Health Messaging: Latina and Vietnamese Women's Channel Preferences for Information about HPV <i>Suellen Hopfer, Samantha Garcia, and Huong Duong</i>	23
"The Confessions of a Reluctant Caregiver" Palliative Educational Program: Nursing Students' Perceptions of Drama-Based Education <i>Bradley Palocko, Ulyana Kachmar, Anna M. Kerr, Merri Biechler, and Tracy Shaub</i>	24
Construal Level, Temporal Distance, Anxiety and Uncertainty: Exploring Patient-Provider Communication in a Cross-Cultural Context <i>Hengjun Lin and Charee Thompson</i>	25

Content Analyzing the Prevalence of Windows of Susceptibility and Literacy Demand on Breast Cancer-Related Websites <i>Daniel Totzkay, Brandon Walling, Brandon Thomas, Sunyoung Park, Ashley Thompson, Molly Carmody, and Danuelle Colloway</i>	26
Cross-National Coverage of Drug Trafficking: Testing Community Structure Theory <i>Nicole Tomkiel, Rachel Mosca, Rachel Pastor, Brandon Shamy, Tristan Gibson, John C. Pollock, and Melissa Morgan</i>	27
Culture and Stigma: Understanding Stigmatizing Messages in Chinese and U.S. Online News Coverage of Schizophrenia <i>Yiyi Yang</i>	28
The Dark Side of Addiction Support Forums: Moderation of Health Stigma and Mediation of Perceived Support Availability <i>Yining Z. Malloch and Heather J. Hether</i>	29
Describing Innovation Attributes in Electronic Word-of-Mouth <i>Paige Chapman</i>	30
Design and Testing of MyPlate Video Education Materials to Communicate Healthy Food Choices to Low-Income, Minority Populations <i>Tiffany Wesley, Diane B. Francis, Diana Hamer, and Angela Johnson</i>	31
Determining the Relationship between Empathy and Burnout in Medical Students <i>Daniel Kinsey and Maria Brann</i>	32
Development of a Local Brand to Promote the Social Determinants of Health: Persuasive and Informational Message Design Approaches* <i>Susana Ramirez, Kiely Houston, Clancey Bateman, Zabrina Campos-Melendez, Erendira Estrada, Kathleen Grassi, Eliana Greenberg, Katie Johnson, Stephanie Nathan, and Raquel Perez-Zuniga</i>	33
Development of a Quantitative Measure of Family Health Communication Patterns <i>Sarah N. Thomas and Shelly R. Hovick</i>	34
#digitalhood: Engagement with Risk Content on Social Media among Black and Latino Youth <i>Robin Stevens, Amy Bleakley, Michael Hennessey, Jamie Dunaev, and Stacia Gilliard-Matthews</i>	35
Disclosing Transgender Identity to Medical Providers: A Dialectical Perspective <i>L. Brooke Friley</i>	36
Discontinuance in Fitness Tracking Apps: An Analysis from a Diffusion of Innovations Approach <i>Kristin G. Maki and Arun Vishwanath</i>	37
Do the News Media and Information Sources Influence Vaccine Confidence? A National Probability Survey of U.S. Adults <i>Maria Len-Rios, Glen Nowak, and Michael A. Cacciatore</i>	38
Do You Smoke?: Conversations about Smoking with Lung Cancer Patients <i>Mary Marshall and Cleveland Shields</i>	39

Effects of Media Exposure to Conflicting Information about Mammography: Results from a Population-Based Survey Experiment <i>Rebekah H. Nagler, Marco C. Yzer, and Alexander J. Rothman</i>	40
Evaluation of a Novel Condom Distribution and Health Communication Intervention Targeting Young African American Females <i>Diane B. Francis, Seth M. Noar, Deborah A. Fortune, and Adaora A. Adimora</i>	41
Examining an Extended Conceptualization of Partners' Reported Response Patterns in Ongoing Disclosure <i>Kate Magsamen-Conrad, Maria Checton, Maria Venetis, and Kathryn Greene</i>	42
Examining Descriptive Norms, Injunctive Norms, and Message Processing as Antecedents of Reactance to Organ Donation Messages <i>Tobias Reynolds-Tylus</i>	43
Examining the Effects of Novel Communication Methods on Recruitment of Hispanic and Asian American Women to a Breast Cancer Study <i>Katherine E Ridley-Merriweather</i>	44
Exercising for Two: The Role of Social Support in Promoting Healthy Physical Activity for Pregnant Women in the 2nd/3rd Trimester <i>Ashley J. George, Mallory Marshall, Hunter Gibbs, and Lauren Lyskoski</i>	45
Experiencing Ebola: "If I die, who will go tell their stories?" <i>Crystal Daugherty</i>	46
Exploring Family Influence on Youth Smoking: Extending the Theory of Planned Behavior <i>Xianlin Jin</i>	47
Exploring Organizational and Professional Commitment, Servant Leadership, Occupational Stress, and Humor Perspectives: How Nurses Manage <i>Brian Perna</i>	48
Exploring Parent's Perspectives of Their Child's with Type 1 Diabetes Transition to Self-Management <i>Bree E Holtz and Katharine M. Murray</i>	49
Exploring the Effectiveness of Interactive Data Visualization for Promoting HPV Vaccination among Young Females <i>Fan Yang, Susan E. Morgan, Nick Carcioppolo, and Tylor R. Harrison</i>	50
Expression in Digital Substance Use Disorder Support Groups: Change Talk and Substances Use <i>Yan Liu, Rachel Kornfield, and Prathyusha Sharma</i>	51
Factors Influencing Patients' Choice of a Physiotherapist: A Case Study of the Swiss Insurance Premium-Funded System <i>Anda Hirceaga, Elizabeth Hintz, and Evan Perrault</i>	52

Family Communication about Family Health History: Investigating Family Communication Patterns' Influence <i>Gemme Campbell, Emily Rauscher, and Jennifer Freytag</i>	53
Fertility Decision-Making in Young Adult Cancer Survivors and Their Romantic Partners <i>Nicholas T. Iannarino and Angela L. Palmer-Wackerly</i>	54
Fitness Tracker Technology: Understanding if Incentives Increase Sharing and with Whom <i>Mary Michelle Coleman-Walsh, and Jennifer Allen Catellier</i>	55
Fitness Trackers and the Theory of Planned Behavior: Understanding the Connection between Intentions and Behaviors <i>Jennifer Allen Catellier and Mary Michelle Coleman-Walsh</i>	56
The Food Environment as a Communicative Context: Students' Choice of Snacks and Beverages on Campus <i>Eulàlia P. Abril</i>	57
Food Labels, Acculturation, Poverty, and Diet among Latinos: Evidence for Communication as a Mechanism for Segmented Assimilation <i>Machelle Wilson, Susana Ramirez, Joanne Arsenault, and Lisa Soederberg Miller</i>	58
Framing of 21st Century Cures Act in U.S. Newspapers <i>Seseer MouDanha</i>	59
The Framing of Pre-Exposure Prophylaxis (PrEP) for HIV Prevention in U.S. Mainstream and LGBTQ Media <i>Alberto Orellana-Campos</i>	60
General Attitudes and Stigma toward Depression as Predictors of College Students' Communication Apprehension with Providers <i>Ashley Reynolds</i>	61
Getting College Students to Sleep: Gain vs. Loss Frame Analysis <i>Amnee Elkhaid and Joseph McGlynn</i>	62
Healthifying Games: Research on the Persuasive Effects of Virtual-World Health Campaigns <i>Hart Blanton and Christopher N. Burrows</i>	63
How Do Doctors and Nurses-To-Be View Extended Breastfeeding? An Exploratory Study <i>Jie Zhuang, Joanne Goldbort, Rose Hitt, Michael Gonzalez, and Alyssa Rodriguez</i>	64
How Emerging Adults Talk about Their Parents' Chronic Health Issues: Comparing Mental and Physical Illnesses <i>Charee Thompson, Nicole Hudak, Alexandra Lippert, and Kate Blackburn</i>	65
How Fear Appeals Change Health Attitudes and Behavioral Intentions in the Context of Haze Pollution <i>Luye Bao</i>	66

How Pediatricians Talk about Antibiotics when Prescribing: Implications for Antibiotic Stewardship <i>Kasey Foley, Erina MacGeorge, Emily Caldes, Rachel Reymann, Nicole Hackman, and Amber Worthington</i>	67
How to Make People Move: The Role of Need for Autonomy in Explaining Customization Effects in Mobile Health Apps <i>Nadine Bol, Nina Margareta Høie, Minh Hao Nguyen, and Eline Suzanne Smit</i>	68
I (Don't) Get Tested So I Can Hook Up: An Integrated Model-Based Investigation of Clustered Sexual Health Behaviors <i>Jacob Matig, Minhao Dai, and Kevin Wombacher</i>	69
"I don't want people to be resentful": Exploring Patients' Disclosure Decisions When Seeking Recurring Social Support <i>Heather L. Voorhees and Angela Palmer-Wackerly</i>	70
"I have a specific plan for ways I might safely intervene as a bystander": Developing and Testing a Successful Intervention <i>Kate Magsamen-Conrad and Jordan Conrad</i>	71
I Learn Haze from WeChat: The Mediating Effects of Health Information Seeking from WeChat in Predicting Protective Health Behaviors <i>Qinghua Yang and Shiwen Wu</i>	72
"I'm not a doctor, but...": How Lay Individuals Construct an Epistemology of Another's Illness <i>Charee M. Thompson and Sarah Parsloe</i>	73
Imagine Your Future: Testing the Role of Imagination, Self-Referencing, and Message Framing in Obesity Prevention Messages <i>John G. Wirtz and Yelin Ren</i>	74
The Impact of Processing Fluency on Parent-Directed Messaging About College Student Mental Health <i>Mackenzie Greenwell</i>	75
Improving Messaging to Promote Organized Disposal & Prevent Abuse of Prescription Drugs in Appalachia: Community Perspectives <i>Donald W. Helme, Mark Wolfson, Kathleen L. Egan, Kaylee Lukacena, Elizabeth Spencer, and Lauren Roberson</i>	76
Improving Pharmacy Student Teamwork Communication through Growth Mindset and Critical Communication Education <i>Elizabeth Jeter, Julie Cooper and Courtney Bradley</i>	77
Improving Student Knowledge and Perceptions of Primary Care Providers at Campus Health Centers <i>Evan Perrault</i>	78

Increasing Perceptions of Tailoring of Online Cancer Resources on Patient and Caregivers' Treatment Decision-Making <i>Elizabeth Flood-Grady, Samantha R. Paige, Jordan Neil, Donghee Lee, Rachel Damini, Deaven Freed and Janice L. Krieger</i>	79
The Influence of Misconceptions about Antibiotic Utility and Perceived Risk on Antibiotic-Seeking Behaviors <i>Emily P. Caldes, Amber K. Worthington, and Erina L. MacGeorge</i>	80
The Influence of Patient Identification and Narrative Transportation on Intentions to Participate in Cancer Research <i>Jordan M. Neil, Aisling Gough, Frank Kee, Thomas J. George, Jr., Jeffrey Pufahl, and Janice L. Krieger</i>	81
Influence of the Healthy Highway Nutrition Education Program on Healthy Eating with Social Cognitive Theory Framework <i>Taejin Jung</i>	82
Influences of Media-Related Parenting on Teens with Prediabetes and Type 2 Diabetes: A Comparison by Disease Stage and Gender <i>Deborah Neffa Creech</i>	83
Keeping Up with eHealth Literacy: An Application of the Transactional Model of Communication <i>Samantha Paige</i>	84
Know What's at Stake Before You Vape: The Design, Implementation, and Evaluation of a Campus-wide e-Cigarette Education Campaign <i>Rachael A. Record</i>	85
Legitimacy Tensions and Student Perceptions of the "Realness" of University Health Providers and Care <i>Heather J. Carmack, Veronica Whalen Jones, and Katherine L. Harville</i>	86
Lung Cancer Screening Awareness: The Thoughts and Beliefs of Family and Friends of Individuals at Risk for Developing Lung Cancer <i>Jeannette Sutton, Jamie Studts, and Will Silberman</i>	87
The Making of an Addiction: Examining Determinants of Prescription Stimulant Abuse among College Students <i>Jennifer Lueck, Morgan Knobloch, and Michael Stephenson</i>	88
Measuring Sexual Stigma: Exploratory Factor Analysis in Search of an Acceptable Scale for Sub-Saharan Africa <i>Paul L Sparks</i>	89
Message Content and Framing: Evaluating Motivators for Male Colorectal Cancer Screening in Appalachian Kentucky <i>Melinda (Mindy) Rogers, Ashley Teague, and Tom Collins</i>	90
Message-Elicited Brain Response Moderates the Relationship between Exogenous Exposure to Anti-Smoking Messages and Message Recall <i>Elissa C. Kranzler, Ralf Schmaelzle, Robert C. Hornik, and Emily B. Falk</i>	91

Metaphors Matter <i>Tiffany Hecklinski and Janet Panoch</i>	92
Modeling Parental Influence on Teenagers' Food Consumption: Data from the Family Life, Activity, Sun, Health, and Eating Survey <i>Zexin (Marsha) Ma and Dale Hample</i>	93
Multiple Sclerosis Diagnoses: Applying the Theory of Motivated Information Management <i>Art Ramirez and Janelle Applequist</i>	94
Nationwide Newspaper Coverage of Opioid Abuse: Testing Community Structure Theory <i>Brittany Cruz, Sabrina Garcia, Chris Moncada, Morgan Tarrant, John C. Pollock, and Nolan DeVoe</i>	95
Natural Cigarette Advertising: Perceived Effectiveness by Smoker Type <i>Stefanie Gratale and Angeline Sangalang</i>	96
Negotiating Health Concerns during the Blended Family Planning Process: A Problematic Integration Theory Perspective <i>Wesley T. Durham and Erin E. Gilles</i>	97
#notokay: Using Information Science Tools to Investigate Disclosure about a Concealable Stigmatized Identity on Twitter <i>Roma Subramanian, Andrea M. Weare, and Jeremy H. Lipschultz</i>	98
Nutrition Facts and Consumption Acts: Testing the Effects of Calorie Label Design on Consumers' Decision-Making Processes <i>Lauren Bayliss</i>	99
Obesity is More than Physical: An Extension of the Risk Perception Attitude Framework among a Sample of Appalachian Young Adults <i>Victoria Ledford and Jill Underhill</i>	100
Oncology Nurse Communication Training Needs across the Cancer Continuum <i>Elaine Wittenberg, Betty Ferrell, and Haley Buller</i>	101
Pediatric Residents' Perceptions of Medical Uncertainty and Communication During Graduate Medical Education <i>Anna M. Kerr and Charee M. Thompson</i>	102
Physician-Patient Communication in Improving Influenza Awareness and Motivation for Vaccination <i>Noviyanti Noviyanti, Rebecca Tomasek, Elena Aronson, and Nancy Muturi</i>	103
#PlasticSurgery on Instagram: A Positioning Analysis <i>Sung-Yeon Park and Claire Y. Joa</i>	104
Predictors for Perceived Stigma towards Online Help-Seeking for Depression among Young Adults based on Theory of Planned Behavior <i>Ting Li and Nancy Muturi</i>	105

Proactive Parenting, Parent-Child Communication, and Risky Online Behavior Among Adolescents <i>Rachel Young</i>	106
Promoting Patients' Participation in Medical Decision Making by Textual and Audiovisual Health Information <i>Elena Link, Eva Baumann, and Martina Albrecht</i>	107
Raising Nursing Students' Awareness of Cultural and Linguistic Divides: A Role-Reversal Exercise Using Multilingual Scenarios <i>Warren Bareiss, Andrew Beer, and Tess Ellis</i>	108
Research on Diversity of Online Support Network and Received Social Support <i>Yi Yan and Jingbo Meng</i>	109
Rethinking the Role of Engagement and Enjoyment: The Effect of a Digital Health Game on Indoor Tanning Attitude and Intention <i>Soyoon Kim, Chun Zhou, Nick Carcioppolo, and Clay Ewing</i>	110
The Role of Identification and Social Impact Games as Persuasive Instruments for Attitudinal Change among Vulnerable Populations <i>Jessica Wendorf Muhamad and Tyler R. Harrison</i>	111
The Role of Organizations in Communicating Advanced Information about the Risks of Rabies in the Philippines <i>Jemimah Kayla J. Abad, Loren Marciana B. Diwa, Carl Jasper L. Yu, and Jan Michael Alexandre C. Bernadas</i>	112
The Roles of Masculinity and Male Gender Identification in Smokeless Tobacco: A Novel Approach for Targeting Prevention Efforts <i>Donald W. Helme, Hannah K. Knudsen, and Carrie Oser</i>	113
Screen Time, Perceptions towards Food Advertising, and Consumption of Energy Dense Nutrient Poor (EDNP) Foods among U.S. Adolescents <i>Chan L. Thai and April Oh</i>	114
See Design, Hear Design: Advancing Health Communication with Design Thinking <i>Lindsey Fay and Kevin Real</i>	115
"Shall I swallow or inject my chemotherapy?" Determinants of Treatment Preference, Communication, and Decision-Making for Patients <i>Aurora Occa, Olivia Pagani, Philippe Groux, Simona Di Lascio, Lorenzo Rossi, Patrizia Froesch, Nicoletta Maestrini, Maria Lagomarsino, and L. Suzanne Suggs</i>	116
Sharing Widely or Spreading Fast: How Linguistic and Content Characteristics Affect Health Message Diffusion <i>Xun Zhu and Youllee Kim</i>	117
Should or Could? Testing the Use of Different Message Frames in Online Computer-Tailored Alcohol Reduction Communication <i>Maria B. Altendorf, Eline S. Smit, Julia C. M. van Weert, and Ciska Hoving</i>	118

Sibling Involvement in End-of-Life Health Decisions for Aging Parents <i>Nicholas T. Iannarino and Allison M. Scott</i>	119
Skinny Talk: Body Shaming and Objectification Among Thin Women <i>Rachel Lloyd and Ryan Crace</i>	120
Sociocultural Understanding of Miscarriages, Stillbirth and Infant Loss: A Study of Nigerian Women <i>Adebanke Adebayo</i>	121
Speaking Up: Predicting Interprofessional Communication Behaviors of Nursing Students <i>Heather Fasano, Elizabeth D. Dalton, and Laura Miller</i>	122
Supportive Weight Management Communication for Middle-Aged and Older Adults: A Comparison of Message Features <i>Elizabeth B. Jones and Susan L. Kline</i>	123
Surprised?: An Emotion-based Model of Anecdotal Evidence Information Seeking*** <i>Wei Peng and Qian Huang</i>	124
Surrogate Seeking at Cancer Information Services: Influence of Cancer Type and Stage <i>Doreen Reifegerste, Fabian Czerwinski, Magdalena Rosset, Eva Baumann, Susanne Weg-Remers, and Evelyn Kludt</i>	125
Tailoring Online Health Information: Explaining Mode Tailoring Effects on Website Attitude and Information Recall <i>Minh Hao Nguyen</i>	126
Testing Competing Explanations for Graphic Warning Label Effects among Adult Smokers and Non-Smoking Youth <i>Chris Skurka, Sahara Byrne, Julie Davydova, Deena Kemp, and Jeff Niederdeppe</i>	127
Text and Illustration: Information Processing on People's Uncertainty and Attitudes about Emerging Technology <i>Qian Huang and Wei Peng</i>	128
Time Frame Effects on Salient Beliefs about Exercise Behaviors <i>Lauren Gray</i>	129
Toward an Integrative Framework on Message Framing Effects <i>Xiaoli Nan, Kelly Daily, and Yan Qin</i>	130
Triadic Communication Between Physicians, Patients, and HSOs: Health Care Partnership Model in Crohn's Disease Communication <i>Farah Latif</i>	131
Trust in Physicians Predicts Patient Online Community Use in Women with Endometriosis <i>Allyson C. Bontempo, Katherine Ognyanova, and Lisa Mikesell</i>	132

Trying to Eat Healthy on College Campuses: Examining Nutrition and Health Management Challenges among College Students <i>Joshua Santiago</i>	133
Uncertainty in the Process of Communicating Cancer-Related Genetic and Genomic Information with Patients and the Public** <i>Soo Jung Hong, Wen-Ying Sylvia Chou, Emily Peterson, Jingsong Zhao, and Kimberly A. Kaphingst</i>	134
Understanding Society's Role: News Framing's Impact on Attribution of Responsibility for Depression, Obesity, and Drug Abuse <i>Stacie Meihaus Jankowski</i>	135
Understanding the Memorable Messages Parents of Children with Vascular Birthmarks Receive <i>Anna M. Kerr and Charee M. Thompson</i>	136
Understanding the Process and Perceptions of External Message Development within a Government Health Agency <i>Katherine Hyatt Hawkins</i>	137
Using a Simulation Game to Teach Registered Dietitians More Effective Communication Styles in the Acute Healthcare Setting <i>Mary Dean Coleman-Kelly and Robert V. Miller</i>	138
What Difference Does a Platform Make? Online Discussions of Inflammatory Bowel Disease Stigma and Support <i>Jacob Rohde</i>	139
What Does the Doctor Say? An Initial Content Analysis of Physician Generated Plans for Conversations about End-of-Life Care <i>Jessica Russell and Karly Quaack</i>	140
What Predicts Recall of Medical Information in Newly Diagnosed Cancer Patients? <i>Minh Hao Nguyen, Ellen Smets, Nadine Bol, Eugene Loos, and Julia van Weert</i>	141
"When you hear the word cancer...?": Appalachian Kentuckians' Powerful Narratives to Inform Future Cancer Communication Efforts <i>Meghan F. Johnson, Autumn Rice, Kristin O'Leary, Devin Montgomery, Lauren Shelton, and Robin C. Vanderpool</i>	142
Which Narrative Elements Persuade in Weight Loss Stories: Focus Groups with Philadelphia Females Seeking to Lose Weight <i>Abby Mayer and Hyunmin Lee</i>	143
Why Do People Keep Using "KEEP": A Qualitative Study on Usage of Smartphone Fitness Application and Physical Adherence <i>Sumin Fang</i>	144
"Why don't you just leave?": Intimate Partner Violence Survivors' Perceptions of Social Support <i>Kaylee M. Lukacena</i>	145

“Wild and Daring” or “Gross and Weird”? An Elicitation Survey of Adolescents’ Perceptions of e-Cigarette Use and Peer Users 146
Allyson C. Volinsky, Angeline Sangalang, Qinghua Yang, and Robert C. Hornik

Windows of Susceptibility: Pediatric & Caregivers Perspectives on Environmental Risk Factors for Breast Cancer 147
Madalyn Mulroy, Kami Silk, Sandi Smith, Brandon Walling, and Brandon Thomas

Working with Dental Professionals to Prevent Crystal Methamphetamine (“Meth”) Use in Rural Idaho Teens: A Qualitative Study 148
Margie R. Skeer and Jennifer Towers

PANELS

African-American Perspectives on End of Life Communication: Gaps and Hopes 149
Wei Sun, Tamara Owens, Finie Richardson, Colin Campbell, Sean Upshaw, and Annette Madlock Gattison

Perceived Effectiveness Ratings of Health Messages: Useful or Overrated? 150
Marco Yzer, Seth M. Noar, Daniel J. O’Keefe, Lucy Popova, and Joseph N. Cappella

The Role of Communication and Information Science in Addressing Cervical Cancer Prevention and Screening in Vulnerable Populations 151
Heather M. Brandt, Elisia L. Cohen, Xiaoli Nan, Robin C. Vanderpool, and Katharine J. Head

Rural Health Communication Research in the 21st Century 152
Melinda Krakow, Janice Krieger, Jakob D. Jensen, Heather M. Brandt, Susana Ramirez, Meghan Johnson, and Robin C. Vanderpool

* Top Poster Award

** Top Early Career Scholar Award

*** Top Student Paper Award

**** Top Conference Paper Award

Harrington Award

A Community-Based Approach to HIV Prevention in Rural Guatemala

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Background: HIV is one of the primary causes of death in Guatemala. HIV transmission rates are nearly three times higher among the indigenous Mayan population than non-indigenous Guatemalans. Increased poverty (World Bank, 2014), poor access to treatment, low literacy, risky sexual behaviors, and lack of Spanish language use (Taylor, Hembling, & Bertrand, 2012; USAID, 2010) are contributors to the HIV disparity among indigenous Guatemalans. Additionally, indigenous Guatemalans have lower levels of HIV knowledge and limited access to testing. A USAID survey found 75% of indigenous females and 92% of males had never heard of HIV, and merely 5% reported having a prior HIV test (Taylor et al., 2012). Taken together, these factors create a unique HIV risk among indigenous Maya, necessitating the development and evaluation of a culturally specific empowerment-based risk-reduction intervention.

Our 2014 formative research study revealed additional factors that increased indigenous Mayan's susceptibility to reproductive health problems including machismo (male dominance), lack of formal education, low income resources, high incidence of spousal abuse that is culturally tolerated, and societal attitudes of denial and stigmatization of AIDS. From these findings, a culturally sensitive HIV campaign plan was developed, guided by community-based participatory research approach and the Health Belief Model. Method: To confirm prior research, data was collected in August 2015 through (1) rapid assessment survey (RAS) and (2) qualitative interviews. Two hundred heterosexual young adults living in Santiago Atitlán ($M = 23$; 49% males, 47% females, 4% n/a) completed surveys in public locations in Santiago. The RAS contained 20 close-ended questions concerning HIV transmission, stigma surrounding people living with HIV/AIDS (PLHIV), and attitudes toward HIV testing and condom use for HIV prevention. Furthermore, 50 qualitative interviews were conducted with heterosexual young adults; 49 were analyzed (49% female, 51% male), as one could not be transcribed.

Results and Conclusions: Findings of the current study confirmed saturation of previous formative research findings (surrounding perceived barriers, risk, and stigma) and advanced the progress of the HIV prevention campaign for the Mayan community. The first step in HIV prevention is documenting HIV status. To date rural communities, like Santiago Atitlán, lack resources for such surveillance. Our goal is to bridge this gap in health disparity by partnering with the Guatemalan Ministry of Public Health and Social Welfare (MSPAS) to carry out HIV prevention and health promotion in this hard to reach indigenous community. We have worked with the local branch of MSPAS in Santiago and are the first researchers to empirically study prevention perceptions and behaviors in a culturally sensitive manner. Our goal is to continue documenting risk, prevalence, and to heighten condom use and HIV testing uptake. Our campaign plan and subsequent implementation is an example of a culturally sensitive and grassroots collaboration prototype that can be utilized in similar surrounding lake communities. We have built and will continue to enhance capacity in the Atitlán community through our engagement with the local youth and community organizations to help the local population recognize its own capability to respond to HIV risk reduction.

A Content Analysis of Health Communication Interventions Designed to Eliminate Racial and Ethnic Health Disparities

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Health communication scholars have long been associated with the quest to reduce health disparities (Healthy People 2020, Institute of Medicine, 2002, Niederdeppe, Bigman, Gonzales, & Gollust, 2013). In the field of communication, two journals, *The Journal of Health Communication* and *Health Communication* have assumed a key role in exploring and providing strategies to address health disparities. Given the opportunity for health communication to have an even greater role in eliminating disparities, the present research (1) analyzes health communication interventions geared towards eliminating racial and ethnic health disparities and published in the two journals during the past ten years, and (2) offers recommendations regarding how the field might effectively address such disparities in the future.

Methodology:

We first conducted a search of all articles appearing in *The Journal of Health Communication* and *Health Communication* pertaining to health communication and African Americans and Hispanics from 2008-2017. Coding categories included including health topic, health disparities mentioned, participant characteristics, setting, research design, and outcomes.

Preliminary Results:

During the 10-year span, *The Journal of Health Communication* and *Health Communication* published over 100 articles that examined communication and African Americans and Hispanic Americans from 2008 – 2017. Cancer (including breast, prostate, cervical) was the most frequently cited health topic; other chronic diseases (e.g., diabetes), sexual and reproductive health, obesity, physical activity, and smoking as a risk factor were also featured.

Health disparities were mentioned fairly frequently, as was more broadly the role of culture in health. Articles explored barriers to communication with the goal of improving communication and interventions, and ultimately improving health. Adults were the most typical participants/respondents; adolescents and college-aged individuals were less frequently included.

Conclusion and Future Directions:

The results of this review are encouraging given the number of articles focusing on improving African Americans and Hispanics' health and eliminating health disparities. However, it is clear from this review that more can be done. Therefore, it is suggested that when developing interventions geared toward the elimination of health disparities, health communication scholars (1) examine other groups (e.g., children and adolescents) and other settings, such as schools and the workplace; (additional health issues and a focus specifically on preventive health; and (2) use additional innovative strategies to reach African Americans and Hispanic Americans. Also, we must note that recommendations made years ago by Freimuth and Quinn (2004) and Resnicow and Braithwaite (1999) are still relevant today: in order to help in the elimination of health disparities, health communication scholars must place greater emphasis on the role of culture and social determinants in health and “reflect the cultural, social, environmental and historical factors that affect health for a minority community.”

Footnote:

1. Additional articles will be coded when the latest 2017 journals have been published.

A Simple Solution? The False Promise of Diabetes Management in Direct-to-Consumer Pharmaceutical Advertisements

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Direct-to-consumer advertisements (DCTA) have become a prominent means of health information dissemination in the US. With approximately 80 ads airing every hour (Spiegel, 2009), “the average TV viewer watches as many 9 drug ads a day, totaling 16 hours per year, which far exceeds the amount of time the average individual spends with a primary care physician” (Ventola 2011: 671). It is not surprising, then, that these advertisements have influenced behavior in the form of patients requesting specific care or medication from their providers (Murray et al., 2004), making them not just advertisements for a product, but a source of health information designed for public consumption. In this presentation, I analyze advertisements for diabetes medications and argue that they present a false picture of this chronic illness, which could have detrimental effects on patients.

Diabetes is a complex illness that requires monitoring and behavioral change including healthy eating, exercising, and monitoring of blood glucose levels in addition to medication. The American Diabetes Association (2017) states that for some people, diet and exercise alone are enough to manage diabetes (prioritizing healthy living) but for some medication is also needed (suggesting this is optionally required for treatment). However, the way that diabetes medication is marketed to the public presents just the opposite prioritization, suggesting that medication alone is the answer.

In this presentation, I analyze 10 televised DCTAs for diabetes medications. Using discourse analytic methods, I show that some ads, while mentioning the role of diet and exercise, minimize this aspect of care through discursive means. This includes the use of vague rather than specific lexical choices and syntactic structures that place the patient in the thematic role of experiencer rather than agent. Additionally, while some ads visually present individuals engaging in healthy behaviors, the language used in the ads makes no explicit mention of these behaviors. Half of the ads fail to even mention diet, exercise or glucose monitoring, effectively silencing the role of the individual in diabetes management, focusing specifically on the ease in which diabetes can be managed with “just one pill a day” (Januvia, 2017). In addition to analyzing the diabetes ads, I also examine four ads for other medications: two for psoriasis, and one each for treatment of acne and chronic dry eye. Despite these conditions being primarily treated with medication alone, these advertisements present the severity of the condition and the effort involved by the patient quite similarly to the ads for diabetes. This creates an equivocation of disease and treatment effort, erasing the inherent differences in disease management across these conditions.

Because DCTAs are not just advertisements but a source of health information for many viewers, I argue that an accurate portrayal of disease management is crucial. Instead, advertisements for diabetes medications neglect to differentiate the additional effort that is required to manage this condition, giving patients an inaccurate picture of their role in disease management and a false sense of personal agency, or lack thereof.

A Systematic Review of Medical Mistrust Measures

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Cabral A. Bigman, University of Illinois at Urbana-Champaign

As health communicators, we often seek to encourage positive health behaviors. For many marginalized populations, medical mistrust is cited as a barrier to engaging in healthy behaviors including organ donation (Morgan, 2006), health services utilization (Hammond, Matthews, Mohottige, Agyemang, & Corbie-Smith, 2010), and cancer screening (Thompson, Valdimarsdottir, Winkel, Jandorf, & Redd, 2004). In order to develop interventions that encourage healthy behaviors and address this barrier, we must have an understanding of medical mistrust as a construct. The current study examines how medical mistrust has been measured in order to reveal how empirical work in this area might inform health promotion efforts.

A systematic review of medical mistrust scales was conducted using four major databases: PubMed, PsychInfo, ERIC, and Mass Media and Communication. Databases were searched using the terms “medical mistrust scale” “medical mistrust” and “medical distrust.” The search returned 1595 non-duplicate citations; after inclusion and exclusion criteria was applied, 248 articles were retained for further analysis. Analysis revealed that there is little consistency in the scales used to measure medical mistrust. Most commonly, scholars use a variety of single items to assess medical mistrust. Even among the most used scales there are important differences, such as the object of mistrust (e.g., system, individual physician) and group salience (e.g., whether the mistrust is tied to group membership). Additionally, analysis revealed that the measurement of medical mistrust varies by health topic and sample population. Cancer, general health, organ and blood donation, and HIV were the most frequently examined contexts. When race was a factor, African Americans were the most studied demographic.

These results speak to the need to consider medical mistrust as a barrier in other health (e.g., mental health) and population (e.g., Arab Americans, Asian Americans) contexts. In addition, differences in the scales exist that should be considered in the context of health promotion and intervention efforts. Different scales emphasize various aspects of medical mistrust (e.g., focus on health organizations versus health personnel; mistrust generally versus mistrust from a group perspective). These nuances have research implications as correspondence in measurement is associated with more valid measures (Ajzen & Fishbein, 1977). Furthermore, many of the items assessing medical mistrust tap individuals’ perceptions of medical institutions. To the extent that framing of an issue can impact the nature of proposed solutions (Gollust, Niederdeppe, & Barry, 2013), the focus on individuals’ perceptions may, in some cases, suggest that the solution lies in changing the attitudes of marginalized populations as opposed to addressing systemic issues that have contributed to their mistrust. Ultimately, health communicators seeking to create interventions and tackle the barrier of medical mistrust should be attuned to the nuances of medical mistrust scales and choose scales that are most relevant to their particular research focus.

A Transdisciplinary Framework for Designing eHealth Interventions to Support Cancer Prevention and Patient Self-Management

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Cancer accounts for 1 in 4 deaths in the US, making it the second most common cause of death next to heart disease. It was estimated that by 2017, the US will have 1.7M new cases of cancer. Moreover, close to 4 in 10 Americans will be diagnosed with cancer during their lifetime. Almost half of cancer deaths in the US are caused by a combination of smoking, physical inactivity, excessive alcohol consumption, and poor nutrition (Siegel et al., 2017). This indicates that some cancers are preventable by targeting these key modifiable health behaviors. Clearly there is a need to develop innovative and effective behavior change interventions to prevent cancer.

Advances in web and mobile technologies have ushered in a growing repertoire of eHealth applications to support behavior change interventions and patient self-management. Web and mobile-based behavior change interventions have multiple advantages: (a) a greater variety of modalities and formats that can address different learning styles and literacy levels; (b) support for both synchronous and asynchronous communication enabling convenient scheduling of interactions and delivery of reminders and messages; (c) access to a wider selection of interactive components to help enhance user experiences and support skills development, tracking and monitoring (e.g., e-journals, simulations, games); (d) greater reach and wider access to personalized expert care and feedback, particularly for underserved and hard-to-reach groups; and (e) enhanced ability to improve dosaging and/or exposure to health campaign messages.

There are encouraging findings about the benefits of eHealth approaches over traditional methods of delivery. However, it is difficult to make any definitive conclusions about what makes eHealth interventions effective compared to standard care. Most eHealth interventions have multiple features, abbreviated reporting of which limits our ability to parse out what works and what doesn't. There is also a prevailing tendency to design eHealth interventions around the technology rather than around the use of technology to support core behavior change outcomes. There is also limited guidance on how participation and engagement in eHealth interventions can be improved particularly among those who need the most support.

To address these concerns, we propose a transdisciplinary framework for designing and evaluating eHealth interventions to support cancer prevention and patient self-management. The framework outlines a multi-dimensional strategy viewed from two perspectives: systems design as well as intervention design (Fig. 1 - <http://bit.ly/2BtQxYK>). It is guided by research, concepts and theories from multiple disciplines: health communication, information science, computer-mediated communication, human-computer interaction, psychology, and behavior science. It espouses a theory- and research-based phased approach that considers behavioral goals, end-user characteristics, sociotechnical factors, and other contextual factors impacting technology choice and the design of persuasive systems. It emphasizes the adoption of appropriate technologies to address patient information and healthcare needs – in order to optimize the cost-effective use of technology in support of the key intervention goals. Implementation of this framework requires interdisciplinary collaboration between system designers, intervention designers and subject matter specialists. This paper also presents examples and best practices based on several years of experience developing eHealth interventions.

Adapting an Online Decision Aid to Older Cancer Patients' Needs: Effectiveness of Audiovisual and Narrative Information Provision

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Cancer patients are often involved in medical decision making. However, this decision making process is more complicated for some groups than for others. Especially older patients have more problems with information recall, which in turn can result in a less informed decision (McGuire, 1996). Because making informed decisions about treatment options can be difficult, decision aids have been developed, but effectiveness among older cancer patients remains smaller than among younger cancer patients (Van Weert et al., 2016). A possible explanation for this is that information provision in decision aids is insufficiently adapted to the cognitive changes that older patients face (Peters, Diefenbach, Hess & Vastfjall, 2008). Therefore, the aim of this study was to test the effectiveness of two strategies (modality and narration style) of presenting information in decision aids among older and younger cancer patients. It was expected that both strategies would positively affect satisfaction with the information and information recall of older cancer patients, which in turn would lead to better informed decisions. Additionally, the relationship between satisfaction with the information, information recall, and informed decision making was studied. A 2 (Modality: visual vs. audiovisual) x 2 (Narration style: narrative vs. factual) x 2 (Age: <65 years vs. >65 years) experiment was conducted. Data was collected from the 5th of July till the 18th of July, 2017. Participants were 215 analogue cancer patients, i.e. people with a personal history of being diagnosed with cancer. In total, 116 participants were older than 65 years old ($M_{age} = 73.30$, $SD_{age} = 5.04$, range 65-90, 56% male) and 99 younger than 65 years old ($M_{age} = 52.76$, $SD_{age} = 9.73$, range 21-64, 27.3% male). The stimuli created for this experiment were adapted parts of a webpage derived from an existing Dutch decision aid for colorectal cancer patients, developed by The Association of Stomach, Liver and Gastro-intestinal diseases (Maag-Lever-Darm Stichting). ANOVA's and Structural Equation Modelling were carried out to analyze the data. Results revealed that audiovisual information resulted in more satisfaction with the information, better information recall and better informed decision making than visual information, for both younger and older cancer patients. In addition, we found a serial mediation effect of audiovisual information on satisfaction with the information, information recall and subsequently informed decision making, which means that the positive effect of modality on informed decision making can be explained by an increase in satisfaction with the information and, consequently, information recall. Narration style had a positive effect on satisfaction with the information, but not on recall and informed decision making. This means that narrative information resulted in more satisfaction with the information than factual information. All effects were found in both older and younger patients. This study has theoretically added value by showing a sequential mediation effect of modality on informed decision making, via satisfaction and subsequently recall. The results show opportunities for adapting decision aids to older cancer patients' needs, as our study provides guidelines for what information strategies can be effective.

An Analysis of Parents' Self-Reported Vaccine-Hesitant Beliefs

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Background: Research into the “anti-vaccination” movement has attracted attention from both the public health and health communication communities in recent years. While popular understanding of the phenomenon often focuses on individuals who outright refuse all vaccinations for their children, recent health communication and public health research has begun to view the phenomenon in terms of “vaccine hesitancy,” rather than as the “anti-vaccination/pro-vaccination” dichotomy, in recognition of the continuum of concerns and beliefs that parents hold regarding childhood vaccination. However, despite this improved understanding, most research into vaccine hesitant beliefs has used one of two methods: either asking researchers and physicians to report their own perceptions of what vaccine-hesitant parents believe, or analyzing public discourse on vaccine-hesitant message boards and websites.

Both of these approaches introduce the possibility of bias. In the first case, it can be assumed that pro-vaccination medical and public health professionals would be oriented primarily to the most extreme or inaccurate vaccine-hesitant beliefs. In the second case, it can be assumed that only the most vocal or extreme vaccine-hesitant parents would take the time to maintain websites or post their views online. This study attempts to avoid these biases and improve the understanding of vaccine hesitancy by eliciting vaccine-related beliefs from vaccine-hesitant parents directly and qualitatively analyzing those responses for common themes.

Method and Sample: Parents were recruited through Amazon’s mTurk. Vaccine-hesitant parents who have at least one child aged 16 years or younger were asked to fill out an extensive open-ended survey addressing their beliefs about childhood vaccination. The survey was accessed by 321 participants, 210 of whom met the screening requirements. Of those 210 participants, 202 parents completed the full survey. Participants’ responses were analyzed qualitatively, looking for both common and not-before-reported themes in the responses.

Results: A number of previously-identified themes were present in the responses, including concerns about autism, unknown side-effects, and the sufficiency of healthy lifestyle choices in protecting against disease. However, new themes identified included comparisons with other countries, concerns about children missing school. Additional themes were identified concerning parents’ perceived normative beliefs regarding vaccination, their understanding of the roles of “good” and “bad” parents in a child’s vaccination decisions, and their beliefs regarding the appropriate role of government in vaccination decisions. Many of the identified themes provide insights regarding possible improvements in pro-vaccination public health messaging.

Application of the Extended Parallel Processing Model to Promote HPV Vaccination among Hispanics

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Human papillomavirus (HPV) is the most common sexually transmitted infection worldwide (Center for Disease Control and Prevention [CDC], 2012). Hispanic women have the highest rates of HPV-related cervical cancer compared to all other groups in the United States (CDC, 2012). Previous research has tested the Extended Parallel Process Model (EPPM; Witte, 1994) as a theoretical framework for designing messages promoting HPV vaccination (Carciooppolo et al., 2013; Krieger & Sarge, 2013). Results demonstrate that message content (cervical cancer vs. genital warts) may differently influence parents' versus young adults' likelihood to vaccinate (cf. Krieger & Sarge, 2013). However, these messages have not been explicitly tested among a Hispanic population—a group with distinct cultural norms and values related to sexual health and healthcare decision making. The current study seeks to test the following hypotheses:

H1: Among Hispanic parents of HPV-vaccination eligible adolescents, messages focusing on HPV-related cancers will lead to higher intentions to vaccinate than messages focusing on genital warts.

H2: Among Hispanic young adults, messages focusing on genital warts will lead to higher intentions to vaccinate than messages focusing on HPV-related cancers.

Additionally, previous research on using the EPPM to design messages related to HPV vaccination has primarily focused on intention to vaccinate as the primary outcome (Fu, Bonhomme, Cooper, Joseph, & Zimet, 2014). The current study is interested in developing messages that promote the use of a previously-developed web-based intervention (CHICOS) that provides users with tailored information related to HPV vaccination. Thus, the primary outcome of interest is to stimulate information seeking behavior that will lead to an increase in the secondary outcome of intention to vaccinate. Thus, we posit the following research questions:

RQ1: Is message frame related to receivers' intention to seek HPV information via CHICOS?

RQ2: Is message frame indirectly related to receivers' intentions to seek HPV information via CHICOS through fear (RQ2a), severity (RQ2b), susceptibility (RQ2c), self-efficacy (RQ2d), or response efficacy (RQ2e)?

The current study employs a 2 x 3 mixed factorial design. Latino-American participants were recruited using Amazon Mechanical Turk including 332 parents of HPV-vaccine eligible adolescents (ages 11-17) and 461 HPV-vaccine eligible young adults (ages 18-26). Participants were randomly assigned to either a cancer, genital warts, or control message group. They completed pre- and post-test surveys to measure intention to vaccinate and intention to seek HPV information via CHICOS. Additionally, items measuring mediating variables identified in the EPPM included fear, susceptibility, severity, self-efficacy, and response efficacy (adapted from Witte, 2000). Data analysis is ongoing and includes analysis of variance used to examine differences between groups (H1-2). Multi-step multiple-mediation analyses will be used to examine the relationship between message content, intention to vaccinate, and intention to seek HPV information (RQ1-2).

Outcomes of the current study will contribute to the extant literature on application of the EPPM framework—specifically as it relates to HPV vaccination. Additionally, the specific outcomes of the current study will be used to develop a future campaign to promote CHICOS, which aims to increase HPV vaccination about Latino-Americans.

Are Commercially Sponsored Health Mobile Apps Credible? The Role of Visual Attention to App Interfaces and Persuasion Knowledge

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Although health information is personal and confidential, newest health communication technology puts it at risk of privacy invasion. Smartphone users choose from over 165,000 health mobile applications (apps) to self-manage day-to-day wellness and illness. Users are often asked to provide personal information to access free health apps. Personal information may be sold to third parties (e.g., marketing and analytic agencies) for interactive and personalized promotions. Commercial companies sponsor and create their own, branded, health apps as part of mobile marketing strategies. For example, BabyCenter pregnancy-tracking app, supported by Johnson & Johnson's, has been in the center of the U.S. Senate Commerce Committee's investigation pertaining to selling personal data to advertisers. The app still successfully functions and collects health information from expecting mothers and unborn children.

While policies to regulate health app market are in progress, smartphone users should be responsible for recognizing marketing intent and possible personal information leaking. This study merges theoretical perspectives of persuasion knowledge and e-literacy to explore effects of sponsorship and personal information sharing cues on health app credibility judgments. Sponsor identification (logo) and information sharing requirement (signing up with email/social media) are hypothesized to elicit poor credibility judgments (H1 and H2), especially at greater level of participant's persuasion knowledge (H3). We use eye tracking to explore effects of sponsorship (RQ1), information sharing (RQ2), and persuasion knowledge (RQ3) on visual attention allocation (total fixation duration) to app interfaces and test if visual attention mediates effects on credibility (RQ4).

Method

Midwestern university students ($N = 141$; 68% female; Median age = 21; 76% junior/senior; 63% white) participated in a 2 (sponsor's identification: logo vs. no logo) \times 2 (personal information sharing: sign-up required vs. no sign-up required) \times 5 (app repetition) mixed factorial experiment. Each participant viewed 10 app interfaces pretested for health issue relevance. Five apps had sponsor's logo (pretested for brand familiarity, involvement, and brand-issue congruency) and other five apps did not. Seventy participants saw the requirement to sign up for each app with email/social media; other 71 participants did not see it (Figure 1). Tobii Pro TX300 screen-based eye tracker was used to measure fixation duration. Persuasion knowledge was assessed before procedure. Perceived credibility was measured after viewing each app.

Results Summary

H1: Participants rated sponsored apps credibility ($M = 4.84$) higher than credibility of non-sponsored apps ($M = 4.54$), $F(1, 96) = 3.73$, $p = .056$, partial eta squared = .04.

H3: Sponsored apps were perceived to be more credible by participants with greater persuasion knowledge, $r(126) = .15$, $p = .087$, $F(1, 96) = 7.72$, $p < .01$, partial eta squared = .07.

RQ3: Participants with greater persuasion knowledge indicated lower total fixation duration when reading non-sponsored app description, $r(129) = -.23$, $p = .008$, than sponsored app description, $r(129) = -.17$, $p = .056$; $F(8, 1008) = 3.89$, $p < .01$, partial eta squared = .03.

Assessing College Students' Oropharyngeal Cancer Knowledge and Screening Intentions to Develop Campus Communication and Education

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Background: The past decade has witnessed a significant increase in the number of oropharyngeal cancers diagnosed among younger people. As a result, adults under 40 years of age are now the fastest growing population of new oropharyngeal cancer patients. The rise in oropharyngeal cancers among the younger population is associated with the human papillomavirus (HPV), for which college-age men and women are at greatest risk for infection. Although college students are a high-risk population for oropharyngeal cancer due to HPV infection resulting from high frequency of sexual activity, multiple sexual partners, and unprotected oral sex, there has been little study of this populations' awareness of oropharyngeal cancer and examination for detecting it. Oropharyngeal cancer is largely preventable with proper lifestyle behaviors, and educating them about the risk of oropharyngeal cancer now gives them ability to control their own health to prevent the cancer from occurring. The purpose of this pilot study was to assess college students' oropharyngeal cancer knowledge, HPV knowledge, and intentions to have an oropharyngeal cancer examination. Additionally, under the framework of cognitive and heuristic models of decision making, the study aimed to determine the cognitive and affective predictors of intentions to have an oral cancer examination. Answers to these questions will be used to develop targeted educational programming about oropharyngeal cancer that can be delivered on college campuses at freshman orientations and social clubs. Methods: Two-hundred sixteen baccalaureate students enrolled in non-health majors from a large southwestern university were surveyed. Survey measures included oral cancer knowledge, HPV knowledge, awareness of oral cancer examination procedures, intentions to have an oral cancer examination, emotions toward having an oral cancer examination, and demographic variables. Descriptive statistics were calculated on all variables and multiple regression analysis was conducted to determine predictors of intentions to have an examination. Results: Results indicated little knowledge about the signs, symptoms and risk factors of oropharyngeal cancer, especially in regard to HPV. Results also indicated that most were unaware of an oral cancer examination, did not understand the purpose of it, and could not affirm they had received one or had one explained to them by a dentist. Additionally, regression analysis indicated knowledge of oropharyngeal cancer and negative emotions toward having an examination were independent predictors of intentions to have an oropharyngeal cancer examination, confirming current behavioral theories that postulate rational decisions require collaboration from both cognitive and affective systems. Conclusions: Tailored messages to college students are needed that communicate the growing incidence of oropharyngeal cancer among young people and its risk factors, especially that of HPV. Messages concerning the ease and availability of oral cancer screening and its importance in early diagnosis are also needed. Last, messages aimed at increasing screening uptake need to communicate knowledge of oropharyngeal cancer and decrease negative emotions toward having an examination. Recommendations for tailored communications and strategies for implementing education about oropharyngeal cancer on campuses are given.

Benefits Ambassadors: Leveraging Coworker Relationships to Encourage Participation in University Workplace Wellness Initiatives

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Today many organizations have wellness champion programs, which consist of a collection of employees who aim to improve overall employee wellness as part of an organizational health initiative. Wellness champions provide social support and awareness about organization-wide initiatives, and encourage healthy behaviors at work (Seaverson, 2015; Wieneke et al., 2016). Universities are among the organizations with such programs (Koster, 2014). However, universities are distinct from other organizations because of the diversity of their employee pools, especially in regard to their varying education levels. A new program – in its second year – entitled “Benefits Ambassadors” at a large Midwestern university has volunteer faculty or staff from individual departments serving as liaisons to inform their departments about university benefits and wellness initiatives. These ambassadors also attempt to persuade members of their department to participate in activities to improve their overall wellness. While wellness champion programs focus solely on health, the Benefits Ambassadors program goes one step further by incorporating all employee benefits (e.g., financial literacy, paid sick leave, retirement planning...) in addition to health and wellness.

The current study will evaluate potential barriers that Benefits Ambassadors may face in leading to meaningful changes within their units. The evaluation will be guided by Rogers’ (2003) Diffusion of Innovations Theory, which supports interpersonal communication as an effective channel for disseminating new ideas throughout a social system. Benefits Ambassadors take the form of opinion leaders; members of the system who have the ability to successfully persuade others to participate in the initiative and model ideal behavior.

Three sources of data – which are already collected – will be evaluated and triangulated prior to this April conference. The first data set is a survey of open-ended questions completed by the 40 incoming Benefits Ambassadors. They were asked about challenges they expect to encounter in their positions, suggestions for empowering their peers and promoting health, and their level of confidence in motivating coworkers. The second data set is a survey completed by about 250 employees and retirees examining their understanding of benefits information, how they prefer to receive human resources related information, their opinions and knowledge of the onsite employee wellness center, and perceptions of their own health. The third data source is a semi-structured interview with the university’s Director of Benefits that aimed to understand previous successes and challenges of the Benefits Ambassadors program. Little scholarly research has focused on the impact of peer influence networks on the success of workplace wellness and benefits programs, especially at universities. Findings will provide insight into the challenges and opportunities faced for these interpersonal influencers, and evaluate ways their efforts could be improved and amplified to lead to positive changes among their coworkers.

"Better be safe than sorry later!": People's Contrasting Views Regarding Medical Tests When Informed about "Overtesting"

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Background

There is a new challenge to communication initiatives about medical tests that traditionally promoted their benefits as a means for early detection of diseases. Critics call for a more discriminate use of medical tests because they might cause physiological or psychological harm and refer to their wide use as 'overtesting'. This poses a complex challenge on how to communicate this to the members of the public who need to decide about recommendations regarding medical tests. These decisions are made in an environment saturated with public health messages emphasizing the advantages of early detection of various diseases, including cancer. Thus, an important communication challenge is to provide people with information about the complexity of medical tests so that they can make informed decisions. This raises the question what would people think when presented with the information that tests they thought would protect them might be harmful?

Methods

The study employed semi-structured interviews to learn about the perspective of people from the general public and their views and concerns after being informed about the "overtesting" and possible risks or negative outcomes from medical tests. Participants were shown a short informative video and were asked about the notion of overtesting after they heard the explanation about it and why it occurs, what they would like to know more about medical tests and who should decide about taking them. Fifty personal interviews were conducted with members of the Israeli public ages 30-55 years. This population was chosen as a first stage in a larger study, to enable learning about the views of people who are considered to be relatively young but who might begin feeling the pressure to conduct screening tests with relatively high literacy skills. The analysis identified contrasting views regarding medical tests and a conceptual framework of people's conceptions of over-testing was developed.

Findings

The proposition that medical tests are not necessarily beneficial was found to be confusing on two main contrasting perspectives: the premise that "the less testing the better" versus the view that "it is better to be tested than to be sorry later." Dread of cancer was a prominent concern. Views differed regarding whose responsibility it is to decide on which medical tests should be conducted—the individual or the doctor.

Conclusion

This study illuminates the complexity and challenges when aiming to inform the public about the benefits of medical tests versus overtesting, in particular addressing people's dread of "missing out" on detecting cancer "on time" and having to deal with uncertainty after decades of being told about the benefits of "knowing in advance." This also has implications for doctor-patient communication about medical tests. The study also points to the need for further research exploring individual's perceptions regarding "early detection," "prevention" and "screening tests" because the notion of "fewer tests" was found to be counterintuitive and contradicts predominant media messages. This could help design relevant information and decision-making tools on the complexity of medical tests decisions in order to enable people to make informed decisions.

Beyond the “Angelina Effect”: Celebrity Breast Cancer Disclosures' Impact on the Public's Breast Cancer Information Seeking

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A celebrity breast cancer disclosure is when a well-known public figure announces she has experienced a breast cancer-related event (e.g., diagnosis, prophylactic mastectomy) or dies due to breast cancer-related complications. Recent research has found that an average of eight celebrity breast cancer disclosures are announced annually. Further evidence indicates that these disclosures receive significant attention from the media and the public (Blinded for review, 2017).

Some believe celebrity breast cancer disclosures serve as an opportunity for the public to learn about breast cancer, but content analyses reveal that little population- or subpopulation-level breast cancer information (e.g., risk, prevention) is present in media reports of these disclosures (Blinded for review, 2017). However, one recent study found immediate and dramatic short-term increases in the public's online breast cancer information seeking after Angelina Jolie's May 2013 breast cancer-related disclosure (Noar et al., 2015). This evidence is important; if exposure (direct or indirect) to a disclosure can motivate the public to seek further breast cancer information, then this behavior could, in turn, drive learning and/or decision-making outcomes.

The impact of Jolie's disclosure on the public's information seeking behaviors has important implications, particularly if such results extend to other celebrity disclosures. The current study goes beyond the “Angelina Effect” by analyzing the impact of 110 celebrity breast cancer disclosures on the public's online breast cancer-related information seeking from 2005-2016. To offer predictive evidence as to what types of celebrities might have a greater effect on seeking behaviors, moderation tests were performed for four celebrity attribute categories: age; career type; breast cancer-related event type; and level of fame.

Volume of media coverage for each celebrity at the time of disclosure constituted the independent variable. Following methods used by Noar and colleagues (2015), dependent variables were constructed using Google Trends' relative search volume (RSV) data. A general breast cancer information search dimension was created, as well as five dimensions reflective of the NCI Cancer Control Continuum (e.g., prevention, detection). All RSV data were collected at monthly and weekly levels for the 2005-2016 period.

Time series methods were used for analysis. Specifically, VAR models were fit for each data series and Granger causality tests were performed. Results varied based on search dimension and the use of monthly- or weekly-level data, but a statistically significant relationship was found between the volume of media coverage and RSV across the four general breast cancer information seeking dimensions, the monthly-level prevention and diagnosis dimensions, and weekly-level prevention and diagnosis dimensions. Findings reveal that increases in the public's online breast cancer-related information seeking are not isolated to Jolie's disclosure, but may not always have such immediate impacts. Instead, information seeking trends are influenced over time.

The moderation analyses indicate that celebrities over the age of 50, those offering a treatment disclosure, or those of the highest level of fame moderated the main effects relationship for certain search dimensions. These results begin to offer evidence for which celebrity attributes may predict certain public breast cancer-related information seeking outcomes.

Body or the Brain? Communicating the Risks of Adderall

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The 21st Century Cures Act seeks to promote modern solutions to existing problems (Rota, 2017). The act mandates researchers heed increased attention to issues of mental health, prescription drugs, and to communicating risks of behaviors that affect the brain. An issue of rising importance in this context is the widespread use of non-prescription Adderall medication among young adults. Adderall use is prominent among young adults (DeSantis, Webb, & Noar, 2008). Non-prescription Adderall use is a growing problem, increasing by as much as 67% between 2006 and 2011 (Mojtabai, Olfson, & Han, 2016).

This study explores the effects of message framing on young adults' perceptions of risk for non-prescription Adderall use. We examined the effects of three types of message frames on perceptions of threat severity, personal susceptibility, and intention to use non-prescription Adderall in the future. The messages described the risks of Adderall using one of three risk frames: physical risks, mental risks, or legal risks of non-prescription Adderall use. Participants ($N = 183$) were randomly assigned to read one of three message frames, depending on experimental condition. After reading the message, participants answered to measure their perceptions of risk of non-prescription Adderall use.

Those who read a message that focused exclusively on the physical risks of Adderall misuse (e.g., dehydration, increased heart rate) reported higher perceptions of threat severity than participants who read a message describing the mental risks of Adderall misuse (e.g. headaches, hallucinations). Describing Adderall misuse in the frame of physical risks also increased perceptions of concern for family or friends who misuse Adderall, and higher perceptions of overall risk of negative effects of Adderall, relative to participants who read a message describing the mental risks or legal risks of non-prescription Adderall use.

Analyses also indicate potential gender differences in the perception of risks of non-prescription stimulants. Women, relative to men, rated Adderall as a more severe threat, and rated themselves as more personally susceptible to the negatives of Adderall misuse.

The results of the current study contribute to knowledge of theories in risk and message design, and inform guidelines for the effective communication of risks of non-prescription stimulants. Theoretical implications, practical applications, and future research directions are discussed in the context of the 21st Century Cures Act.

Cancer Beliefs and Perceptions among a Sample of Appalachian Kentucky Residents as Compared to National HINTS Respondents

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Background: Appalachian Kentucky communities experience increased socioeconomic disparities and an undue burden of cancer, particularly malignancies that are preventable and screenable such as lung, colorectal, breast, and cervical cancer. Understanding Appalachian residents' perceptions of cancer is important for designing health communication messaging and educational programming to improve cancer health literacy and decrease related disparities.

Methods: As part of an administrative supplement from the National Cancer Institute, the University of Kentucky Markey Cancer Center developed and administered a health-related survey – ASK: Assessing the Health Status of Kentucky – during summer 2017 in the 54 counties of eastern Kentucky designated as Appalachian. Survey items assessed a range of topics including: cancer information-seeking, cancer fatalism, cancer knowledge and beliefs, cancer screening and other health behaviors (e.g., tobacco use), and socio-demographics. Data collection methods included a probabilistic address mailing (N=3200) and community-based, in-person administration (N = 200). Herein, we report on preliminary findings from the (unweighted) mailed sample (n=786, 25% response rate) as compared to national (unweighted) data from NCI's Health Information National Trends Survey (HINTS) 3 and 4 related to perceptions of and beliefs about cancer.

Results: Compared to national HINTS respondents, Appalachian Kentuckians were more likely to strongly or somewhat agree that:

- “everything causes cancer” (59% vs. 67%, respectively);
- there's not much one can do to lower their chances of developing cancer (27% vs. 32%);
- perceive that there are too many different recommendations about preventing cancer (74% vs. 80%);
- automatically equate cancer to death (53% vs 71%); and
- would rather not know their chances of developing cancer (31% vs. 38%).

Conclusion: Based on these initial results, Appalachian residents commonly reported unfavorable perceptions of and beliefs about cancer that may influence their self-efficacy and locus of control related to behaviors that may help prevent or screen for cancer. Tailored, culturally-appropriate health communication messaging that (1) promotes the power of preventive behaviors (e.g., physical activity, healthy diet, tobacco cessation) and screening exams (e.g., mammography, colonoscopy, low-dose CT scans, Pap testing) to improve cancer outcomes and (2) provides factual information about increasing survival rates for all cancer sites may help to address Appalachian's negative beliefs about cancer.

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Cannabidiol in the News: Nature of Coverage, Inclusion of Health Effects, and Use of Exemplars

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Background. Cannabidiol (CBD), a non-psychoactive derivative of cannabis, is becoming more widely known for its ability to treat seizures and relieve spasticity associated with conditions such as Multiple Sclerosis (MS). Media coverage is increasing, and multiple states have passed laws allowing for the medicinal use of CBD (Mead, 2017). However, little is known about the nature of news coverage related to CBD. Because news coverage may shape public views on policy issues (Zillman & Brosius, 2000), and the drug approval process for and legalization of CBD continue to be controversial policy topics of interest, it is important to understand the characteristics of CBD-related news. Characteristics of interest include sentiment toward CBD, inclusion of health effects of CBD, and inclusion of exemplars.

Methods. All newspaper articles appearing between January 1, 2016 and December 31, 2016 and including the term “cannabidiol” were collected using LexisNexis (N = 862). Duplicates were removed and only U.S. newspaper articles were retained (n = 208). Articles were subjected to a thematic analysis and then manually coded for sentiment toward CBD, inclusion of benefits of CBD use, inclusion of negative effects of CBD, and inclusion of exemplars. A second coder recoded a random selection of articles to establish inter-coder reliability. Articles were also analyzed using automated language processing software (LIWC2015; Pennebaker, Boyd, Jordan, & Blackburn, 2015).

Results. Results from the thematic analysis suggest that the majority of articles about CBD were related to policy. Articles frequently mentioned medicinal qualities of CBD, typically did not mention negative effects of CBD use, and regularly included exemplars (example cases of individuals benefitting from CBD). Automated analyses revealed that articles about CBD had a more negative emotional tone and included a greater number of health-related terms than a comparison corpus of newspaper articles on all topics.

Discussion and conclusion. The current news media environment surrounding CBD, including coverage of policy debates, frequently includes positive medicinal qualities of CBD and examples of individuals who have benefited from CBD use. Because theories of media effects (e.g., exemplification theory; Zillman, 2006) predict that media coverage can shape risk perceptions, perceived social norms, and other determinants of health behavior, CBD news coverage may be having unintended consequences on readers. It may also shape policy debates regarding the drug approval process and legalization of medical marijuana and marijuana derivatives. Future research should examine the effects of exposure to this news coverage on perceptions of CBD and cannabis, in general, intentions to use cannabinoids, and attitudes toward the drug approval process, medical marijuana legalization efforts, recreational use of marijuana, and medical use of marijuana and marijuana derivatives.

Children as Informal Health Advocates: Implications of Intergenerational Information Seeking for Communication Privacy Management

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Close to 8 million of the 51.3 million U.S. children ages 5 to 17 live with at least one English-language learner (ELL) parent; and 80% of the U.S. ELL population identifies as Hispanic or Latino. This means that many U.S. Latino children are growing up in bilingual families and will at some point perform the role of a child broker by bridging their family's access to information and resources (Correa, Straubhaar, Chen, & Spence, 2015; Katz, 2014). Youth engage in information brokering as they mediate their parents' engagement with digital technologies and information (Katz, Moran, & Gonzalez, 2017; Yip, Gonzalez, & Katz, 2016).

Through in-home interviews and parent-child online search tasks, this qualitative research examines how Latino families collaboratively pool their language and technical skills in order to achieve goals that are often critical for the wellbeing of the family unit. This study consisted of three separate home visits with 24 self-identified Latino families in a metropolitan city in the Pacific Northwest. During the first visit, parents and children were interviewed separately to capture their independent perspectives on information brokering. During the second visit, the parent-child dyads completed search tasks to demonstrate how they access and interpret online information together. The third visit served as a final interview during which the parent-child dyads reflected on their brokering experiences.

Findings indicate that when children engage in online search and brokering, they become co-owners of private information, and gain access to details that they might not have been exposed to otherwise—including information regarding the health of their parents or other family members. During sensitive health situations, privacy boundaries become blurred as children are tasked with finding, translating, and interpreting medical information that requires certain language and technical skills. We found that child brokering and informal health advocacy poses important implications for communication privacy management within families.

When family members become informal healthcare advocates by mediating patient-doctor interactions, they face difficult decisions about privacy and confidentiality (Petronio, 2010; Petronio, Sargent, Andea, Raganis, & Cichocki, 2004). In bilingual families, the informal advocate is often an English-speaking child supporting adult family members' information needs. This means that privacy management looks different when health problems need to be addressed intergenerationally and when informal advocacy transcends the clinical setting. Health information brokering is thus a phenomenon worth inquiry, as generational differences in digital literacy will require some form of collaboration within families. In fact, concerns about digital health information disparities are bringing topics of informal advocates, health proxies, and surrogate seekers to the forefront (Massey, 2016).

Emerging research reveals how access to information about symptoms, treatment options, and preventative behaviors is a critical element in health promotion among vulnerable populations (Baezconde-Garbanati, Murphy, Moran, & Cortessis, 2013; Hernandez & Organista, 2013). As more health resources migrate online, health problem solving will likely become more collaborative in families with varying proficiencies—such a shift toward collective discussions about health requires a re-conceptualization of health literacy and privacy management in the digital age.

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Clickbait Headlines and Cancer News: How Streamlining Headline Content Influences Cancer-Related Knowledge and Beliefs

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Research suggests that headlines incongruent with article content are associated with scientific uncertainty and can influence interpretations of the article that are inconsistent with article content. This is a common practice in online news coverage, known as 'clickbait.' Clickbait is colloquially defined as imprecise or sensationalist headlines to attract an audience. Clickbait headlines take at least two forms: (1) questioning headlines, which pose a question subsequently answered in the article (i.e., "Have scientists discovered life on Mars?"); and (2) streamlined headlines, which omit key conditional factors and overstate scientific findings, such as, "Antioxidants can make cancer worse." Streamlining is a common but controversial journalistic technique in which scientific findings are overstated by omitting crucial conditional statements, like the relationship between antioxidants and cancer mortality is varied and conditional on many factors. Further, many people do not read beyond headlines encountered online, which could result in limited understanding.

In short, the purposeful obfuscation or misrepresentation of cancer risk factors may negatively impact article understanding and increase perceptions of cancer information overload (CIO). Considering this, the overarching research questions for this study are as follows: (1) How do clickbait headlines influence understanding?; (2) Does exposure to only the headline or full article impact understanding?; and (3) Is there an interaction between headline-type and article exposure on understanding? We use the cognitive mediation model and fuzzy trace theory as guiding theoretical frameworks to describe and analyze the process of media learning through which news content influences recognition (e.g. verbatim recitation), comprehension (e.g., gist understanding), and resultant CIO after exposure to cancer news.

A representative online sample of U.S. adults ($N = 629$) was recruited through Qualtrics panel service. Participants were randomly assigned to view one of six different stimuli to assess the 3 (headline-type: accurate, question, streamline) X 2 (exposure: headline only, full article) factorial on content recognition, comprehension, and CIO. The clickbait stimulus was taken from a magazine article dramatically overstating white wine as a causal factor for skin cancer and modified for other conditions.

Results revealed a significant interaction between headline and exposure: when participants read the headline only, the streamlined message resulted in highest recognition; when participants read the entire article, the accurate headline resulted in highest recognition and the streamlined headline resulted in lowest recognition. This finding highlights a complicated relationship – when reading the headline only, overstated danger is processed more accurately. However, reading the entire article with a streamlined headline elicited the lowest knowledge, supporting research demonstrating gaps in understanding when headlines are incongruent with article content. A significant interaction was observed for comprehension: the accurate headline was highest across both exposure levels, but only significantly higher than the question headline among those who read only the headline. Generally, people understood the true connection between white wine and cancer best when an accurate headline was provided. CIO was significantly higher among participants who only read the headline, highlighting the deleterious effects of browsing clickbait headlines inherently devoid of qualifiers, hedges, and conditional factors.

Collegiate Athletes' Vestedness in Perceived Concussion and Head Impact Risks

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Concussions resulting from sporting activities are a relatively common injury with the potential for pervasive short and long-term consequences (Daneshvar, Nowinski, McKee, & Cantu, 2011). Data from the National Collegiate Athletic Association (NCAA) indicate that 1.6 to 3.8 million concussions occur every year in the U.S., from participation in sports (Zuckerman et al., 2015). Related research suggests that these numbers may be higher because concussions do not typically manifest clear symptoms, leading to unidentified and/or misdiagnosed injuries (Valovich McLeod, Bay, Heil, & McVeigh, 2008). Effective concussion diagnosis and treatment are reliant on timely and honest communication from the athletes regarding their symptoms, both immediately after the cranial impact event, and as the recovery period progresses toward return to play (Graham et al., 2014).

Vested Interest theory (VI; Crano & Prislin, 1995, 2006) allows for the investigation of discrete attitudinal elements that mediate relationships between competing attitudes and behavior decisions. The theory specifies that five variables (salience, certainty, immediacy, self-efficacy and response-efficacy) function to predict individuals' relative vestedness in a particular attitude or attitude-object (De Dominicis et al., 2014). Vested Interest theory has demonstrated efficacy in several health and risk contexts (Authors; De Dominicis et al., 2014), and is useful as both an attitude assessment tool, and as a frame for strategic message design (Authors).

Athletes ($N = 435$) were sampled through a purposive process that targeted athletes competing in contact and collision sports that pose the highest risk for concussions, as identified by the NCAA Injury Surveillance Program (Zuckerman et al., 2015). The sample included female ($n = 114$) and male soccer ($n = 44$) and female ($n = 55$) and male ($n = 36$) basketball athletes, male football athletes ($n = 94$), male wrestlers ($n = 50$), and female lacrosse and field hockey athletes ($n = 42$). Most of the sampled athletes (45.5%) reported being on a full scholarship; 37.9% reported receiving a partial scholarship, and 16.6 reported participating with no scholarship support.

The results indicate that VI's variables – salience, certainty, immediacy, self-efficacy, and response-efficacy, are valuable in understanding and predicting perception levels of key outcome variables. Notably, vestedness predicts 37% of the variance in perceived risk, a key variable that influences a host of self-protective outcomes (Sitkin & Weingart, 2016). Results also show that the VI variables account for 14% (R^2_{adj}) of the variance in recalled concussions and undiagnosed severe head impacts, and 7.8% of the variance in perceived concussion education.

This research takes a first step in Mrazik and colleagues' (2015) call for deliberate, theory-based optimization and translation of concussion education for high-risk athletes. For practitioners charged with educating and protecting athletes, these findings should provide both a critical understanding of which attitudes and cognitions to target, and provide a valuable theoretical frame for building health risk messages that are both educational and can motivate protective attitudes and behaviors. The continuing challenge is to understand the pressures and motivations athletes face, and provide theory-based materials that enhance athletes' risk perception and encourage self-protective reporting and recovery behaviors.

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Communicating with Patients About Gene-Based Cancer Therapies: The State of the Research

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Applying advancements in genetic/genomic medicine to inform individualized therapy is a chief focus in precision medicine. One goal of initiatives such as the 21st Century Cures Act and Cancer Breakthroughs 2020 (formerly the Cancer Moonshot) is to pair cancer patients with efficacious treatments based on their genotype, as therapeutics that target specific gene mutations found within a tumor can be safer and more effective than standard chemotherapies (Ngeow & Eng, 2016). Patients and healthy people are considered crucial collaborators in the discovery and implementation of these new approaches (Hawgood, Hook-Barnard, O'Brien, & Yamamoto, 2015; U.S. Food & Drug Administration). However, the extent of discussion with patients and the broader public on gene-based therapies is unknown. This paper presents findings from a scoping review of cancer-related genetic and genomic communication studies published from 2010 to 2017 (N = 513). This body of empirical literature assesses clinical communication as well as patient and public knowledge, attitudes, and preferences. In this analysis, we first describe communication studies specific to gene-based therapies and pharmacogenomics within the larger landscape of genetic and genomic communication studies. We then present a summary of findings from this subset of studies to abridge the extant empirical knowledge in this area and identify research gaps. Overall, findings indicate that the application of genomic testing for gene-based drugs and tumor therapies has been largely ignored in genetic communication research. Studies focused on pharmacogenomics and/or tumor (i.e., somatic) genetic testing comprised just 1% of papers in the pool of literature (15 papers total). Of these, most assessed attitudes among current cancer patients (typically with breast or unspecified cancer; Gray et al., 2012; Rogith et al., 2014; Yusuf et al., 2015). One study examined patient-provider communication following tumor sequencing (Catenacci et al., 2015), while one study measured outcomes of DTC pharmacogenomics testing (Bloss, Schork, & Topol, 2014), and another looked at whether understanding of pharmacogenomics was affected by information format (Martin et al., 2016). Some patients expressed concern about insurance discrimination and privacy of their genetic data (Rogith et al., 2014), and nonwhite patients were less open to testing than white patients; Yusuf et al., 2015). Perhaps unsurprisingly, findings also indicated that most patients are generally unaware of genetic or genomic testing to inform cancer therapeutic decisions (Gray et al., 2012). This aligns with results from the 2017 Health Information National Trends Survey (HINTS), which found that the public was much less aware of genetic testing to inform individualized therapies than of other genetic testing applications (e.g., determining personal disease risk; National Cancer Institute). For patients and the public to benefit from advancements in genomic medicine and to participate in policy decisions, greater awareness is needed (Hurle et al., 2013; McBride et al., 2010), making research that facilitates public awareness and understanding of emerging therapeutic applications of genomic medicine an important next step. The findings presented in this paper highlight avenues for communication research to support the advancement of gene-based individualized cancer therapy, including optimizing information formats and encouraging minority population participation.

Comparing the Results of a Longitudinal Social Norms Campaign with Results from the CDC Behavioral Risk Factor Survey Outcomes

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Many college campuses use social norms approaches for harm reduction. Past research shows mixed results about the effectiveness of norms based campaigns, with some reporting success and others showing no effects (e.g. DeJong et al., 2009; Park, Klein, Smith, & Martell, 2009; Silk, Perrault, Nazione, Pace, & Collins-Eaglin, 2017; Wechsler et al., 2003). Michigan State University (MSU) has collected NCHA data biennially since 2000 and Celebrations Survey data of MSU students near the ends of 15 of the 20 semesters from Fall 2003 through Winter 2013 to assess the effectiveness of their university-level social norms marketing campaign in reducing harm effects of drinking behaviors. Results show the campaign has been successful in that students have started to drink less and have adopted preventive behaviors in MSU, but it is not clear whether these preventive behaviors are the outcome of the campaigns or mirroring a trend in colleges these days to drink less. To increase confidence that the MSU social norms marketing campaign was effective, there must be a difference between the MSU trend where the social norm campaign conducted, and the overall trend where the social norms intervention did not take a place. Thus, this study analyzes MSU's NCHA survey data from 2000-2014 and compares results with the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Survey (BRFS), using 18-24 years olds as a control group from 2000 to 2014. Results indicate MSU data has a different trend from BRFS data, especially from 2010 to 2014. Specifically, results show that the number of MSU non-drinkers increased eight-times greater than the BRFS sample; the number of MSU students who drink more than three days in the past month decreased, whereas this behavior increased in the BRFS sample; the number of MSU students who drink five or more alcoholic behaviors decreased, but there was no change in the BRFS sample; the number of MSU drunk drivers decreased, whereas that behavior increased in the BRFS sample; the number of MSU binge drinkers had decreased, but binge drinkers increased in the BRFS sample. Similar trends in both the MSU and BRFS data before 2010 can be explained by the different sampling methods used to collect BRFS data. For example, the CDC only selected respondents by calling their households for BRFS prior to 2010, but began to include the cellphone-only population in the sample after 2010. Given the result of previous research that cellphone-only respondents tend to take more risks compared to respondents collected by landline (Hembroff, Rusz, Rafferty, Lyon-Callo, & Fussman, 2008), it is possible to conclude that the trend in BRFS data from 2010 is closer to the general trend in the U.S. Ultimately, this comparison of data demonstrates the effectiveness of the MSU social norms marketing campaign. This paper also makes a strong contribution to alcohol related social norms literature because it is one of few studies that compares outcomes of a norms based campaign with a control group, and reports results of longitudinal survey data to assess the effects of those campaigns.

The Comparison of the Effects of #Fitspiration and #Thinspiration Instagram Images on College Females' Sexual Behaviors

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Research background: The trends #Fitspiration (focusing on being physically fit) and #Thinspiration (focusing on thinness and weight loss) are gaining popularity on Instagram, especially among young women (Boepple, 2016; Tiggeman & Zaccardo, 2016). Research revealed the relationship between women's body image and their sexual beliefs and behaviors. Young women with body dissatisfaction are likely to have low sexual assertiveness, low condom use self-efficacy, and high rates of unprotected sex (Blashill & Safren, 2013; Winter & Satinsky, 2014; Schooler, 2012). This study aims to analyze the effect of different types of idealized media images (fitspiration and thinspiration images) and sexual beliefs and behaviors (e.g., sexual assertiveness, condom use self-efficacy). The roles of body image domains (e.g., body dissatisfaction, state appearance comparison, state appearance self-esteem, and body appreciation) and sexual domains (e.g., sexual relationship status, similarity, and sexual orientation) are also investigated.

Experimental Design: An online experiment will be conducted. Participants ($N = 150$) are undergrad female students at a Western university. The experiment employs a between-subjects experimental design with three levels of the independent variable of image types (fitspiration, thinspiration, and scenery). Participants will be assigned randomly to one of three following groups: (a) a control group ($n = 50$) who will expose to scenery images; (b) a fitspiration group ($n = 50$) who will expose to fitspiration images; and (c) a thinspiration group ($n = 50$) who will expose to thinspiration images. Within each group, participants will be asked to view the images in a Qualtrics and then fill out an online questionnaire measuring their body image, sexual behaviors, and demographic information. IRB approval has been obtained.

Materials: Three sets of stimulus materials were constructed for this research. First, the thinspiration image set portrays pictures of women who have ultrathin bodies. Second, the fitspiration image set portrays pictures of women posting in active outfits or engaging in exercise. Third, the scenery image set contains pictures depicting various natural landscapes. All images were sourced from public Instagram profiles from the "fitspiration," "thinspiration," and "scenery" hashtags. An initial pool contained 50 fitspiration, 50 thinspiration, and 50 scenery images. A small panel of five female undergrads was asked to rate the initial pictures for two aspects, including the 'quality' and 'visual appeal' of on 5-point Likert scales (1 = very poor, 5 = excellent). The final sets of image were well-matched on both perceived quality and visual appeal. Each final set contains 20 images.

Analysis: ANOVAs, ANCOVAs, and the PROCESS macro will be used as analysis techniques through SPSS software. For each variable univariate outliers will be assessed for all the cases to check assumption of normality.

Expected Timeline: We are in the process of collecting the data, and this should be finished by January 2018. The data analysis and the full manuscript will be done by March 2018.

Complementary Channels for Health Messaging: Latina and Vietnamese Women's Channel Preferences for Information about HPV

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Background: Advances in communication technology have shifted the modes of health information consumption dramatically in the past decade expanding young adults' communication channel preferences. Aligning interventions with channel preferences is an important aspect of communicating with target populations. Complementarity theory guided the focus of inquiry to understand how various communication channels complement interpersonal communication with a clinician.

Methods: This qualitative inquiry elicited from Latina and Vietnamese women attending Planned Parenthood health centers their communication channel preferences for health information with respect to HPV vaccine information. Women were asked to elaborate how they utilize channels and why they prefer specific channels to others. Between July-August 2016, we conducted 50 semi-structured interviews at Planned Parenthood of Orange and San Bernardino Counties (PPOSBC) with young adult Latina ($n = 24$) and Vietnamese ($n = 24$) women aged 18-26, and with PPOSBC staff ($n = 2$). Data were analyzed for communication channels discussed and for channel attributes.

Results: The majority of our sample were US-born Vietnamese and Latina women ($n= 44$). Vaccinated women learned about HPV vaccination primarily from clinicians or school. Unvaccinated women either never heard of HPV vaccination (6/48) or had learned about HPV vaccination from school, family or friend, TV commercial, or Planned Parenthood website. When asked to describe their health information seeking behaviors, women talked about searching online (e.g., Google, Planned Parenthood website) initially and following up with a clinician when a health issue was perceived as severe enough. For receiving health information, women described multiple channel preferences: social media (e.g., Facebook, Twitter), online resources (e.g., email, portals), and texting. While women talked about accessibility and convenience of online information, they also talked about the importance of trust in channel preferences especially when searching online sources. Latina women discussed preferences of traditional communication channels (e.g., print material, radio) that Vietnamese women did not mention. While some women described the accessibility of texting, other women perceived these channels as invasive raising privacy concerns.

Discussion: Latina and Vietnamese women valued in-person clinician interactions for health information yet described that they often turned to other channels initially e.g., online because of accessibility and convenience. Results suggest that for effectively reaching Latina and Vietnamese young adult women to raise awareness about HPV vaccination, a multi-channel approach is necessary to accommodate the complex way in which women utilize and disregard information from different sources. Women weighed the trustworthiness of channels giving more weight to familiar health care organizations such as Planned Parenthood or their primary care health care organization. At the same time, women discussed the accessibility of phone delivered social media information. Melding the credibility of a recognized health care organization to deliver a social media intervention via a health care portal may combine the communication attributes valued by women: trust/credibility and access/convenience.

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“The Confessions of a Reluctant Caregiver” Palliative Educational Program: Nursing Students’ Perceptions of Drama-Based Education

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Introduction: Nurses play a critical role in providing care to patients at end-of-life stages and they can experience difficult dilemmas when communicating with patients and their families during these highly emotional situations.[1] As such, there is a need for nursing students to receive sufficient end-of-life education.[2] Many nursing programs in the United States, Canada, and United Kingdom have implemented educational methods regarding teaching end-of-life care.[3][4][5] However, most of these teaching methods involve using traditional lecture-based formats which may not be the most effective approach to teaching nursing students such an important topic.[3] Using other teaching methods, such as incorporating drama-based learning into the curriculum, may be more successful than traditional teaching methods alone.

Objectives: To examine the immediate effects of drama-based learning on nursing student palliative care education.

Methods: Data were collected from nursing students who participated in the “Confessions of a Reluctant Caregiver” Palliative Educational Program, which involves a staged reading of a play about end-of-life care and a post-performance discussion. Students completed an evaluation survey that assessed their perceptions of the play and its usefulness compared to traditional educational experiences.

Results: A total of 83 nursing students participated. The participants ranged in age from 19 to 61 years ($M = 29.35$) and were primarily second-year (60.2%), female (83.1%), Caucasian (89.2%) students. The majority of students found the program to be equally as useful or more useful as an educational tool in comparison to didactic lectures (70.9%), journal articles (73.1%), and bedside rounds (70.6%). Most participants rated the play as “excellent” (69.9%) and reported being more comfortable with discussing end-of-life issues with patients after participating ($t(80) = 4.739; p < .001$). After participating, students felt interested in breaking bad news ($M = 3.6; SD = 1.3$), discussing treatment options with patients ($M = 4.2; SD = 1.0$), dealing with patients’ emotions ($M = 4.2; SD = 1.0$) and dealing with the impact of the illness on the family ($M = 4.2; SD = 1.0$). Lastly, most of the participants felt that it would be satisfying to care for patients at end-of-life stages ($M = 4.0; SD = 0.9$).

Conclusion: Nurses are critical members of the healthcare team and as such, there is a need for them to receive effective education in end-of-life care. Based on the data collected from this study it can be concluded that effective delivery of this education can, in part, be achieved through drama-based learning. Benefits of this style of education include exposure to emotions experienced by patients and caregivers. The use of a staged reading can help students feel more comfortable approaching these sensitive topics that often cannot be taught using traditional didactic approaches. Moreover, the results suggest that drama-based learning can influence nursing students’ interest in important communication issues such as delivering bad news, discussing treatment options, and addressing the emotions of patients and their families. Overall, the data gathered from this study suggest drama-based education can be implemented to enhance nursing students’ understanding of end-of-life care.

Construal Level, Temporal Distance, Anxiety and Uncertainty: Exploring Patient-Provider Communication in a Cross-Cultural Context

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Identified as a “vulnerable population”, immigrants are a group of people facing increasing risk of inadequate health care (Aday, 2002). Existing research has found immigrants have a lower quality of health care than U.S. born populations (Derose, Escarce, & Lurie, 2007). Unfortunately, when immigrants see their health providers, they experience uncertainty and anxiety, which can have negative consequences on communication effectiveness between them and their health providers (Logan, Steel, & Hunt, 2015). There is little research that focuses on uncertainty and anxiety felt by immigrant patients’, and how messages provided by health providers influence patients’ understanding of the clinical experience, as well as their perceptions of providers’ communication effectiveness. Understanding the process by which patients manage their uncertainty and anxiety to achieve better communication effectiveness during their clinical visit is crucial to improve the quality of health care for immigrant patients. This study applies Anxiety/Uncertainty Management (AUM) Theory (Gudykunst, 2005) and Construal Level Theory (CLT; Trope & Liberman, 2010) to investigate the factors that influence immigrants’ uncertainty and anxiety during interactions with their provider. We hypothesize that background variables (e.g., self-concepts, motivation to interact, etc.) predict uncertainty and anxiety, which in turn predict communication effectiveness. Further, we hypothesize that messages used by providers influence the relationship between uncertainty/anxiety and perceived communication effectiveness.

This study has two parts: a message design pilot and the main study. The purpose of the pilot is to test the four message conditions, manipulated for construal and temporal distance (2 x 2 factorial design): high construal and proximal temporality, high construal and distal temporality, low construal and proximal temporality, low construal and distal temporality. The messages are in the context of diet and exercise, and participants are told the doctor (Dr. Smith) is from a different culture than theirs. We are recruiting 100 individuals from Amazon Mechanical Turk, an online crowdsourcing platform where individuals can be paid to complete tasks, including surveys. To participate, individuals must: a) have visited any health care provider within last six months, b) report English is not their first language, and 3) be a non-US citizen. Participants will be paid \$1 for participating. We are currently pilot-testing the messages.

Assuming the message manipulation is successful, for the main study we will recruit another 1000 individuals from Amazon Mechanical Turk who meet the same participant requirements. Participants will be paid \$1 for their participation. Participants will be randomly assigned to read one of the four messages. Then they will be directed to a series of measures about self-concept, motivation to interact, reaction to strangers, social categorizations, situational processes, connection with strangers, ethical interactions, anxiety, uncertainty, mindfulness, and communication effectiveness. Data will be analyzed using multi-group analysis in structural equation modeling in IBM SPSS Amos 22.0. This data will be collected in mid-December, followed by data analysis in January, 2018. We believe the findings will provide potentially useful insights on how messages can influence the management of anxiety and uncertainty for immigrants, towards improving communication quality during patient-provider encounters.

Content Analyzing the Prevalence of Windows of Susceptibility and Literacy Demand on Breast Cancer-Related Websites

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Biomedical science relevant to cancer control, especially regarding breast cancer risk reduction, has focused on certain periods of the lifespan during which individuals are particularly vulnerable to the carcinogenic effects of lifestyle factors and chemical compounds in the environment and in certain commercial products. Known as windows of susceptibility (WOS) (Rudel, Fenton, Ackerman, Euling, & Makris, 2011), these developmental periods include fetal development, puberty, pregnancy, and menopause in women. It is during a WOS that exaggerated risk of developing breast cancer later in life has been observed after exposure to things like a diet high in animal fat (Zhao et al., 2013), the plasticizer bisphenol-A (BPA) (Lamartiniere, Jenkins, Betancourt, Wang, & Russo, 2011), or the flame-resistant coating perfluorooctanoic acid (PFOA) (Yang, Tan, Harkema, & Haslam, 2009). It is currently unknown how the concept is represented in places visited online for health information. Thus, this study aims to examine the prevalence of information on WOS as it relates to breast cancer with a content analysis of cancer related websites.

Hyperlinks were curated from the top 50 results of Google and Yahoo searches using the terms “breast cancer” and “breast cancer” “environment.” After excluding duplicates, news articles/blogs, academic works, paid ads, and university resource pages, hyperlinks were collected from every page within two “clicks.” Upon application of exclusion criteria, 855 pages constituted the population of content to be analyzed. Coders ($n = 5$) were trained on identifying 22 WOS-related risk factors (i.e., Alcohol, BPA, Diet, PFOA, etc.) and achieved adequate reliability on all variables. This yielded 125 (~14.6%) pages containing mentions of at least one risk. These represent 38 unique domain names with a maximum of 10 topics represented on any single page and a median of 2.

Coding is in process to document the extent to which WOS information is presented, and the literacy demands of those pages. To assess the latter, coders ($n = 5$) are measuring scientific concepts that are discussed on each page in order to extrapolate what base knowledge is required to understand the content discussed (see Brossard & Shanahan, 2006). The co-occurrence of each risk with the concept of WOS, whether it is specifically mentioned or just described, will be presented, as will the relative scientific literacy demands of each. Implications for understanding these concepts and the likelihood of risk reduction will be discussed, as will new directions for cancer communication and the topic of WOS.

Cross-National Coverage of Drug Trafficking: Testing Community Structure Theory

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A community structure analysis compared national characteristics and newspaper coverage of drug trafficking in a cross-section of nationally prominent or database-available newspapers from 22 different countries, examining all relevant articles of 250+ words selected from 01/01/16 to 06/26/2017. The resulting 374 articles were coded for “prominence” (placement, headline size, article length, and the presence of graphics) and “direction” (“government responsibility,” “societal responsibility,” or “balanced/neutral” coverage of drug trafficking), then combined into composite “Media Vector” scores for each newspaper, from +1.000 to +0.0788, total range .9212. All 22 newspapers emphasized government responsibility for reducing drug trafficking.

Agricultural dependence was strongly connected to coverage supporting government responsibility. The “vulnerability” hypothesis (More “vulnerable” populations linked to coverage reflecting their interests) revealed multiple significant indicators. For “agricultural dependence,” three indicators were significant: Percent rural population ($r = 0.439, p = .021$), crop production index ($r = 0.437, p = .021$), and food production index ($r = 0.391, p = 0.036$) were all connected to more media emphasis on government responsibility to reduce drug trafficking. A regression analysis revealed that crop production index accounted for 61.1% of the variance, food production index 5.2%, and percentage of a nation’s rural population 6.9%, totaling 73.2% of the variance. Crop production importance mirrors transit migration coverage research (Pollock, O’Brien, et. al., 2016) finding agricultural dependence significantly linked to coverage benefitting marginalized groups.

Privilege was a driver of coverage emphasizing less government responsibility for drug trafficking. Although it was expected that higher privilege levels (populations “buffered” from uncertainty) would be associated with coverage emphasizing government responsibility, and indeed industrial production growth rate met expectations ($r = 0.362, p = .053$), three more highly significant broad privilege indicators -- GDP per capita ($r = -0.626, p = 0.001$), male life expectancy at birth ($r = -0.362, p = 0.049$), and physicians per 100,000 ($r = -0.360, p = 0.050$) were all linked with “less” media emphasis on government responsibility to reduce drug trafficking. Other indicators of “communication privilege” were also associated with less media emphasis on government responsibility: percent population covered by a mobile phone network ($r = -0.626, p = 0.001$), number of daily newspapers per 1,000 people ($r = -0.560, p = 0.019$), and number of broadband subscriptions per 100 ($r = -0.360, p = .050$). The only communication privilege exception was “freedom of the press”, with higher scores associated with media emphasizing government responsibility for reducing drug trafficking ($r = 0.528, p = 0.003$). For detailed hypothesis explanations, see Pollock (2007, 2013a, 2013b, 2015).

Empirically, this study confirmed agricultural dependence as linked to coverage emphasizing government responsibility for reducing drug trafficking, while most measures of media access and penetration, as well as most broad privilege indicators, were associated with less media emphasis on government responsibility, possibly revealing a privileged “indifference” perspective regarding drug trafficking. Methodologically, combining measures of “prominence” and “direction” generated highly sensitive “Media Vector” scores illuminating the capacity of media to reflect country level measures of agricultural dependence and privilege indicators. From a theoretical perspective, as Funk and McCombs suggest (2017), agenda setting’s “top-down” perspective is powerfully complemented by the “bottom-up” viewpoint of “community structure” theory’s indicators of community-level demographics.

Culture and Stigma: Understanding Stigmatizing Messages in Chinese and U.S. Online News Coverage of Schizophrenia

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Approximately 21 million people worldwide are affected by schizophrenia (WHO, 2015). Compared with other mental illness, people with schizophrenia were more likely to be targets of stigmatization and social rejection (Imai & Dailey, 2016), which could lead to unwillingness to seek treatment and other destructive consequences (Corrigan, 2004). In addition, the mass media worldwide have been criticized for disseminating stigmatizing messages about schizophrenia, promoting the dangerousness and violence of people with schizophrenia. However, evidence suggests that people with schizophrenia were more likely to be victims of homicide and violent acts, rather than perpetrators (Rodway et al., 2014).

Previous research on the mediated portrayal of schizophrenia focused primarily on traditional news media, such as print newspaper and television. However, with the rise of online news, traditional news outlets continue to lose hold on their news consumers (Pew Research Center, 2012). As such, an examination of online news coverage of schizophrenia is warranted. In addition, the majority of existing studies referred to stigma as a unitary construct. However, stigma is multi-dimensional and culture-specific (Parcesepe & Cabassa, 2013). A better understanding the stigma surrounding schizophrenia may contribute to creating efficacious interventions effective social support programs.

To address the gaps in the literature, this study aims at finding out whether there are cultural variations in the types of stigmatizing messages in online news coverage of schizophrenia. Specifically, this study examines the cues that promote and mitigate stigma surrounding schizophrenia in the United States (a typically individualistic culture) and in China (a typical collectivistic culture). Drawing on stigma communication theory, this study is particularly interested in the use of stigma cues and challenges cues across the two cultures.

The findings of this study revealed that a stigmatizing portrayal of schizophrenia in the online news outlets in both cultures. Both Chinese and U.S. online news outlets ubiquitously used more stigma cues than challenge cues in the online coverage of schizophrenia. In addition, cues of peril were used in more than half of all online news articles in both cultures, emphasizing the threats and dangerousness of people with schizophrenia. In addition, cultural variances in the use of stigma cues were also identified. For instance, Chinese online news reporting of schizophrenia included more stigma cues than that in the United States. Specifically, Chinese online news articles were more likely than U.S. online articles to use cues of marks and social exclusion. Practical and theoretical implications were discussed.

The Dark Side of Addiction Support Forums: Moderation of Health Stigma and Mediation of Perceived Support Availability

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Online social support forums leverage the capabilities of communication and information science to provide an accessible context for individuals seeking social support related to a variety of health issues. Research has identified many benefits of online social support forums for participants, including their anonymity, convenience, and generally high activity; however, fewer studies have examined the potential negative impacts of participating in these communities. The current study explored how participation in support forums might negatively impact users by testing the impacts of receiving insensitive and under-benefitted emotional support and the potential moderation effect of health stigma in online support forums related to addiction. An online survey of online addiction support forum users ($N = 354$) was conducted. Results showed that perceptions of online emotional support availability mediated the relationship between insensitive emotional support and health efficacy and the mediation functions differently between high and low stigma groups. Insensitive emotional support had negative effects on support availability perceptions among low-stigma users but positive effects among high-stigma users. A considerable proportion of users (46.33%) reported being under-benefitted on emotional support, but the problem did not correlate with support availability perceptions. The study revealed the dark side of getting social support on support forums. Social support and online communication theories should be revisited and include the negative effects. Health care practitioners should be careful in recommending online support groups as social support sources to addiction patients.

Describing Innovation Attributes in Electronic Word-of-Mouth

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The decision to adopt an innovation – a new method, idea, product, or behavior – can be influenced by several factors, including a person's evaluation of the innovation, belief that the innovation use will be successful, and the persuasive influence of what others say about it.

Because smartphones may provide a unique opportunity to reach underserved populations that experience health disparities, this study examines a distinctive element of this medium – the app. When seeking a health app, individuals are faced with the descriptions of myriad apps and have two distinct sources of information to learn more about them – the product description provided by the app's producer and the reviews submitted by users. This study delves into three areas thought to influence decisions about innovations or new behaviors – diffusion of innovations theory (Rogers, 2003), the persuasive influence of electronic word-of-mouth, or eWOM, and a person's perception of self-efficacy (Bandura, 1994) – and how they function in relation to adoption of health apps, specifically the most popular types of health apps: those related to weight management, nutrition, and physical activity (Purcell, 2011). This research will extend understanding of diffusion of innovations theory to an online realm where a potential adopter's decision-making may be influenced by reading other users' reviews, including comments that may be related to users' experience with trialability, observability, relative advantage, complexity, and compatibility.

The purpose of this experiment was to use both diffusion of innovations theory and literature on eWOM to examine how innovation attributes included in health-app description pages influence perceptions of self-efficacy and the likelihood of adopting health apps and related healthy behaviors. The study also considered whether describing attributes of a tool for use with a personal health behavior, like the health-related apps, can extend its influence to the likelihood of adopting the behavior, not just the tool. And, finally, the study considered whether and how a person's perception of self-efficacy can be influenced by observing vicarious experiences that others relate through user reviews.

If eWOM about a health app can indeed act as a vicarious experience source for a person's perception of self-efficacy related to a health behavior, the implications could extend from the use of mobile health technology to a broad range of health behaviors in the off-line world. If the inclusion of innovation attributes in eWOM messages influences adoption decisions, there are implications for persuasion theories and the type of eWOM messages that may be more influential in adoption decisions. Results of this study may inform literature not just on the persuasiveness of eWOM in general, but on specific elements and content of eWOM that persuade adoption likelihood of both health apps and related healthy behaviors. Data collection and preliminary data analysis is complete. Full results will be available before April 2018.

Design and Testing of MyPlate Video Education Materials to Communicate Healthy Food Choices to Low-Income, Minority Populations

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Since 1916, the US Department of Agriculture (USDA) has created dietary guidelines to assist Americans in making healthy food choices. In 2011, the USDA launched the MyPlate diet.¹ A 2017 study indicates that only 20% of U.S. adolescents and adults, mostly women, non-Hispanic Whites and those with higher income, know about the MyPlate diet.² Given this limited awareness combined with research showing MyPlate is associated with higher diet quality and improved health outcomes,³ this pilot study aims to determine the feasibility of using video education materials to communicate healthy food choices among a predominately African American and low-income clinic population in Baton Rouge, LA. This project was designed with two goals: (a) develop a 5-minute MyPlate video to communicate MyPlate guidelines, and (b) assess the acceptability and effectiveness of the video.

We used a systematic approach to design and test the video education materials. We began by identifying our target audience of low-income patients served by LSU Health clinics in Baton Rouge, LA. The clinic population is predominantly Medicaid recipient, African American, and low-income. We next reviewed published studies on dietary education and clinic-based nutrition education programs as well as health behavior and persuasion theories to identify the best approach to communicate healthy food choices. The review revealed that there were no validated videos to educate low-income, minority clinic populations on the MyPlate program.

Guided by the literature on patient education and the MyPlate diet, we developed a video script and worked with a creative advertising team to develop a 5-minute educational video about MyPlate. As the intention is to place the video in a clinic setting, the video opens with a medical doctor describing the MyPlate guidelines. The video then uses graphics and text to describe the MyPlate food groups and the types of foods that fit into each group. Attention was taken to ensure that foods mentioned would be similar to what is traditionally eaten in Louisiana, but the emphasis remained on healthy options and portions. Keeping our audience on the forefront, the graphics and limited text were used to ensure comprehension of the MyPlate diet.

The development process began in May 2017, and pilot testing will occur in December 2017. Implementation of the video in the clinics will start in January 2018 and continue for six months. In the video pilot, we will conduct focus groups with patients to elicit constructive feedback. In order to not contaminate the intervention, we are recruiting a similar population of patients from a different clinic location than the implementation site. Our focus group findings, which we will present at the conference, will help to further develop the video based on participants' reactions to the concepts and content in the video. This project has relevance to health communication scholarship with disparate populations. This will specifically evaluate the types of evidenced-based MyPlate education materials that are best suited for this population, making it relevant to the conference theme of "21st Century Cures Act: The Role of Communication and Information Science."

Determining the Relationship between Empathy and Burnout in Medical Students

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Approximately 54% of US physicians report at least one symptom of burnout and are moderately to severely depressed (“Physician burnout,” 2017). Burnout affects both a provider’s personal and professional life and manifests in emotional exhaustion, lack of sleep, poor diet, fatigue, depression, anxiety, and diminished concentration and attention (Miller, 2017). Furthermore, providers experiencing burnout are more likely to deliver substandard care to patients, which has a corresponding effect on fostering a hostile workplace and perpetuating more feelings of burnout (Miller, 2017). Understanding what leads to such high levels of burnout could reduce stress for medical providers and improve quality of care for patients.

Empathy and burnout are theorized to be closely related in medicine. Providing quality care by utilizing a compassionate, empathic approach has been shown to be a mitigating factor of burnout (Thirioux et al., 2016). Empathy has both an affective (passive emotional response) and a cognitive (objective understanding) component (Batt-Rowden et al., 2013). Physicians demonstrating higher abilities to empathize with patients are reported to have higher levels of personal or professional job satisfaction, which are indicative of lower rates of burnout (Shanafelt et al., 2009). Using the mitigating aspect of empathy to burnout as a framework, we hypothesize that empathy scores have an inverse relationship with burnout scores. Although some investigation into the relationship between physician burnout and empathy exists, its relationship in medical students has not been determined. Besides the paucity of research on this topic with medical students, it is important to study medical students because focusing on the medical school experience serves as an effective way to ensure future generations of physicians have the desired empathic abilities necessary to potentially combating burnout.

Since mid-November, 45 medical students (23 males, 22 females) have anonymously completed a survey assessing burnout, empathy, and various demographic factors. We measured burnout using the Maslach Burnout Inventory, which assesses levels of emotional exhaustion, personal accomplishment, and depersonalization (Maslach, 1981). The Jefferson Scale of Physician Empathy, the most common scale assessing physician empathy, was used to measure empathy, and both scales were tailored to medical students specifically (Hojat et al., 2001).

Preliminary analysis indicated medical students scored high on emotional exhaustion ($M = 34.20$, $SD = 10.31$), moderate on depersonalization ($M = 11.96$, $SD = 5.11$), and low on personal accomplishment ($M = 38.66$, $SD = 8.04$), suggesting that many are experiencing burnout. Students were above average on empathy ($M = 119.06$, $SD = 10.84$). Regression results indicated that empathy scores explained 49.1% of the variance ($R^2 = .492$, $F(1,17) = 16.44$, $p < .001$) and significantly predicted depersonalization ($\beta = -.23$, $p < .001$).

After further data collection and analysis of the total survey responses, we plan to continue this investigation qualitatively to explore the effect of other factors on influencing burnout and empathy. For example, humanities coursework focuses on nonscientific aspects of medicine, such as professionalism and ethics, and therefore, studying humanities may provide insight into how this curriculum can combat desensitization and loss of empathy that occurs during medical school education (Wershof Schwartz et al., 2009).

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Development of a Local Brand to Promote the Social Determinants of Health: Persuasive and Informational Message Design Approaches

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Background: Preventable chronic disease accounts for 7/10 deaths in the US. Just three risk behaviors – tobacco use, poor nutrition, and physical inactivity – account for most preventable chronic disease. There is growing recognition that individuals' health choices are influenced and constrained by context – the policies, systems, and environments (PSE) in which people live, work, learn, and play. Modern public health approaches include efforts to influence these contexts. Communication plays an essential role by changing the way the public perceives health and wellness, and by influencing policy- and decision-makers by shifting norms from individual behavior change to systemic and structural change for healthier communities. However, effective strategic communication about the social determinants of health and PSE approaches within diverse communities remains an important health communication challenge.

Aim: We describe the process of developing a communication campaign to create a culture of health in a rural community by informing, educating, and empowering residents and decision-makers for individual behavior change and civic engagement. We focus on audience testing and message development processes to determine key messages and approaches to accommodate multiple languages and cultural perspectives within one overarching brand. The communication campaign underscored the coalition-led PSE approach to improve access to healthy foods, physical activity, and smoke-free environments that formed the CDC-funded Partnerships to Improve Community Health grant.

Context: The rural, agriculturally-rich Merced County is located in California's San Joaquin Valley. The county is diverse – the majority of residents are Latino, 9% are Hmong, and over half report speaking a language other than English at home – and characterized by high poverty, inequality, and health disparities.

Methods: We employed an iterative, mixed methods approach to develop and test campaign names, logos, and key messages. The four key phases of campaign development included: I) Formative evaluation to identify priorities, guiding themes, and audience segments (in-depth interviews/focus groups with residents, $N = 85$; stakeholders, $N = 10$); II) Brand development with key audience segments (focus groups and closed-ended surveys; $N = 56$); III) Message testing to assess effectiveness of different approaches to verbal and visual appeals ($N = 50$ resident intercept interviews); IV) Workshop with coalition members to finalize the campaign approach and gain sponsorship ($N = 26$ participants representing 15 partner organizations). A fifth phase – a longitudinal survey to assess changes in knowledge, attitudes, social norms, and behavior – was planned, but only baseline data were collected ($N = 290$).

Results: Residents and stakeholders were engaged throughout campaign development and the resulting campaign materials, including the campaign name (All In for Health) and visual aesthetic (e.g., logo, color schemes) reflect the diversity of the community and were accepted and valued by diverse groups in the community. Campaign materials featuring photos of county residents were created in English, Spanish, and Hmong. Plain language messages on social determinants of health resonate with residents and stakeholders.

Discussion: Creating a communication campaign focused on systems and environmental change for chronic disease prevention relies on thorough formative evaluation. We discuss challenges in developing such messaging and evaluating its effectiveness across multiple, diverse audiences.

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Development of a Quantitative Measure of Family Health Communication Patterns

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Background: Numerous qualitative studies have shown distinct patterns in the ways that families communicate about health, yet there are no reliable quantitative methods for assessing family health communication styles. Quantitative measures of communication patterns within families exist, alongside measures of secret keeping motivations, and family communication boundaries, but none that directly assess the various patterns of communication including non-communication, open communication and selected communication (i.e., communication restricted to certain people or topics). The goal of this study was to explore the validity of a quantitative measure of non-communication, open and selective communication of family health information. We adapt and expand upon the Interior Privacy Management Subscale from Morr-Serewicz & Canary's Family Privacy Orientation scale (2008), which captures elements of open and selective styles. New items were also developed by the authors.

Method: These data are from a largely study assessing parent-child health communication during college. Participants ($N = 521$) completed a one-time cross sectional survey. Participants were predominantly female ($n = 345$), with a median age of twenty ($n = 138$). To assess scale validity, an exploratory factor analysis was conducted in SPSS 24, using a Direct Oblimin rotation to account for item correlation.

Results: The scree plot yielded three factors with Eigen values above 1. As hypothesized, three factors were retained for further analysis. Three items loaded on two factors above .5 and were dropped from subsequent analysis due to cross loading on selective and open factors. One of the dropped items originated from the previously validated scale, while the other two were original items. The three factor structure accounted for 62.09% of the variance within item responses (Kaiser-Meyer-Olkin = .76, and Bartlett's test of sphericity, $X^2 = 2080.47, p < .001$). Factor one contained three items representing open family health communication (e.g., "within my family, everybody knows everything about each other") and reliability for these items were excellent ($\alpha = .91, M = 2.31, SD = 1.07$). Factor two contained four items representing non-communication (e.g., "when family members share private health information in my family, they are sometimes blocked from sharing by other family members"; $\alpha = .77, M = 2.00, SD = .86$), while factor three contained two items representing selective communication (e.g., "family members share health information with certain people, but not everyone; $r = .66, M = 3.19, SD = 1.55$).

Conclusion: Exploratory factor analysis revealed that the hypothesized factor structures were present within the data, and the reliability for these items were acceptable. The selective communication variable only contained two items due to cross loading with factor one, and this could be due to the composition of the previously validated Interior Privacy Management subscale which measures both open and selective styles of communication. Easy assessment of family health communication patterns may be useful in patient care, including genetic counseling and testing. Furthermore, these measures can serve as starting point for research identifying key cognitive, individual and social factors associated with various communication patterns.

#digitalhood: Engagement with Risk Content on Social Media among Black and Latino Youth

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Just as Black and Latino youth live in neighborhoods that influence their health (1-5), they also grow up in digital neighborhoods online. The digital neighborhood is the amalgamation of the spaces online where youth connect with others. Youth are exposed to social media content featuring substance use, sexual risk and violence, and little is known about the extent to which youth engage with such content and how it might influence their offline behavior. To gain a better understanding of usage and content characteristics of the “digital neighborhood”, we ask: What social media platforms do urban minority youth use and what are their patterns of use? What are the types of risk content that youth are exposed to on social media and to what the extent do youth engage with, or are exposed to, the risk content in their digital neighborhood by testing the scaling of the social media engagement continuum. We hypothesize that there is an engagement continuum with social media that ranges from passive exposure to active engagement.

Using a modified venue sampling strategy, we administered CASI surveys to 171 Black and Latino/a youth aged 13-24 living in low-income neighborhoods in a small northeastern city in the United States. Researchers administered the surveys at eight community-based organizations to allow youth to participate in the study at their convenience, in their neighborhoods, and based on their availability. Survey topics included social media use, sexual behavior, substance use, and violence. Descriptive statistics were calculated on the study sample and on the prevalence of risk behavior content in their digital neighborhoods. Analysis of variance was used to assess mean differences in social media use patterns by age groups and gender. We analyzed social media engagement using ordered difficulty scaling (6).

Youth regularly used social media and used on average 2.8 platforms ($SD = 2.2$, range 0-8), with the number of platforms decreasing with age. Across social media platforms, respondents reported high levels of exposure to sexual, alcohol, drug and violence related content (65%-84%). Users reported lower levels of engaging with risk related content on our hypothesized engagement continuum, ranging from passive exposure to dissemination. For example, the majority of Facebook users reported seeing sexual content (73%), seeing sexual content featuring local people (57%), followed by liking that content (26%) and disseminating content through shares (8%) and finally, disseminating sexually suggested images of themselves (6%).

The findings contribute to the accumulating evidence that not only is social media popular among minority youth (7-9), but that sexual content, substances, and fighting are commonly broadcasted in their digital neighborhoods. Risk exposure in the digital neighborhood is analogous to risk exposure in many Black and Latino urban neighborhoods, where there is a high density of alcohol outlets and marketing, violent crime, drug trafficking and/or commercial sex work (10, 11). While negative risks may be amplified in the digital neighborhood, youth strategically limit their engagement with that content. These digital neighborhoods also offer provide opportunities for health promotion interventions.

Disclosing Transgender Identity to Medical Providers: A Dialectical Perspective

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Transgender individuals represent an underserved population with significant health concerns including lack of quality care and providers, and failure to seek care due to fear of negative responses from medical professionals. Potential negative responses greatly increase discomfort trans-individuals experience when considering disclosure of transgender identity to providers. Satisfactory patient health outcomes are strongly associated with positive patient-provider relationships allowing for safe disclosure of risky information. Learning how trans-individuals approach disclosing to providers is essential to exploring how these interactions may be improved.

Disclosure of transgender identity aligns with Tardy and Dindia's description of revelation of risky information as situations wherein self-disclosure reveals highly intimate and negative information about the self, and assertion that disclosing stigmatized information about the self can incur damaging consequences. Additionally, this disclosure aligns with Dindia's¹ proposition of stigma self-disclosure as a dialectical process. A dialectical perspective is useful for analyzing this phenomenon because: 1) the internal conversation a trans-individual has about this disclosure is a form of stigma management guided by decision making rules¹; 2) often a trans-patient is forced to disclose their transgender identity, creating unique interpersonal tension; and 3) the patient's disclosure decisions create new tensions between patient and provider as they create meaning around the patient's transgender identity.

The purpose of the present study was to explore potential dialectical tensions trans-individuals negotiate when considering disclosure of transgender identity to providers. The following research question was posed: RQ1: What dialectical tensions arise as trans-individuals consider the disclosure of transgender identity to providers?

26 trans-individuals were interviewed as part of a larger study exploring disclosure. Participants were asked to discuss their experiences disclosing to providers by describing instances where they disclosed, how they felt the provider would respond, and typical disclosure strategies. Grounded in a directed approach to content analysis² interviews were first coded using an inductive analytic approach³ to identify major themes, then coding was refined according to Strauss and Corbin's⁸ constant comparative method.

Four overarching tensions were identified. 1) Protecting the self vs. caring for the self, which reflected participants' desires to avoid potential negative consequences of disclosure while at the same time wanting to receive the care that would require them to disclose; 2) Role of educator vs. role of patient, which reflected participants' feelings of responsibility for educating providers about transgenderism while at the same time feeling burdened to take on that responsibility when they should be treated like a patient; 3) Conceal vs. reveal, which reflected patients' deliberations over what and how much information about their transgender identity to share with providers; and 4) Passing vs. not passing, which reflected participants' uncertainty over whether they would be perceived by providers as their expressed gender or assigned-at-birth gender.

This study: 1) gives voice to an underserved patient population that has experienced erasure in research resulting from conflation of sexual orientation and gender identity; 2) explores these interactions from the patient perspective, a unique approach from extant literature focusing on provider behavior; 3) extends current stigma disclosure research into an underexplored context.

Discontinuance in Fitness Tracking Apps: An Analysis from a Diffusion of Innovations Approach

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With its ability to generalize across fields, the diffusion of innovations (DOI) framework has been robust in predicting and explaining the spread of several innovations, both technologically and ideologically. However, despite the prominence of DOI within practical and academic research, discontinuation continues to be an understudied phenomenon. The present study aims to redress this void by examining discontinuation within the context of fitness apps, such as Nike+ or Apple Health. Specifically, this research examines result visibility; socially-driven uses of fitness apps, such as posting workout updates on social media; fitness apps' compatibility with lifestyle; and perceived utility of fitness apps. In addition to examining the DOI-based factors relating to discontinuance, the theory of self-monitoring is included as an additional explanatory factor. The study's participants ($N = 241$) were recruited from an introductory communication course. Although this is a convenience sample, the individuals represent a desirable group of individuals for this research. Indeed, the general demographics represented by undergraduate students aligns with the typical profile of technology users; this allowed a sample that includes adopters (48.3%) and discontinuers (60.5%) of fitness apps. Additionally, this is an ideal sample for the study due to undergraduate students' generally poor dietary habits, high levels of stress, lack of predictable sleep schedules, and limited amounts of time for structured physical activity. The results indicate that individuals who use socially-driven features of fitness apps are 1.5 times more likely to discontinue use. The relationship between self-monitoring and socially-driven features of fitness apps was not statistically significant, suggesting that another explanation may be at work. The importance of the present study is twofold. First, its contribution lies in furthering our understanding of circumstances in which an individual may discontinue using a fitness app. Specifically, contrary to the predicted outcome, socially-driven use of a fitness app was related to a higher likelihood of discontinuing. This finding is noteworthy and bears further investigation as it goes directly against the DOI framework. Second, the present study provides a starting point in explaining why some individuals may continue using fitness apps—even if the DOI framework would indicate discontinuance. Although the findings relating to self-monitoring were not significant, future work may be warranted with this or other personality traits that affect the uses (and discontinuance of) fitness apps. In sum, the present study serves three main purposes: (1) it introduces the DOI and self-monitoring frameworks and relevant extant research that draws upon the tradition of health-related studies as well as discontinuation; (2) it discusses the methodology and measures to examine discontinuation of fitness apps; and (3) it reasserts the importance of the present study in terms of practical and theoretical development.

Do the News Media and Information Sources Influence Vaccine Confidence? A National Probability Survey of U.S. Adults

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Background: Fostering greater use of vaccinations affects many areas of health related to the 21st Century Cures Act—including the ability to reduce vaccine-preventable diseases among at-risk groups (e.g., the chronically ill). While many factors influence attitudes and trust in vaccinations, communication plays a key role. While interpersonal communication with family, friends and health professionals may offer people with trusted information, individuals may have greater exposure to such information through news media, the Internet and social media. One multi-year study of vaccine stories in U.S. and Canadian news showed that 87 percent of stories were positive, but when examined by source, 36% of stories from websites were negative compared to 5% of stories from traditional news sources (Powell, Zinszer, Verma et al., 2016). The results show that not all information sources are equal. Other studies show that more information is not always better (Larson, 2016) and “balanced” information may suggest that there is no expert consensus (Dixon & Clarke, 2012). This study concerns confidence in the flu vaccine, and examines how demographic variables, self-reported attention to health and medical information sources, and the likelihood of using certain sources for vaccine information predict vaccine confidence. Further, we examine what messages in news stories participants identify as prompting them to get a vaccine.

Methods: The investigators commissioned the University of Chicago’s National Opinion Research Center to conduct a random probability survey via Internet and telephone using its AmeriSpeak Panel. The survey ran in 2016 from Sept. 30 to Oct. 21. A total of 1,005 responses from the U.S. general population, ages 19 and older, were collected. The survey achieved a 35.6% completion rate.

Preliminary Results: Of participants, 55.4% were female, and averaged 49.2 years old ($SD = 17.7$). Participants’ race was: 66.5% White non-Hispanic; 14% Hispanic; 11.2% Black; 2.4% Asian; 3.5% Two or more races; and 2.4% other. Forty-three percent had received a flu vaccine in the last 12 months. When asked about how much attention they paid to health and medical information (1 = no attention; 5 = a lot of attention), participants paid the most attention to materials from their doctors and healthcare providers ($M = 2.66$; $SD = 1.28$) and television news shows ($M = 2.58$; $SD = 1.27$).

When asked about the information sources they’d most likely use for vaccine information (1 = very unlikely; 5 = very likely), respondents indicated greater trust in their doctors and healthcare providers ($M = 4.09$; $SD = 1.13$), pharmacists or local pharmacy ($M = 3.61$; $SD = 1.26$), and medical or health-related internet sites ($M = 3.42$; $SD = 1.34$) than in their family ($M = 3.17$; $SD = 1.31$), social media ($M = 3.12$; $SD = 1.30$) and close friends ($M = 2.99$; $SD = 1.26$). Respondents were least likely to use a federal, state or local government agency websites ($M = 2.79$; $SD = 1.32$).

When asked if a news story “ever prompted getting a vaccine,” nearly 1 in 5 (19.5%) said “yes,” demonstrating that individuals believe news stories influence their behavior. Participants were asked to provide an open-ended response of what it was about stories that prompted them to get vaccinated. Further analysis of these data will be conducted. Multivariate analyses will investigate the relationship among demographic variables and information sources on vaccine confidence.

Do You Smoke?: Conversations about Smoking with Lung Cancer Patients

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Lung cancer patients face unique challenges such as stigma and regret due to the known association between smoking and the disease. Lung cancer patients report avoiding medical appointments due to fear of being blamed for their illness. However, unaddressed emotions such as guilt or regret surrounding their smoking history can increase psychological distress and poor health. Physicians can provide lung cancer patients with support and compassion during conversations about smoking, but there is little research regarding these conversations. Understanding how physicians navigate conversations about smoking with lung cancer patients is an important step in improving patient-physician communication for lung cancer patients. This study uses qualitative analysis to explore how physicians navigate conversations (n = 152) with lung cancer patients about smoking.

Thematic analysis reveals the communication patterns physicians use (i.e. validating, ignoring, exonerating, etc.) when discussing past and future smoking habits. Findings include rich detail about communication patterns, and overarching themes about combinations of patterns. For example, physicians in this study typically share an informing statement about the benefit of smoking cessation during their conversation (i.e. "Because you quit smoking, you'll get less lung infections and you're not continuing to whittle away at your lung reserves. So don't think quitting didn't buy you something, because it did."). Physicians were less likely to use negative comments, such as blaming or condemning the patient for their smoking behavior (i.e. "Your smoking has done a number on your lungs").

Findings from this study offer insight for how physicians can understand and navigate sensitive topics with lung cancer patients, such as smoking. Identifying communication patterns that physicians use when discussing smoking with lung cancer patients may highlight how physicians can provide support to patients faced with challenging emotions such as guilt or regret due to disease stigma.

Effects of Media Exposure to Conflicting Information about Mammography: Results from a Population-Based Survey Experiment

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There is growing theoretical and empirical support for the proposition that exposure to conflicting health information can have adverse cognitive effects, including increased confusion and decreased trust in health recommendations (see Blinded Citation, 2017 for a review). Yet overall this research arena is in its infancy, with few studies causally linking exposure to conflicting information with adverse outcomes (e.g., Chang, 2015; Nan & Daily, 2015; Jensen & Hurley, 2012). It also is unknown whether such exposure may disproportionately affect vulnerable populations. Viswanath and Emmons, in discussing the influence of social determinants of health on message receptivity, suggest that individuals of lower socioeconomic position (SEP) may have greater “difficulty [in] reconciling conflicting messages” (2006, p. S245). Such effects could be driven by lower levels of health literacy, the absence of a medical home, or greater baseline levels of medical mistrust among lower SEP populations.

Building on this nascent literature, we conducted an online survey-based experiment in 2016 with a population-based sample of U.S. women aged 35-55. Participants (N=1474) were randomly assigned either to one of three conditions that differed in the amount of conflicting information about mammography presented in a news story (low, medium, or high) or to a no-exposure control condition. We used mammography as a case example given substantial expert disagreement about the age at and frequency with which women should be screened for breast cancer—discord that increasingly plays out in the media (Blinded Citation, 2015). Given a priori interests in assessing differential effects by SEP, we oversampled women living at or below 100% of the federal poverty level and stratified by income level. Main outcomes included confusion about cancer prevention recommendations (e.g., “it is not clear to me how best to avoid cancer”), backlash toward such recommendations (e.g., “cancer recommendations should be taken with a grain of salt”), and ambivalence about screening (e.g., “I have mixed feelings about getting a mammogram”).

Results showed that exposure to conflict increased cancer prevention-related confusion ($p < .01$, eta squared = .01) and backlash ($p < .05$, eta squared = .01). In both cases, the effect of increasing conflict reflected a linear trend ($p < .001$). Exposure to conflict also influenced women’s ambivalence about mammography screening ($p < .001$, eta squared = .01). Here we observed a quadratic trend, with ambivalence highest among those in the low and medium exposure groups ($p < 0.01$). Those highly exposed to conflict might have been less ambivalent about screening because they were, in fact, confident in their decision not to get screened: mean mammography screening intentions were lowest among those in the high exposure group. Across outcomes, patterns indicate that the effects of exposure to conflict may actually be stronger among higher SEP women, though results were not statistically significant.

Although overall effects were small, findings suggest that media exposure to conflicting information about mammography produces adverse cognitive outcomes including confusion, backlash, and ambivalence. These cognitions could, in turn, undermine campaigns or interventions designed to encourage not only mammography but also other cancer prevention behaviors. Future research should assess whether the effects of exposure to conflict vary across population subgroups.

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Evaluation of a Novel Condom Distribution and Health Communication Intervention Targeting Young African American Females

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The United States has seen a record number of sexually transmitted infection (STI) cases in recent years. The highest rates of infection are among adolescents and young adults, and persons living in the South; sexual health disparities are particularly acute among young African American women. Condoms have long been a primary tool for preventing STIs; however, environmental and psychosocial barriers hinder obtaining, carrying and using condoms, especially for women. Condom barriers are particularly challenging for young women attending Historically Black Colleges and Universities (HBCUs). This makes HBCUs important settings for health communication interventions.

Using a before-and-after quasi-experimental panel design, we evaluated a novel 3-month campus-based condom distribution and health communication intervention targeted at African American females attending a small, all-female HBCU in North Carolina. The theoretical frameworks were the integrative model of behavioral prediction and theory of gender and power. Prior to launching the intervention, we conducted focus groups to develop and test messages that would ultimately be affixed to condom dispensers that provided free condoms. The purpose of the messages was to reduce embarrassment and increase comfort associated with obtaining condoms. The final concept included four print messages – each representing a different execution of the same theme – which was an empowering message to protect oneself – but delivered in a playful, humorous manner to attraction attention and persuasion. The four messages were: There is nothing like being well packaged; sex is more fun when everybody stays firm; be straight up and so will he; make a stand and so will your man.

The intervention consisted of 10 condom dispensers with these messages affixed to them; nine dispensers were installed in dorm bathrooms and one in the campus health center. To evaluate the intervention, we recruited $N = 195$ participants before and retained $N = 118$ three months after. Almost 90% of respondents saw the condom dispensers and messages in person, 38% engaged in interpersonal conversations, and 21% posted information online about the intervention. Overall, the messages were well-received.

Condom acquisition and carrying increased significantly ($p < .05$) at follow-up, as did perceptions of condom availability and accessibility ($p < .05$). While perceptions of condom acceptability did not change, participants reported feeling extremely comfortable using the dispensers, especially when alone. Forty-four percent of respondents used the dispensers, 70% of whom reported using the condoms during sexual intercourse. In multivariate analyses, dispenser use was significantly ($p < .05$) associated with greater condom use. Thus, young women who used the dispensers were more likely to have used condoms with their partners.

Our findings indicate that the intervention not only motivated young African American women to obtain and carry condoms but also had a direct positive impact on those who obtained the condoms by impacting condom use. In sum, the study shows the promise of a low-cost, broad-reach approach to intervention delivery to prevent new sexually transmitted infections among African American females. This topic is very relevant to the conference theme of “21st Century Cures Act: The Role of Communication and Information Science.”

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Examining an Extended Conceptualization of Partners' Reported Response Patterns in Ongoing Disclosure

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The goal of this study was to provide a better understanding of the role of perceived dyadic response (i.e., supportive, emotionally reactive, avoidant, or reciprocal responses) in ongoing health-related interpersonal disclosure. We tested an extended conceptualization of response-related associations pervasive across information management studies within the health-disclosure context, incorporating both patients' and partners' perspectives of communication variables. The main contributions of this study include: a) Examining ongoing disclosure (vs. initial disclosure decisions) in the context of illness, b) Incorporating and testing perceptions of both members of a dyad (vs. only disclosers' perceptions), and c) Testing an expanded conceptualization of disclosure response (vs. response as a single "type" or as valence).

Participants were 308 dyads in which one partner has a nonvisible health condition (NVHC). We conducted multilevel analyses using an actor-partner interdependence model (APIM) to examine response as a mediator between relational quality and disclosure behavior. We created factor scores from our CFAs using covariance structural equation modeling. Using CFAs to create factor scores allowed us to conduct measurement at the latent level, distinguishing the error component from what is shared with a factor, including multiple fit indices, and allowing for much greater flexibility in constructing our model (DiStefano, Zhu, & Mindrila, 2009; see also Bollen, 1989).

We found that participants' accounts of their own beliefs and behaviors were consistent with existing literature: individuals' perceptions of their relational quality predicted their perceptions that their partner's response patterns were supportive, open, not avoidant, and positively emotionally reactive. In turn, these response patterns predicted individuals' own illness-related disclosure depth and breadth. In terms of interdependent predictions, perceptions of patient and partner relational quality were correlated. However associations between dyadic partners' disclosure patterns (self reports of depth and breadth of disclosure) and perceptions of response patterns (participants' reports of how supportive, emotionally reactive, reciprocating, or avoidant their partner is to their disclosure) were not. Examining by dyadic role, patient reports of partner response patterns predicted partner disclosure, but partner reports of patient response patterns did not predict patient depth and breadth of disclosure. Furthermore, partner perceptions of relational quality predicted patient reports of partners response patterns as supportive, open, not avoidant, and positively emotionally reactive. This relationship was not supported between patient reports of relational quality and partner reports of patient response.

We also examined how different dimensions of response affect ongoing disclosure, finding that more reciprocity, more support, and less avoidance predict ongoing disclosure breadth and depth about health conditions. This paper offers important contributions to theory, confirming the utility of an expanded conceptualization of response to disclosure, and illustrating how ongoing disclosure unfolds similarly to initial disclosure decisions (as explained in DD-MM and many other models). This paper also illustrates how partner's conceptualizations of relational quality influence both their own and the patients' perceptions of how the other responds when they talk about illness, but it is patients report of partner response patterns that influence both their own and their partner's ongoing disclosure about illness.

Examining Descriptive Norms, Injunctive Norms, and Message Processing as Antecedents of Reactance to Organ Donation Messages

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Given that over 116,000 Americans are awaiting a lifesaving organ transplant (UNOS, 2017), understanding effective strategies for increasing organ donor registration is critical. The current study uses psychological reactance theory (PRT; Brehm, 1966) as a framework for examining resistance to organ donation appeals. PRT proposes that individuals' cherish their freedom to choose, and reactance occurs when a valued personal freedom is threatened. As reactance is associated with diminished attitudes and behavioral intentions (Quick, Shen, & Dillard, 2013), identifying strategies for avoiding reactance is an important area of study for health communication scholars. Of particular interest in the current study is the role of three previously unexamined antecedents to reactance: (a) *descriptive norms*, individuals' beliefs about the prevalence of a behavior (Lapinski & Rimal, 2005), (b) *injunctive norms*, individuals' perceptions' about the social desirability of a behavior, and (c) *message processing*, an individual's level of cognitive engagement when processing a message (Petty & Cacioppo, 1986).

Method: 258 American adults (age: 19-81, $M = 38$, $SD = 13$; race: 80% Caucasian; sex: 66% female) were recruited for an experiment via Amazon MTurk. Participants read a promotional organ donation message that used either choice-restricting language ("You must join your state organ donor registry!") or choice-enhancing language ("Consider joining..."). An induction check indicated the choice-restricting condition garnered greater freedom threat. All measures demonstrated adequate reliability ($\alpha \geq .80$).

Results: Consistent with conventions (Kline, 2016), prior to testing the hypothesized model confirmatory factor analysis assessed the measurement of study constructs. The measurement model demonstrated adequate fit, $\chi^2(N = 239) = 359.06$ ($p < .001$), RMSEA = .06 (90% CI: .045, .064), CFI = .95, SRMR = .05. Exogenous variables included freedom threat, descriptive norms, injunctive norms, and message processing as antecedents to reactance. All two-way interactions were also included as antecedents to reactance. Endogenous variables included state reactance (measured as a latent composite of anger and negative cognitions; Dillard & Shen, 2005), attitude, and intention. Model fit for the hypothesized model was acceptable, $\chi^2(N = 239) = 363.12$ ($p < .001$), RMSEA = .06 (90% CI: .055, .074), CFI = .93, SRMR = .08. Of note, freedom threat (.42**), injunctive norms (-.43***), and message processing (-.44***) predicted reactance. An interaction between injunctive norms and freedom threat was also observed (-.21*), such that under conditions of low injunctive norms and high freedom threat, participants experienced the greatest level of reactance. Reactance predicted attitude (-.75***), and attitude in turn predicted intention (-.52***). In total, the model accounted for the following variance in endogenous variables: reactance ($R^2 = .93$), attitude ($R^2 = .57$), intention ($R^2 = .27$).

Discussion: The current study advances the literature on organ donation and PRT in several ways. First, the finding that injunctive norms and message processing were strongly associated with reactance suggests the importance of these variables for promoting organ donation. Furthermore, the interaction between injunctive norms and freedom threat underlines the importance of high injunctive norms in attenuating reactance. Finally, the large variance explained highlights the utility of study variables in forecasting reactance to organ donation messages.

Examining the Effects of Novel Communication Methods on Recruitment of Hispanic and Asian American Women to a Breast Cancer Study

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Breast cancer (BC) is the most common cancer affecting women globally, and mortality rates and occurrence disparities can be distinctly drawn along racial and ethnic lines. While Hispanics demonstrate a lower risk of developing BC, it is the leading cause of cancer-related death. Additionally, Latinas are usually affected at a younger age and at later stages compared with other groups. Women living in Asia generally have a lower risk of developing breast cancer; however, whatever protection was enjoyed in their home country dissipates after migrating to the U.S. Over time, Asian American (AA) BC incidence increases to rival that of Caucasian women.

The current study focuses on the Komen Tissue Bank (KTB) clinical trial, a biobank of healthy breast tissue and blood collected from female donors used as normal controls for BC research. Ethical and scientific integrity demand that clinical research include appropriate representation of minority groups; however, increasing Latina and AA participation has proven quite difficult to accomplish. Some of the barriers to lack of participation, such as mistrust of medical research, present a challenge to successfully conducting studies to identify communication approaches that may result in these ethnic groups' increased involvement in clinical trials. This study incorporates novel methodology to explore the perspectives of AA and Hispanic women regarding donating healthy breast tissue to the KTB and examines the effectiveness of communication surrounding the recruitment of these women.

By combining Grounded Practical Theory (GPT) with innovative Focus Group methodology, this study examined the perspectives of AA women and Latinas toward donating healthy breast tissue. Traditional focus group structure was enhanced by incorporating interactive activities to promote richer, fuller data and to counteract the natural cultural reticence of the group participants (AA $N = 17$, Latina $N = 11$). Data analysis through the lens of GPT illuminated three themes common to both groups - knowledge, culture, and altruism - with differing sub-theme foci. AA participants expressed a genuine need for knowledge while Hispanic participants required knowledge about BC and its effects. Culture understandably influences the attitudes of both groups of women. Women of Asian descent were greatly affected by cultural influence while the Hispanic group women were more concerned with cultural comfort. Finally, altruism influences the attitudes of both groups of women. A personal connection to BC and sense of altruism was evident in the Latina participants, whereas AA women clearly displayed a paucity of altruism and a perceived lack of personal connection to BC.

In conclusion, this study revealed the attitudes and perceptions of AA and Hispanic women toward donating healthy breast tissue to the KTB. It also illuminated the importance of using novel methodology to encourage deeper, more enlightening participation in focus groups comprised of subjects who may or may not belong to cultures promoting personal privacy and reticence. These findings will inform future health communication efforts to recruit women from these racial groups to donate breast tissue and to participate in other clinical research where there is a demonstrated difficulty in recruiting AAs and Latinas.

Exercising for Two: The Role of Social Support in Promoting Healthy Physical Activity for Pregnant Women in the 2nd/3rd Trimester

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Introduction: Research has demonstrated numerous health benefits for both mother and offspring when the mother engages in physical activity (PA) during pregnancy (ACSM, 2006). However, recent evidence shows that only 14-23% of pregnant women meet the PA recommendations of 150 min/wk for pregnant women (Evenson & Wen, 2010; Evenson et al. 2004). Social support may influence health behaviors in pregnant women. Close relationship partners, spouses, family members, and friends are typically viewed as the primary support providers in one's life. More specifically, spouses are typically the first consulted for support (High & Steuber, 2014). The purpose of this study was to examine the effect of perceived partner social support on PA in pregnant women.

Methods: Fifty-six pregnant women, in their second or third trimester, were recruited for this study (two did not complete the study). All participants wore an ActiGraph Link accelerometer for 7-8 days and completed a survey detailing demographic information, pregnancy history, physical activity, and perceived social support from their male spouse/partner generally and as related to PA. PA questions were adapted from the International Physical Activity Questionnaire (IPAQ) (Craig) and asked about moderate activities, vigorous activities, walking, and time spent sitting. Participants responded to a 9-item measure adapted from the Multidimensional Scale of Perceived Support (Zimet, Dahlem, Zimet & Farley, 1988) regarding their perception of supportiveness from their partner. Additionally, 13 statements about PA-related social support (Sallis et. al 1987), limited to during the current pregnancy, were included. Daily step counts and stepping speeds were calculated across all 7-8 days for each participant. Odds ratios (OR) and 95 percent confidence intervals (CI) were calculated to predict odds of meeting physical activity recommendations (of 150 minutes or more of moderate or vigorous physical activity weekly), meeting step count recommendations of 10,000 steps/day, or of accumulating time spent at walking speeds of at least 100 steps/min (considered to be moderate intensity) based upon demographic characteristics and types of PA support.

Results: Average age of participants was 30.7±4.7 years and average gestation was 25.7±7.5 weeks. 92.6% were married and 71.7% had a college degree. Average self-reported moderate PA time was 98.3±124.5 min/wk while vigorous time reported was 33.2±63.3 min/wk. According to self-report, 22.2% spent no time in moderate PA, 64.8% spent no time in vigorous PA, and 24.1% met PA recommendations. Average step counts were 11,000.3±2900.0. 60% of the sample met step recommendations of 10,000 steps/day while 48.9% spent at least some time daily in stepping rates greater than 100 steps/min (considered to be moderate intensity). Participants who reported low overall PA social support from their partner were 78% less likely to meet PA recommendations according to self-report (OR = 0.22, CI = 0.05-0.88) but there was no effect on step count or step rate. Additionally, none of the sub-types of support significantly affected odds of meeting PA or step recommendations.

Conclusion: Women who perceive low total PA support are 78% less likely to meet PA recommendations of 150 min/wk as measured by self-report, but PA support had no effect on PA as measured by accelerometer.

Experiencing Ebola: "If I die, who will go tell their stories?"

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The deadly Ebola outbreak began in 2014 as Liberia was still trying to rebuild after back-to-back civil wars in the late 1990s and early 2000s. The virus swept across West Africa taking over 11,000 lives, 4,810 of which were Liberians (Center for Disease Control, 2016). This qualitative study explores a single case of an individual who contracted Ebola in the village of Weala, Liberia. Weala is located approximately three hours outside the capital of Monrovia. This work is guided by literature addressing narrative theory, health narratives, family narratives, and coping strategies.

This unique, single-case analysis is part of a larger data set collected during a research-gathering trip to rural Liberia in 2016. Using semi-structured interviews, adapted from the McGill Illness Narrative Interview protocol, I collected health narratives from 35 individual community members who live in and around the village of Flehla (Groleau, Young, Kirmayer, 2006). This project highlights one interview featuring a man's lived experience of surviving Ebola when six immediate family members did not survive the virus.

Using framework analysis, I have identified the following major themes: knowledge about Ebola, cultural approach to health, the impact on daily life, and the role of family in coping. In addition to the primary themes, I identified the following minor themes: emotional/mental health concerns and access to resources.

This research is part of my dissertation, which focuses on health narratives and legacies in Liberia. Liberians, especially those living in rural areas, are an understudied population in the communication discipline, especially ethnic groups living in rural or remote areas. Implications from this work include the need for future research that addresses the significant impact of culture; specifically, in terms of how individuals understand and approach health and healthcare. There is also a need to also evaluate the best methods of communicating health information in areas like rural Liberia. Furthermore, this study adds to the existing literature in health communication by addressing the lack of familial health legacy research, advancing understanding of critical health message, and health literacy in rural Liberia, which may be applicable to other similar settings.

Exploring Family Influence on Youth Smoking: Extending the Theory of Planned Behavior

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Although some studies have explored how family impacts youth's tobacco usage, the findings are mixed. Some scholars claimed that parents' anti-smoking socialization practices (i.e., parental communication about smoking and household smoking bans) prevent youth from smoking (Harakeh, Scholte, De Vries, & Engels, 2005), while some researchers disagreed with this conclusion (Nonnemaker, Silber-Ashley, Farrelly, & Dench, 2012). To clarify family's role in youth smoking, informed by the Theory of Planned Behavior (TPB), this cross-sectional study explored whether family factors work as distal factors in the extended framework, and how distal factors and proximal factors (attitudes toward smoking and social norms of smoking) combine to predict youth smoking.

The study conducted a secondary data analysis with a data-set from the population assessment of tobacco and health (PATH) study which targeted households with children aged 12 years or older across the United States (Hyland et al., 2017). Specifically, the interview data of 13,611 youths (ages 12 to 17) and 13,548 parents were analyzed. Parents and youth reported their smoking in the past 30 days. Youth ranked household smoking bans (e.g., "it is allowed anywhere and at any time inside my home"). They also reported whether parents have communicated the smoking issue with them in the past 12 months. Youth were asked about how their parents will react if parents found them smoking (i.e., 1 "be very upset," 2 "not be too upset" and 3 "have no reaction"). Youth's attitudes toward smoking were measured with five items (e.g., "I think using tobacco would help me reduce or handle stress") and the rating options ranged from 1 "strongly agree" to 4 "strongly disagree." The scale items are unidimensional based on the exploratory factor analysis result.

Through logistic regression analyses, an extended TPB model was generated in which the distal factor of parents' smoking (OR = 2.194, 95% CI = 1.464, 3.289) along with the proximal factors of youth's attitudes toward smoking (OR = .175, 95% CI = .127, .241) and subjective norms of smoking (OR = .474, 95% CI = .263, .856), predict the odds of likelihood of youth smoking.

Interestingly, this study showed that youth are not influenced by parental communication and household smoking bans, contradicting to the previous claim that regardless of parents smoking, parental communication and household smoking bans prevent children from smoking (Harakeh et al., 2005).

In contrast, parents' smoking behaviors explained 87.5% cases of youth smoking, suggesting that parents tend to be the model of smoking for youth. Moreover, an overlap influence of the distal factor (parents' smoking) and proximal factors (youth's attitudes and subjective norms) was identified, which indicates that parents' smoking is almost as important as youth's beliefs about smoking.

Considering the significant impact of parents' smoking, the study suggests that future campaigns should focus on parents' influence and alert parents to the social influence of smoking in front of children. The study also indicates that adding social context (e.g., family context) in the TPB model will help scholars predict what leads individuals to engage in certain behaviors.

Exploring Organizational and Professional Commitment, Servant Leadership, Occupational Stress, and Humor Perspectives: How Nurses Manage

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The primary research objective of this study was to explore how nurses' communication influences organizational commitment, professional commitment, servant leadership, occupational stress, and humor use. These concepts were approached qualitatively to obtain deep and rich information about communication influences on nurses' work lives.

A total of 34 nurse participants from network sampling and snowball sampling techniques were interviewed for this study, most from a medium-sized southeastern hospital. Specifically, semi-structured interviews were conducted where participants were asked to provide perspectives regarding communication events that painted accounts of organizational commitment, professional commitment, servant leadership, occupational stress, and humor use. These perspectives were analyzed using Strauss and Corbin's (1990) guidelines.

Conclusions were reached based on grounded theory analysis that followed from asking five research questions. First, participants sought out their coworkers and patients because of organizational commitment characteristics. Second, participants uncovered valuable unique aspects of nursing that frame nursing as more than just giving medicine. Third, participants revealed servant leadership qualities in their charge nurse. Fourth, participants revealed stress-filled experiences and ways in which they remedy them. Fifth, the humor phenomenon shed light into humor use. Collectively, these results extend valuable communication tools to both scholars and healthcare personnel.

Exploring Parent's Perspectives of Their Child's with Type 1 Diabetes Transition to Self-Management

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Type 1 diabetes (T1D) afflicts approximately 154,000 people under the age of 20. T1D typically presents in children who are incapable of managing a complex chronic illness, therefore their parents are responsible for its management. As the child matures, she must begin the transition to self-management. This transition is difficult for both the adolescent and the parents. An ability to cope with these changes is necessary for the well-being of both. We applied the Transactional Model of Stress and Coping (TMSC) to frame the context of the transition situation from the parent perspective and offers intervention possibilities to aid in coping with the stressful transition to adolescent self-management.

TMSC is used for evaluating the process of coping with stressful events, like the transition to self-management. Through this model, stressful experiences are viewed as transactions between the person and their environment. The person's appraisals of the stressor as well as the psychological, social, and cultural resources that the person perceives, mediates the impact of the stressor on the person.

Objective

The objective of this formative research was to better understand the perspectives of parents regarding the transition of care from parents to teen.

Methods

Parents were recruited through the Juvenile Diabetes Research Foundation's family network and a parent listserv. Interviews were semi-structured and focused on the time of transition to self-management. The interviews lasted 45 to 90 minutes. All of the data collected in the interviews was audio recorded, transcribed verbatim, and coded using NVivo (version 11) software. Using a deductive thematic analysis, three themes were emerged.

Results

The sample included eight mothers and one father. The themes included: family communication, denial, and transition facilitators.

Family Communication. All parents reported nagging their teens and expressed frustration its ineffectiveness. Parents knew that their behavior is annoying, but because teens rarely volunteer their blood testing information, parents felt the need to frequently ask about their child's management. This was noted as a major cause of family conflict.

Denial. Many parents reported their child would deny that they had to manage their diabetes—many just wanted to be like everyone else. The child would know their parents would be angry if they did not test, therefore they would lie.

Transition Facilitators. Parents spoke of what could help facilitate a smoother transition for their families. Many parents found social support important and noted that they need more resources. Several parents stated that they felt like they were the only parent they knew with a teen with T1D.

The parents' feedback clearly shows their appraisal of the stressful nature of this transition, however they note that support systems and additional resources are needed in order to better help them cope with the difficulties of transitioning their teen to full self-management.

Conclusions

This research offers a unique insight into the transition process. Parents find this transition period stressful; Interventions targeted toward increasing parents' coping skills, social support, and reducing parent stress are needed. These insights can be used to develop interventions to support this transition.

Exploring the Effectiveness of Interactive Data Visualization for Promoting HPV Vaccination among Young Females

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Data visualization is a type of presenting method using the visual encoding of quantitative data to deliver information. Aims to highlight the most important elements or key issues, data visualization has been widely adopted in variety of areas, including health issues such as vaccine efficacy, to enhance comprehension of numeric information, and thus, to facilitate with decision making. Although the idea of utilizing visuals to enhance communication efforts has existed for decades, new technology has brought increased attention and demand for data visualization. Rapid technological development has enabled more advanced and creative data visualization formats such as interactive data layouts in which individuals interact with visual datasets and receive tailored information (Yang, 2017). Although anecdotally there exists support for data visualization as a more user friendly presentation than traditional charts and graphs (e.g. Cairo, 2012), there are few studies examining the effects of data visualization on persuasion from theoretical perspectives in health communication. Driven by the urgent call to address this gap in literature, the study is designed upon the Extended Parallel Process Model (EPPM) and Fuzzy Trace Theory to explore the effectiveness of different types of data visualizations on increasing young female's understanding of Human papillomavirus (HPV) vaccination and promoting cervical cancer preventative behaviors.

All cases of cervical cancer are caused by HPV, and HPV can be prevented via vaccination (CDC, 2017). Results of clinical trials demonstrate high efficacy (over 90%) of HPV vaccines, yet the HPV vaccine coverage in U.S. remains significantly lower than the Healthy People 2020 goal (Healthy People 2020). To examine the effectiveness of data visualization for promoting HPV vaccination, a between-subjects experimental study was designed with three message conditions: the written text condition, the static data visualization condition, and the interactive data visualization condition. The stimuli were designed upon the theoretical components of EPPM, and the creation of the stimuli was beneficial from the collaboration of experts in health communication, interactive media, computer science, and public health. The study was conducted with a national sample recruited from a Qualtrics panel. The initial sample included 1053 participants; from this sample, in total 374 females who during the data collection had not begun HPV vaccination, were included in this study. The average age of the sample was 22.63 years ($SD = 2.67$), ranging from 18 to 26. A series of MANCOVAs and follow-up ANCOVAs were conducted to explore the effectiveness of data visualization, and the results demonstrated that there are significant differences among the three conditions in term of information comprehension (Wilk's $\Lambda = .86$, $F(4, 738) = 14.42$, $p < .001$) and persuasion for HPV vaccination ($F(2, 370) = 4.23$, $p = .015$). More specifically, interactive data visualization is significantly more effective than the traditional brochure for comprehension and persuasion (see Table 1), which suggests that both health communication scholars and practitioners should consider it as a valuable method to employ for health campaigns and other interventions to promote positive social change when combined with established, well-supported theories of social influence.

Expression in Digital Substance Use Disorder Support Groups: Change Talk and Substances Use

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Background: Change talk, refers to “any self-expressed language that is an argument for change” (Miller & Rollnick, 2012). The person conveys personal ability, need, desire, or reason for change, or a particular action taken that is clearly lined to change, or an intention to change. In motivational interviewing, “change talk” indicates participants’ planning of and committing to behavior change, including in contexts of substance abuse recovery (D’Amico et al., 2015; Engle, Macgowan, Wagner, & Amrhein, 2010). To date, change talk has predominantly been examined in face-to-face therapist-client sessions, leaving it unclear to what extent change talk occurs in online peer-to-peer forums, a rapidly growing recovery support venue that extends into the action and maintenance phases. Change talk in digital forums may predict recovery outcomes.

Methods: This study applied a supervised machine learning approach to identifying change talk in messages posted in an online forum for substance use disorders (SUDs) during 12 months of a mobile health intervention. Integrating machine classified data with three waves of survey data, this study examined whether change talk expressed in the discussion forum predicted substance use outcomes (risky drinking days, illicit drug use days) at two time points (6 months and 12 months).

Results: A boosted decision tree classifier performed well in automatically classifying the presence of change talk based on linguistic features of messages (F-score = .807). Of 10,278 messages posted in the first 6-month period, 2,286 messages contained change talk. Of 4,115 messages posted in the second 6-month period, 890 messages contained change talk. Greater change talk expression was negatively associated with risky drinking days at six months ($\beta = -.192, p < .05$) but not at 12 months (see Table 2). Change talk expression did not predict illicit drug use.

Conclusions: Change talk was common in an online peer-to-peer support forum, and predicted later alcohol use. Change talk can be automatically detected with supervised machine learning techniques, offering opportunities to tailoring digital interventions to participants’ recovery trajectories.

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Factors Influencing Patients' Choice of a Physiotherapist: A Case Study of the Swiss Insurance Premium-Funded System

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Little research has been done on how patients choose healthcare providers. The majority of research on this topic has been based in the United States, and has mainly surrounded primary care providers. Recent studies have focused on specific aspects of message testing for both text and video biographies, asking patients to choose between similar fabricated provider biographies with small manipulations (Perrault & Silk, 2016; Perrault, 2016, Perrault & Silk, 2015). One important area that has been understudied in healthcare is how patients choose physiotherapists. In physiotherapy settings, provider selection is particularly important, as rehabilitation is an essential component of recovery, healthy life adaptation, and continued well-being. Switzerland offers a unique socioeconomic climate in which to study this phenomenon, as the healthcare system, open prescriptions, and an emphasis on holistic medicine give patients the opportunity to select any healthcare provider they desire. In Europe, countries are beginning to consider patients as consumers, and healthcare offerings are growing (Thomson & Dixon, 2006).

This study is rooted on the premise that it is important to provide patient-centered care throughout the care continuum (i.e., not just within the confines of a healthcare interaction, but at the beginning of the provider selection process). To become better healthcare consumers, patients need to be able to gather the most relevant information and choose the best providers for themselves and their healthcare needs to achieve optimal care. Findings from this study have the potential to contribute to positive changes for both the industry and patients.

To achieve our objectives, a survey was conducted at a private physiotherapy clinic in the Italian part of Switzerland (n=94) across a 6-month period. New and current patients answered questions regarding factors influencing their choice of a physiotherapist, the sources they use to seek information, and when applicable, why they left their previous physiotherapist. Results indicated that the majority of patients surveyed, between 44% to 57%, seek information from family members, friends, or from a doctor in Switzerland. Results also indicated that patients generally consult physiotherapy clinics' websites and social media pages, ask acquaintances or colleagues for information and read patient comments on the Internet. Patients under the age of 35 are more likely to visit physiotherapy clinics' websites, social media pages, or ask their friends or colleagues for recommendations, while those over the age of 35 also visit physiotherapy clinics' websites, but are influenced by professional recommendations from doctors in their decision-making as well. These results indicate important differences between age groups that are relevant for more effectively positioning Swiss physiotherapy clinics today and in the future.

This research suggests physiotherapy clinics should not only actively communicate and collaborate with doctors when it comes to patients' care, but also work on expanding their own online channels that they are able to fully control. Future research could further explore the attitudes and perceptions of patients towards physiotherapy clinics' websites, and seek to understand which information is most useful to the patients in this unique setting.

Family Communication about Family Health History: Investigating Family Communication Patterns' Influence

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Advances in science and genomic medicine are leading to more discoveries of genetic variations associated with specific diseases, making family health history an important diagnostic tool for clinicians (Rolland & Williams, 2006). Family health history (FHH), or a family's medical history, can provide genetic risk information about a patient's close and distant relatives, which can alert healthcare providers to potential health risks they may be able to monitor, prevent, and treat (Koehly et al., 2009; Parrot & Hong, 2014). Family communication environment can be a pivotal facilitator or barrier to conversations about FHH. The environment family creates through communication forms spoken and unspoken rules, influencing family functioning, norms, and roles (Koerner & Fitzpatrick, 2002a). Based on the important role family communication can play in shaping environments facilitating or impeding FHH communication, Family Communication Patterns theory (FCPT) (Koerner & Fitzpatrick, 2006) guides this study. Family Communication Patterns theory (FCPT) contends families have internal working models of family communication and behaviors influenced by their uniquely shared worldviews, values, and belief systems (Koerner & Fitzpatrick, 2002a; Reiss, 1981). According to FCPT, families create their shared reality through two communication behaviors viewed on a continuum that define families' communication patterns: conversation orientation and conformity orientation (Koerner, LeRoy, & Veach, 2010). The first dimension of family communication is conversation orientation, which refers to the extent to which families create a relational climate encouraging family members to participate in unrestrained interactions about a myriad of topics (Koerner & Fitzpatrick, 2002b). Conformity orientation refers to the degree to which family communication stresses a climate of homogeneity of worldviews, values, and belief systems (Koerner & Fitzpatrick, 2002a). These dimensions are measured and used as predictors in this study.

The primary goal of this study is to explore the ways family communication environments influence FHH communication and whether individuals actively collect FHH information. Further, this study tests the mediating role of FHH communication between family communication environments and whether individuals actively collect FHH information. Study participants ($N = 203$) were recruited through Amazon Mechanical Turk and received a \$1.00 payment for completing an online Qualtrics survey. Hypotheses examined the relationships between conformity and conversation orientations on FHH communication and whether individuals actively collected FHH information. Research questions explored sex and age differences in mediation models. Indirect effects of models were computed using bootstrapping via Hayes' (2013) PROCESS macro. Results from data analysis show conformity orientation significantly and negatively predicted FHH communication, but not active collection of FHH information. Using Hayes' (2013) PROCESS macro (model 4) FHH communication partially mediated the relationship between conformity orientation and active collection. Conversation orientation significantly predicted FHH communication as well as whether individuals actively collected FHH information. Further, FHH communication was found to fully mediate the relationship between conversation orientation and active collection using Hayes' (2013) PROCESS macro (model 4). There were also significant differences in the conversation orientation model based on sex and age. Specifically, women and participants under 35 years old were more likely to communicate about and actively collect FHH

Fertility Decision-Making in Young Adult Cancer Survivors and Their Romantic Partners

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Young adult cancer survivors (i.e., 18-39; YACs) have unique psychosocial needs, including difficulty establishing and maintaining romantic relationships and coping with potential fertility loss (Kim, White, & Patterson, 2016). Compared to younger and older survivors, YACs are underrepresented in cancer and communication research, and scholars have called for more in-depth exploration of their illness experience (e.g., Zebrack, 2014). While fertility concerns (e.g., self-identity, uncertainty) have been explored in YAC studies (e.g., Crawshaw & Sloper, 2010), the communication involved in these decisions has not been closely examined. To address this gap, we apply the Family Determinants of Clinical Decisions (DECIDE) Typology (Krieger, 2014) to explore how YACs negotiate fertility decisions with their young adult (YA) significant others.

Methods

We conducted individual narrative interviews with 12 YAC-YA romantic partner dyads ($N=24$). At diagnosis, 7 dyads were dating, 3 were engaged, and 2 were married. Over 4 months, we met weekly to establish reliability through constant comparison (Strauss & Corbin, 1998) of thematic connections related to partner communication of fertility-related decisions following the YAC's diagnosis.

Findings

Two key decision-making styles were shared by most YAC-YA partner dyads when negotiating decisions about fertility. Couples using the collaborative style ($n = 6$) expressed that both partners shared cognitive and emotional ownership over fertility decisions and discussed them together (e.g., "we didn't bank sperm," "we weren't too worried about it"). Couples using the independent style ($n = 4$) agreed that the YAC should have autonomy and ownership over fertility decisions (e.g., "it's not my body," "I didn't get the option to choose"). Remaining couples ($n = 2$) had incongruent decision-making styles between partners. One YAC believed his girlfriend was worried about their fertility (i.e., collaborative), but she said she was "floored" when his mother brought up the topic because she "didn't think that far down the road" (i.e., independent). Another YAC viewed cancer as primarily affecting his body (i.e., independent), and he withdrew from conversations in which his girlfriend wanted to talk about the fertility decision she felt they shared (i.e., demanding).

Implications

Our findings have several implications for decision-making for both cancer and fertility communication. First, fertility decision-making involves both romantic partners, but because of their newer relationship statuses, YACs and their partners might not always feel comfortable discussing fertility as a "shared" decision. Second, our study suggested at least two important stages of fertility decision-making: the initial decision to preserve fertility, and the later decision to pursue fertility. Factors affecting these decisions included cancer type and stage, perceived locus of control (i.e., external vs. internal factors), and uncertainty management. Third, some YAC participants reflected previous findings that YACs would like more immediate, sensitive, and direct communication about fertility risk and preservation from providers (Crawshaw & Sloper, 2010). One participant even liked that her surgeon pushed the issue because it saved her from regretting her decision later. Finally, family members also made fertility decisions salient to participants, with some parents and siblings also expressing ownership over decisions, despite occasional resistance from YACs and their partners.

Fitness Tracker Technology: Understanding if Incentives Increase Sharing and with Whom

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With the rapid expansion of the mobile health technology field, personal health information can be accessed and communicated with increasing ease via health apps and devices. Among the most popular of these technologies are fitness trackers, which allow individuals to track and share health information such as physical activity, heart rate, sleeping patterns, and food intake. As technology advances even more health information may be able to be tracked such as blood sugar, blood pressure, or even blood alcohol (Olshansky et al., 2016).

Preliminary research suggested that individuals were most willing to share their fitness tracker information with their physician for the purposes of improving their health. They were less likely to share this information with others in their network. The current study examines individual's willingness to share health information from fitness trackers as the technology expands and if willingness to share increases when they are given incentives to share.

To help explain information sharing behaviors, Communication Privacy Management (CPM) was used as a framework for this study (Petronio, 2002; Petronio, 2013). This theory suggests that individuals place thick boundaries around information they consider to be private, such as health information, while placing thin boundaries around information they are more likely to disclose. These boundaries may be flexible and vary depending on the type of information and the source the information is being disclosed to (Petronio & Durham, 2008). Because of this, CPM considers relational and dialectical components as important elements that influence our disclosure of health information. These elements, along with core theoretical principles of privacy ownership, privacy control, and privacy turbulence, can be used to explain why individuals share fitness tracker information, with whom, and how much information they share. This will also illuminate why people may be more willing to share and allow flexible boundaries to be placed around their fitness tracker data when incentives are provided.

Data is being collected through a survey which asks participants about their fitness tracker use and willingness to share a variety of data to people including physicians, family, friends, health insurers, and marketers, among others. Initial results suggest that participants are likely to track new measures as technology advances, and when given incentives people are more likely to share their data with numerous groups. Additional analysis will help to determine what types of information individuals would be willing to share with their physician, insurance company, employer, marketers, and the government. A series of ANOVAs will be run to examine the differences in types of information shared and individual characteristics between those who share or do not share.

When we examine these results through CPM, we will determine if the receiver of the information plays an important factor in what we share, how much we share, and if incentives do change the boundaries around what were considered to be private health information in previous research. The results of this research allow for practical application in how fitness tracker information is used in relation to health, marketing, and privacy.

Fitness Trackers and the Theory of Planned Behavior: Understanding the Connection between Intentions and Behaviors

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The Theory of Planned Behavior (Ajzen, 1991) has been well studied in relation to physical activity and exercise behaviors. This research clearly indicates that attitudes, norms, and behavioral control are positively associated with the intention to engage in physical activity (Armitage & Connor 2001 & Hausenblas, Carron & Mack, 1997). In particular, behavioral control is a strong predictor of physically active behaviors (Armitage & Connor, 2001; Ajzen, 2002). However, we also know that much research in this area relies on the study of intention as an outcome variable and that intentions are not always predictive of behavior (Norman & Conner, 2005; Godin & Kok, 1996). This study seeks to understand that connection by looking not at beliefs related to exercise or physical activity, but beliefs about fitness tracker use as predictive of intentions to improve physical activity and ultimately, of activity behavior.

What this study suggests, is that those who track their health information, may have a stronger link between intention and behavior than those who don't. This information helps bridge the gap that sometimes occurs between intentions and behaviors. In particular, those who have a strong inclination toward self-quantification of health information may show a stronger relation to behavior than those who do not. The self-quantification movement is a more recent trend in health care in which individuals track, monitor, and quantify aspects of their health, to gain knowledge and self-awareness and ultimately make improvements to their health (Almalki, Gray, Sanchez, 2015). This is done through apps, electronic health records, and devices like fitness trackers. These individuals are more knowledgeable than ever about their health which has implications for patient-provider communication as well (Mehta, 2011).

This study hypothesizes the basic structure of the TPB to hold true in the context of fitness trackers. We expect attitudes, norms, and behavioral control to predict intentions, and intentions to predict behaviors. These variables were all measured using survey items. Behavior is measured by asking participants to indicate the number of steps, miles, sleep, or calories they log on an average day with their fitness tracker. As noted above, we do expect that those who suggest an interest toward self-quantification will show stronger connections between intentions and behaviors than those who are more casual fitness tracker users. However, because this is a new area of study, with little research available, we pose the relationships between self-quantification and variables in the TPB as a research question to further explore. Self-quantification was measured with a set of four questions that will be checked for validity through exploratory factor analysis and then the final measure will be checked for reliability. Data collection is ongoing and participants are being recruited through a convenience sample. Early data are trending in the expected direction, although not enough data is available to conduct statistical testing at this time.

The Food Environment as a Communicative Context: Students' Choice of Snacks and Beverages on Campus

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Unhealthy snack consumption in college campuses is high (Caruso, Klein, & Kaye, 2014), compounding the problem of poor health habits among college students (Price, Whitt-Glover, Kraus, & Mckenzie, 2016). Unhealthy snacks comprise high sugar, salt, and saturated fat content (Lobstein & Davies, 2008). Studies seeking to address unhealthy snack consumption have typically focused on health literacy as a factor (Yahia, Brown, Rapley, & Chung, 2016), with mixed results (Mcarthur, Valentino, & Holbert, 2017); mobile app interventions (De Cock et al., 2017), with limited applicability, and the physical environment or the choices available. The latter is an under-explored substantial influence on health choices as exemplified in the literature on food deserts (Cummins & Macintyre, 2002) or physical environments (Popkin, Duffey, & Gordon-Larsen, 2005), which I conceptualize as communicative contexts. Communicative contexts are factors of influence from a communication perspective surrounding individuals.

One such communicative context is cafeteria environments, whose research has produced remarkable results as to their direct influence on consumption. However, many of these studies had no behavioral component (Neumark-Sztainer, French, Hannan, Story, & Fulkerson, 2005), only had two choices (List & Samek, 2015), had confounding variables (Gittelsohn et al., 2010), or exclusively used price as a factor (French, Jeffery, Story, Hannan, & Snyder, 1997).

This study examines the role of the physical environment as a communicative context in snack choice on college campuses. The objective of this study is to determine the ability of healthy environments to both diminish unhealthy and increase healthy snack and beverage picks using behavioral measures. A between-subjects experiment embedded in face-to-face, in-depth interviews was conducted at a large urban public university in 2015 (N = 32). The intervention consisted of a basket of refreshments containing ten snacks and five beverages. Unbeknownst to participants, the basket was manipulated to represent one of the following three conditions: a mostly unhealthy basket, a mostly healthy basket, and a 100% healthy basket. The unhealthy basket represented the distribution of healthy (20%) to unhealthy (80%) snacks on campus as revealed in a previous pilot study. The mostly healthy basket reversed the proportion, and the 100% healthy basket only contained healthy refreshments. Participants were offered refreshments three times during the interviews and encouraged to take them away. Measures included the snacks and beverages picked for consumption. Interviewers debriefed participants after each interview.

Results showed that participants chose fewer unhealthy snacks and beverages in healthier environments. However, participants did not choose healthier options in healthier environments. Only when there were no unhealthy refreshments did healthy snack picks significantly increase, but there was no change in beverage picks.

The findings point to a discrepancy in the effects of the physical environment as expressed in the available foods around us. It appears that it is easier to communicate to eat fewer unhealthy items than more healthy items. Two lessons emerge: (a) Strategies to limit unhealthy snacks and encourage healthy snacks not only differ but also may have different effect sizes. (b) Further research is needed to help increase healthy snack persuasiveness.

Food Labels, Acculturation, Poverty, and Diet among Latinos: Evidence for Communication as a Mechanism for Segmented Assimilation

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Background: Latinos have disproportionately high rates of diet-related diseases, including obesity and diabetes, and the risk of poor diet is positively associated with acculturation among Latinos. Given the growing population of bicultural Latinos in the U.S., interventions to improve diet among this population are critically needed. However, previous studies suggest that nutrition communication may fail to reach bicultural, English-speaking Latinos, or fail to be effective at changing diet behaviors due to inadequate cultural targeting. The nutrition facts panel is a population-level communication intervention that has the potential to mitigate some challenges associated with communicating about diet with Latinos. Yet little is known about the extent to which Latinos use nutrition labels, and whether use and effects on dietary behaviors differ by acculturation. Additionally unclear is how socioeconomic status, a predictor of nutrition label use and dietary behaviors among the general population, may interact with acculturation to affect exposure and how acculturation and socioeconomic status interact with label use to influence diet.

Aim: To investigate how acculturation and poverty independently and jointly affect the use of nutrition labels, and to examine the extent to which nutrition label use moderates the effects of poverty and acculturation on diet among Latinos.

Methods: Cross-sectional analysis of Consumer Behavior Phone Follow-up Modules of the National Health and Nutrition Examination Survey ($N = 3,696$). Logistic regression models tested the interactive associations of income, and language spoken at home (as a proxy measure of acculturation) on label use, and on dietary quality, while also testing for interactions between income and label use, controlling for education, sex, BMI, and age in both models.

Results: Acculturation moderated the effects of income on nutrition label use, such that English-speaking low-income Latinos were half as likely as English-speakers with higher incomes to use nutrition labels (OR = 0.44, 95% CI: 0.24-0.81); however, Spanish-speakers were equally likely to use nutrition labels across income levels (OR = 1.00, 95% CI: 0.77-1.31). Nutrition label use moderated the effects of acculturation on diet: Among English-speaking Latinos, those who read nutrition labels had less than half the risk of poor diet (OR = 0.43, 95% CI: 0.26-0.69); however, label use did not significantly affect the diet quality of Spanish speakers (OR = 0.82, 95% CI: 0.67-1.02). Nutrition label use decreased risk of poor dietary quality regardless of poverty status.

Conclusions and Implications: Overall, results demonstrate the effectiveness of the nutrition facts panel for Latinos who use it, and particularly as a strategy for nutrition communication among bicultural Latinos, who may be more vulnerable to poor diet as a result of acculturation. However, low utilization rates suggest opportunities to increase its use. The evidence of differential effectiveness by income and acculturation extends segmented assimilation theory, which examines how immigrants' and their descendants' trajectories of integration are influenced by a complex interplay of individual, social, and structural factors. Results suggest that communication may be one mechanism for segmented assimilation: Low-income, bicultural Latinos follow an underclass pattern of acculturation demonstrated by a lower likelihood of reading nutrition labels and higher-income, bicultural Latinos follow the more successful selective pattern of integration.

Framing of 21st Century Cures Act in U.S. Newspapers

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In January 2015, the US Committee on Energy and Commerce released the first drafts of what is now the 21st Century Cures Act with a call for comments and suggestions from the public. The Act was approved in 2016 by Congress after a majority vote of legislators in the major political parties and the signature of President Obama. The Act brought about significant changes in health care especially for producers, patients, and the economy at large. This study applies the Functionalist Theory of the media to examine the media's role of surveillance, correlation, transmission, entertainment, and mobilization in regards to newspaper reports about the Act. Most people turn to the news media online to get credible information about important issues. It is important therefore to understand how the mass media chooses to frame such issues especially in the initial and subsequent stages. Quantitative content analysis and framing analysis are implemented to evaluate reports from four US elite newspapers: New York Times, Wall Street Journal, The Washington Post, and USA Today. Specifically, framing analysis will utilize blame attributes and Semetko and Valkenburg's media frames (responsibility, conflict, human interest, economic consequences, and morality) which have been extensively used and beneficial in framing research. A total of 76 newspaper reports were collected from Proquest Newsstand online databases using the search term, 21st Century Cures Act. Analyses are in progress and appear promising.

The Framing of Pre-Exposure Prophylaxis (PrEP) for HIV Prevention in U.S. Mainstream and LGBTQ Media

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While the number of new HIV infections per year has remained stable, the CDC considers the pace of new infections far too high, particularly among gay, bisexual, and other men who have sex with men (MSM). According to AIDS.gov, Pre-Exposure Prophylaxis, or PrEP, is a prevention method for people who do not have HIV, but who are at a high risk of getting it, to ward off contagion by taking a daily pill, among other measures. In recent years, Truvada, an antiretroviral pre-exposure prophylaxis drug, became available in the US market. Clinical trials and availability of Truvada have enjoyed significant media coverage. However, PrEP implementation continues to face challenges. One such challenge is awareness. Few know of PrEP, and those aware of this option learned about it from news media, friends or acquaintances, or the internet. Research also shows MSM often look for information about sexual health online. MSM use search engines and news sites such as the New York Times to locate information about HIV (Schwartz & Grimm, 2016).

The prospective for learning about PrEP for the first time from the news media and/or the internet may be a scenario for inaccurate or incomplete information that could potentially contribute to a health risk. Examination of news coverage of PrEP helps identify messages and narratives surrounding the method. This in turn will help understand how PrEP is communicated to the public, in particular, the frames utilized to disseminate information about PrEP; and the potential consequences and implications of these frames on perceptions and knowledge about this prevention method. Ultimately, the findings of this study may aid health communication practitioners design campaigns to either supplement or correct existing PrEP knowledge.

Following Van Gorp (2007)'s conceptualization of frame analysis, this study examines news coverage of PrEP in online mainstream and specialized media outlets since Truvada became available as PrEP in 2012. A convenience sample of 30 news texts from mainstream media outlets include CNN, USA Today, The Los Angeles Times, and The Dallas Morning News. The study also includes a convenience sample of 30 news texts from coverage in the three largest LGBTQ magazines in the United States by circulation: Out, The Advocate, and Instinct. All of the stories in both samples are available online. The study pays special attention to essential points in the process of frame building such as selection of information; and emphasis, or salience (Hallahan, 1999).

The results of this inductive framing analysis show that, even though news stories in mainstream and LGBTQ news outlets present the same basic frames, the structure, format, and variety of sources and stories draw distinct differences between the two types of media. This paper identifies and discusses the frames found in these stories, and the implications for this health issue.

General Attitudes and Stigma toward Depression as Predictors of College Students' Communication Apprehension with Providers

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Rationale: The rise in the number of college students who experience symptoms of depression is growing at an alarming rate. A high number of students do not seek professional help, with common barriers to treatment including lack of time, privacy concerns, lack of emotional openness, and financial constraints. However, variables that predict individuals' communication apprehension with a provider about depression has been neglected in the research. The author hypothesizes (1) communication apprehension will be negatively associated with friends and families perceived general attitudes toward mental health and positively associated with personal depression stigma, and perceived depression stigma and (2) general attitudes toward mental health problems, personal depression stigma, and perceived depression stigma will predict an individual's communication apprehension with a provider.

Method: Undergraduate students ($n = 376$) at a large mid-Atlantic university participated in the study. Participants' ages primarily ranged from 18 to 21; a majority identified as White ($n = 273$) and first-year ($n = 356$). Over half the participants reported being female ($n = 201$). Participants completed a 22-question survey that assessed demographic information, mental illness diagnostic history, and attitudes and behaviors related to the stigma of depression. A Pearson correlation was computed to address associations between general attitudes, personal stigma, perceived stigma, and communication apprehension, while a standard multiple regression analysis was performed between communication apprehension and general attitudes, personal stigma, and perceived stigma.

Results: There was a significant negative relationship between communication apprehension and general attitudes ($r[372] = .385, p < .05$) and significant positive relationship between communication apprehension and personal stigma ($r[372] = .418, p < .05$) and perceived stigma ($r[372] = .368, p < .05$). Regression analysis revealed that the model significantly predicted communication apprehension, $F(3, 368) = 42.421, p = .000$. R^2 for the model was .257, and adjusted R^2 was .251. In terms of individuals relationships between the independent variables and communication apprehension, personal stigma ($t = 5.077, p = .000$), perceived stigma ($t = 4.738, p = .000$), and general attitudes ($t = 2.748, p = .000$) each significantly predicted communication apprehension.

Implications: There are several implications for future this study. First, individuals who perceive that their friends and family have negative attitudes toward mental illness and stigmatize those with depression are more likely to experience communication apprehension with a provider. This suggest that family and friends play an important role in college students' decision to discuss important health issues, including depression, with their provider. Second, individuals whose family and friends have negative attitudes and stigmatize others with depression are more likely to stigmatize others, which is supported by literature that argues individuals learn to stigmatize from their networks. Finally, future health communication interventions to decrease communication apprehension for depression among college students should focus on messages that aim to decrease stigma and negative attitudes among students and their family and friends.

Getting College Students to Sleep: Gain vs. Loss Frame Analysis

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The importance of sleep is often overlooked, especially for college students. This paper advances current research to increase awareness of unhealthy sleep habits, and to advance theory in message design strategies. This analysis utilizes prospect theory with a specific focus on impact of messages with gain frames vs. loss frames. Results indicated college students are heavily influenced by concern for others (over the self) and value friendships over sleep. Additional results indicated females are more likely than males to indicate intentions to change their sleeping habits. Practical and theoretical implications are discussed, along with future research directions.

College students are some of the strongest victims of unhealthy sleep behaviors. Compared to the “normal” adult population, college students have a high-level sleep deprivation (Buboltz, Jenkins, Soper, Waller, & Faes, 2009). Although negatively impacted physical and emotional well-being, as well as a decrease in performance is a known issue due to a lack of sleep (Curcio, Ferrara, & Dennaro, 2006; Trockel, Barnes, & Egget, 2000), Buboltz et al. (2009) argued this unhealthy issue is still overlooked in college and university students.

We created two versions to manipulate message framing (gain vs. loss). Messages used the narrative of a college student that gained (or lost) recommended amount of sleep according to the National Sleep Foundation (2017). Both messages addressed the impact sleep had on academic performance. Participants averaged 20 years of age and were primarily in their freshman year of college. After receiving one of the two messages, participants completed a 34-item questionnaire on Qualtrics.

ANOVA analyses indicated significant differences in self-efficacy, concern for others, and decisions between friends and sleep; results of threat, intention, personal susceptibility, social norms, and past behavior between the two designed messages remained insignificant.

Prospect theory (Kahneman & Tversky, 1979) argues “losses loom larger than gain”, and our study supports this tenet of prospect theory. When participants responded to the message, results indicated the loss frame condition was more likely to influence participant intentions to change their sleep behavior in the future. Based on our findings, we argue college students are heavily impacted by others, whether it be a reason why they are willing to modify their own sleep habits, or the level of concern for the sleep habits of others. These analyses indicate students prioritize friendships and social influences over sleep.

We noted 43% of our participants were freshmen in college, which could be an additional reason our participants demonstrated the need for others. Results also indicated that women are more likely than men to intend to change their sleep habits to obtain a higher level of sleep quality in response to the message. Stereotyping influences could be another impact on women’s sleep habits, and is an area of interest for future research.

Future related research should perform studies with an increased number of participants, analyze sleep habits of students at multiple universities, examine health costs and benefits between sleep and friendships in college, and examine the influence of gender and sex on reactions to sleep messages in health communication.

Healthifying Games: Research on the Persuasive Effects of Virtual-World Health Campaigns

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Nationally representative surveys indicate that over 80% of young adults play video games, as do nearly all adolescents. This simple reality has motivated a research program in which we have been exploring the feasibility of “virtual health campaigns” (e.g., Burrows & Blanton, 2016; in press). In this program of research, we have developed video games around common themes of interest to adolescents and young adults (e.g., first-person shooter, car racing, skateboard challenges). In each game, we find plausible reasons for players to encounter health promotion images from within the virtual gaming environment. In one study, for instance, players are sent on a hunt-to-kill mission in an old, abandoned Division of Motor Vehicles (DMV) building that has been overrun by armed, alien humanoids. There, we happen to have placed posters discouraging driving under the influence of alcohol (DUI) -- posters typical of what one might encounter at an actual DMV. In studies such as this, we find that immersion (or “transportation”) into gaming environments heightens influence from health messages encountered, as measured by changes in attitudes, intentions and health-risk perceptions. Thus, the more players self-reported feeling immersed or transported into the DMV game just described, the lower their intentions to DUI after message exposure (relative to controls and controlling for pre-exposure intention). In this talk, we present results from a half dozen studies from this research program, where we have used a range of different video games to target a range of different health behaviors. We find that video games provide a powerful medium for targeting individuals who typically will be the most resistant to health communications. This is because transportation into gaming environments appears to block some of the forms of message rejection and resistance that can undermine attempts to influence health intentions. The effects we observe from delivering messages in virtual gaming environments also differ from those typically found in real-world campaigns, in that effects on attitudes and intentions appear to be more diffuse. That is, messages targeting specific risks behaviors often spread out to influence intentions regarding other, related health-risk behaviors. We close by discussing potential strategies for introducing messages into commercial games, as well as plans to implement a larger-scale, game-based behavioral health intervention.

How Do Doctors and Nurses-To-Be View Extended Breastfeeding? An Exploratory Study

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Extended breastfeeding is breastfeeding continuing beyond babies' 12 months of age (Brockway & Venturato, 2016). The World Health Organization (2016) recommends breastfeeding beyond two years with supplemental food. However, breastfeeding rates in the U.S. decline rapidly after six months, with the rate of any breastfeeding at 30% at 12 months and 11.8% at 18 months (CDC, 2014).

Research has focused on factors influencing breastfeeding initiation and public breastfeeding (Lau et al., 2017; Rempel, Rempel, & Moore, 2016). Few studies examine how extended breastfeeding is perceived. With the limited existing research, scholars tend to demonstrate there is social disapproval of extended breastfeeding. Cockerham-Colas and colleagues (2012) reported increasingly negative attitudes about children breastfeeding at 1-2 years and 3-4 years. Tomori and colleagues (2016) reported that women practiced extended breastfeeding secretly due to social stigmatization.

Moreover, Cisco (2015) showed that women who planned on extended breastfeeding received the least support from health professionals. Therefore, it is important to understand how extended breastfeeding is perceived among health practitioners to identify areas for improvement in the education of pre-healthcare professionals on this topic. This study examined pre-health professionals' cognitive (perceived advantages and disadvantages) (RQ1), affective (RQ2), and behavioral (what they would say to patients) (RQ3) responses to extended breastfeeding.

Students enrolled at a large mid-western university (73 pre-med students and 42 nursing students) participated in the online survey. They answered open-ended questions assessing their cognitive, affective, and behavioral responses. A grounded-theory approach (Strauss & Corbin, 1997) was employed to generate overarching themes, along with social support themes (Cutrona & Suhr, 1992) and emotional classifications (Lazarus, 1991), followed by a content analysis of the responses.

As shown in Table 1, benefits for the child are mentioned more frequently than general benefits, and benefits for the mother. When asked about disadvantages of extended breastfeeding, 43.5% of the participants responded that extended breastfeeding was likely to lead to more disadvantages for the mother, whereas fewer responses (23.5%) mentioned disadvantages for the child. As shown in Table 2, negative affective responses (discomfort, contempt, piety, and anger) were expressed by 40% of the participants, and neutral affective responses (curiosity, none of my business) were expressed by 41.7% of the participants. Very few participants (6.1%) expressed positive responses (e.g., happiness, respect). Participants were divided about what they would say to patients who engage in extended breastfeeding, as the number of participants expressing approval/support or questioning/concern was approximately equivalent (see Table 3). If asked for advice by patients, participants displayed a variety of advice, ranging from direct support to warning against extended breastfeeding, and from non-commitment to providing direct recommendation (see Table 3).

The results demonstrate that many pre-health care practitioners hold negative beliefs about extended breastfeeding and also feel neutral, if not negative about extended breastfeeding. These results stress the importance to improve the curriculum to educate pre-health practitioners about the advantages of extended breastfeeding. To address the negative affective responses, healthcare organizations should place emphasis to support women to engage in extended breastfeeding and reduce health practitioners' discomfort about it.

How Emerging Adults Talk about Their Parents' Chronic Health Issues: Comparing Mental and Physical Illnesses

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For children, the experience of growing up with a parent who has one or more chronic illnesses can alter the trajectory of their development. To understand how children have experienced their parents' chronic illness(es), we explored the language they use to talk about their parents' health over the course of the illness(es). We were particularly interested in the recollections of emerging adults (EAs) who are on the cusp of adulthood and possible differences in their language use when their parents had physical versus mental chronic conditions. Our approach was guided by the theoretical idea that analyzing individuals' talk provides insight into their emotional, social, and cognitive processes (Tausczik & Pennebaker, 2010).

We interviewed 98 emerging adults (30 males; 68 females; $M_{\text{age}} = 19.09$, $SD = 1.72$) about supporting a parent with a chronic health condition from the time they first found out about the condition(s) to present day. Most EAs were Caucasian (83.7%). A majority (55%) reflected on experiences supporting their mothers. EAs reported on a wide variety of health conditions; 26% included mental illnesses (e.g., depression) and the other 74% were solely physical health conditions (e.g., cancer).

We used two types of language analysis on the transcripts (EA talk turns only). The first was Linguistic Inquiry Word Count (LIWC), a software program used by researchers to study people's behaviors and psychological states (Pennebaker, Boyd, Jordan, & Blackburn, 2015). We used LIWC to determine the frequencies with which categories of words were used. Independent samples t-tests comparing parental mental and physical health conditions revealed that usage of emotion words, particularly anger ("hate", "pissed"), as well as insight words ("think", "know") and authentic words (honest, personal, and disclosing text), were higher for parents with mental illnesses. The word "they," words about health ("clinic", "pill"), including biology words ("eat", "blood", "pain") and body words ("hands", "feet"), were more common when talking about parents with physical illnesses.

Second, we used the Meaning Extraction Method (MEM) to extract themes associated with these conversations. The method identifies words that statistically co-occur with one another across a body of text (Chung & Pennebaker, 2008) and is executed as a principal components analysis that returns factors of words. We found eight discrete factors that we reviewed as a research team to assign meaningful labels to. EAs with parents with mental illnesses were less likely to talk about their parent as "healthy" (i.e., factor words included, "chronic," "recovery," "together," and "healthy") than EAs whose parents had physical conditions. For all findings we will provide contextual examples from the interviews.

Our findings suggest that talking about parents' mental health is an emotional, even if honest and personal, experience for emerging adults and that it reflects a narrative process of understanding (i.e., use of insight words). On the other hand, talking about parents' physical conditions is marked by the use of more objective, descriptive words about health. Fostering meaningful ways for children to talk about parents' health can potentially help them cope with its impact on their lives and their family's.

How Fear Appeals Change Health Attitudes and Behavioral Intentions in the Context of Haze Pollution

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More than 100 cities and billions of residents in China have been suffering from haze pollution, a severe kind of outdoor air pollution similar to smog, for more than one decade. In 2013, the International Agency for Research on Cancer have considered outdoor air pollution as a primary cause of cancer deaths. Due to the magnitude of harm caused by haze pollution and plenty of residents relevant to the pollution, haze pollution has become a primary agenda among health and environmental issues in news reports and social media. Media messages on haze pollution have also become an on-going research interest among communication researchers in China, mainly focusing on investigating features (i.e. frames, sources, tones, attributes of pollution) of news reports on haze pollution though focusing on one media outlet or comparing different media outlets.

The question remains unexplored as to how haze pollution-related media coverage influences audiences' attitudes and behaviors in response to the pollution. It is worthwhile to study the media effects on attitude and behavioral change towards haze pollution from a psychological perspective because media is widely considered as a cue to attitude or behavioral change for an audience. Therefore, this study aimed to (1) applying the Extended Parallel Process Model (EPPM) to the haze pollution issue, and (2) explore how variables from Risk Information Seeking and Processing (RISP) model (i.e., information seeking and avoidance, systematic and heuristic processing) further enhance the predictive power of EPPM model. A 2x2 pretest-posttest quasi-experiment was conducted in Mar. 2017. 140 senior students from the School of International Relations at the Renmin University of China participated in the experiment. Among them, there were 129 valid samples with an answering rate of 92.14%.

Participants were randomly divided into four groups, receiving different stimuli (threat: high/low; efficacy: high/low). In the pretest, participants were asked the perceived threat of haze pollution and the frequency of protective actions they took when facing haze pollution. Then, they were asked to read the stimuli and answered questions about perceived threat and efficacy, health attitudes and intentions, and risk information seeking and processing behavior.

EPPM model was proved effective in the context of haze issues. Results from data analysis indicated that the degree of threat and efficacy cause the difference of persuasive effects. Messages containing both high threat and high efficacy information had the strongest persuasive effects, whereas messages with low threat and low efficacy were weak in changing health attitudes and behavioral intentions. Moreover, inconsistent with previous research, the interaction effects of perceived threat and efficacy was insignificant in this research. Through multi-hierarchical regression model, RISP model significantly improved the predictive power of EPPM model, ranging from 5.2% to 12.4%. Risk information seeking and systematic processing were significantly related to positive health attitude and behavior change. Perceived threat was the strongest factor of four variables of EPPM model in predicting health attitudes and intentions.

How Pediatricians Talk about Antibiotics when Prescribing: Implications for Antibiotic Stewardship

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Antibiotic-resistant bacteria are a serious and growing threat to public health, currently accounting for over 23,000 deaths and 2 million infections annually in the U.S. (Centers for Disease Control and Prevention, 2016). Preserving the utility of existing antibiotics demands reduction of antibiotic prescribing in outpatient settings where it is estimated that approximately 30% is unnecessary (Fleming-Dutra et al., 2016). At present, the culture of healthcare in the U.S. privileges patient input on treatment decisions (i.e., "shared decision-making," Elwyn et al., 2012) such that providers' motivation to act as stewards for antibiotics is undercut by the expectation that patients will react negatively if denied them (Mangione-Smith et al., 2015).

To date, researchers have focused attention on how providers communicate when recommending against antibiotic treatment or advising a waiting period before use (MacGeorge, Caldes, Smith, & Hackman, 2017; Mangione-Smith et al., 2015). Yet, the way providers talk about antibiotics when they prescribe them for immediate use is also worth attention. If providers treat antibiotic prescribing as nonproblematic, and do not adequately address issues of utility and risk, they miss an opportunity to educate patients and promote public health—and thus unwittingly contribute to expectations that promote demand for antibiotics.

The way providers talk about antibiotics when they prescribe them has gone largely unexamined (Roberts, Albert, Johnson, & Hicks, 2015). As an initial inquiry on this topic, the current study presents both quantitative and qualitative analysis of provider-parent communication in a set of medical visits for pediatric middle ear infection (otitis media, or OM). OM is a condition for which a great deal of antibiotic prescribing continues to occur, often unwarranted. OM is also ubiquitous and often occurs more than once in early childhood (Harsten, Prellner, Heldrup, Kalm, & Kornfält, 1989). If providers who prescribe immediate antibiotics for OM omit discussion that addresses actual antibiotic utility and risk, they likely reinforce the perspective that antibiotics are useful and harmless, such that parents carry that orientation into subsequent visits. In particular, providers' discussion of the antibiotic prescription, adverse effects from antibiotics, pain management, nature of the illness, and finishing the course of antibiotics have the potential to influence parents' antibiotic-relevant attitudes and behaviors.

Provider-parent interactions ($N = 64$) in which an antibiotic was prescribed for an ear infection were recorded at a pediatric clinic affiliated with an academic medical center. They were professionally transcribed and analyzed both quantitatively and qualitatively. Analyses based on quantitative coding indicated that providers uniformly described the prescriptions but were less consistent in discussing adverse effects or pain management, and rarely discussed the nature of ear infections or finishing the course of antibiotic treatment. Qualitative analysis revealed limitations in how most topics were discussed, including minimal attention to adverse effects. The findings from this study illustrate how providers' talk about antibiotics may serve to reinforce the very misconceptions that make it difficult for them to educate patients and reduce injudicious prescribing.

How to Make People Move: The Role of Need for Autonomy in Explaining Customization Effects in Mobile Health Apps

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Physical inactivity has been identified as a leading risk factor for global mortality [1]. Although research has shown that the majority of people intend to engage in physical activity, nearly half of them fail to act upon those intentions [2]. A promising strategy to promote physical activity is the use of mobile health apps, given the widespread adoption and technical possibilities of mobile technology. Mobile devices are always on and people tend to carry them with them everywhere, which makes them especially suitable to intervene in people's daily lives and promote physical activity [3-5].

A claim that has typically been made, is that mobile health apps can provide autonomy support in health-related decision making [6-8]. Based on self-determination theory [9], the motivational technology model [10] argues that optimal levels of customization, i.e., the ability to self-tailor the mediated environment to one's individual preferences [10,11], are essential to enhance the user's active control and intrinsic motivation to use mobile health technology, which is in turn expected to promote the uptake of physical activity. The question remains, however, whether customization in health apps can indeed foster health behavior change, and whether customization is equally effective for all individuals. This study therefore investigates the effects of customization in mobile health apps on people's intention to engage in physical activity (mediated by perceived active control and intrinsic motivation), and explores the role of need for autonomy in explaining customization effects.

A convenience sample of 203 participants were randomly assigned to one of two experimental conditions (customization vs. non-customization), with need for autonomy (lower vs. higher levels) as quasi-experimental factor. Through an online survey, participants were asked about their need for autonomy, and exposed to a customizable or non-customizable exercise app, dependent on experimental condition. The customizable app included an "add-button" to customize a personal workout plan, whereas the non-customizable app did not. After engaging with the mobile health app, participants completed items on perceived active control over the app, intrinsic motivation to use health apps, and intention to engage in physical activity.

Structural equation modeling showed that customization did not lead to increased perceived active control, enhanced intrinsic motivation, and higher behavioral intentions. However, a significant interaction between customization and need for autonomy revealed that customization only led to higher intentions to engage in physical activity for those with higher levels of need for autonomy, and not for those with lower levels of need for autonomy.

This study investigated the effects of customization in mobile health apps and the role of need for autonomy in its effectiveness. Our results showed differentiating patterns in need for autonomy; those with a higher need for autonomy significantly increased their intention to engage in physical activity after engaging with a customizable health app, whereas those with a lower need for autonomy did not. Our study provides relevant implications for health app design and health communication at large by suggesting that differences in need for autonomy should be considered to optimize the impact of mobile health communication efforts.

I (Don't) Get Tested So I Can Hook Up: An Integrated Model-Based Investigation of Clustered Sexual Health Behaviors

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The current study is part of a larger research project, guided by the integrated model of behavioral prediction (IMBP; Fishbein & Ajzen, 2010), that is focused on designing messages that encourage STI testing among undergraduate college students. Such work is needed in light of research that indicates that undergraduate college students are “hooking up” at increasing rates, yet underestimating their personal risks of contracting an STI while doing so (Garcia, Reiber, Massey, & Merriwether, 2012). Indeed, for many students, the perceived positive outcomes associated with hookups outweigh their potential negative outcomes (Lewis, Granato, Blayney, Lostutter, & Kilmer, 2012).

Interestingly, in our previous research, we found that an attitudinal belief that getting tested “may mean I cannot hook up” was positively correlated with STI testing behavior (Authors, under review). Moreover, in another of our studies—derived from the same data set—we found that students had overwhelmingly positive attitudes about hooking up, which had a significant association with their hookup intentions and behavior (Authors, 2017). In other words, not getting tested for STIs may serve as an uncertainty management strategy for many students; avoiding information about their status enables them to maintain hope and optimism that they can hook up, which, in turn, facilitates their positive attitudes about hooking up.

Drawing from these results, as well as research that shows that behaviors often happen in clusters (Burke et al., 1997), we hypothesized in the current study that these two behaviors may be coupled, such that hookup attitudes, norms, control beliefs, and behavior, influence STI testing intentions and behavior. To investigate these relationships, we used the data from the previously discussed studies ($N = 268$), which were collected via an online survey that included both indirect measures (see Robbins & Niederdeppe, 2015) and direct measures (see Fishbein & Ajzen, 2010) of the IMBP's core constructs.

We then used this data to conduct exploratory analyses of two multiple regression models. The first model, in which STI testing intentions was the dependent variable, was significant overall, $R^2 = .06$, $F(5, 268) = 3.56$, $p < .01$; individually, hookup attitudes ($b = -.20$, $t[268] = -2.37$, $p < .05$), behavioral control enablers ($b = .21$, $t[268] = 3.37$, $p < .01$), and behavior ($b = .18$, $t[268] = 2.25$, $p < .05$) had significant associations with STI testing intention. The second model, in which STI testing behavior was the dependent variable, also was significant overall, $R^2 = .12$, $F(5, 268) = 7.26$, $p < .001$; individually, hookup attitudes ($b = -.14$, $t[268] = -1.7$, $p < .05$) and behavior ($b = .36$, $t[268] = 4.73$, $p < .001$) had significant associations with STI testing behavior.

We have embarked on a confirmatory study to test these models within a new student sample. Data have been collected, but have yet to be analyzed. If our findings hold, we propose that suggesting that consistent STI testing (and treatment, if necessary) actually facilitates hooking up may be an effective message design strategy.

“I don’t want people to be resentful”: Exploring Patients’ Disclosure Decisions When Seeking Recurring Social Support

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Currently, 117 million Americans are experiencing chronic illness (Ward, Schiller, & Goodman, 2014). Because of the long-term nature of chronic illness, such patients usually have ongoing needs for support. Social support is a broad concept, encompassing verbal and nonverbal communication that helps the recipient build a safe emotional, mental, and physical foundation (Goldsmith & Albrecht, 2011). Though social support is often linked to improved health, patients might hesitate to communicate their support needs for various reasons, including a concern about how their requests may change others’ perceptions of them, or how such requests may alter close relationships. Researchers have examined how patients decide to initially disclose diagnoses, but there is a call for scholars to study how chronically ill patients routinely decide what illness-related information to disclose or conceal when seeking recurring social support (Checton & Greene, 2012).

Study participants were recruited via online message boards (e.g., Nextdoor.com), support groups/chat forums (e.g., reddit.com), and respondent-driven sampling. Eligible participants were at least 19 years old, had been diagnosed with a chronic illness in 2010 or later, and were in a serious romantic relationship at the time of diagnosis. Nineteen individuals from the United States and Canada participated in in-depth, semi-structured interviews, ranging from 45 to 75 minutes. Interviews were transcribed verbatim; using a grounded theory approach (Charmaz, 2006), transcripts were coded to identify emerging themes around social support seeking. The first author and an undergraduate assistant met regularly to establish coder reliability.

Preliminary results indicate four key themes in the data: (1) Individuals intentionally and routinely conceal illness details or illness-related needs in order to protect or maintain their sense of personal identity; as one participant said, “I don’t want to be That Crohn’s Girl”; (2) Patients conceal chronic illness-related information, or avoid seeking support entirely, to maintain or protect relationships: “I have avoided a lot of my close friendships over the last year, kind of as a way of preserving them”; (3) Patients appreciate support that does not focus undue attention on the illness, as one participant explained: “I need them to keep things as they were. I just want things to go on as normal”; and (4) Patients seek support from others with similar, even if unrelated, health issues, because those individuals are perceived as having a fuller, more empathic, understanding of chronic illness. Immediately after her lupus diagnosis, one participant called a friend who has a similar condition because, “She’s experienced it, she knows what it’s like to get these kind of things.”

These findings have implications for patients with chronic illness and those in their extended support networks. By understanding how patients strategically and continuously seek social support from others during chronic illness, we can help them manage their personal and relational identities, including identifying additional support sources (e.g., with less identity threat). Additionally, we can help friends and family members provide support more tailored to patients’ relational needs and concerns, which can ultimately decrease stress and improve well-being throughout the chronic illness experience.

“I have a specific plan for ways I might safely intervene as a bystander”: Developing and Testing a Successful Intervention

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Jordan Conrad, Bowling Green State University**

More than 300,000 women are raped each year, while nearly 1 in 6 American women will be the victims of a rape or an attempted rape during their lifetime (Tjaden & Thoennes, 1998). Perhaps even more troubling is the fact that female college students are at the highest risk of being a victim of sexual assault, with more than a quarter reporting victimization of rape (Fisher, Cullen, & Turner, 2000; Koss, 1985).

The purpose of this study is to test an educational intervention curriculum grounded in the Theory of Active Involvement (Greene, 2013). The format of the intervention is a two hour small-group discussion-based learning session, led by a peer facilitator. During the session, students discuss key topics, share their experiences and beliefs, challenge each other’s opinions, collaborate to propose strategies, participate in group activities, and create pro-social action plans.

The project is founded in community based participatory research. We partnered with students in a health communication course throughout the tenure of the project. These students joined the research team by piloting both the intervention and facilitator training and providing significant feedback (e.g., 25 single spaced pages), reviewing and adapting (with special attention to normative college student’ speech patterns) existing psychometrically validated measures, recruiting participants, and serving as facilitators. After pilot studies with three groups of participants we learned that they found the methodology powerful, but that some of the men said they felt attacked. 100% said they would recommend peers participate in program, but that the program seemed long. Finally, students wanted more take-aways/strategies in bystander intervention. We made the following changes to the program before the intervention test: we continued to streamline language, we corrected for bias against men in question phrasing, we added structure to bystander intervention section.

About two months later, we tested the resulting intervention using a pre- post-test design with a control group. Unfortunately, participants self-selected into the study, and into conditions (e.g., if they had time to participate in the intervention). We found no significant differences between groups at T1. There were no significant differences between control and intervention groups in terms of seeking consent or empowerment at T2. We also measured bystander intervention intentions in four different ways. First, we looked at intentions for action (e.g., “I have developed a specific plan for ways I might safely intervene as a bystander if I see sexual violence and/or misconduct happening around me”) for both victims “you know” (e.g., friends) and “strangers.” Second, for challenging norms (e.g., “would speak up if I heard someone I know say ‘she deserved to be raped.’”) for both known and unknown others. While there were no significant differences between control and intervention groups for friends, people who participated in the intervention were significantly more likely to intervene on behalf of strangers, both in terms of speaking up ($t(66.30) = 7.60, p < .001$), and in terms of taking action ($t(54.10) = 13.97, p < .001$). Finally, 100% of intervention participants indicated they would recommend the program to a friend.

I Learn Haze from WeChat: The Mediating Effects of Health Information Seeking from WeChat in Predicting Protective Health Behaviors

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Background

“Under the Dome”, a self-financed documentary made in 2015 by Jing Chai, a famous Chinese journalist, attracted over 300 million views on Youku after being published for 4 days. The virality of this video indicates not only the severity of haze (a term used to describe China’s air pollution), but also the public’s concern about its health risks, including difficulty in breathing, coughing, asthma, and reduced longevity by 5.5 years (Chen, Ebenstein, Greenstone, & Li, 2013). Since December 2013, more than 100 cities in China were threatened by haze, endangering over 1 billion people’s health. WeChat, the top social media in China with 902 million daily log-in users, has risen to become a primary platform for Chinese people’s health information seeking behavior (HISB; Zhang, Gu, & Shao, 2015). Despite the prevalence of HISB on WeChat, the predicting factors and consequences of Chinese people’s haze HISB using WeChat remain unclear. To fill this gap, we proposed a hypothesized model under the Risk Perception Attitude (RPA) framework (Rimal & Real, 2003) that perceived risk (H1) and efficacy beliefs (H2) positively predict Chinese people’s haze HISB on WeChat, which positively predicts their intention (H3a-b) and protective behaviors of wearing PM2.5 mask and reducing outdoor exercises (H4a-b).

Method

An online longitudinal survey was administrated during October 2016 and April 2017. A panel of participants currently residing in mainland China was contacted to complete the survey at Time 1 (T1; $N = 1,168$) and re-contacted to complete a follow-up survey at Time 2 (T2; $N = 305$) one month later. Only those who completed the questionnaires at both T1 and T2 were included in the analyses.

To answer our hypotheses and establish temporal order, we perform lagged analyses using measures of perceived risk (i.e., perceived severity, susceptibility) and efficacy beliefs (i.e., self-efficacy, response efficacy) at T1, haze HISB from WeChat at both T1 and T2, and intentions and behaviors of wearing mask and reducing outdoor exercises at T2. Demographic variables, HISB, and perceived credibility of haze information on WeChat at T1 were controlled. All constructs were measured using established scales.

Results

Structural equation modeling was conducted using Mplus 7.0. Bootstrapping with 500 replications was implemented to test the indirect effects. Hypotheses were all supported, except for the non-significant predicting effects of efficacy beliefs on HISB (H2), and HISB on intention to reduce outdoor exercise (H4b). WeChat HISB was found as a significant mediator. Plausible explanations could be that a) efficacy beliefs become less important in predicting HISB when the volitional control over behaviors reaches a high level, and b) there are fewer recommendations about reducing outdoor exercises than wearing masks on WeChat, which was confirmed by our content analysis results.

Discussion

Our study not only lent support to RPA framework in predicting understudied health intentions and behaviors, but extended this framework to new media environment and to a non-Western culture. The findings also provided empirical evidences and guidance for WeChat-based health interventions and campaigns in China to mitigate the consequences of haze.

“I’m not a doctor, but...”: How Lay Individuals Construct an Epistemology of Another’s Illness

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Individuals perform the “sick role” by talking and behaving as if they are ill. However, these illness presentations may not be believed by others. Given the high stakes nature of health issues and the centrality of support in managing health issues in relationships, it is of both theoretical and practical importance to understand the processes by which lay individuals evaluate the “truthfulness” of others’ illness presentations. Exploring this phenomenon pushes the boundaries of current theorizing about managing health information in relationships. It challenges the assumption of honesty in health-related disclosures, turns the focus of analysis to disclosure recipients, and sheds light on the processes by which individuals come to know about and manage others’ health issues in relationships. Our research question was:

RQ: How do individuals evaluate the “truthfulness” of their family members’ illness presentations?

We recruited 32 individuals (nine men and 23 women, $M_{\text{age}} = 35.28$ years, $SD = 9.91$ years) through Amazon Mechanical Turk and interviewed them about their experiences with a romantic partner or family member (relational “partners”) who they believe fabricates or exaggerates his or her health condition(s). Participants spoke about mother figures ($n = 8$; including mothers-in-law and step-mothers), sisters ($n = 8$), husbands ($n = 6$), aunts ($n = 3$), wives ($n = 2$), fathers ($n = 1$), grandmothers ($n = 1$), sons ($n = 1$), and uncles ($n = 1$). Partners were 46.21 years old on average ($SD = 17.00$ years). We had no inclusion criteria for the health condition(s) of the family member and so they varied widely.

Findings from our grounded theory approach to analysis suggested that participants construct an epistemology of illness or theory of knowledge about their partners’ health, outlining the process by which they “know” their partners are fabricating or exaggerating symptoms. Participants constructed this epistemology of illness by first positioning themselves as an expert who has more knowledge and experience than discreditable partners and, in some cases, healthcare professionals. This theme answers the epistemological question, “Who can know?” Second, participants assessed their partner’s illness presentation for its correspondence with expectations and its internal coherence. For correspondence, they used personal “expertise” and information given by healthcare providers or gathered through research to assess whether an illness presentation was recognizable (i.e., a “real” condition), verifiable (i.e., confirmed by experts), and normative (i.e., conformed to expected patterns of behavior). For internal coherence, they looked for contradictions both (a) within what partners said about their condition and (b) between their partners’ words and actions. These themes address the epistemological questions, “How do I know?” and “How do I go about knowing?” Through these processes participants drew (in)conclusions about their partner’s health that were often uncertain or incomplete, illustrating the complexities of differentiating truth from belief—a core epistemological concern (i.e., “What do I know? What can be known?”).

We discuss the implications of our participants’ methods of understanding their partners’ health for both themselves, their partners, and their relationships, as well as the contributions of this work to interpersonal health communication literature.

Imagine Your Future: Testing the Role of Imagination, Self-Referencing, and Message Framing in Obesity Prevention Messages

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Public service announcements (PSAs) and health promotion messages often implicitly or explicitly refer to the future consequences of adopting or failing to adopt a recommended health behavior. For example, a recent anti-smoking ad “Destiny” features high school students talking about the negative effects of smoking they expect to experience 20 to 30 years in the future (e.g., emphysema, lung cancer; Centers for Disease Control, 2012). Likewise, Strong4Life’s “Rewind the Future” anti-obesity campaign features a character “Jim,” who is portrayed in 2030 suffering a heart attack—the result of 20 years of overeating and a sedentary lifestyle (Strong4Life, 2013).

Although these PSAs are similar in many ways, one key difference is the audience’s perspective. In the “Destiny” ad, viewers watch as others (i.e., high school students) talk about how smoking will affect their health in the future, while the “Rewind the Future” ad uses a camera angle that captures what is happening from Jim’s perspective. As a result, viewers “experience” the future effects of obesity, as if they were happening to them. This difference in perspective between negative health outcomes affecting others or affecting the message recipient has been studied frequently in health communication (e.g., Chang, 2011; 2013; de Graaf, 2014; Escalas, 2007), although relatively little research has tested whether combining audience perspective with direct and indirect references to the future may enhance the effectiveness of health messages.

Therefore, the current paper presents the results of a study that tested the effects of implicit or explicit references to an imagined future and the effects of direct or indirect references to message recipients on attitude, involvement, and intention. Because message designers also frequently emphasize potential benefits or risks associated with adopting or rejecting a behavior, we included message framing as a third variable in our study. Message framing is an application of Prospect Theory (Kahneman & Tversky, 1979) to message design whereby messages highlight the potential benefits or risks of engaging or not engaging in a recommended behavior (Rothman & Salovey, 1997).

The study used a 2 (imagined future: explicit, implicit) x 2 (perspective: self-referencing, other-referencing) x 2 (message frame: gain, loss) between-subjects experimental design. Participants ($N = 267$) were U.S. adults recruited through Amazon Mechanical Turk. They were randomly assigned to read and evaluate a message about physical activity and healthy eating as strategies to reduce the risk of obesity. Analysis of variance (ANOVA) and simple effects tests were used in inferential statistical analyses.

These analyses revealed a compelling pattern of results. When participants were explicitly instructed to imagine the future, gain-framed and self-referencing messages were evaluated more positively, and they produced higher levels of involvement and intention. However, when participants were only presented with potential negative future outcomes associated with obesity, loss-framed and self-referencing messages produced significantly higher attitudes, involvement, and intention when compared to other conditions.

One important study implication is that the effectiveness of PSAs emphasizing future outcomes may be contingent on whether future benefits or risks are presented as affecting the message recipient directly or affecting generic others.

The Impact of Processing Fluency on Parent-Directed Messaging About College Student Mental Health

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Given that approximately 75% of mental illnesses begin by age 24, and incidences of mental illness in college students are on the rise (SAMHSA, 2015; Mistler, Reetz, Krylowicz, & Barr, 2012), this study explored mental-health promotion messages sent to parents of college students. Using mental-health promotion material that is currently distributed to parents by mental health services at a U.S. university, this study investigated relevant aspects of parent-child communication and the ease with which individuals are able to process visual information in parent-directed mental health materials (Oppenheimer, 2006). Visual ease, retrieval ease, and imagination ease were explored in this study. Mental health promotion information, as well as the fluency of the content and visual layout were manipulated, creating three conditions: (a) current content, (b) current content + fluency, and (c) new content + fluency. The following hypotheses were advanced:

H1: Parents who view new content will perceive the messaging as more informative and relevant and have greater intent to speak to children about mental health (i.e., convincingness) than parents who view current content or current content + fluency.

H2: Parents who view current content + fluency will perceive the messaging as more informative and relevant and have greater intent to speak to children about mental health (i.e., convincingness) than parents who view current content.

Participants ($N = 228$, mothers = 173) were randomly assigned to view and read one of three mental-health handouts (current content = 77, current content + fluency = 78, and new content + fluency = 73) presented via online survey. Likert-type and open-ended questions were included, and demographic information was collected. Parents reported about their students who were 65.7% female ($n = 150$) and 33.9% male ($n = 78$).

To investigate group differences across the set of dependent variables, a one-way MANOVA was conducted. There was no evidence of a significant main effect of group on perceived satisfaction, informativeness, relevance, and convincingness of the mental-health promotion messages. Therefore, neither hypothesis was supported.

Although there was no evidence to support the hypotheses advanced in this study, these results may be explained by the Elaboration Likelihood Model (ELM), which posits that personal involvement with a topic (i.e., child's health) enhances motivation to think about that particular topic (Petty & Cacioppo, 1986). Preliminary analysis of open-ended participant responses also indicated that parents across groups were invested in learning more about and attending to college-student mental health. For example, "...reminds me to stay engaged with my child about their personal well being," and "...my daughter & I have a close relationship but I realize I probably don't discuss the importance of mental health enough." ELM suggests this interest and connection with the subject matter motivates parents to engage with the mental-health promotion materials in similar ways, regardless of processing fluency. These findings also present an opportunity to explore the influence of processing fluency when relaying information about high-stakes or high-risk topics such as college student mental health (e.g., Cox, Cox, & Mantel, 2010).

Improving Messaging to Promote Organized Disposal & Prevent Abuse of Prescription Drugs in Appalachia: Community Perspectives

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The U.S. is experiencing a nationwide opioid abuse crisis, with overdoses caused by misuse of prescription opioids, illicitly produced synthetic opioids, and heroin having reached epidemic proportions. The 21st Century Cures Act, enacted in December 2016, calls for the implementation and evaluation of effective strategies for prevent opioid abuse. We report on a current project that addresses the significant health issue of nonmedical prescription drug use (NMPDU), with opioids constituting the most frequently misused medication. NMPDU is defined as the use of a drug without a prescription or for reasons other than prescribed. NMPDU is the second most common form of illicit drug use in the U.S., with 7.6% of individuals age 12 and older reporting use in the past 12 months. According to the National Institute on Drug Abuse, prescription opioids are responsible for the majority of NMPDU overdose deaths. A key prevention strategy promoted by the U.S. Drug Enforcement Administration and implemented by 100s of local communities is organized drug disposal programs—specifically, permanent drug donation boxes and takeback events. These programs provide opportunities for community members to dispose of their unused and expired prescription drugs, reducing their availability for nonmedical use by those to whom they were originally prescribed, others who live in the home, and visitors. Our study team has shown that only a miniscule fraction of unused NMPDs are disposed through these efforts (Egan et al., 2016). This could be due in part to the failure to use best practices in message development to increase awareness, particularly using formative research to develop messages tailored to a target community. The current project utilizes a framework incorporating the Health Belief Model and the Service Dominant Logic Model to address these concerns in five Appalachian counties (3 in KY, 2 in NC). The project uses this theoretically-informed focus group approach to gain an understanding of: (1) the reasoning and rationale that community members have for use/nonuse of organized disposal programs; (2) the value they place (if any) on having such programs in their community; and, (3) how community-tailored messages promoting the use of disposal programs can be used to promote proper disposal. The perspective gained from community residents will offer understanding for developing theory-based messages that will resonate with community members and ensure members' voices are heard and reflected in the messaging strategies. To this end, qualitative data collected from community focus groups in all five counties will identify the pertinent themes using HBM and SDLM for understanding community perspective on the opioid and prescription drug abuse crisis and rationale for not disposing of unused medications. This understanding of rationale and perspective will aid in message development and testing utilizing McGuire's Communication-Persuasion Matrix. Themes from the focus groups and implications for tailored message design encouraging proper disposal of unused prescription drugs will be presented in this paper. In the long term, this research will ensure state-of-the-science message design, placement and campaign implementation, all increasing likelihood of campaign success, marked by increased use of organized disposal programs in communities.

Improving Pharmacy Student Teamwork Communication through Growth Mindset and Critical Communication Education

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The US health care system provides high cost care of inconsistent quality (McGinnis, Malphrus, Blumenthal, 2015). According to the Institute of Medicine (IOM), improvement requires restructuring our healthcare system to provide coordinated clinical care (Bloom, 2002; Page, Hume, Trujillo et al., 2009). High performing interprofessional teams are essential to care coordination; but in a recent survey, 36% of employers felt that new graduates lacked the soft skills of interpersonal abilities and teamwork (PayScale, 2016). Patient centered care requires health professionals to effectively communicate and work with diverse team members of varying strengths and values (Baker, Day, Salas, 2006). The American Association of Colleges of Pharmacy (AACCP) have called for pharmacy curricula to create interactive, team based, and interprofessional learning experiences that prepare students for the future of healthcare (ACPE, 2016). Increasingly evidence-based active learning strategies – such as Team-Based Learning – are being employed in health profession classrooms, including pharmacy (Michaelsen, McMahon, Levine, 2008). While active learning pedagogies compare favorably to traditional lecture based methods when measured for instructional outcomes, some students remain unsatisfied with team-based learning and attitudes can decline after group learning (Hudson, Lethbridge, Vella, Caputi, 2016). Team-Based learning programs in pharmacy school curricula often leave students to work out issues of team dynamics among themselves rather than intentionally equipping students to handle the inevitable conflicts that arise in team work (Beatty, et al., 2009). Equipping pharmacists with tools to identify, respect, and work with the differing strengths of fellow pharmacists has not been studied. Pharmacy Schools often face educating students driven by personal success that places a high value on autonomy – an autonomy that conflicts with the value of interdependence necessary for effective teamwork, especially when accompanied with what Dweck (2008) calls a Fixed Mindset towards collaborative learning processes. The mindset of pharmacy students toward group learning at the start of pharmacy school has not been studied. Additionally, the mindset of current practitioners towards team-readiness has not been studied.

To fill these research gaps, we are conducting a 2-year study of pharmacy student's and practitioner's Growth Mindset toward team readiness after implementing team-based learning activities that utilize critical communication pedagogy (Fassett & Warren, 2006) with Growth Mindset to improve the team-based learning outcomes for pharmacy students. We are in the initial phases of data collection that has established the baseline for measuring Growth Mindset outcomes through two surveys of 74 first year pharmacy students and interviews with 2 pharmacy professors who will implement the communication-based activities in the spring 2018. This data collection process will continue over 3 more semesters with an analysis across the surveys, interviews, and pharmacy course materials. Based on initial data analysis, we foresee the pharmacy students adopting communication skills to improve their team-based performance and increase their Growth Mindset scores. This research has implication for improving pharmacy students' communication skills to meet the patient-center needs of the pharmacy profession and healthcare workplace environment.

Improving Student Knowledge and Perceptions of Primary Care Providers at Campus Health Centers

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As the number of medical students studying primary care as a specialty declines, the primary care landscape to which college students are currently exposed, and likely to be exposed for the foreseeable future, is one increasingly dominated by nurse practitioners (NPs) and physician assistants (PAs). One location already seeing this shift is campus health centers, where the most recent ACHA staffing summary found that PAs and NPs outnumber physicians in primary care specialties. However, confusion regarding what these care professionals can actually perform in comparison to the more widely understood physician profession is likely to be high. This confusion is likely to be further compounded when students who are seeking information about the primary care providers staffed at their campus health centers are introduced to numerous, and probably unfamiliar, credentials next to providers' names on their websites (e.g., CRNP, PA-C). Previous research has already uncovered that students are hesitant to seek care at campus health centers because of concerns regarding providers' technical competence and the quality of care they can receive there. Without a thorough understanding of the actual duties various primary care providers staffed at campus health centers can perform, simply having the term "nurse" or "assistant" appear in the formal names of the primary care practitioners treating students could potentially impact their perceptions of the kind of care to be received, as well as their willingness to even seek care. Therefore, this study sought to answer the following two research questions:

RQ1: What are students' knowledge and perceptions regarding primary care professionals staffed at campus health centers?

RQ2: What are students' primary care professional preferences for a minor healthcare concern?

One way to potentially improve students' knowledge and perceptions of primary care providers staffed at student health centers could be through the provision of more informative provider biographies that help explain their specialties. The following study, therefore, developed an enhanced provider biography for an NP to determine if exposure to it could improve student knowledge and perceptions.

RQ3: What effect does an informative provider biography have on students' knowledge and perceptions of primary care providers?

Students ($n = 1,646$) from two universities in two states participated in this online study. Some were exposed to an improved biography of an NP (about 260 words) discussing how she can perform many of the same duties as primary care physicians (e.g., prescribe medications, diagnose illnesses, order lab tests). Changes in knowledge and perceptions were assessed pre- and post-biography exposure. More than half of students are unaware NPs and PAs can prescribe medications and diagnose illnesses. The majority also indicated they would want to receive care from a doctor (not an NP or PA) to have a minor infection treated. Students exposed to the biography increased their knowledge of NPs, and perceptions of their expertise. Results suggest improved provider biographies on student health centers' websites can help reduce the knowledge deficit that exists among students regarding common primary care providers.

Increasing Perceptions of Tailoring of Online Cancer Resources on Patient and Caregivers' Treatment Decision-Making

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Participation in cancer clinical trials (CCTs) is critical to advancing patient care (NCI, 2017). Yet, the decision to participate can be difficult for patients and caregivers. Individuals affected by cancer are increasingly turning to the Internet to locate information about the disease and treatment options (Roach et al., 2009). Although the widespread availability of cancer information online could benefit patients and caregivers, cancer decision-making is emotion-driven (e.g., Beach & Dozier, 2015), strong emotions that accompany a cancer diagnosis (e.g., Jenkins & Fallowfield, 2000) present challenges to how individuals seek information and make decisions about treatment.

Message tailoring – the practice of designing messages at the individual level (Kreuter et al., 2000) is one way to increase intentions to engage in cancer-related behaviors (see Noar et al., 2009). However, tailoring information is resource intensive and simply increasing perceptions of tailoring (i.e., belief that information has been matched to their preferences) could be as effective at achieving similar outcomes. In this study, we examined if priming patients and caregivers to perceive that web-based materials about cancer had been tailored to their preferences influenced emotion surrounding cancer treatment and cancer decision-making.

Patients ($n = 105$) and caregivers ($n = 105$) were asked to provide insight on a website created for cancer patients to help them make better decisions about treatment. Prior to viewing the website, participants answered questions about their website preferences (e.g., “Do you prefer webpages with downloadable resources?”). Patients and caregivers were randomly assigned to one of two message conditions. Participants in the Perceived Tailoring Condition (PTC) were instructed to view a personalized website whereas those in the Non-Tailored Comparison (NTC) were instructed to view a website. Participants completed a post-test survey with measures assessing perceptions of tailoring, emotions surrounding CCTs, and intentions to seek information about CCTs and participate in a treatment registry.

We ran a serial mediation model in PROCESS (Hayes, 2013) depicting the indirect effect of perceptions of tailoring on intention to participate a cancer treatment registry through positive emotion and intention to seek information about CCTs. Inclusion of these variable was based on preliminary analysis. There was a significant direct effect between perceptions of tailoring on intention to participate ($B = .55$, $t(206) = 5.920$, $p < .001$). To explicate this relationship further, we ran the serial mediation model. The total effect model significantly predicted intention to participate in a cancer treatment registry ($F(15, 189) = 5.96$, $p < .001$) and there was a significant pathway through the mediators in serial ($a_1a_3b_2 = .049$, CI, .02 to .11). In other words, participants who perceived the web-based materials had been tailored to their preferences experienced stronger positive emotions about CCTs and were significantly more to express an intention to seek cancer information and to enroll in a cancer treatment registry. Our results advance theoretical knowledge regarding the underlying mechanisms of tailoring and have implications for developing web-based materials about cancer and designing cancer treatment interventions.

The Influence of Misconceptions about Antibiotic Utility and Perceived Risk on Antibiotic-Seeking Behaviors

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Increases in antibiotic-resistant infections worldwide (CDC, 2013) have led to widespread concern for public health and intensified efforts to promote antibiotic stewardship, which refers to coordinated efforts to preserve the utility of antibiotics by reducing or eliminating inappropriate use (Doron & Davidson, 2011). At present, antibiotic stewardship campaigns typically emphasize the need to correct misconceptions about the utility of antibiotics. However, in line with the Health Belief Model, simply correcting misunderstandings about when antibiotics are useful (or not) may be insufficient to move the public towards behavior change. Further, Broniatowski and colleagues (2015) contend that simply understanding when antibiotics are useful (or not) is insufficient to move the public towards behavior change (see also McNulty, Boyle, Nichols, Clappison, & Davey, 2007). The current study was therefore designed to examine the extent which seeking antibiotics is predicted uniquely, or interactively, by misconceptions about antibiotic utility and perceived risks of antibiotic use. Participants ($N = 1,007$), recruited using Qualtrics.com, completed an online survey designed to assess misconceptions about perceived utility, perceived risk of antibiotic use, and antibiotic-seeking behaviors. Hierarchical regression analysis revealed a significant main effect of utility misconceptions on antibiotic seeking, but no effect of perceived risks on antibiotic seeking behavior. However, there was a significant interaction between misconceptions about utility and perceived risk, suggesting that the effect of utility on seeking behaviors depends on perceived risks. The simple slopes analysis revealed that misconceptions about utility were a significant predictor of antibiotic seeking behavior only when participants believed that the risks associated with antibiotic use were low. The results thus suggest that misconceptions about the utility of antibiotics directly predict antibiotic seeking, but perceived risk does not. Importantly, although perceived risk of antibiotic use does not have an effect on antibiotic seeking independent from perceived utility, the interaction results indicate that when perceived risks of antibiotic use are higher, there is no relationship between misconceptions about the utility of antibiotics and antibiotic seeking behavior. However, when the perceived risk is low, these misconceptions are significant predictors of antibiotic seeking behavior. The results from this study underscore the need for health education scholars and practitioners to create, evaluate, and employ widespread antibiotic stewardship campaign messages that both correct misconceptions about antibiotic utility and educate the U.S. public about the risks associated with antibiotic use.

The Influence of Patient Identification and Narrative Transportation on Intentions to Participate in Cancer Research

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Entertainment education interventions commonly utilize narratives as a persuasive strategy to increase identification with the message source, promote involvement with the topic, and elicit greater willingness to adopt recommended behaviors. However, there is little empirical research examining the mechanisms underlying the effectiveness of this strategy in the context of cancer research participation. Data for the current manuscript were collected as part of a larger study conducted with cancer patients (N = 340) from the United States, United Kingdom, and the Republic of Ireland. Participants viewed and evaluated video-recorded vignettes illustrating different strategies for discussing clinical trials participation with family members. Results showed nationality was a significant predictor of identification with the main character (i.e., patient) in the vignette. Unexpectedly, these cross-national differences in identification disappeared when patients currently undergoing treatment had higher perceived threat of cancer. Identification with the main character in the vignettes was a significant predictor of intentions to participate in cancer research, but only when the mediating role of narrative transportation was considered. Finally, this model significantly predicted patients clicking on a link to find out more information about how to enroll in a cancer research registry. The findings demonstrate the importance of considering how individual and social identities influence identification with characters in cancer narratives and yield practical guidance for developing arts-based interventions to increase cancer research participation.

Influence of the Healthy Highway Nutrition Education Program on Healthy Eating with Social Cognitive Theory Framework

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This study examines the effectiveness of a school-based healthy eating intervention program, the Healthy Highway Program, for improving healthy eating knowledge and healthy food choice behavior among elementary school students. Adopting the key aspects of social cognitive theory into the healthy eating promotion strategies at school, the program helped students raise the value of good health and nutrition, identify the benefits of adopting healthy eating patterns, develop practical skills for reading food labels and make healthy food choices through observation and hand-on experiences.

After intervention, based on pretest-posttest design, statistically significant more students improved their healthy eating literacy by telling “healthy (green light) and unhealthy (red light)” foods among their daily food choices. For example, after the intervention, statistically significant more K~2nd graders became to perceive French fries as “red” food (from 41.9% to 61.2%). Similar changes happened among 3rd~5th graders regarding broccoli, bacon, banana, and green beans. Continuing positive intervention effects were found at the school lunch food choice behavior too. The positive findings of the present study can be attributed to the effective program design and curriculum content as well as to the educational workshops organized for teachers who volunteered to implement the Healthy Highway Programs into their classroom curricula.

Influences of Media-Related Parenting on Teens with Prediabetes and Type 2 Diabetes: A Comparison by Disease Stage and Gender

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Type 2 diabetes (T2D) is a fast-growing chronic disease in the U.S. projected to quadruple in 40 years among adolescents (Pettitt et al., 2014). Helping prevent or manage T2D is paramount, with diabetes management self-efficacy (DMSE) and frequency of daily blood glucose checks (GC) important for health enhancement (ADA, 2015; Berg et al., 2010; Copeland et al., 2013). Parents are key influencers of youth's self-efficacy, with DMSE and GC linked to parent-child relationship quality (RQ) and parenting styles—supportive, engaged parenting leads to greater RQ, which is positively linked to DMSE and GC (e.g., Berg et al., 2010; Dashiff et al., 2008; Saletsky et al., 2014).

Studies of youth with diabetes continually explore parenting of normative (e.g., homework) and diabetes-related behaviors, with parenting of media-related behaviors unexamined. The amount of time youth spend with media/technologies often leads parents to manage or restrict their use. This may be particularly true among youth with diabetes, who spend more time in front of screens, a habit linked to poor glucose regulation (Galler et al., 2011; Liese et al., 2013; Lobelo et al., 2010). Per mediation of media theory (Nathanson, 1999, 2002; Valkenburg et al., 1999), parental mediation approaches (i.e., restrictive, active/instructive, and co-viewing) can affect attitudes toward parents and perceptions of relationship closeness, with restrictive approaches being most damaging (e.g., Guo & Nathanson, 2011; Nathanson, 2002; White et al., 2015). The approaches parents use differ by youth gender (Blum-Ross & Livingstone, 2016) and may vary by youth's disease stage (i.e., at risk of disease (prediabetes) or diagnosed (T2D)).

This study uses structural equation modeling (SEM) to understand how mediation of media approaches and monitoring of youth's health behaviors predict RQ (and, ultimately, DMSE and GC). It uses responses from 13-15-year-olds nationwide to an online survey distributed to consenting parents/legal guardians ($N = 307$; 56% prediabetes, 53% male). An SEM model was tested for measurement invariances and using multiple-group approach, one model by disease stage and another by gender. Final models are partially constrained and show a good fit: Disease stage ($X^2(25) = 47.03, p = .005; CFI = .952; RMSEA = .076$) and gender ($X^2(26) = 37.43, p = .068; CFI = .975; RMSEA = .054$).

Disease stage moderated three parameters: active mediation, restrictive mediation, and co-viewing as predictors of RQ. Gender moderated two parameters: active mediation as a predictor of RQ, and active mediation and health monitoring as co-varying constructs. Active and restrictive mediation were significant predictors of RQ for youth with T2D while only co-viewing was predictive for those with prediabetes. All media parenting approaches were significant predictors of RQ for males and females, with exception of active mediation for males. Furthermore, mediation of media parenting approaches are stronger RQ predictors than health monitoring when comparing groups by disease stage, an indication of the significance of media-related parenting. Lastly, RQ mediated the link between parenting approaches and DMSE, with GC mediated by DMSE.

Adolescents' diabetes-related self-efficacy and behaviors are influenced by relationships with parents, with RQ predicted by media- and health-related parenting (the former more predictive than the latter at times). Additional findings, implications discussed in paper.

Keeping Up with eHealth Literacy: An Application of the Transactional Model of Communication

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Background: Electronic health (eHealth) fosters the dynamic computer-mediated transaction of information and communication among online users. Consistent with the fundamental features of eHealth, the transactional model of communication functions under the assumption that interpersonal communication exists within a fluid state, meaning that the situation, intended communication and information goals, and communicators themselves are consistently changing and simultaneously influence one another. Within the context of eHealth, the transactional model of communication can be conceptualized as a form of interpersonal computer-mediated communication (I-CMC). In I-CMC, “noise” consists of physical, psychological, and semantic factors that interfere with the ability to access, understand, and exchange information. To effectively and appropriately thrive in eHealth, a communicator must have the skills to manage or co-regulate these noise factors. In 2006, eHealth literacy was coined to understand patients’ skills to use and benefit from eHealth technologies and online health information. Current definitions and models of eHealth literacy, however, are outdated and do not account for this transactional and social nature of eHealth. **Purpose:** The purpose of this study was to conduct a concept analysis of eHealth literacy in the context of the transactional model of communication to derive an updated definition and model to guide its future understanding and measurement.

Methods: In 2017, eHealth literacy definitions ($N = 10$), models ($N = 4$), measurement instruments ($N = 6$), and peer-reviewed empirical literature that applied at least one of the models ($N = 16$) were systematically extracted from three online databases (i.e., PubMed, CINAHL, PsycINFO). An adapted version of Walker & Avante’s concept analysis methodology was conducted. An inductive analysis of definitions and the attributes/dimensions included in conceptual models and measurement instruments was conducted.

Results: Findings suggest that eHealth literacy is a process-oriented construct with overlapping and inconsistent attributes/dimensions across definitions, models, and measures. The relationship between operational skills presented within eHealth literacy definitions (e.g., locate, understand) and the literacies included within conceptual models is unclear. “Communication” in eHealth literacy remains underdeveloped and seen as an outcome rather than part of the eHealth process. eHealth literacy models and measurement instruments are conceptual with minimal insight to the operationalization of the construct.

Discussion: An updated definition and concept of eHealth literacy is proposed. eHealth literacy is conceptualized as the ability overcome impeding effects (i.e., “noise”) of reciprocal contextual factors (i.e., personal, relational, technological, situational) in the eHealth experience that hinder patient advocacy across diverse ecological levels. A proposed eHealth literacy definition is: “the ability to locate, understand, exchange, and evaluate health information within dynamic online environments to facilitate patient advocacy across diverse ecological contexts.” To complement the definition, a hierarchical model of literacies is proposed: (1) functional eHealth literacy; (2) communicative (social) eHealth literacy; (3) critical eHealth literacy; and (4) translational eHealth literacy. This study contextualized eHealth literacy in the computer-mediated transactional model of communication to provide a definition and corresponding model that has been since validated by key informants (i.e., eHealth experts, eHealth end-users) to inform a current study that is aiming to develop an measurement instrument.

Know What's at Stake Before You Vape: The Design, Implementation, and Evaluation of a Campus-wide e-Cigarette Education Campaign

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Background: Electronic cigarettes (e-cigarettes) are a growing trend among young adults. Although the misperception that e-cigarettes are safer than traditional cigarettes currently runs rampant, recent research has found e-cigarettes to contain many of the same harmful and cancer-causing chemicals as traditional cigarettes—including nicotine. Evidence also suggests that these products are not effective cessation aids. Although the science is clear that e-cigarettes are no healthier than traditional cigarettes, communication research has found substantial disconnects in the dissemination and awareness of this science. Thus, intervention efforts are needed to disseminate the science regarding harms of e-cigarette use to the lay public.

Purpose: Guided by the health belief model (HBM), this study sought to develop, implement, and evaluate the effectiveness of a campus-wide e-cigarette education campaign for increasing awareness of the harms of e-cigarette use and reducing intention to use e-cigarettes.

Campaign design: Through preliminary focus groups, campaign messages presenting scientific evidence of the harms of e-cigarettes were evaluated and developed. During focus group discussion, the campaign slogan Know What's at Stake Before You Vape emerged. The final messages sought to emphasize HBM constructs, such as demonstrating risks of use, outlining ways to overcome barriers to not using, and presenting the known harms of e-cigarette use. The messages were designed as half-page flyers by the University art department. Across six weeks, 5,000 flyers were distributed around campus.

Method: Campaign effectiveness was tested using a pre-test/post-test experimental design. Undergraduate students were recruited through random sampling via the Registrar's office to participate in the pre-/post-test survey. Base-line measures were collected three weeks prior to campaign implementation. Six weeks after implementation post-test measures were collected. Items on pre-/post-test surveys included measures of demographics, tobacco use, e-cigarette use, and theoretical constructs. Post-test items also included measures of campaign exposure.

Results: In order to investigate campaign effectiveness for improving perceptions of e-cigarettes, t-tests were run for numerous measures related to e-cigarette knowledge, attitudes, efficacy, and intentions to use. Through paired samples t-test, analyses found significant reductions in intention to use an e-cigarette ($t[199] = 1.98, p < .05$). Independent samples t-tests examining campaign exposure found individuals exposed to the campaign messages to be more aware that e-cigarettes contain particles that have been known to cause cancer ($t[198] = 1.72, p < .05$) and to be more aware that the vapor emitted from e-cigarettes is not just water ($t[198] = 2.27, p < .01$). Thus, the campaign had some positive effects for improving awareness of the harms of e-cigarette use and for reducing intention to use an e-cigarette in the future.

Implications: Findings from this study demonstrate how communication efforts can effectively reach young adults regarding the harms of e-cigarette use. In addition, the findings provide guidance for communicative strategies that researchers and practitioners can employ in order to educate the public about the threat of e-cigarettes. E-cigarette companies are spending millions of dollars marketing e-cigarettes and millions more challenging FDA attempts to regulate these products. Communication efforts, such as the present campaign, are desperately needed to disseminate the scientific findings regarding the harms of using e-cigarettes.

Legitimacy Tensions and Student Perceptions of the “Realness” of University Health Providers and Care

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University health centers (UHC) offers a variety of services, from flu vaccinations to women’s health screenings and are often students’ first health stop. However, UHCs struggle with student satisfaction and often compete with local urgent care clinics or students’ home providers. In a 2016 in-house patient experience survey at a large Mid-Atlantic university, students reported UHC providers were caring, but express frustration with providers’ diagnosis and treatment options. The purpose of this study was to explore the underlying issues impacting student UHC providers and care satisfaction.

Fifty-four students attending the above mentioned university participated in focus groups about UHC services. Students must have visited the UHC at least once during the 2016-2017 school year. Focus groups were recorded and transcribed, resulting in 198 pages of text. Data were analyzed using an emergent thematic approach. Legitimacy tensions emerged during the analysis as major factors which influence their perceived care experience.

Across focus groups, students questioned the legitimacy of UHC providers and the legitimacy of the UHC as a “real” clinic. Students were quick to point out that UHC providers were “real” because they have medical/nursing degrees; however, they often questioned the legitimacy of care. First, students questioned the realness of the healthcare space. Students talked about how it was hard to take the UHC seriously because it was a university clinic, with some comparing it to their high school’s nurse’s office. Also, due to the layout of the UHC, students witnessed backstage communication practices, including joking and laughing, which some interpreted as the providers not being serious. Second, students questioned the realness of provider actions. Students often talked about satisfaction being associated with receiving medication at the conclusion of their appointment. When UHC providers recommended self-care options or told students their illnesses didn’t warrant a prescription, students questioned if providers were knowledgeable. Students contrasted UHC providers with their home doctors, who would prescribe antibiotics at almost every visit. This was compounded further when students sought a second opinion at the local urgent care clinic and received antibiotics. Third, students questioned the realness of provider ability. Students recounted visits where providers couldn’t identify or diagnose a health issue or when they perceived they were misdiagnosed. These perceived misdiagnoses were “confirmed” when providers at urgent care offered a different diagnosis and prescribed antibiotics, even though there is no evidence the students were misdiagnosed.

Students base their care satisfaction on how well UHCs meet their health expectations. Students’ belief that the “realness” of UHC care is linked to whether they receive a prescription at the end of the visit underscores the need for increase health literacy training for young adults. Students do not always understand why they aren’t being prescribed antibiotics. Second, students’ perceptions of misdiagnosis are problematic because they frame UHCs as less-than health spaces. Students may not realize illnesses can evolve and were not misdiagnosed. Universities should add a unit about health care and antibiotic use into basic health courses and UHCs should offer workshops to help students learn about important health topics.

Lung Cancer Screening Awareness: The Thoughts and Beliefs of Family and Friends of Individuals at Risk for Developing Lung Cancer

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Background: Lung cancer screening employs low-dose computed tomography to identify potential malignant nodules among individuals who are at high risk of developing lung cancer. Results of a large randomized trial demonstrated that lung cancer screening reduces mortality (Aberle et al. 2015), and policy organizations have responded by mandating insurance coverage. Despite these developments, uptake of screening remains low, and this may be partially explained by a lack of community awareness of screening and a lack of support for individuals are at high risk for lung cancer.

Prior research on lung cancer screening has been conducted with long-term smokers (Carter-Harris, et al.2015). Researchers found confusion or inaccurate information regarding causes and associated risk factors for lung cancer as well as low levels of knowledge related to lung cancer screening and how it is performed. Participants reported barriers to screening that included stigma and distrust.

Current efforts that to draw attention to lung cancer screening commonly utilize persuasive messaging that combine fear-based appeals to action; an exclusive focus on screening benefits; inaccurate information; and encouraging immediate uptake. These campaigns are not consistent with principles of patient-centered care and also may have the undesired consequence of reducing uptake among individuals at high risk of lung cancer due to the apprehension and distrust that function as barriers to screening.

In this study, we choose to focus on loved ones/family members because they could play a prominent role in promoting awareness and informed choices pursuing lung cancer screening, and they may have different knowledge, beliefs, and concerns than persons at risk of lung cancer.

Purpose: Guided by the expanded Health Belief Model (see Carter-Harris et al. 2015), we explore the knowledge and beliefs regarding early detection procedures among family members/loved ones who are eligible for lung cancer screening. We do so in order to inform the design of a web-based lung cancer screening campaign for high-risk individuals.

Methods: We conduct a qualitative study that is theoretically framed by the expanded Health Belief Model to analyze data from six focus groups ($N = 36$). Content analysis will be performed to identify prominent themes pertaining to lung cancer screening including perceived risks, perceived benefits, perceived barriers, and self-efficacy.

Results: This study is one part of a larger research project. We are currently in the process of recruiting participants and will have completed transcription and analysis by mid-February.

Implications: Findings from this research will inform the design of a lung cancer screening campaign that is shaped by best practices for health communication and marketing about lung cancer screening (Kentucky LEADS Collaborative, n.d.). Findings will provide guidance for strategies to 1) convey accurate information about lung cancer screening, 2) encourage engagement with a health care clinician, 3) encourage individuals to seek an unbiased presentation of potential benefits, harms and unknowns of lung cancer screening, while 4) avoiding fear based and stigmatizing approaches.

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The Making of an Addiction: Examining Determinants of Prescription Stimulant Abuse among College Students

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Attention Deficit Hyperactivity Disorder (ADHD) is a prevalent condition in the U.S. (CDC, 2017). As first line of treatment, prescription stimulants (e.g., Adderall) can improve brain functioning (i.e., ability to focus). Tragically, the abuse of such drugs are on the rise, particularly as “study drugs” among college students. About one in every three students admit to having abused prescription stimulants in college (Low & Gendaszek, 2002; Varga, 2012). This is problematic, as it aggravates the prescription drug crisis in the U.S. – about 30,000 prescription drug overdose deaths occurred in 2015, with an alarming uptick among 15-24-year olds (Rudd et al., 2016). A college campus is a breeding ground for abuse and addiction – risk-seeking behavior is modeled after influential peers and pressure to achieve academic excellence is ever-increasing (Leonard et al., 2015). Yet, intervening in the supply chain of prescription stimulants is not an effective solution. Instead, the underlying psychological factors leading to stimulant abuse must be known in order to enable effective interventions – particularly among young people (Leung et al., 2017).

Using the reasoned action framework (Fishbein & Ajzen, 2010), a belief elicitation was conducted with 121 college students at a large Southern research university. A grounded theory approach, enhanced by NVivo 11 analyses, was used to identify themes. When asked about consequences (behavioral beliefs), students referenced negative side effects (e.g., addiction; “coming down”) and improved productivity (e.g., pulling all-nighters; improve grades). Interestingly, for normative referents (normative beliefs), students distinguished referents with a strong sense of integrity (e.g., student conduct code) from those without (e.g., creating unfair advantages). Students also mentioned authority figures (e.g., doctors, parents, professors) and peers (e.g., sororities/fraternities) as strong influencers. Addressing behavioral circumstances (control beliefs), themes centered around access (e.g., dealers; costs), peer/situational pressure, and awareness of confirmed health risks. The qualitative analysis had an exploratory aim and generalization of findings is not (yet) warranted. Whereas research previously identified academic pressure as main motivator for stimulant abuse (Teter et al., 2005), this research elicited relevant attitudinal, social normative, and efficacy beliefs.

A quantitative survey testing the predictive power of reasoned action variables and the previously elicited beliefs on intentions to abuse prescription stimulants will be conducted with 300 college students in early spring 2018. This is done with one important objective in mind - once the strongest determinants are known, they can usefully be addressed and changed vis-à-vis effective health communication interventions. For example, if found to be crucial determinants of intentions, interventions successfully priming fears of side effects while acknowledging academic and normative pressure might be particularly effective.

Addressing and influencing beliefs early in order to prevent the escalation of “study drug” abuse to a lifelong struggle with prescription drug addiction is of utmost importance. True to the objective of this study, findings highlight the important role of beliefs in the prescription abuse intervention domain. This research reveals an under-used, but promising opportunity for health communication interventions to prevent the habituation of prescription drug abuse on college campuses.

Measuring Sexual Stigma: Exploratory Factor Analysis in Search of an Acceptable Scale for Sub-Saharan Africa

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Sexual stigma may contribute to unintended pregnancy, but there are few validated scales measuring stigma that are appropriate for populations in sub-Saharan Africa. Hall et al. (2017) developed a 20-item measure, inclusive of three sub-scales for enacted stigma, internalized stigma and stigmatizing lay attitudes. Despite a rigorous confirmatory factor analysis procedure based on a survey of Ghanaian women, their proposed scale incorporates some items of dubious face-validity. Nevertheless, given the paucity of available measures, it is worthwhile to examine whether or not this scale is appropriate for use with populations of varied demographic characteristics in other contexts. In this pilot study ($N = 175$), exploratory factor analysis (EFA) partially validated the Hall et al. scale based on data from a survey of men in Kampala, Uganda. By limiting the extraction to three factors, utilizing an oblique (Quartimax) rotation and suppressing coefficients with an absolute value below 0.25, the analysis produced a 16-item scale ($\alpha = 0.72$, cumulative total explained variance=29%). Despite the different genders and geographies of the two research populations, the hypothesized sub-scales loaded mostly as predicted, with some notable differences. Using a backward elimination approach, four items were dropped due to low standard factor loadings and low correlation with other variables ($r < .3$). This solely affected the hypothesized “stigmatizing lay attitudes” sub-scale, rendering it a questionable measure of that latent variable. Ugandan men also responded differently than predicted when asked about items where the gender of the respondent was implied. In such cases, data collectors were instructed to first read the question as written, then clarify, “or if this were to happen to a sexual partner” only when respondents expressed confusion. Two items, “Becoming pregnant and having a baby as a teen would bring disgrace to my family,” and “Becoming pregnant and having a baby as a teen would make me feel ashamed and bad about myself,” loaded on the enacted stigma factor rather than the internalized stigma factor, likely due to the gender difference. Nevertheless, multivariate regression established construct validity via associations between the total stigma scale and a simple measure of religiosity (number of days attending a religious event in a typical week). While aspects of the proposed scale show promise, it should be seen as a step toward establishing a valid and reliable measure of sexual stigma that can be utilized among diverse populations in sub-Saharan Africa. The paper closes with recommendations for future research.

Message Content and Framing: Evaluating Motivators for Male Colorectal Cancer Screening in Appalachian Kentucky

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Introduction: This research examined colorectal cancer (CRC) screening message framing and delivery methods to identify Appalachian Kentucky men's preferences for message content and modality as motivators to seek CRC screening. This presentation will discuss the impact of awareness campaigns to improve CRC screening knowledge among Appalachian Kentucky men of recommended screening age, and their preferred delivery methods to receive CRC screening messages.

Methods: Sixteen men between the ages of 41-61, who resided in Appalachian Kentucky, were recruited at community events and meetings in 2015-16 to participate in either face-to-face interviews or small focus groups to review a variety of currently used CRC screening messages (from the Centers for Disease Control, the Kentucky Cancer Program, and the HSC Public Health Agency in Ireland) in various formats. No incentives were provided. The formats reviewed included posters, flyers, television ads, radio ads, and pamphlets. In addition to basic demographic information, participants were asked scaled-response and open-ended questions to collect opinions of preferred message content and delivery styles. Example questions included: "Which format did you like better? Why?" "How important or helpful are each of the key messages listed? Rate each one on a scale of 1-10, with 1 being unimportant/not helpful, and 10 being very important/helpful." "In general, which messages do you find the least helpful/useful/beneficial/important?"

Results: Feedback from this small, but impactful, group of participants suggests that Appalachian men may not receive adequate information about what types of CRC screening tests are available, as only two of the 16 were familiar with fecal immunochemical testing (FIT) as an annual screening option. Additionally, nine participants identified that presentation of the multiple screening options (e.g., FIT, colonoscopy, sigmoidoscopy) available for CRC testing is a key message for health materials and advertisements. Participants identified social media, television, and health providers as a trusted and preferred message delivery point for CRC education.

Conclusion: These qualitative findings indicate that additional research can further refine messages and delivery methods that combine population-based awareness with improved provider-based communication to better educate this population of appropriately aged males about CRC screening.

Message-Elicited Brain Response Moderates the Relationship between Exogenous Exposure to Anti-Smoking Messages and Message Recall

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Introduction: The success of a health communication campaign hinges on its ability to achieve adequate exposure. However, there is variability in the strength of the relationship between opportunities for exposure (e.g., media market measures of campaign reach) and recall of campaign messages. How and when does campaign exposure produce cognitive effects? Capturing brain response during the reception process offers insights into the implicit psychological processes underlying memorable and effective messages. Drawing on recent findings in communication neuroscience, we hypothesized that message-elicited responses in brain regions associated with social processing and memory encoding moderate the relationship between opportunities for campaign exposure and message recall in a campaign's target audience.

Methods: We merged 3 sources of data pertinent to the "The Real Cost" youth-targeted smoking prevention campaign: (1) self-reports of past 30-day message recall from a rolling, cross-sectional survey of 13- to 17-year-olds ($n=5,695$), (2) message-specific weekly Target Rating Points (TRPs), an exogenous measure of campaign reach and frequency, and (3) message-elicited neural response in brain regions implicated in social processing and memory encoding among 14- to 17-year-olds ($n = 40$). Survey respondents were assigned message-specific past 4-week TRP values based on survey interview date, and message-specific brain responses (averaged across neuroimaging participants) for each message recall item completed. We then estimated mixed-effect multilevel models, regressing message recall on the interaction between TRPs and the message-level brain response, accounting for clustering within each respondent.

Results: The message-level brain response in both social processing and memory regions significantly moderates the relationship between TRPs and message recall. Analytic models suggest that for messages that elicit high versus low brain response in regions associated with social processing, respondents with access to 200 more TRPs in the previous 4 weeks report recalling 2.6 more exposures ($p < .01$); similarly, those exposed to the same quantity of messages that elicit high versus low brain response in regions associated with memory encoding recalled 2.1 more exposures ($p < .05$). Exploratory analyses with past 8-week TRPs demonstrate larger and stronger interaction effects for both social processing and memory regions, indicating that the interaction between past 8-week TRPs and neural response more strongly predicts message recall than TRPs alone.

Conclusions: Findings suggest that measuring brain responses to health messages can improve our understanding of how and when exposure produces campaign effects, both at the individual level as well as at larger scales. We discuss implications of this analytical approach as a strategy for identifying messages that will "stick" with a communication campaign's intended audience.

Metaphors Matter

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Metaphors Matter is an active listening training program designed to identify metaphors in the medical interview with medical students. While the use of metaphors is largely unconscious, the metaphors that people use do matter (Deetz, 1984). For health care professionals, the use of metaphors matters even more as a strategy for educating patients and their families about a disease or potential treatment options (Arroliga, Newman, Longworth, & Stoller, 2002; Krieger, 2014; Sontag, 1989). In this program, students learn why metaphors matter as they provide “keys which unlock a storehouse of ideas” (Wubbolding, 1991, p. xiii) to provide a way to proceed from the known to the unknown. The Theory of Planned Behavior (TPB) informs the design and drives the evaluation methods to measure perceived behavioral control for implementation with patients. Metaphorical language can be an effective means of patient-provider communication; physicians who used more metaphors and analogies elicited better patient ratings in communication (Casarett, Pickard, Fishman, Alexander, Pollak & Tulskey, 2010) and ultimately build a better relationship with the patient and family. Students will learn to listen for metaphors in selected videos then apply and co-create metaphors in patient focused practice sessions using case studies. The value of patient selected metaphors suggests that metaphor preference could serve as the basis for future diagnostic tools (Plug, Sharrack & Reuber, 2009). This program translates research in TPB to applied medical education as students alternately role play both patient and provider; honing active listening skills for metaphors provides an effective communication tool for future clinicians.

Metaphors Matter was presented at an Indiana University School of Medicine (IUSM) campus to first and second year medical students in the 2017 fall semester. Based on post-workshop survey results of approximately 40 students, IUSM medical students agreed that metaphors are useful to increase patient and physician understanding during the medical interview. Self-efficacy increased and students felt that they could effectively use metaphors in the medical interview. Informal feedback for quality improvement purposes indicated that the students would like more multimedia vignettes that demonstrate how metaphors could be used in the medical interview.

Recently, Metaphors Matter was invited to be a part a medical humanities conference in April, 2018 at the University of Pittsburgh-Johnstown. The audience will consist of a diverse group of undergraduate students, faculty members, community leaders as well as hospital residents and nurses. Based on feedback from the IUSM presentation, Metaphors Matter will be revised and expanded as a two hour workshop for the conference.

Future goals include presenting Metaphors Matter at all 9 campuses of IUSM as well as other medical schools across the country. While initially developed for first year medical students, interest in the Metaphors Matter has expanded beyond the walls of the classroom with increased interest with other levels of healthcare professions. Continued assessment and evaluation will help to improve the outreach for this innovative workshop that combines active listening with medical education.

Modeling Parental Influence on Teenagers' Food Consumption: Data from the Family Life, Activity, Sun, Health, and Eating Survey

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Background – This study investigates the relationships among parental influence, teenagers' self-efficacy, and their food consumption, based on Kelman's (1958) three processes of social influence (compliance, identification, and internalization). Compliance occurs when an individual adopts a behavior without real commitment to it because he/she hopes to gain approval or rewards and avoid disapproval or punishments. Parental control over teenagers' diet, such as pressuring teenagers to eat healthy food or restricting them from consuming unhealthy food, attempts to call out compliance. Identification occurs when individuals accept the behavior as a result of a desire to establish or maintain a good relationship with others, or in admiration of them. This relationship may take the form of learning from or modeling another person. In the current context, teenagers may model their parents' eating behaviors to be like them. Internalization is the label for the type of influence in which individuals come to believe that it is intrinsically rewarding or beneficial to adopt the induced behavior. Individuals accept the influence because they come to realize that it is consistent with their own value systems. For instance, parents can exert influence by sharing information and making judgments together with their teenagers. Based on Kelman's (1958) model, and making the reasonable assumption that parents are giving suitably healthy advice, we proposed that parental control, parental modeling, and parent-teen co-decision-making would be positively related to teenagers' fruit and vegetable consumption, and negatively associated with teenagers' sugary drinks and junk food consumption. In addition, we proposed self-efficacy would mediate the relationship between parental influence and teenagers' food consumption (Young, Fors, & Hayes., 2004).

Approach – Data were obtained from the Family Life, Activity, Sun, Health, and Eating (FLASHE) study sponsored by the National Cancer Institute (NCI, 2016). Key variables included parental control, parental modeling, parent-teen-co-decision-making, self-efficacy, fruit and vegetable consumption, and sugary drinks and junk food consumption. Age, gender, race/ethnicity, health status, and weight status were included as covariates. Analyses were conducted from the viewpoint of the adolescents ($N = 1,657$).

Key Findings – Compliance was not effective in improving adolescents' diets. Parental control had no significant effect on teenagers' healthy food consumption after controlling for teenagers' self-efficacy. In fact, it even produced an undesirable effect on their unhealthy food consumption, which is consistent with previous studies (Birch, 1999). Identification and internalization were more effective types of influence. Parental modeling (identification) was the most consistent predictor across the two contexts (healthy and unhealthy diets). Parents affected teenagers' food consumption by eating more healthy food and less unhealthy food around children. Parent-teen co-decision-making (internalization) had a positive effect on teenagers' healthy food consumption. However, it did not make a difference for teenagers' unhealthy food consumption after controlling for teenagers' self-efficacy. The results shed lights on how parents impact their teenagers' food intakes and have implications for what parental behaviors should be encouraged.

Multiple Sclerosis Diagnoses: Applying the Theory of Motivated Information Management

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A serious health diagnosis is a life-changing event. The moments immediately surrounding the time of diagnosis are understandably ridden with uncertainty and anxiety for a patient, as the future of their health will undoubtedly change. With a diagnosis of Multiple Sclerosis (MS), which is classified as a disabling disease of the central nervous system that disrupts the flow of information between the brain and body, a high degree of unpredictability exists regarding the progression of the disease and its symptoms (National Multiple Sclerosis Society, 2016). The development of specific symptoms, progression, and severity for affected individuals varies, meaning that it becomes important for research to understand how these patients may seek information.

The theory of motivated information management (TMIM) offers a conceptual framework for understanding the process individuals undergo in managing their information needs (Afifi & Morse, 2009; Afifi & Weiner, 2004). TMIM proposes a multi-phase model of information management that highlights the role of the discrepancy between individual's actual uncertainty level and their desired level as well as associated emotional responses as motivators of information seeking and avoidance behavior. Specifically, the theory identifies three phases (interpretation, evaluation, and decision) as central to understanding how individuals manage sensitive, difficult, or threatening information such as a medical diagnosis. Individuals are assumed to work sequentially through the phases.

The TMIM has yet to be applied to the area of MS diagnosis, and presents an opportunity for research to better understand the process of information-seeking for individuals facing serious diagnoses. The present study surveyed 251 individuals (155 females, 96 males) diagnosed with MS by a healthcare provider, with an average age of 45.82 (SD = 13.18) years. Measures were selected from previous research utilizing TMIM and adapted for this study, with uncertainty and anxiety about MS acting as the key variables (Afifi & Morse, 2009; Afifi & Weiner, 2004; Afifi & Weiner, 2006). The overall model fit to the data as well as its associated paths were assessed via structural equation modeling (SEM). All of the models summarized below met traditional fit indices (e.g., χ^2/df ratio, CFI, RMSEA).

The primary findings support the application of TMIM in the case of MS diagnoses and subsequent information seeking. Controlling for the amount of time since diagnosis and current general health status, the overall measurement model explained a significant amount of variance in individual's direct information seeking behavior during their diagnosis ($R^2 = .41$). Moreover, the models tested also explained significant amounts of variance in the use of human and non-human information sources, including search engines ($R^2 = .16$), social media ($R^2 = .22$), online support groups ($R^2 = .13$), online MS organizations ($R^2 = .14$), family members ($R^2 = .27$), friends ($R^2 = .22$), and coworkers ($R^2 = .24$).

The overall results indicate that TMIM provides a credible framework for contextualizing the uncertainty and anxiety that characterize MS diagnoses. The findings suggest that although human information sources continue to play an important role in managing uncertainty surrounding a diagnosis, non-human sources provide an additional path.

Nationwide Newspaper Coverage of Opioid Abuse: Testing Community Structure Theory

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A community structure analysis compared city characteristics and nationwide newspaper coverage of opioid abuse in newspapers in 28 major U.S. cities, sampling all 500+ word articles from September 30, 2012 to September 30, 2017. A total of 552 articles were coded for editorial “prominence” (placement, headline size, article length, presence of graphics) and “direction” (“government responsibility,” “societal responsibility,” or “balanced/neutral: coverage,”) then combined into each newspaper’s composite “Media Vector” (range= +.7821 to -.0023). Twenty seven of the 28 newspapers (96%) yielded media coverage emphasizing government responsibility for opioid abuse.

Overall, community structure theory connecting city demographics and variations in coverage of opioid responsibility was confirmed for three demographics clusters: “belief systems”, “vulnerability”, and “women’s empowerment”. The “belief system” hypothesis (religious beliefs connected to coverage of policy positions) was robustly confirmed. Cities with greater numbers of Evangelicals ($r = 0.441, p = 0.009$) were linked to greater media emphasis on government responsibility for opioid abuse, expected because Evangelicals lobbied for President Bush to allocate government funds for the HIV/Aids epidemic in Africa. However, cities with a greater percent of Devotional Readers ($r = -0.613, p = 0.000$) and Mainline Protestants ($r = -0.402, p = 0.017$) were linked to less media emphasis on government responsibility for opioid abuse, contrary to prior research finding Mainline Protestants typically associated with progressive reporting on such issues as same-sex marriage and prisoner rights at Guantanamo.

The “vulnerability” hypothesis (economically disadvantaged groups connected with media coverage reflecting their interests) was substantially disconfirmed. Cities with greater percentages below the poverty line ($r = -0.322, p = 0.047$), greater percentages unemployed ($r = -0.541, p = 0.001$), higher homicide rates ($r = -0.328, p = 0.044$), greater percentages of single-parent households ($r = -0.397, p = 0.018$), or female headed households ($r = -0.326, p = 0.045$) were linked to “less” media emphasis on government responsibility for opioid abuse.

The “stakeholder: women’s empowerment” hypothesis (linking female empowerment to progressive coverage of policy positions) was robustly confirmed. Cities with greater percentages of women in the workforce ($r = 0.433, p = 0.011$) or college educated women ($r = 0.334, p = 0.041$) were linked to more media emphasis on government responsibility for opioid abuse. Curiously, neither political identity (voting Democratic or Republican) nor measures of privilege (college education, family income, or professional occupational status) were connected with variations in coverage of opioid policy.

Regression analysis revealed that cities with greater percentages of Devotional Readers accounted for 37% of the variance, associated with “less” media emphasis on government responsibility, while greater percentages of Evangelicals accounted for 12% of the variance, connected to “more” media emphasis on government responsibility for opioid abuse. Thus, media coverage of opioid abuse confirms it as a nationwide “belief system” issue. Methodologically, by combining measures of both “prominence” and “direction,” highly sensitive Media Vectors highlighted the capacity of media to reflect community measures of “belief systems”, “vulnerability”, and “women’s empowerment”. Theoretically, by emphasizing the influence of local demographics, community structure theory complements agenda-setting theory at the national level, re-confirming the findings of an original founder of agenda-setting (Funk & McCombs, 2015), that both nationally prominent newspapers (agenda setting) and local community characteristics/concerns (community structure) can affect coverage of critical local issues.

Natural Cigarette Advertising: Perceived Effectiveness by Smoker Type

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Background

Tobacco marketing that highlights terms including “natural” and “organic” often inspires misperceptions that such products are less harmful than traditional cigarettes, and smokers identify perceived reduced harm as a reason for using brands like Natural American Spirit (NAS) (Agaku, Omaduvie, Filippidis & Vardavas, 2014; Byron, Baig, Moracco & Brewer, 2016; Czoli & Hammond, 2014; Kelly & Manning, 2014; Pearson, et al., 2016; O’Connor, et al., 2017). In fact, the effects of natural cigarette advertising on attitudes and intentions toward the product are mediated by misperceptions about healthfulness (Gratale, Maloney, Sangalang & Cappella, 2017), even though natural cigarettes have not been shown to be less harmful than other cigarettes (Byron, Baig, Moracco & Brewer, 2016; Campaign for Tobacco Free Kids, 2017; U.S. Food and Drug Administration, 2015). Despite the demonstrated effects of natural cigarette advertisements, little research exists regarding perceptions of advertisement effectiveness or advertising features that may influence perceived effectiveness (PE). PE has been validated as an indicator of persuasion (e.g., attitudes, behaviors) and a useful way to discriminate between different messages (Biggsby, Cappella, & Seitz, 2013; Dillard, Shen, & Vail, 2007; Yzer, LoRusso, & Nagler, 2015). The present investigation examines effects of exposure to NAS advertising content on PE and the potential interaction with smoking status.

Method

A national sample of adult current ($N = 650$) and former smokers ($N = 478$) completed a randomized experiment wherein participants were assigned to one of five advertising conditions or a no-exposure control. The advertising conditions utilized NAS advertisements or textual arguments from them, varying in number of arguments and visual presentation. Stimuli were selected based upon a detailed review of existing NAS advertisements. Participants assessed PE (i.e., ratings of the advertisements as convincing, effective, believable; $\alpha = .96$) and informativeness (i.e., measure of the advertisements as teaching something new) of the advertising materials.

Results

An ANOVA of both condition (advertisement type) and smoking status (current/former) as factors led to significant differences on PE, $F(1,9) = 31.43, p < .001$. The interaction of condition and smoking status was significant, $F = 3.37, p < .01$. For former smokers, the advertising content with more elaborated textual arguments reflected significantly higher PE ratings than all other types of advertisements, whereas among current smokers, there were few significant differences among any of the advertising types. Similar results obtained for informativeness, $F(1,9) = 17.12, p < .001$, with a significant interaction, $F = 4.05, p < .01$.

Discussion & Conclusions

This investigation revealed that former smokers found elaborated text/arguments to be most effective, whereas current smokers found all advertisement types to be roughly equally effective, but more effective than former smokers. These conclusions are consistent with our previous research, which found that aggregated NAS advertising claims lead to misperceptions about product healthfulness and composition that influence intentions among former smokers. They indicate that cumulative exposure to misleading natural cigarette advertising claims may increase former smokers’ risks of returning to smoking, further evincing a potential need for regulation of natural cigarette advertising.

Negotiating Health Concerns during the Blended Family Planning Process: A Problematic Integration Theory Perspective

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Over the last 30 years, communication scholars have paid much attention to blended families including: (a) how stepparents and stepchildren interact (e.g., Speer, Giles, & Denes, 2013), (b) stepfamily roles and identities (e.g., Nuru & Wang, 2017), (c) stepfamily satisfaction and mental health outcomes (e.g., Schrodt & Braithwaite, 2011), (d) the role of ex-spouses (e.g., Schrodt, Miller, & Braithwaite, 2011), and (e) how children navigate co-parenting (e.g., Braithwaite, Toller, Daas, Durham, & Jones, 2008). Throughout this period of research, scholars have focused largely on how blended families “become” (e.g., Braithwaite, Olson, Golish, Soukup, & Turman, 2001) or struggle “becoming” (e.g., Afifi, 2003). However, it is our contention that research on blended families could be extended by focusing on how individuals communicate/interact within typical family processes. To that end, this research explores how marital partners within blended families discuss, negotiate, and navigate the family planning process when health concerns are present.

In order to understand the how health-related issues impact the family planning process within blended families, 41 participants were interviewed regarding their family planning process following remarriage. Of the 41 participants interviewed for the larger study, 32 described that health concerns played a major factor in their family planning conversations with their spouse. Participants were located via snowball sampling (Creswell, 2013) and through recruiting students’ contacts within a large-lecture introductory communication course. Of the 32 participants included in this study, 22 are female and 10 are male. The mean age of the participants in the present study is 43.125 years. The long interviews elicited 1,196 double-spaced pages of transcripts. The authors approached data analysis by using an iterative approach (Baxter & Babbie, 2004), beginning inductively and then applying concepts of Problematic Integration Theory (Bradac, 2001) as the utility of the theory to explain the data emerged. Problematic Integration Theory (PIT) was utilized as the theoretical framework for the present study due to the participants’ accounts that health risks and concerns created additional uncertainty throughout the process of determining whether to have additional children. While the 32 participants identified varied health challenges that impacted decision-making (e.g., gestational diabetes, cancer, clotting/stroke potential, fear of birth defects due to advanced age, etc.), the family planning outcomes were equally varied based on how the uncertainty regarding the health risks of procreation were mitigated for each participant.

This project is presently nearing the end of data analysis. It is the goal of the authors to have the manuscript drafted by early March, at the latest. If this abstract is selected for presentation at the Kentucky Conference for Health Communication, we will be able to provide a completed manuscript. As mentioned above, the data included in this study comes out of a larger, more encompassing data collection project on the family planning communication of blended families. This research contributes not only to previous research on blended families, but also demonstrates the unique health-related obstacles that blended families must navigate during the family planning process.

#notokay: Using Information Science Tools to Investigate Disclosure about a Concealable Stigmatized Identity on Twitter

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Background:

In October 2016, a leaked tape from a 2005 interview between presidential candidate Donald Trump and Access Hollywood host Billy Bush revealed Trump seemingly bragging off-screen that he routinely sexually assaulted women (Bullock, 2016). In response, on October 7, 2016, writer Kelly Oxford publicly disclosed on Twitter her first experience of sexual assault and encouraged women to do the same. By October 8, one million women responded to Oxford's tweet – most disclosing their experiences in tweets marked #notokay (Domonoske, 2016). And, thus, was born a user-generated activist campaign that may have primed an active online audience to participate in this year's #metoo, which, among other public outings, led to a watershed firing in media conglomerates in late 2017.

Given the stigmatized nature of sexual assault, this unprecedented participation by a marginalized population in a hashtag campaign is worthy of analysis. This study investigates the disclosure communication characteristics of the #notokay campaign by examining key players in and attributes of its first 24 hours.

Theoretical framework:

We draw on Chaudoir & Fisher's (2010) disclosure processes model (DPM), which indicates that disclosure is dynamic with multiple components: antecedent goals for disclosure (e.g., self-expression), the disclosure event itself (e.g., breadth of content), mediating processes (e.g., alleviation of inhibition), long-term outcomes (e.g., trust), and a feedback loop.

Method:

First, we use the Gnip Historical Power Track tool via the DiscoverText software (Schulman, 2011) to search and retrieve relevant tweets. We also use DiscoverText and the quantitative social network analysis tool NodeXL to investigate #notokay patterns, specifically, the characteristics of key actors such as their location, influence level, and account privacy level. Additionally, we create "network visualization maps along with reports that highlight key people, groups, and topics" (Smith, Rainie, Schneiderman, & Himelboim, 2014, p.5). Second, through a thematic analysis, we investigate the breadth (range of topics covered) and emotional content (degree of emotional versus factual information) of a sample of tweets. This study is part of a larger project investigating other DPM components of #notokay.

Findings:

This study is a work-in-progress and will be completed by April 2018. Preliminary analyses of 43,688 tweets indicate the top three most retweeted tweets were by users Kelly Oxford (6,345 times) and TeenVogue (1,565 times). Ninety-six tweets describing sexual abuse used the word "drunk." Most participants were from the United States, but 325 tweets originated from countries such as Pakistan, Australia, Canada, and the UK.

Significance:

This study analyzes a 2016 case of user-generated activism among a minority population with a concealable stigmatized identity. It fills a gap in the health communication scholarship on user-generated content production and audience momentum in disclosing concealable identities. It also contributes to the social network analysis literature on how to use information science tools like NodeXL to study historical online health events—an important methodological tool considering the half-life of a tweet is a mere 24 minutes (Rey, 2014). Finally, the study extends the disclosure processes model, which was conceptualized to understand interpersonal disclosure, to an online context.

Nutrition Facts and Consumption Acts: Testing the Effects of Calorie Label Design on Consumers' Decision-Making Processes

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Effective July 2018, the FDA has changed the requirements for the nutrition facts label's design. These changes include increasing the font size of the calorie number to be twice as large as any other information on the label. Many studies have addressed how emphasizing calorie information influences perceptions of food healthiness (e.g. Hawley et al., 2013). However, current research does not indicate how increased emphasis on calorie information influences other antecedents to consumption decisions, such as expectations for how a food will satisfy the consumer (expected satiety). Furthermore, few studies have explored how nutrition label design influences actual portion size selection. Therefore, this study tests the effects of calorie emphasis, as implemented in the redesigned nutrition facts label, on expected satiety and consumer portion size selections.

A lab experiment was conducted with 211 female participants to test the effects of nutrition label design. In a factorial manipulation, four versions of a nutrition label based on the new guidelines were placed on snack serving containers. For the first factor, the serving size and the calories were either presented in the same font size as those required by the new guidelines (22-point for calories, 10-point font for serving size), or the two were switched so that serving size information was larger than calorie information. For the second factor, the serving size reference amount and associated calorie counts were manipulated to be either 1/3 cup (130 calories) or 2/3 cup (260 calories). Finally, because individuals who are overweight or obese often react differently to food information than those who are not, participants' body mass index (BMI) was also measured, and two levels of weight status (overweight/obese and normal-weight/underweight) were included as a third factor.

Participants were randomly assigned one of the four labeled containers and told to serve themselves; the selected portion size was then recorded. A second dependent variable, expected satiety, was also measured using pictures of a comparison food (see Brunstrom et al., 2008). A 2x2x2 factorial MANOVA indicated that the labels had no effect on portion size selection. However, for the dependent variable of expected satiety, a significant interaction occurred between weight status category and the calorie/serving size emphasis condition ($F(1, 203) = 4.68, p < .05$). Simple effects tests indicated that the labels emphasizing serving size led to similar levels of expected satiety for normal-weight/underweight and overweight/obese participants. However, the labels emphasizing calories significantly increased how satisfying overweight/obese participants thought that the food would be ($p < .05$). These same labels tended to decrease how satisfying normal-weight/underweight participants expected the food to be, although this shift was not significant ($p = .08$).

The results indicate that making calorie information salient may increase overweight and obese individuals' expectations for how satisfying or filling a food will be. The discussion section suggests explanations for why increased emphasis on calories influences expected satiety and describes how these expectations may influence consumption. The paper concludes with directions for future research to understand how nutrition label design influences consumers' decisions.

Obesity is More than Physical: An Extension of the Risk Perception Attitude Framework among a Sample of Appalachian Young Adults

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Given the disproportionate impact of obesity in the Appalachian region (Berlin, Hamel-Lambert, & DeLamatre, 2012) and the tendency of adolescents to develop poorer health behaviors as they progress into adulthood (Harris et al., 2006), health communication scholars must investigate how Appalachian young adults perceive obesity. Since obesity research has largely been situated in fields of public health and the hard sciences, little scholarship examines obesity as more than just a physical health risk despite evidence suggesting that young adults also perceive obesity in relation to how it affects their emotional and social well-being (Corsino et al., 2014). To date, no theoretical model has addressed the interactions of multiple obesity risk types, obesity self-stigma, and weight-related efficacy beliefs on behavioral outcomes even though obesity self-stigma can reportedly increase depressive symptoms, decrease self-esteem, and trigger greater body image concern (Durso, Latner, & Ciao, 2016) while also damaging self-efficacy beliefs (Corrigan, Larson, & Rusch, 2009). The present study used the risk perception attitude (RPA) framework to test the interactions between obesity self-stigma; perceived emotional, social, and physical obesity risks; and weight-related self-efficacy beliefs on intentions to eat healthy and maintain regular physical activity. The RPA framework is a useful audience segmentation tool that divides audiences into one of four attitudinal groups based on their relevant efficacy beliefs and perceptions of risk (Rimal & Real, 2003). Researchers hypothesized that those in the responsive group (high efficacy/HE, high risk/HR) would exhibit the greatest behavioral intentions to eat healthy and maintain regular physical activity, followed by the proactive (HE, LR), avoidance (LE, HR), and indifferent groups (LE, LR). Investigators also sought to understand self-stigma's role in this framework, the relevant salience of obesity risk types, and the relationship between perceived risks, obesity self-stigma, and self-efficacy beliefs. Through convenience sampling primarily conducted at the institution of the principal investigator but also at six additional universities in Appalachia, survey data were analyzed. Results from univariate analyses validated the RPA and also revealed a significant interaction effect for RPA group membership and self-stigma on healthy eating intentions such that when self-stigma was low, individuals reported greater intentions to eat healthy, but when self-stigma was high, the opposite effect was observed. Among self-identified Appalachian young adults, emotional and social obesity risks were also more salient than physical risks. Self-stigma was also negatively correlated with self-efficacy among the entire sample and positively correlated with each risk type. This study provides a validation and extension of the RPA in a context previously unexamined by RPA scholarship. Finally, this study also highlights the emotional, social, and psychological effects of obesity, which should be seriously considered in future targeted health messages.

Oncology Nurse Communication Training Needs across the Cancer Continuum

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The COMFORT Communication Course for Oncology Nurses is a train-the-trainer program funded by the National Cancer Institute (R25) that provides nationwide communication training to improve patient-centered communication in cancer care. The COMFORT communication course provides the essential communication skills and tools oncology nurses need to provide quality care across the cancer continuum. Oncology nurses apply to the 2-day course as a team of two and prior to the course they complete a pre-application survey. The pre-course application includes three surveys for evaluating institutions and communication training needs: 1) Institutional Assessment; 2) Educational Programs; and 3) Institutional Survey. To date, four courses have been presented to 356 nurses from 42 states and Washington, D.C. Findings from the pre-course application surveys demonstrate communication training needs across the cancer continuum. The Institutional Assessment survey assesses each team's institution's available support services and resources to patients, family members, and caregivers and the institutional standards present prior to attending the course. Availability of visiting standards was the highest rated with 85% responding positively, followed by quality improvement standards. Teams reported that institutions routinely obtain feedback from patients and caregivers (80%), have providers available for family meetings (94%) and by phone (91%), and have administrative executive staff support for implementation of initiatives to improve communication (94%). Although 82% reported that routine feedback from community partners is obtained as part of quality improvement standards, only 61% reported that staff knowledge of community resources and contact information is current. The Educational Program survey assesses the educational programs offered to healthcare professionals over the past two years. Nurses reported that the most frequent educational programs offered were focused on Team Communication (70%) and Culture (70%), with educational programs less frequently offered on how to have conversations about recurrence (15%), discussing bad news (23%), transitions in care (25%), and treatment conversations (33%). Finally, the Institutional Survey assesses the teams' perceptions of communication effectiveness with patients across the continuum of care (0=Not Effective; 10=Very Effective), the degree of difficulty teams have with certain communication topic (0=Not Difficult; 10=Very Difficult), and teams' involvement with breaking bad news and providing prognosis information. Across all points on the cancer continuum, participants' perception of communication with patients were least effective at their institutions during bereavement (4.4), when facing end of life (5.2), and through survivorship (5.3). Teams reported having most difficulty handling conflict among patients and their families (5.4) and among team members (5.1). Telling others a concern about errors in care (4.5) was also reported as difficult. In response to yes/no questions, findings showed 43% of the nurses are present when prognosis is delivered to a patient and 43% deliver the prognosis. Findings from pre-course surveys demonstrate that institutions across the nation have prioritized communication standards, yet there is a continued need to address communication training for nurses to improve team communication and end of life discussions. Curriculum development is needed to provide nurses with training on sharing prognosis as well as discussing survivorship.

Pediatric Residents' Perceptions of Medical Uncertainty and Communication During Graduate Medical Education

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Previous research suggests physicians experience anxiety when faced with uncertainty about diagnosis, treatment, prognosis, or the medical system (e.g., Iannello et al., 2017). Despite its potential to cause anxiety, discussing uncertainty is actually an important element of informed decision making (Libert et al., 2016). Unfortunately, not all medical education curricula teach students how to handle uncertainty (Ghosh, 2004), so it is not clear what perceptions of medical uncertainty physicians entering Graduate Medical Education (GME) are facing and how they may influence communication with patients. Therefore, we are undertaking a longitudinal study to answer the following questions:

RQ1: What is the level of residents' tolerance of uncertainty across GME?

RQ2: What are residents' reactions to medical uncertainty across GME?

RQ3: What are residents' perceptions of their communication efficacy when discussing medical uncertainty with parents and attending physicians?

RQ4: How are residents' tolerance of and reactions to medical uncertainty related to their communication competence?

This study reports on Wave 1 data from a larger longitudinal project. We recruited 50 first-year residents from a general pediatric residency program at a large Midwestern children's hospital. Using an online survey, we asked residents to report on their tolerance for uncertainty (Carleton et al., 2007), reactions to uncertainty (Gerrity et al., 1995), perceived communication competence (Cegala et al., 1998), and efficacy communicating with attendings (e.g., target efficacy; Afifi et al., 2006). We also asked open-ended questions about how they handle the uncertainty and the challenges they face expressing uncertainty with colleagues and parents.

Data collection is currently underway and we plan to analyze the quantitative data once we reach an adequate sample size. In response to the open-ended questions, the current participants acknowledged that uncertainty is expected at their level of training. However, they expressed concern over how it influences others' perceptions of them. One participant stated, "I generally feel just somewhat uneasy and don't want [parents] to lose hope/faith/trust in me as a provider." The residents are also concerned that discussing uncertainty with their attendings may cause the attendings to "lose faith in [their] medical knowledge." Nonetheless, the residents recognize that discussing uncertainty with attendings is necessary for "safe patient care" and that transparency with parents has the potential to "improve trust [and the] therapeutic relationship." One resident described the tension of "discussing uncertainty while maintaining confidence." This reveals a significant communication dilemma pediatric residents face.

The results of this study will have important implications for graduate medical education. This study can shed light on the experiences of uncertainty for providers, including how much they experience, how they deal with it, and importantly, how it influences their communication with patients. Ultimately, understanding how to handle medical uncertainty can be used to make them better providers. Currently, there is almost no information about how to teach residents about uncertainty during their training, though this is an ACGME requirement. Findings of this study can be used to prepare residents to handle medical uncertainty during their graduate medical education and into their careers.

Physician-Patient Communication in Improving Influenza Awareness and Motivation for Vaccination

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Background: Influenza is a serious public health issue in the United States that needs to be addressed from various perspectives. In Kansas, deaths and hospitalization due to influenza virus during the last two years increased significantly than the average, disproportionately affecting older adults. Although working age-adults are the least affected, they are at the same risk of infection and possibly transmit the virus to the higher risk individuals, including the older adults. According to the CDC, this age group tends to have the lowest vaccination acceptance among the general population but they also hold false beliefs and misconceptions about the virus and are reportedly the cause of vaccine hesitancy. Current prevention interventions such as media campaigns, outreach flu clinics, and information provided by the public health officials have not worked to correct these misperceptions. A study on vaccine-preventable diseases has suggested that an effective physician-patient communication is strategic to improve awareness and vaccination uptakes. Moreover, nurses also play an important role in improving vaccine uptake.

Purpose: Using the Health Belief Model, this study aimed to investigate independent predictors for influenza vaccine acceptance among working age-adults (18-64 years old) and to assess the role of various medical professions to persuade people to get the flu vaccine.

Method: This study was based on the cross-sectional online survey ($N = 572$) conducted in a Midwestern City in Kansas following approval by the Institutional Review Board. Independent predictors included perceived benefits, perceived barriers, perceived severity, perceived risk, self-efficacy, and cues to action. Self-reported history of vaccination was determined as vaccination acceptance. The respondents also reported whether they had received flu vaccine recommendation from physician, nurse, and pharmacist. Data were analyzed by SPSS 24, which included descriptive, coefficient, and linear regression. Cronbach alpha (α) was used to determine scale reliability and .70 as the acceptable value.

Results: Of the 572 respondents, 46.2% ($n = 264$) did not receive seasonal vaccine in 2016 and 2017. About 58% of participants had relatively low knowledge about influenza, which varied significantly by age and gender in which younger adults (< 35 years) and men were having lower knowledge. All of the independent variables were significantly influence vaccination acceptance, except for perceived severity ($p > .05$), and they explain 46% of the model variance ($R^2 = .458$). Results also show a significant association between the role of healthcare professional in communicating about the flu and vaccine recommendation. Those who were vaccinated on both seasonal periods ($n = 191$), 83.7%, 71.2%, and 45.0% had received vaccine recommendation from a physician, nurse, and pharmacist, respectively.

Conclusion: A low percentage of working-age adults accept seasonal flu vaccine despite numerous health campaigns and other prevention interventions. This study recommends strategies focus on individual risk perceptions, barriers, benefits, and increase self-efficacy for preventing influenza. Interpersonal communication by healthcare professionals is important in raising awareness, enhancing knowledge, and recommending vaccination, especially among younger generation. More engagement of healthcare professionals is also more likely to persuade and motivate hesitant populations in vaccine acceptance.

#PlasticSurgery on Instagram: A Positioning Analysis

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Proliferation of social media use among medical professionals added a new layer to the discussion of medical professionalism, namely online professionalism. Due to the high connectivity of social networking sites (SNSs), inappropriate online conducts by medical professionals and trainees such as careless sharing of care-setting photos, friending patients without discretion, and display of personal mischiefs were all brought to the attention of many, including the media and the public (e.g., Associated Press, 2010, June 20). Facing the increasingly visible problem, medical societies and schools created social media guidelines and began incorporating online professionalism in medical education curricula (e.g., Shore, Halsey, Shah, Crigger, & Douglas, 2011). Researchers continue to examine social media practices of medical professionals and make suggestions for professionally responsible social media use (e.g., Chretien & Tuck, 2015). However, the discussions of online professionalism to date have missed one type of social media use by medical professionals: social media use for patient recruitment.

Hence, this is an opportune time to examine how physicians use social media to market themselves directly to prospective patients. In this study, plastic surgery is chosen as the medical context because the specialty has been particularly successful at marketing its services to the general population by using media advertising and public relations (Sullivan, 2001). Among various SNSs, Instagram is examined here. It is viewed as a particularly effective outlet to promote plastic surgery to mass audiences due to its emphasis on the visual, the open nature of the network that permits public access, and the hashtag function for each search and retrieval. By applying positioning theory, we will examine how the medical specialty is positioned on the SNS along the two dimensions of professionalism and commercialism.

The Instagram posts for analysis are collected by harvesting nine posts on the “top posts board” tagged to the hashtag “#PlasticSurgery” for three months. Of resulting 828 posts generated by 221 different accounts, non-redundant top three posts from the daily top nine list ($N = 272$) and their accounts ($N = 207$) are analyzed. More specifically, the accounts are examined for the type (e.g., doctors, patients, online health community, etc.), statistics (e.g., the number of posts, followers, and following), interconnectivity with other social media, profile photo, and, if a health provider, medical credentials of the plastic surgery service provider. The posts are examined for the theme, motivation, interconnectivity with other social media, visual features, and user engagement statistics such as the number of likes and comments.

The findings of the current study can be useful in several ways. Because Instagram is heavily utilized by adolescents and young adults, understanding what they learn about cosmetic surgery from the online platform is crucial for health care providers and parents before they start a conversation about healthy body image with the impressionable population. Medical professionals, especially plastic surgeons, can also gain insights on how the medical specialty is positioned in the highly visible and impactful online space and how some fellow providers are using it to promote their practices.

Predictors for Perceived Stigma towards Online Help-Seeking for Depression among Young Adults based on Theory of Planned Behavior

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Background: Depression is one of the common mental health problems in the United States that disproportionately affects young adults. In 2016, the National Survey on Drug Use and Health (NSDUH) estimated about 16.2 million (6.7%) adults aged 18 or older with at least one major depressive episode (MDE; SAMHSA, 2017). Compared to other age groups, young adults aged 18-25 account for the biggest percentage of adults who had MDE, but are less likely to seek professional treatment. Perceived stigma towards mental health is among several factors that prevent help-seeking and treatment (Barney, Griffiths, Jorm, & Christensen, 2006). However, with the development of e-Mental health, more information, education and services are provided online. The interactive nature of social media makes it an important tool for addressing stigma associated with help-seeking for depression and other mental health disorders. Based on the theory of planned behavior (Ajzen, 1991; 2006), the study investigates factors that determine how people perceive stigma towards online help-seeking and the role social media plays in influencing these perceptions.

Method: Data were gathered through a self-administered online survey that was distributed to a randomly selected sample ($N = 278$) at a large Midwestern University. Key variables included depression literacy, attitudes, normative beliefs, confidence for help-seeking, perceived stigma and social media usage. Differences perceived stigma based on gender and cultural context were also examined.

Results: Results show that among predictors for perceived stigma towards online help-seeking, depression literacy ($\beta = -.278, t = -4.682, p = .000$) and control beliefs ($\beta = -.231, t = -3.817, p = .000$) were significant and explained about 16% of model variance ($R^2 = .158$). None of the demographic factors (age and education level) had a significant role. Depression literacy is positively correlated with control beliefs or the confidence in their ability to seek help online for depression and to avoid stigma ($r = .203, p = .001$). Social media usage was significantly correlated with control beliefs ($r = .160, p = .009$) but not with depression literacy or perceived stigma. A significant difference in perceived stigma was found based on cultural context (collectivistic and individualistic culture) ($t = 2.96, df = 225, p = 0.003$) but not on gender ($p > .05$).

Conclusion: This study suggests that future programs should focus on increasing depression literacy and self-efficacy, delivering information about depression and providing exposure to young adults through social media in order to reduce perceived stigma and promote help-seeking for mental health. It is important for programs to use culture-specific strategies and messages that people from various cultural backgrounds will find relevant.

Proactive Parenting, Parent-Child Communication, and Risky Online Behavior among Adolescents

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Introduction: Parents report worries about the risky behaviors adolescents may engage in online, rating cyberbullying, internet safety, and sexting among their top 10 health concerns (C.S. Mott, 2015). Research on parental mediation of new technologies suggests that limiting or monitoring children's media use are more effective at preventing involvement in risky online behaviors (Livingstone & Helsper, 2008), but restrictive strategies may also be in conflict with parenting styles that value trust and open communication as well as children's developmentally appropriate need for increasing independence. Some scholars have suggested that proactive strategies, like discussing online safety before issues occur, may be more effective at decreasing risky behaviors online (Padilla-Walker et al., 2012). The goal of this study was to investigate the associations between parental limits to online media use, proactive parenting around online safety, family communication, and child-reported risky experiences.

Methods: We conducted a national (nonrandom) online cross-sectional survey with parent-child dyads ($N = 362$ dyads). U. S. parents who reported they had a child aged 11 to 17 who was available to take the survey were recruited through Qualtrics Panels. Parents first completed the parent portion of the survey, then called their child to the computer to complete the child portion. The median parent age was 40 (79% female; 64% white), and median child age was 14 (53% female).

Results: We created an index of online experiences by summing child responses to dichotomous variables about risky interactions online, including being involved in online aggression as a victim or perpetrator, meeting strangers online, or accidentally or intentionally encountering sexual content ($M = 2.56$, $SD = 0.78$, range = 1-9). A hierarchical linear regression model predicted 31% of the variance in risky online experience. Two covariates, amount of child internet activity ($\beta = 0.21$) and the child owning a cell phone ($\beta = 0.13$), were associated with increased risky online interactions. Parental knowledge of children's online interactions was protective, with child report of parental knowledge negatively associated ($\beta = -0.06$) and child concealment of online activities positively associated ($\beta = 0.12$) with risky behavior. The only proactive parenting variable associated with fewer child risky interactions online was cocooning ($\beta = -0.15$), defined as limiting a child's exposure to media or friends the parent disapproves of. Finally, child assessment of parent communication warmth was also negatively associated with risky online interactions ($\beta = -0.21$).

Discussion: Parents report concerns about the impact of risky online behaviors on adolescent health. While past research has suggested several parenting prevention strategies, including restricting or monitoring technology use and initiating conversations about technology, our findings suggest a combination of those strategies may be most effective. Parents limiting access to certain sites and child-reported communication warmth were both associated with lower incidence of risky online interactions. Other proactive strategies, such as parent-initiated conversations specifically about online behavior, had no significant association. Continued work is needed to help parents promote effective limits to screen time and activities while also maintaining an atmosphere of open communication with adolescents.

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Promoting Patients' Participation in Medical Decision Making by Textual and Audiovisual Health Information

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The paradigm of patient-physician-relationship has lately changed into a more participatory direction (Elwyn & Miron-Shatz, 2010; Joosten et al., 2008). In Germany, since 2013 this shift is supported by legislation ("Law of Patient Rights"), which strengthens the patients' rights and defines patient autonomy as an important value in healthcare (Härter et al., 2011). As described by Joosten et al. (2008) "one way of fostering these modern priorities" is promoting the process of shared decision making (SDM) which requires health information efforts and is supposed to improve the quality of care and outcomes like patient satisfaction (Joosten et al., 2008). But not all patients are aware and willing to participate in SDM. Rather, the patients' participatory role requires their awareness and readiness to engage in decision making.

Against this background, our study focuses on the question how SDM preferences can be addressed for different target groups. We first investigated the impact of evidence-based media information about SDM on participants' attitudes towards this model of decision making. Second, we analysed how health-related and sociodemographic factors are related to these media effects and influence attitude formation.

Method

This study is part of a larger evaluation project ($N = 5,984$) on evidence-based media information about knee osteoarthritis. We focused on one selected explanatory text and video about SDM and required skills to participate in decision making ($n = 1,996$). The participants aged between 18 and 86 years ($M = 46.8$, $SD = 15.16$; 51.1 % female) were recruited via an Online Access Panel. Before viewing the information, participants were asked about their attitudes towards SDM (preferred type of decision making on a continuum between patient-lead and physician-lead). Also health-related factors like information seeking preferences, health locus of control or coping styles were measured. After viewing one of the educational materials, participants were asked to evaluate the information and to express their SDM-preferences again.

Results and Discussion

The findings showed that both the textual and audiovisual SDM-information increase the number of participants preferring to decide together with their physician (62% before receiving the stimulus; 71% afterwards). Textual and audiovisual information did not differ in their impact on SDM-preferences. In order to investigate which target groups were successfully addressed, we differentiated four types of dealing with the information: The "Convinced and Stable Shared-Decision-Makers" ($n = 1,116$), the "Unreachable Public" ($n = 433$), and the "Receptive" who changed their attitudes towards a higher preference for SDM after the stimulus. For the group of "Receptives," we differ between individuals with a higher previous-attitude for patient-led ($n = 190$) or physician-lead decision making ($n = 257$). Group comparisons showed that they differ in their sociodemographic characteristics as well as their health-related attitudes. Older, lower educated and female participants as well as people with poor health seem to be more convinced of and receptive for SDM-information. These and further findings revealing the importance of supporting SDM by targeting messages using both textual and audiovisual media will be discussed. Based on our data, we will recommend considering the individuals' sociodemographic and health-related characteristics in efforts to support SDM.

Raising Nursing Students' Awareness of Cultural and Linguistic Divides: A Role-Reversal Exercise Using Multilingual Scenarios

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Effective communication between patients and healthcare practitioners is a fundamental aspect of quality nursing practice. As such, nursing students should be aware of challenges faced by both patients and healthcare providers when patients do not speak the dominant language of healthcare settings.

In this study, we examined the effectiveness of an interactive role reversal exercise designed to introduce nursing students to linguistic and cultural divides that they will likely experience in clinical circumstances. The exercise took place at a mid-sized university in the southern United States and focused primarily on Spanish-speaking patients. Along with the role reversal activity, the lesson included a reinforcing lecture on medical interpreting between Spanish-speaking patients and English speaking healthcare practitioners. The entire exercise was a collaborative effort, involving faculty from Nursing, Communication, Spanish, and Psychology.

For the interactive part of the lesson, first-year nursing students were assigned various symptoms as "patients" in a mock hospital setting. The students/patients worked their way through seven scenarios in which they tried to communicate with Spanish-speakers playing the roles of doctors and nurses who spoke no English. Also, one participant playing a nurse spoke only in Italian to challenge nursing students who were fluent in Spanish. Our goal was to approximate among the nursing students the frustrations, limitations, and misperceptions experienced by many patients with whom nursing students will eventually work.

To demonstrate a range of minimal to optimal conditions, each station in the exercise provided a different communication dynamic. These dynamics ranged from a single healthcare provider with no English skills to scenarios using different types of interpreters including a lay family member, an off-site certified interpreter communicating via Skype, and an on-site certified interpreter.

Sixty-three first-year nursing students took part in the three-hour interactive lesson and accompanying lecture. A pretest developed by Sherrill and Mayo (2014) was administered one week prior to the lesson in order to measure nursing students' awareness of difficulties faced by Spanish-speaking patients, students' level of acquaintance with Spanish and Hispanic/Latino cultures, and their confidence in treating Spanish-speaking patients. The survey also measured how much students valued the role of certified interpreters.

A post-test was administered after the exercise. Qualitative items were added to the post-test asking students to describe their confidence in working with Spanish-speaking patients and with patients whose cultural background was different from their own.

Quantitative results demonstrated significant increases in nursing student awareness of cultural challenges faced by Spanish-speaking patients and decreases in students' confidence in treating Hispanic/Latino patients following the exercise. Qualitative results further demonstrated nursing students' recognition of their own lack of awareness regarding linguistic challenges and the necessity of working with on-site, qualified medical interpreters.

We conclude that the role-reversal exercise combined with the reinforcing lecture content helped nursing students recognize their need for training in working with culturally diverse patients and introduced students to the value of certified--preferably on-site--interpreters. Additionally, the collaborative effort among multiple departments provided an additional beneficial outcome, forging bonds among faculty members who have not previously worked together.

Research on Diversity of Online Support Network and Received Social Support

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Background: Diversity of support network refers to the variety of relational ties that people have in their support network. Network diversity has shown to positively associate with one's perceived and received social support. Different relational ties can afford different kinds of support. Existing literature has primarily focused on diversity of offline relational ties (e.g., families, close friends) in providing complementary support resources. Relatively less attention has been given to examine the composition and diversity of online support sources (e.g., peers from online support communities). It is possible that online support sources are composed of various types of relational ties. The concept of diversity of online network can be an important factor to people's online supportive resources.

Purpose: This study aims to (1) understand the composition of online support networks in terms of major types of relational ties that people seek support from; (2) examine the relationship between diversity of online support network and received social support from such network; and (3) investigate how offline support resource may moderate the relationship between participation in online support groups and received social support from online networks. We hypothesize that diversity of online support network positively predicts received support from that online network. In addition, we test the competing hypotheses derived from social enhancement and social compensation perspectives with respect to the role of offline support resource in moderating the relationship between use and received support.

Method: We have recruited participants ($n = 409$) from two large online cancer support communities to complete an online survey. The average age of the participants is 40.64 years ($SE = 9.32$).

Results: Online support network primarily consists of club members (31%), friends (30%), acquaintance (19%), and helping professionals (13%). An exploratory factor analysis showed four major categories of relational ties mentioned in online support network: offline ties, online friends, online acquaintances, and strangers. We then used Blau's diversity index to compute diversity of online support network. OLS revealed that diversity of online support network positively predicted received social support ($\beta = 0.26$, $SE = 0.21$, $t = 4.21$, $p < 0.05$). Moreover, participation in online support groups is positively related to one's received social support in online health support groups. The moderating effect of offline diversity on the relationship between media use and online received support is aligned with the social compensation hypothesis.

Conclusion: Online diversity is an important concept that deserves more attention. It not only indicates the potential social support resources in the online network but also highly relates to one's offline network and the overall social support.

Rethinking the Role of Engagement and Enjoyment: The Effect of a Digital Health Game on Indoor Tanning Attitude and Intention

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One cause of the recent increase in skin cancer incidence in the United States is the growing use of indoor tanning facilities, particularly among young adults (Watson et al., 2013). Unfortunately, the group's general tendency to resist didactic health-intervention messages, in conjunction with intensifying marketing efforts from the tanning industry, makes it difficult for health campaign planners to address this concern. One important alternative approach to address this resistance, which has received growing attention over recent years, is the use of serious health games. Serious health games are designed to promote psychological, behavioral, and clinical health by integrating educational goals with the entertaining nature of gameplay (Baranowski, 2014). In particular, a digital serious health game can provide a preferred platform for young individuals who often show poor compliance with conventional health-intervention approaches. The sense of engagement and enjoyment triggered by digital games can motivate them to engage with the game elements, in which the educational contents are implicitly embedded, without developing psychological reactance (Vorderer, Bryant, Pieper, & Weber, 2006).

Despite the increased interest in the potential of serious digital health games and evidence that demonstrated their positive impacts, counterevidence also exists, concerning the potentially detrimental effects of playing digital games (e.g., Panic, Cauberghe, & De Pelsmacker, 2014). Moreover, there is still a wide array of health intervention areas, including indoor-tanning prevention, in which the potential of serious digital games has not been empirically tested. This research is designed to fill this gap by testing the effectiveness of a digital game developed to discourage indoor tanning among young adults. In two quasi-experimental studies, we examine the game's effectiveness relative to other conventional health intervention platforms, such as an informative website and a narrative brochure. The moderating effects of participants' characteristics are also examined. In addition, we investigate the role of engagement and enjoyment as underlying mechanisms for the effects.

The results of the first study showed that the game's effectiveness was not universal, even among the relatively homogeneous group of young individuals. For example, among female participants and those who had not previously tanned indoors, the game was one of the two most effective tools, along with narrative brochure condition. On the contrary, among male participants and those who had used indoor tanning, playing the digital game led to a significantly higher level of pro-tanning attitude and indoor tanning intention than other conditions. Ironically, the results of a follow-up study indicated that the sense of engagement and enjoyment elicited by the interactive gameplay might be responsible for the undesired outcomes: Perceived engagement and enjoyment reported under the game condition were far more positively associated with pro-tanning attitude and strong indoor tanning intention than the engagement perceptions produced by other intervention conditions, which showed non-significant or slightly negative associations with the undesirable health outcomes. While these findings should be confined to the context and materials used in this study, they emphasize the need for further efforts to provide empirical evidence on the potential of serious digital games as alternative health intervention tools.

The Role of Identification and Social Impact Games as Persuasive Instruments for Attitudinal Change among Vulnerable Populations

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Globally, sexual violence of children is considered a child's most severe human rights violation and the worst possible form of abuse and exploitation of a minor. An estimated 1.8 million children exploited through prostitution and/or pornography each year (ECPAT, 2016) and 3 million coerced and/or trafficked (Humanium, 2016), contributing to a \$20US billion or more a year industry. Commercial sexual exploitation of children (CSEC) is an umbrella term that encompasses child pornography and prostitution, trafficking of children, child sexual tourism, and other sexual activities that occur in exchange for monetary gains. Unfortunately, child victims of sexual exploitation are not the recipients of empathy, but in fact are often stigmatized and ostracized. Although children are aware of the purposefulness of their sexual behaviors, given that they are minors their engagement cannot be presumed to be of free choice. This, coupled with the severity of CSEC, has made it critical to develop targeted interventions, that not only improve prevention and rehabilitation efforts, but that are also accessible in terms of cost, dissemination (reach in rural settings), and diffusive properties. Of particular importance is targeting children living in areas of armed conflict, such as developing countries, that are disproportionately susceptible to CSEC.

Due to its complexity and emotionally charged content, CSEC has often eluded researchers and activists. Various traditional approaches have found both success and failure in working with communities and implementation of interventions. The process of engaging in experiential learning, actively constructing educational outcomes, on-the-spot problem solving, and other features, make social impact games (SIGs) qualitatively different than traditional approaches. An essential mechanism of games is the participant's identification with their character. Through identification individuals are able to enact responses to situations from a position of suspended ideology. This is important because through cognitive and emotional detachment of personal attitudes and beliefs individuals are better able to understand the position of the other, thus allowing for the reduction of stigma. Moreover, identification – as proposed in various models (e.g., EELM, EORM), can reduce counterargument when coupled with engaging and persuasive narrative.

Given the multifarious nature, causes, and manifestations of CSEC, and in an effort to enhance prevention efforts in this area, a role-playing, social impact game, Por Nuestras Calles (PNC), was developed for use in Colombia and evaluated via a randomized control trial ($N = 268$). Developed with identification as a guiding principal, PNC is especially well suitable for reducing the stigmatization of victims while seeking to increase empathic response and action from community members. Findings from the pre- and post-intervention measures suggest that character identification ($t = .18, p = .049$) was a significant predictor of change in the perception of stigma among participants. Finding from this study support the idea that games may be an effective strategy to assist prevention efforts and provide an enhanced communication channel for complex social issues such as CSEC.

The Role of Organizations in Communicating Advanced Information about the Risks of Rabies in the Philippines

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While preventable, rabies has killed an estimated 70,000 people worldwide (Global Alliance for Rabies Control, 2011). In the Philippines alone, it is responsible for approximately 300 deaths annually (World Health Organization, 2017). Dogs are the main source of rabies infection in the country, with a total of 97.94% animal rabies cases from 2010 to 2016 (Opulencia, 2017). Stray dogs are common therefore they are more vulnerable to rabies while also exposing humans and other animals (Cruz, 2015). Central to the goal of rabies-free Philippines 2020 (Department of Health, 2017) is the role of organizations in health education and advocacy. To date however, little is known about the extent to which the intersection of health communication and organizational communication may inform ongoing efforts to fight rabies in the Philippines and this paper is a step towards that direction.

Guided by Risk Information Seeking Processing model (Griffin, Dunwoody, & Neuwirth, 1999), Theory of Planned Behavior (Ajzen, 1991), and This is Public Health: Health Communications Campaign (Chase, Dominick, Trepal, Bailey, & Friedman, 2009), this paper claims that health-related organizations are likely to facilitate anti-rabies vaccination uptake intention by communicating messages that enhance information sufficiency. In partnership with a veterinary hospital in Manila, it designed, implemented, and evaluated a health communication campaign about the risks of rabies and the preventive measures community members can do to avoid these risks, most especially, anti-rabies vaccination uptake.

This paper used mixed methods approach across three phases: (1) message design ($n = 1$), (2) message pilot testing ($n = 6$), and (3) pre-test and post-test ($n = 30$). After securing informed consent, interviews and surveys were conducted and administered with veterinary hospital staff and intended audience. Interviews data were analyzed based on 1) reasons for (not) vaccinating their dogs and/or 2) for (not) having the intention to do so. Meanwhile, survey data were analyzed to identify 1) uptake of anti-rabies vaccine injections for the year, 2) intention to vaccinate their dogs, and 3) information sufficiency. Data were collected between May and August 2017.

Results suggested that the health communication campaign was partly effective in terms of increasing information sufficiency and promoting intention to vaccinate among community residents. However, there was no evidence for increase anti-rabies vaccination uptake. Overall, this paper has broadened applied health-related organizational communication literature in the Philippines in at least to ways. First, high level of intention may not necessarily translate into performance of a behavior, especially if there is lack of readily available and accessible opportunities that may have facilitated anti-rabies vaccination uptake. Second, self-efficacy messages in health communication campaigns are critical for translating knowledge and intention into other rabies-related preventive behaviors other than getting an anti-rabies vaccination for dogs.

The Roles of Masculinity and Male Gender Identification in Smokeless Tobacco: A Novel Approach for Targeting Prevention Efforts

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Tobacco use is the leading preventable cause of disease, disability, and death in the United States. Cigarette smoking is responsible for 1 in every 5 U.S. deaths, but for every one death about 30 more people suffer from serious tobacco-related illness, such as esophageal, mouth, tongue, cheek, gum, and throat cancer – such as those resulting from smokeless tobacco use (SLT). SLT is primarily used by younger males (often in the presence of other males) and by individuals who live in rural settings. This formative study sought to better understand what leads to initiation and continued use of SLT by adolescent males and how best to develop relevant prevention strategies. To this end, the current study conducted 13 focus groups and survey data collection with male ($n = 125$) and female ($n = 168$) high school sophomores ($M_{age} = 16$ yrs) in 5 rural high schools in Kentucky to explore the role of masculinity and male gender-identification in SLT uptake and continued use. About 22.5% of the sample reported lifetime use of SLT (34.4% of males and 13.7% of females), and 10.9% reported past-month SLT use (20.0% of males and 4.2% of females). For males, logistic regressions indicated that a one-unit increase in adherence to traditional masculinity more than doubled the odds of ever using SLT (odds ratio, $OR = 2.22, p < .001$) and significantly increased the odds of past-month use ($OR = 1.57, p < .05$). Similarly, males with a male family member who also uses SLT were 2.5 times more likely to have ever used SLT ($OR = 2.54, p = .032$) and 4 times more likely to have used SLT in past 30 days ($OR = 4.02, p = .004$). Of interest, having a male family member who smokes cigarettes was not related to SLT ever use or past 30-day use, but adherence to traditional masculinity norms and having a male family member who uses SLT also increased the odds of lifetime SLT for females. Recognition of health warnings on SLT packaging was negatively associated with SLT use. Qualitative analyses of the focus group transcripts using Grounded Theory supported the quantitative data with primary themes emerging that for the young men, use of SLT was seen as a male rite of passage, often emulating the behavior of admired older males such as fathers or grandfathers - or important male peers in athletics or farming activities. Use of SLT by males was also seen as important expression for rural & agricultural heritage. Qualitative data also showed that for many young men the important females in their lives (mother and girlfriends) - while not overtly supportive of SLT use, gave tacit approval because “at least he’s not smoking”. Implications for message design using masculinity and male gender identification norms as a potential persuasive strategy for prevention and cessation of SLT use are discussed.

Screen Time, Perceptions towards Food Advertising, and Consumption of Energy Dense Nutrient Poor (EDNP) Foods among U.S. Adolescents

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Background: Previous research has established a relationship between increased screen time and obesity among adolescents. While increased screen time is associated with less physical activity, it may also be associated with increased exposure to food advertising, particularly if the time is spent in front of the television. Research has also shown that children are exposed to a disproportionate amount of junk food marketing on television, and that there is an association between exposure to food marketing and dietary behavior. A recent study found that positive perceptions of food advertising were associated with consumption of energy dense nutrient poor (EDNP) foods. The present study further explores the relationships between these factors and investigates the relationship between television time, perceptions towards food advertising, and consumption of EDNP foods.

Methods: Data were drawn from the US National Cancer Institute's national web-based Family Life, Activity, Sun, Health and Eating Survey (2014), collected from 1,693 adolescent-parent dyads. The following analyses were conducted on the adolescent data ($n = 1,251$): descriptive statistics, chi-square tests, ANOVAs, and regression models with interactions to assess relationships between television time, perceptions towards food advertising, and consumption of EDNP foods. Television time was assessed through self-report of number of hours spent watching television in the past week. Perceptions towards food advertising were assessed through items on preferences for and the perceived taste of advertised foods and trust in food advertising. Consumption of EDNP foods was assessed through self-report and a summary score for amount consumed over a day was computed. Standard demographics (sex, age, race/ethnicity, parents' education level) were also assessed.

Results: 38.3% of adolescents reported watching more than 2 hours of television in the past week. On a scale of 1-5, with 5 being more positive, their mean score for perceptions towards food advertising was 3.60 and their mean score for trust in food advertising was 2.88. Their daily frequency of consumption of EDNP foods and drinks was 2.76 times/day. Controlling for sociodemographics, regression models showed that television time is associated with EDNP food consumption ($\beta = 0.13, p < .0001$); with perceptions towards food advertising ($\beta = 0.12, p < .0001$); and with trust in food advertising ($\beta = 0.17, p < .0001$). An adjusted multivariate regression model showed that television time ($\beta = .17, p < .0001$) and perceptions towards food advertising ($\beta = 0.19, p < .005$) had significant associations with EDNP food consumption, while trust in food advertising ($\beta = 0.10, p = 0.0002$) did not. Separate adjusted regression models showed that the interaction between television time and advertising perceptions in predicting EDNP food consumption was not significant ($\beta = -.01, p = 0.7$); however the interaction between television time and trust in food advertising was statistically significant ($\beta = .08, p = 0.03$), though the effect size is small.

Conclusions: Results suggest that the relationship between screen time and obesity may be more complex than decreased active time. Exposure to television may lead to increased exposure to food advertising, which may impact perceptions towards foods advertising and influence consumption of EDNP foods among adolescents. Findings emphasize the role of perceptions towards food advertising in dietary behavior and the potential need to cultivate advertising literacy among adolescents.

See Design, Hear Design: Advancing Health Communication with Design Thinking

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Hospitals are complex settings that must function effectively for a wide variety of people and requires communication between physicians, nurses, technicians, therapists, managers, and administrators. Too often, there is a disconnect between the designers of spaces and the people that communicate within these contexts. This is particularly concerning in healthcare environments where communication has been linked to the well-being of occupants (Institute of Medicine, 1999, 2001). Studies have shown that changes in the built environment lead to new communication processes that shape patient care processes and outcomes (e.g., Fay et al. 2017; Real et al. 2017; Ulrich et al. 2008, 2010). Yet few, if any, studies have examined how the design of the built environment influences communication outcomes across different user groups.

This presentation will present data from a 5-year study of communication and healthcare design that implemented a human-centered approach for soliciting feedback from both end-users and designers of a new academic medical facility. Design thinking is a human-centered approach to innovation (Brown, IDEO) and provides a framework for thinking beyond historical data, intuition, or the aesthetics of a space and instead bases decisions on what future customers want through an empathetic process.

To better understand the unique beliefs, values, and behaviors of each of the identified user groups, a human-centered research model was employed. This six-step process included observation, ideation, rapid prototyping, user feedback, iteration, and implementation. This study utilized pre- and post-move field observations, and over twenty end-user focus groups with nurses, physicians, technicians, security, housekeeping, administrators, etc. as two primary components for understanding user needs. Insights were additionally gathered from the design firm to assist in understanding the design decision making process. Systematic qualitative analysis was conducted using a conceptual framework based on systems theory and prior health care design and communication research.

Key themes emerged from the observations and focus groups. One primary focus of the observations was examining the change from a centralized to decentralized nursing station model and its influence on caregivers and the culture of care. Outcomes from the focus groups enriched the researchers' understanding of this change and its impact on the variety of users. Specifically, access to storage and technology, implications for communication, and workflow emerged as primary themes impacting caregiver and staff experiences in the pre- and post-move settings. The design team focus group revealed that the new environment was intended to promote flexibility, visibility, family accommodation, and better workflow. Part of the human-centered design process is providing a feedback loop for information. To achieve this, findings were shared with both the hospital and design firm.

Design thinking is an important element for health communication scholarship and research because it offers a human-centered approach for understanding the unique needs of the caregivers, patients, and families that occupy these complex environments. The design thinking process employed in this study will be shared with KCHC attendees to inspire new methodologies for examining health communication.

“Shall I swallow or inject my chemotherapy?” Determinants of Treatment Preference, Communication, and Decision-Making for Patients

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Cancer drugs have been traditionally administered intravenously, with patients commuting to the hospital and spending time there with experienced professionals. Such visits are lengthy and may require help from friends or family members and the availability of transportation (Groux, Anchisi, & Szucs, 2014). Because of these disadvantages, researchers have started to develop oral treatments to be taken by mouth (Mazzaferro, Bouchemal, & Ponchel, 2013). Chemotherapies in the form of pills tend to be less expensive and do not require hospitalization (Mazzaferro et al., 2013) or long journeys (Groux et al., 2014). The preference for one treatment administration method over the other has been explored for patients affected by cancer at treatable stages, and considering dimensions such as tumour response and increased survival (Mazzaferro et al., 2013). Recently, physicians have started to acknowledge also other factors such as patients' experiences and their quality of life (Mazzaferro et al., 2013; Groux et al., 2014).

The present study explored stage IV cancer patients' preferences for intravenous (e.v.) or oral administration of chemotherapy and the decision-making process to express such preference, from a non-medical perspective. The study focused on stage IV breast and lung cancer patients receiving intravenous or oral chemotherapy in Ticino, Switzerland. This country is characterized by a heterogeneous geography and infrastructure, and has the peculiarity of four official languages, indicating a population with different cultural attitudes. The few studies available on this topic in Switzerland have been conducted only in the Valais area (Groux et al., 2014; Groux & Szucs, 2013). No information is currently available on the situation in other Cantons like Ticino.

Sixteen interviews were conducted and transcribed verbatim. The transcriptions were analyzed using a thematic framework analysis. Several categories emerged, such as the moment of the diagnosis of cancer at stage IV; the communication patients had with their oncologist; the experiences and preference for therapy; and the expectations about outcomes.

Patients considered the relationship with their doctors, previous experiences, and personal networks when choosing the treatment administration method. Physician's style of communication and the empathy expressed were considered fundamental factors to establish a sense of trust and to support patients' decision-making. It was not possible to identify a general preference for a treatment method over the other. Patients in this study tended to choose the treatment recommended, the one that gave them hope, a better quality of life, and a sense of control. Concerns related to the procedures to take the medicines and their storage emerged as important. According to the findings, physicians should embrace a shared decision-making approach based on the preferred involvement level of patients.

This study is a pioneering attempt to investigate stage IV cancer patients' preference for oral or intravenous chemotherapy and their decision-making process. It is also one of the few studies investigating cancer patients' perspectives and care in Ticino. The information presented could help oncologists to provide a more patient-centered care.

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Sharing Widely or Spreading Fast: How Linguistic and Content Characteristics Affect Health Message Diffusion

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Peer-to-peer sharing of health information, or social diffusion (Hornik & Yanovitzky, 2003), has long been a prominent strategy for health promotion (Edgar, Volkman, & Logan, 2011). The emergence of social media has created unprecedented opportunities for people to share health information with their social networks. Public health agencies have increasingly relied on social media to disseminate health information and engage with the audience. However, the changing media landscape also means that health messages have to compete with an overload of information in the noisy online marketplace. Accordingly, health-messaging efforts need to be more strategic than ever before to make the information shareworthy (Southwell, 2013).

One strategic move is to identify message features that promote information sharing (Cappella, Kim, & Albarracín, 2015). Previous research has linked content characteristics (e.g., efficacy, emotional evocativeness; Kim, 2015) and linguistic choices (e.g., pronouns, future tense; Liang & Kee, 2016) to the extent to which messages were shared widely. Yet, less is known about what characteristics affect the speed by which health messages spread. This study aims to advance this line of research by investigating the characteristics that prompt health messages to not only diffuse widely but also spread fast in online networks.

This study used real-time, actual behavioral data on sharing of tweet messages from CDC. A machine-based data mining was employed to collect all the tweet messages ($N = 330$) posted by @CDC.gov from 21 November 2016 to 31 January 2017. The spread of each message in online networks was tracked for 24 hours since its initial post to capture the speed of spread. The contents of each message were analyzed using both human and computerized coding methods. Multilevel modeling was used to analyze the data.

The results showed that message features driving the amount of sharing may not be the same with those affecting the speed of spread. Severity information about health-related threats was associated with more sharing ($B = 7.31, SE = 1.79, p < .01$), and faster spread ($B = 0.17, SE = 0.05, p < .01$). Efficacious information predicted faster spread ($B = 0.11, SE = 0.05, p < .05$), but not more sharing. Messages with images were shared more widely ($B = 8.91, SE = 1.88, p < .01$) and quickly ($B = 0.28, SE = 0.05, p < .01$) than those without images. Videos prompted faster spread ($B = 0.22, SE = 0.12, p < .01$), but not more sharing. Messages including more negation words (e.g., never), future-oriented words (e.g., foresee), and perceptual words (e.g., touch) obtained less sharing. The linguistic choices, however, did not affect the speed of spread.

Social media will remain to be a pivotal source of health information. This study furthered our understanding of how message features affect the sharing of health information through social media. The findings provide evidence-based guidance for health agencies to inform the public about urgent health issues through social media. Different strategies may be needed depending on whether the emphasis is on rapid or widespread dissemination of health information.

Should or Could? Testing the Use of Different Message Frames in Online Computer-Tailored Alcohol Reduction Communication

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Individuals can feel more motivated to change health behaviour when perceiving autonomy-support, as induced through non-pressuring message phrasing and the provision of choice: autonomy-supportive message framing (Deci, Eghrari, Patrick, & Leone, 1994; Kinnafick, Thøgersen-Ntoumani, & Duda, 2016). Contrastingly, controlling message phrasing - commands that do not provide choice, can thwart autonomy and lead to reactance, which is detrimental to the persuasiveness of health messages (Brehm, 1966; Miller, Lane, Deatrick, Young, & Potts, 2007). Many health messages have not been formulated autonomy-supportively and therefore could arouse reactance, resulting in reduced intervention effectiveness. Therefore, this experimental study aimed to test the effects of autonomy-supportive vs. controlling language and the provision of choice vs. no choice in the context of an online computer-tailored alcohol reduction intervention on individuals' perceived autonomy-support from these messages and their reactance arousal towards the message content while considering the individual need for autonomy. A 2 (autonomy-supportive language vs. controlling language) x 2 (choice vs. no choice) between subjects online experiment ($N = 521$) was conducted using an online computer-tailored alcohol reduction intervention. Outcome measures were perceived autonomy-support and reactance arousal. Perceived autonomy-support was measured with the Virtual Care Climate Questionnaire (Smit, Dima, Immerzeel, van den Putte, & Williams, 2017) and reactance was measured with an affective and a cognitive measure, similar as in previous studies (Rains & Turner, 2007). Further, we investigated whether individual's need for autonomy moderated the effect of autonomy-supportive and controlling message frames on those outcome variables. Multiple linear regression analyses showed that neither autonomy-supportive nor controlling message frames had significant effects on perceived autonomy-support or reactance, and there was no moderation from the need for autonomy. Overall, participants evaluated the intervention as positive. Future research needs to test whether the positive intervention evaluation is due to content tailoring, regardless of the message frames used. Therefore, this study is currently being replicated in form of a 2 (autonomy-supportive language vs. controlling language) x 2 (choice vs. no choice) x 2 (content-tailoring vs. no content-tailoring) online alcohol reduction experiment with content-tailored control groups to further investigate whether positive intervention evaluation could have been due to content tailoring, regardless the message frame used. Data collection and analysis will be done in spring 2018, in order to be presented at the conference.

Sibling Involvement in End-of-Life Health Decisions for Aging Parents

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Research has focused on how spouses of older parents and their adult children discuss end-of-life topics, but little is known about how siblings work together to coordinate care and negotiate end-of-life decisions for a parent as they reach the end of life. The different perceptions of multiple siblings' involvement in making these decisions can lead to conflict, which can compromise the siblings' relationships with one another and the quality of care provided to their parent. Additionally, while the characteristics of family caregivers who assume the most responsibilities in parental care and decision-making are well documented, we know little about how they perceive and negotiate this involvement with their siblings. Thus, in the current study, we used a multiple goals theoretical perspective (Caughlin, 2010) to explore how adult siblings experience potentially conflicting task, relational, and identity goals as they negotiated both their own and their siblings' perceived involvement when making health decisions for their aging parent.

Method

We conducted semi-structured interviews with 34 sibling dyads and triads ($N = 71$) across 30 different families. We used constant comparison (Strauss & Corbin, 1998) and dyadic interview analysis (Eisikovits & Koren, 2010) to discover how siblings described and negotiated involvement when making health decisions for an aging parent.

Findings

Participants defined their own and their siblings' involvement in terms of the perceived quality and quantity of currency (e.g., time, emotional support, physical effort, financial contributions) they invested into their parents' care. Although these currencies had different values in different families, those siblings who were perceived to have invested the most currency wielded the most power and ownership in decision-making. However, when siblings overreached and pushed for more decision-making power than what they had paid (i.e., commission) or did not invest as much as they were initially expected (i.e., omission), they were perceived to commit a violation that the most involved siblings worked to correct. Involved siblings' choice of corrective response was defined by their goal prioritization. For example, when task goals took precedent over relational goals, siblings shamed or guilt-tripped others to complete the job. When relational goals were prioritized over task goals, siblings rationalized the violations through self-protection (i.e., they assuaged their own bitterness toward their sibling) or other-protection (i.e., attributing their sibling's lack of involvement to their fragility or lack of available time). However, the most involved siblings still remained overextended and their task goal quality decreased. Families who engaged in conflict that encouraged both relational and task goals (i.e., State of the Union) to be met experienced the best outcomes.

Implications

Collecting dyadic data deepened our understanding of sibling involvement by allowing us to gain multiple perspectives from members of the same family. Although every family had their own definition of what constitutes siblings' "fair share" of involvement, the most involved siblings perceived and responded to violations in similar ways depending on their evaluation of their siblings' investment and their commitment to task and relational goals, suggesting that interventions should encourage sibling discussion that prioritizes both task and relational goals.

Skinny Talk: Body Shaming and Objectification Among Thin Women

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Women in particular are at risk for being criticized for their physical appearance. Researchers show that when people at large are unhappy about their bodies, it is easy to become a victim of body shaming. It is our contention that negative feelings about the body are not unique to "being too big" and that "skinny shaming" can produce similar negative consequences including mental health issues. This study uses objectification theory to investigate the association between hurtful messages that individuals receive for being too thin and their risk of physical and mental health related outcomes such as depression, anxiety, lowered-self-esteem, and body objectification.

Preliminary analysis of 455 participants (M = 60; F = 395), examines the various types of skinny shaming messages individuals receive (e.g., statement, questions, nonverbal behavior) as well as the source of the message (e.g., significant other, friend, family member). Open coding from respondents' reports of real life experiences was used to analyze the data this portion of the data. This study also investigated the extent to which women habitualize (e.g., become accustomed to) or sensitize (e.g., become more sensitive/aware of) these messages with repeated exposure over time.

Data analyses revealed positive correlations between body objectification and depression ($r = .276; p < .001$) as well as appearance anxiety ($r = .613; p < .001$). Additionally, there was a significant relationship between those who experience greater risk for depression and reported levels appearance anxiety ($r = .420; p < .001$). Further, there was a negative relationship between self-esteem and depression ($r = -.659; p < .001$), appearance anxiety ($r = -.616; p < .001$), and body objectification ($r = -.326; p < .001$).

Results also indicated that those who receive messages for being too skinny on a frequent basis, experience lower levels of body objectification than those who do not ($p < .001$). In other words, those who are not criticized for their shape often, are more likely to engage in negative body perceptions than those who frequently receive comments for being too thin. Interestingly, while controlling for other health related outcomes (e.g., depression, appearance anxiety, body objectification), those who received skinny shaming messages more often were more likely have to have a lower self-esteem over time ($F = 3.837; p = .005$).

This study provides several contributions to interpersonal health literature. First, it establishes the notion in an empirical context that women may receive hurtful messages about being too small. Thus, it can create a discussion regarding the notion that weight related talk for women is not solely about being too big. In addition to shedding light on the existence of body shaming thin individuals in the scholarly realm, this study further investigated how individuals adapt to receiving a magnitude of skinny shaming messages over time. Furthermore, it explores how these individuals may be at risk for both negative physical and psychological outcomes. Limitations and future directions for interpersonal health communication are discussed further in the paper.

Sociocultural Understanding of Miscarriages, Stillbirth and Infant Loss: A Study of Nigerian Women

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Miscarriages, stillbirth, and infant loss are a constant threat to Nigerian women with 2,300 under five-year-old deaths every single day, and 261,549, annual neonatal deaths placing Nigeria on the top five contributors to neonatal deaths in the world (UNICEF Nigeria, 2012, and UNICEF, 2014). Little research has sought to understand the cultural silence and taboo that typifies these issues and its impact on Nigerian women. The sole aim of this formative study is to understand the sociocultural dynamics of perinatal loss from the unique lived experiences. The challenges highlighted would inform further research and pave way for creating necessary support mechanisms needed to help women recuperate after loss for a better holistic health outcome. Drawing on 35 in-depth interviews with Nigerian women using semi-structured interview questions; this study explores the sociocultural understanding of perinatal loss among indigenous Nigeria women. Data collected was thematically analyzed through a careful examination of both the implicit and explicit ideas within the raw data. Following Glaser and Strauss (1967) the constant comparative method was used. The data was collectively reviewed; similar ideas and concepts were tagged using possible codes, and then categorized into themes. Of the four stages identified by Glaser and Strauss, the authors engaged in the first two stages, namely "(1) comparing incidents applicable to each category, and (2) integrating categories and their properties" (p. 105). The thematic analysis of the women's narratives indicates that cultural norms and practices contribute to disenfranchised grief, which translates into ridicule and blame for women, identity loss, marital instability, a feeling of despair, and most especially the use of indigenous cultural metaphors to shame and ridicule women. The findings shed light on practices and cultural norms that delegitimize such losses as insignificant, such as denying women the chance to be involved in decision making related to the deceased and most especially the use of metaphors. At the root of such practices is the complex Nigerian belief systems related to death, including the lack of acknowledgement for certain "unworthy deaths," and a definition of life that delegitimizes certain losses. The findings point to a need for more empirical research into the grieving processes of diverse populations. This formative study consciously seeks to understand the lived health experiences of Nigerian women who have suffered from miscarriages, stillbirths, and infant loss. Hebert (1998) proposed that healthcare professionals needs to consider factors at the micro (the person), mezzo (the family, client group and team), and macro (the local and nonlocal community) levels in order to deliver culturally appropriate patient care in the case of perinatal bereavement. Though encounters with healthcare professionals were not the focus of the study, experiences of interacting with doctors and nurses did come up in the discussions. It is significant to note that all references to the healthcare system, to interactions with medical professionals, seem to suggest that Nigerian healthcare providers have yet to meet their patients' needs for a culturally appropriate social support after encountering such losses.

Speaking Up: Predicting Interprofessional Communication Behaviors of Nursing Students

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“Speaking up” in healthcare scenarios has been identified as “the raising of concerns by health care professionals for the benefit of patient safety and care quality upon recognizing or becoming aware of risky or deficient actions of others within health care teams” (Okuyama, Wagner, & Bijnen, 2014). Although speaking up has been established as an effective strategy for reducing health care errors and improving patient safety and outcomes, there continues to be a deficit in actual speaking up behavior among health care professionals. Nursing students are in a low position of power and may struggle to speak up when they perceive an error is being made that threatens patient safety. Differences have been observed between nurses, who tend to use avoidance and accommodation in workplace conflict situations (Eason & Brown, 1999), and physicians, who have less difficulty in speaking up when problems arise in the operating room (Sexton, et al., 2006). Concurrently, some individuals are more sensitive to social hierarchy and the authority of others. Known as Social Dominance Orientation [SDO] (Pratto, et al., 1994; Sidanius, 1993), this has been explored as an important determinant of speaking up in groups (Islam & Zyphur, 2005). Speaking up about patient safety is also influenced by the severity of the error being made. For instance, the perceived potential harm and anticipated discomfort for the patient are significant predictors of speaking up behaviors of health care professions in the patient care setting (Schwappach & Gehring, 2014).

Using a quasi-experimental design, we seek to better understand speaking up behaviors of nursing students who have observed a member of the interprofessional team committing a health care error. Specifically, the influence of the role of the errant health care professional, the severity of the health care error, the nursing student’s SDO, and experience level will be examined, as well as any interactions among these variables. To accomplish these aims, nine vignettes are being created for a three-by-three factorial design. Each vignette will depict a clinical scenario in which a member of the care team (e.g., peer, practicing nurse with at least 3-years’ experience, resident physician) is in the process of committing a health care error of varying degree of potential severity (e.g., error with no harm, error with moderate harm, and error with severe harm). Clinical subject matter experts will help develop and vet these vignettes to ensure realism. After pre-testing vignettes to ensure adequate manipulation of the independent variables, nursing students will be asked to respond to each vignette. Surveys measure students’ likelihood of speaking up, social dominance orientation, and years of experience. Regression modeling will be used to assess main and interaction effects.

Findings from this study will contribute to the existing literature examining the development and impact of educational interventions to promote speaking up behaviors when patient health is at risk. These types of interventions have been found to improve teamwork climate (Ginsburg & Bain, 2017) and nurses’ beliefs in their own abilities to speak up to improve patient safety (Sayre, McNeese-Smith, Leach, & Phillips, 2012)

Supportive Weight Management Communication for Middle-Aged and Older Adults: A Comparison of Message Features

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Approximately 75% of middle-aged and older adults in the U.S. are overweight or obese (Ogden, Carroll, Kit, & Flegal, 2014). Multiple deleterious health outcomes have been associated with overweight and obesity for this population (Rillamas-Sun et al., 2014). Although lifelong weight management (WM) is important, long-term weight loss and maintenance is often difficult to attain (Wing & Phelan, 2005). Because of the complexities of WM, researchers have increasingly examined the role that relational partners play in supporting one another's WM efforts (Black, Gleser, Kooyers, 1990; Dube & Stanton, 2010; Wing & Jeffery, 1999). However, little research has specifically examined the communicated messages which help to foster effective WM within the context of these relationships. The current study, therefore, compared several different WM messages in order to determine which message features best help facilitate beneficial attitudinal and intentional WM outcomes for middle-aged and older adults.

Previous analyses have shown the effectiveness of several message features for WM in both eating and exercise: person-centeredness, affirmation efficacy, situational efficacy-counter arguing, and call to action. These messages were conceptualized as consisting of two levels: high and low, and were designed to capture the message features being tested. For example, a message high in person-centeredness acknowledged, legitimized, and elaborated the feelings of the person attempting WM. Messages were tested in order to assess if high levels of each message embodied concepts as intended; for instance, that messages high in person-centeredness provided more emotional support than messages low in person-centeredness. The current paper builds upon these prior findings by investigating the comparative ability of each message feature to promote beneficial WM beliefs and intentions. Our research questions, therefore, compare all message dimensions on the four dependent variables of interest: Does person-centeredness, affirmation, situational efficacy, or call to action work best to: a) provide emotional support, b) invoke self-efficacy, c) remove perceived obstacles to WM, and d) inspire people to act on their weight management intentions?

The data used to answer these questions came from a larger research project that used an online experimental method. Participants were 415 individuals (287 women, 128 men, $M_{age} = 58.16$ years, age range 45-86 years, $SD = 7.96$) from a national sample recruited through an opt-in panel provider. Participants were randomly assigned to assess weight management messages varying in message feature and quality (high/low) on the dependent measures described above. Advanced statistical analyses are ongoing; however, initial tests suggest that certain message features may be more effective in facilitating beneficial WM beliefs and intentions for middle-aged and older adults. Complete findings will be presented at KCHC.

These findings are significant for several reasons. First, these results provide more granular insight into the specific communicative practices that are associated with beneficial WM outcomes than has previously been available. Second, this study focuses on the understudied population of middle-aged and older adults. Third, these findings may inform future intervention research interested in equipping relational partners and health practitioners in effective supportive WM communication for the population of interest.

Surprised?: An Emotion-based Model of Anecdotal Evidence Information Seeking

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Anecdotal evidence (AE) refers to case-based personal experience that is often used to support a generalization in probability argumentation (Hoeken, 2001). However, AE is also commonly found presenting low-probability and atypical cases that challenges existing generalized medical information and fuels the spread of health misinformation (Dixon, McKeever, Holton, Clarke, & Eosco, 2015). Despite a strong interest in the use of personal storytelling in health communication (e.g., Niederdeppe, Shapiro, & Porticella, 2011), less is known about the mechanism behind processing anecdotal evidence that is critical and contradictory against public health information.

An emotion-based model that centers on surprise is proposed and tested to explain risk perception, uncertainty and information searching behavior that could exist after exposure to critical AE information. Existing literature suggests surprise is a transient emotion that is aroused when an unexpected event occurs (Maguire, Maguire, & Keane, 2011; McDaniel, Jordan, & Fleeman, 2003). The outcome of surprise can be divided into valence-check (e.g., other emotions) and cognitive processing, such as causal search (Vanhamme, 2000). Specifically, we propose AE information may lead to stronger surprise. Then surprise further leads to negative emotions (e.g., fear, anger, and sad) that further influence risk and uncertainty processing before seeking more personal information.

A total of 293 participants were recruited from MTurk for this study. The participants were randomly chosen to view a message from either government or a personal case about flu vaccine. Surprise, sad, fear, angry, risk perception, uncertainty management, and personal information seeking intention were measured.

Due to a large sample size, Chi-square test was significant ($X^2 = 35.14$, $df = 20$, $p < .05$). However, other fit indices suggested sufficient fit to the data (CFI = .972, TLI = .940, RMSEA = .072 with CI 90% = .029-.110, SRMR = .060). Two-group path models were specified and compared based personal information and public information respectively. Surprise was significantly different between two models ($b = 32.70$, $p < .001$). Surprise was related to fear ($b = .34$, $p < .001$; $b = .32$, $p < .001$, respectively) and sad ($b = .60$, $p < .001$; $b = .33$, $p < .001$, respectively). Fear was related to angry ($b = .20$, $p < .01$; $b = .35$, $p < .001$, respectively) and sad ($b = .54$, $p < .001$; $b = .35$, $p < .001$, respectively). Angry was related to sad ($b = .42$, $p < .001$; $b = .33$, $p < .001$, respectively). Uncertainty was related to risk ($b = .21$, $p < .001$; $b = -.17$, $p < .05$, respectively). The likelihood of seeking personal information is related to sad ($b = .18$, $p < .05$; $b = .54$, $p < .001$, respectively) and uncertainty ($b = 7.41$, $p < .001$; $b = -4.56$, $p < .05$, respectively). In the personal model, risk is related to fear ($b = .01$, $p < .05$; ns, respectively) and surprise ($b = .015$, $p < .05$; ns, respectively).

In sum, the model showed surprise caused by personal information leads to two paths. First, surprise causes sad and then encourage 1) personal information seeking directly. Second, surprise causes negative emotions, including fear and angry. Angry and fear together lead to stronger perceived risk. Third, surprise causes stronger perceived risk directly. Personal information seeking is influenced by risk and uncertainty perception driven by emotions.

Surrogate Seeking at Cancer Information Services: Influence of Cancer Type and Stage

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Cancer information services (CIS) have established as easily accessible and valuable sources of advice (Clinton-McHarg et al. 2014). They offer support not only for patients but also for their family members who seek information on behalf or because of them (Abrahamson et al. 2008) and who have become increasingly involved in the patients' coping and decision-making (Krieger 2014). Surrogate information seeking is quite common (Cutrona et al. 2015), but surrogate seekers represent different demographic groups than people seeking for themselves (Fennell et al. 2016). Female carers and middle-aged adults are more likely to gather information (Kinnane & Milne 2010; Oh 2015) or contact CIS on behalf of a cancer patient (Heckel et al. 2017). However, most studies do not provide data on differences between patients and surrogate seekers concerning the stage, type, and topic of cancer (Mistry et al. 2010) and the communication channel. This information would provide important insights into the specific information needs and preferred channels of patients and their family members.

Our analysis is based on all requests by patients and family members (both being 18 years or older) in 2016 (N=20.149) to the largest provider of cancer information in Germany (Krebsinformationsdienst, KID) hosted by the German Cancer Research Center. Each request by telephone, email, social media, letter, or in person was coded anonymously by the CIS counsellors. In contrast to many existing studies on surrogate seeking that rely on self-reported behaviors, we can rely on observational data of health information seeking behaviors. The data set includes the callers' age and gender as well as the cancer type and stage the request referred to.

Overall, 32.8% of the callers were surrogate seekers and 66.3% of surrogate seekers were female. We applied a logistic regression to predict whether the query came from a patient or a family member. Queries were more likely to come from patients if the calling person was male (Odds Ratio = 1.193, $p = .001$), older (OR per year: 1.058; $p < .001$) and the request was made via email (OR = 5.623; $p < .001$). The stage of the cancer is also strongly associated with the type of caller: while in the first stages of the care continuum (diagnosis, before and after first treatment session, maintenance therapy) requests were significantly more likely to be conducted by patients themselves (OR between 1.324 and 2.463; all $p < .001$), in "palliative care" it was more likely that queries came from family members (OR = .527; $p < .001$).

All locations of the most prevalent cancer types are associated with significantly lowered odds for patients when compared to the reference category "breast" (OR from .120 to .445; all $p < .001$). Concerning the topic of the queries, three topics are associated with decreased odds: screening (OR = .505; $p = .024$), address search (OR = .871; $p = .011$) and palliation (OR = .339; $p < .001$) are more often conducted by family members than by patients. The model's pseudo- R^2 of .344 indicates a satisfying fit to the given data.

Our findings underline the importance of specific information for family members and characterize typical disease situations in which surrogate information seeking is more likely.

Tailoring Online Health Information: Explaining Mode Tailoring Effects on Website Attitude and Information Recall

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Recent tailoring studies have started exploring novel strategies next to content tailoring to maximize health communication efforts, such as tailoring the mode of information presentation to match individual preferences and processing styles (Smit et al., 2015). Previous mode tailoring research has shown promising effects on user evaluations and message processing in various online contexts (Authors, 2017; Chung & Nah, 2009; Sundar & Marathe, 2010). Yet, more insight is needed in why mode tailoring is effective to be able to use this knowledge in designing more effective digital health information. Building on current theoretical models of tailoring and customization effects (e.g., Lustria et al., 2016), we propose a range of mediating variables that are expected to explain the effects of mode tailoring on website attitude and information recall, and test this in a single structural equation model (SEM).

Method

In a between-subjects online experiment 392 study participants were exposed to a mode-tailored or standardized health-related website with three webpages ($M_{age} = 54.71$, $SD_{age} = 14.50$, range 25 – 86; 52.8% male). On the mode-tailored website users were able to self-tailor the mode of information presentation via textual, visual and/or audiovisual information. Website attitude was measured with nine items ($M = 5.13$, $SD = 1.06$; $\alpha = .92$; Bol et al., 2015). Information recall was measured with seven open-ended questions (Jansen et al., 2008), with good intercoder reliability over 19% of recall answers ($n = 74$; mean $\kappa = 0.925$, $p < .001$). Perceived active control, perceived relevance, website engagement, and perceived cognitive load were assessed as mediating variables.

Results

The model showed a very good fit to the data. Compared to a standardized website, the mode-tailored website significantly increased participants' perceived active control, which in turn led to a more favorable attitude toward the website and higher information recall. Perceived active control significantly increased perceived personal relevance, which in turn enhanced website attitude – with a significant serial indirect effect ($\beta = .07$, 95% CI [0.00, 0.14], $p = .040$). Furthermore, the analysis revealed that perceived active control led to increased website engagement, and decreased perceived cognitive load, which in turn enhanced recall of information – with a significant serial indirect effect ($\beta = .03$, 95% CI [0.00, 0.06], $p = .032$). In summary, mode tailoring influenced website attitude and recall of information through two distinct serial pathways. Full statistical analyses and results, including tables and the final model, will be presented at the KCHC conference.

Discussion

This study shows that increasing active control over online health information – by enabling users to tailor the mode of information presentation – can increase the perceived relevance of the message, enhance engagement, facilitate information processing by reducing cognitive load, and consequently lead to improved website attitude and information recall. Overall, this study provides insight into the specific mechanisms that explain mode tailoring effects on attitudinal and cognitive outcomes, confirms earlier work examining theoretical models of tailoring effects (Lustria et al., 2016), and proposes a novel approach to, and extension of, traditional tailoring research in today's digital environment.

Testing Competing Explanations for Graphic Warning Label Effects among Adult Smokers and Non-Smoking Youth

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The US Food and Drug Administration proposed nine graphic warning labels (GWLs) on cigarette packages in 2011. Five major cigarette companies challenged their effort in court, arguing that the GWLs infringed upon their First Amendment-protected commercial speech rights. A federal appeals court sided with the tobacco companies, arguing that the proposed GWLs were excessively emotional and did not communicate information in an uncontroversial way. This argument implicitly suggests that graphic, pictorial warnings are emotional whereas text-based warnings inform, but research in judgment and decision-making suggests these relationships are more complex.

This paper seeks to understand this complexity by testing the emotional and cognitive mechanisms of GWL effects on intentions to quit (among adult smokers) and susceptibility to start smoking (among youth). We draw on several theoretical frameworks suggesting competing hypotheses about the relationships between negative affect, smoking risk beliefs, and intentions/susceptibility. We test these competing models using data from four experiments—two among adult smokers of low socioeconomic status and two among (primarily non-smoking) middle-school youth.

We recruited adult smokers from communities in the Northeastern US by using US Census data to identify zip codes where median household income was <\$35,000. We enrolled adults after biochemically verifying their smoking status. We recruited (mostly non-smoking) youth in middle schools where at least 40% of students received free or reduced-price lunch.

In the first pair of experiments, we randomly assigned participants ($N=313$ adults, 331 youth) to one of five between-subjects conditions: (1) 50% full-color GWLs (text and images) originally proposed by the FDA in 2011, (2) 50% black and white versions, (3) 50% text-only versions, (4) 50% labels displaying the current, Surgeon General's text-only warnings, or (5) cigarette packs without any warnings (control). In the second pair of experiments ($N = 234$ adults, 229 youth), we manipulated GWL size for three between-subjects conditions: (1) 50% full-color GWLs (text and images) of the FDA-proposed GWLs, (2) 30% full-color versions, or (3) packs without GWLs (control). Participants viewed a slideshow of nine images of cigarette packs on a computer screen. They then reported their negative affect, beliefs about the health risks associated with smoking, intentions to quit smoking (or susceptibility to smoking for youth), and a variety of demographics and risk factors for smoking/continuing to smoke.

The best fitting model across all four datasets was one in which GWL-induced negative affect (a) directly predicted intentions but also (b) indirectly predicted intentions via risk beliefs. Mediation analyses generally supported this pattern of indirect effects. These results speak to the importance of negative affect, which directly motivated smokers' quit intentions. In this way, negative affect served a motivational function for current smokers. Additionally, negative emotions served an informational function, cuing both adult smokers and middle-school youth to think about smoking risks. This pathway is consistent with the notion of an "affect heuristic"—that people use affective experiences as input when thinking about risk, and those risk-related cognitions guide behavioral outcomes. Thus, contrary to the courts' logic, our data suggest that GWLs are informative precisely because they are emotional.

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Text and Illustration: Information Processing on People's Uncertainty and Attitudes about Emerging Technology

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Textual and illustrative information is often used concurrently to assist public understanding of information regarding emerging technology. However, little is known about effects of different text and illustration combinations on perceived uncertainty and attitude.

Narrative as a persuasive tool for promoting well-established health and risk communication showed mixed results (Hinyard & Kreuter, 2007). The effects of using narrative in delivering new scientific discovery may even be less ideal. Also, narrative activates more information seeking and brings uncertainty to the understanding of emerging technology (Read et al., 2006). Thus, narrative should lead to stronger uncertainty and less positive attitude than non-narrative (H1). Uncertainty will mediate the relationship between the attitude and information types (H2).

Images are often embedded in text either as a semantic symbol or syntactic device (Messaris, 1997). The former relies on individual interpretations whereas the latter provides anchoring guidance to crucial information (Barthes & Heath, 1977; Myers, 1994). Existing studies based on the elaboration likelihood model (ELM) argued pictures are often processed as heuristic cues (Petty & Cacioppo, 1986). Thus, images should be processed separately and interplay with textual information. Because of this possibility, we also argue the moderating role of images may appear at a different temporal point than text (RQ1). Moreover, individuals with particular dispositional characteristics, such as novelty seeking, should drive information seeking of emerging technology (H3).

The study is a 2 (text type: narrative vs. non-narrative) x 2 (illustration type: syntactic vs. semantic) factorial between-subject online experiment. Participants recruited from MTurk ($N = 175$) viewed news story about new ophthalmology treatment technology based on genetic engineering that was produced by different illustration and text combinations. Measured variables were novelty seeking, uncertainty and attitude toward emerging technology. Control variables were religiosity and deference to science.

Hayes' PROCESS (2013) showed simple mediation model (H2) was not supported (CI 95% = $-.06 - .07$) but found an overall significant moderated mediation model ($SE = .06$, CI 95% = $.002 - .233$). The model indicated a significant positive effect of narrative on increasing uncertainty (H1) ($b = -1.59$, $SE = .72$, $t = 2.19$, $p < .05$), which was moderated by novelty seeking (H3) ($b = .34$, $SE = .16$, $t = 2.18$, $p < .05$). Illustration type interacted with uncertainty to influence attitude, $b = .22$, $SE = .11$, $t = 1.98$, $p < .05$ (RQ1). When using semantic image caused, less uncertainty actually caused more negative attitude toward attitude ($b = -.08$, $SE = .05$, CI 95% = $-.22 - -.01$).

This study provides evidence that human brain usually does not process text information at the same time with the illustration information. Text message would be processed in advance whereas image served as a heuristic cue at a later point of time when uncertainty has been elicited by text. This study challenged the finding of Petty (1991) that the engaging choices of processing route of viewers might not be determined by the use of visual image itself, but by the characteristics of visual argument that to what extent the elements of could be central to the argument of the persuasive message.

Time Frame Effects on Salient Beliefs about Exercise Behaviors

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According to the U.S. Department of Health and Human Services (2017), only 1/3 of the adult population meets the current recommendations for weekly exercise, with less than 5% participating in 30 minutes of physical activity a day. Because lack of physical activity is the main cause of many chronic diseases (Boots, Roberts, & Laye, 2012), the need for understanding how adults decide whether to exercise is clear. According to behavior change theories, decision-making is highly reliant on individual-level beliefs (Fishbein & Ajzen, 2010; Hornik & Woolf, 1999). Interestingly, previous research has suggested that beliefs can be dependent on the time frame of behavioral enactment (Lutchyn & Yzer, 2011). Because of this, I sought to explore adults' beliefs about exercise and, to probe deeper, examine the role of time frame in this process so that persuasive health messages can be designed that build on adults' exercise decision-making.

Taking a qualitative belief elicitation approach (Fishbein & Ajzen, 2010), I conducted a study with U.S. adult Amazon MTurk participants (N=100). Specifically, I conducted an open-ended belief elicitation survey to identify salient desirability and feasibility beliefs regarding exercising in the near future (this week) or in the distant future (a year from now). To assess these beliefs, I asked participants to list the positive and negative outcomes of their exercising and facilitators of and barriers to exercising. These beliefs were content analyzed for desirability and feasibility themes.

Initial analysis suggests the possibility that salient beliefs about exercise differ by time condition. Regarding desirability, unique beliefs in the near time condition included "being motivated to continue exercising," "forming a routine," "improved mobility," "aggravated existing health conditions," and "upsetting their current routine." Unique beliefs in the distant time condition included "having a goal," "being a role model," "having a healthier future," and "being the person I want to be." Regarding feasibility, unique beliefs in the near time condition included "already having a routine," "having music to listen to," "having a fitness tracker," and "being sore." Unique beliefs in the distant time condition included "having a reminder" and "being in shape."

My data suggest that time frame can influence exercise decision making. It therefore is a potentially important factor to consider when designing persuasive exercise messages. For example, if health message designers are interested in persuading adults to exercise in the near future, they might want to consider messages targeting beliefs about forming a routine and having a fitness tracker. Alternately, if health message designers are interested in persuading adults to exercise in the more distant future, they might want to consider messages targeting beliefs about being a role model and having a reminder.

This study is part of a larger dataset that includes other health behaviors. I am currently analyzing these data to see if time frame effects hold across behaviors or if they are more behavior-dependent. I am also conducting a quantitative analysis to determine if time frame effects make one type of belief (desirability or feasibility) more salient than the other.

Toward an Integrative Framework on Message Framing Effects

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A significant body of literature has examined the relative persuasiveness of gain- vs. loss-framed messages. Despite the amount of research, when and why one message frame may be more persuasive than the other are not fully understood. This article provides a review of theoretical perspectives that have been proposed to explain message framing effects. Specifically, prospect theory, regulatory focus theory, dual-process theories of persuasion, psychological reactance theory, and fear appeal theories are reviewed in relation to their applications in gain vs. loss frame research.

The article then reports an analysis of published articles conducted to ascertain which theories are most often employed in message framing research and whether these theories are relied upon in isolation or in combination. The review demonstrates the prevalence of disparate theories employed to address the relative persuasiveness of gain- vs. loss-framed messages. Although researchers more often than not use a single theory, most notably prospect theory, to guide message framing research, many studies have employed multiple theoretical perspectives to derive hypotheses or research questions.

Finally, building upon the review of existing theories and moderators in framing studies, this research advances a preliminary integrative theoretical framework that delineates crucial factors determining the relative persuasiveness of gain vs. loss frames. Specifically, ability and motivation to process information and types of processing modes are identified as critical factors. Four propositions were proposed based on these factors: 1. In heuristic processing mode, gain-framed messages will be more persuasive than loss-framed messages or both frames will be equally persuasive. 2. In accuracy-motivated systematic processing mode, gain-framed messages will be more effective for promotion-focused individuals whereas loss-framed messages will be more persuasive for prevention-focused individuals. 3. In defense-motivated systematic processing mode, gain-framed messages will be more persuasive when the messages are counter-attitudinal whereas both frames will be equally persuasive when the messages are pro-attitudinal; 4. In impression-motivated systematic processing mode, gain-framed messages will be more persuasive when the message-advocated position is incongruent with the views of relevant reference groups whereas both frames will be equally persuasive when the message-advocated position is congruent with the views of relevant reference groups.

Gain vs. loss framing is a fundamental aspect of message feature that has generated considerable research interest, partly in response to the increasing need for strategic communication in influencing individual health behaviors. While past research has applied a number of theories to elucidate when and why one message frame may be more effective than the other, there has been limited effort to review and synthesize the theories, and to integrate different theoretical perspectives in a general framework that may be used to better reconcile previous findings and guide future research. This integrative framework is developed based on systematic review of existing theoretical perspectives and integrates both situational and dispositional factors. Future research may use the proposed framework as a conceptual map to determine the relative persuasiveness of gain- vs. loss-framed messages in a given study context.

Triadic Communication Between Physicians, Patients, and HSOs: Health Care Partnership Model in Crohn's Disease Communication

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Crohn's disease (CD) is a chronic condition that is often diagnosed from the early teens to anytime during one's lifespan. The researchers' review of literature demonstrated that health communication literature is heavily focused on dyadic interactions between patients and healthcare providers and most communication guidelines are developed by physician-driven data. Moreover, most health communication studies don't distinguish between different types of inflammatory bowel disease (IBD), including ulcerative (UC) and Crohn's disease (CD) as they share some symptoms. Applying Health Care Partnership Model, the current study aims to fill these gaps and scrutinize triadic communication between physicians, patients, and health significant others (HSOs) in management of Crohn's disease (CD). The researchers interviewed six CD patients, three HSOs, and two gastroenterologists. Half of patients reported their disease status as active with daily pain, diarrhea, or other symptoms that interrupts daily routines. The results of the study revealed that communication is the primary process that closes the gap in power among healthcare providers, patients, and caregivers. Consistent with previous studies, the present research indicated that building trust and developing interpersonal relationships with patients positively affects CD patients' well-being. In addition, the findings indicated that Internet is an important resource for gathering medical information for both patients and HSOs. Dissatisfaction with physicians' information, keeping themselves updated, and lack of understanding of their diagnosis after doctor's visits were identified as the main reasons for using the Internet to search for medical information. Moreover, all participants who expressed feeling supported by their HSOs seemed to believe that HSOs' support far surpassed the discontent with the physician's behavior. Overall, the study contributes to the literature by highlighting the role of HSOs in the care of CD patients and identifying key communication strategies in the triadic communication behaviors of patients, physicians, and HSOs to facilitate patient-centered treatment. Limitations, future directions, and general implications were addressed. It is hoped that the present study can raise awareness about such triadic relationship and lead to improvements in the quality of CD patient care.

Trust in Physicians Predicts Patient Online Community Use in Women with Endometriosis

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Patient online communities (POCs) offer a variety of benefits to its users, including the provision of information. According to the Theory of Motivated Information Management (TMIM; Afifi, & Weiner, 2004), one factor that influences from whom individuals seek information is the degree to which they believe the person providing that information is able to provide the information (competence) and is honest in doing so (honesty). Competence and honesty are two of the five proposed domains of trust, and trust in one's physician is a frequent predictor of online health information seeking. In endometriosis patients specifically, qualitative research has revealed that they often distrust physicians, either because they have often been met with skepticism or because physicians are often not well-versed in endometriosis. For example, Whelan (2007) found that women with endometriosis often evaluate the validity of physicians' statements by cross-checking them with other sources, including women from POCs and their accounts of conversations with physicians. Therefore, the following hypothesis was made: Less trust in physicians would significantly predict POC use. Also, the following research question was asked: Which of the four of five specific domains of trust (fidelity, competence, honesty, global) predict POC use? The sample consisted of 745 U.S. women 18 years of age or older who self-reported a surgically-confirmed diagnosis of endometriosis recruited to participate in a larger research study. The Trust in Doctors Generally (Hall, Camacho, Dugan, & Balkrishnan, 2002) measure was used to measure general trust in physicians. Use of POCs was dichotomized by prompting either a yes or no response regarding its use. Independent samples t-tests were performed to test our hypotheses. As predicted, lower trust scores significantly predicted POC use ($t = -2.61, p < .01$). Specifically, the fidelity ($t = -2.15, p < .05$), competence ($t = -2.55, p < .05$), honesty ($t = -2.64, p < .01$), and global ($t = -2.19, p < .05$) domains of trust all contribute to an increased likelihood of POC use. The honesty domain of trust was the strongest predictor, followed by competence, global, and fidelity. This research confirms conclusions drawn from qualitative research that women with endometriosis who trust physicians less are more likely to use POCs and is also consistent with TMIM. However, the effect sizes are small. One reason may be that the search for information is only one benefit of POCs and a more specific measure tailored to information-seeking may yield greater effect sizes. Also, according to TMIM, individuals are more likely to engage in information-seeking when they have a greater need for information and when they want to reduce their uncertainty likely as a result of the anxiety it produces. Therefore, including these variables in analysis may also yield greater effect sizes. Overall, these findings provide the first quantitative evidence that less trust in physicians predicts POC use in women with endometriosis and also supports the TMIM.

Trying to Eat Healthy on College Campuses: Examining Nutrition and Health Management Challenges among College Students

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Background: According to the U.S. Centers for Disease Control and Prevention, adults should consume between 1.5-2 cups of fruits and 2-3 cups of vegetables daily. Despite these recommendations, data suggest that US adults are not complying, with current obesity rates estimated at 37.9%. More specifically it is reported that 70% of college students gain an average weight ranging from 12 to 37 pounds during their undergraduate career. Of those students, 18% to 31% were considered either medically overweight or obese. Addressing healthy eating habits among young adults is important because it can help prevent occurrence of medical complications, such as type 2 diabetes, high blood pressure, heart disease, stroke, and breathing disorders. Thus, understanding nutrition challenges among college students is a crucial first step in helping college students prevent obesity-related health threats. This information is particularly needed for health practitioners and universities seeking to help college students navigate healthy eating while living on campus.

Purpose: Guided by the health belief model (HBM), the purpose of this study is to understand how post-first year undergraduate students perceive nutrition and health through semi-structured focus group discussions.

Method: Undergraduate students were recruited to participate through SONA, an online research recruitment system that exchanges research participation for extra credit in participating courses. Questions in the interview were seeking conceptualization (e.g., how they defined nutrition/healthy), access (e.g., was it healthy/nutritional options easily accessible), communication (e.g., how did they talk about nutrition/healthy with their peers and family), motivations (e.g., were they motivated or not to follow a healthy and nutritious diet), freshman 15 (e.g., have they heard of the term before), and nutrition on campus (e.g., does the campus communicate about the importance of a healthy diet). Depending on current student awareness of nutrition and health, the focus group lasted anywhere from 60 to 90 minutes. The focus groups were transcribed and coded by two independent coders. Theoretical thematic analysis was employed to analyze focus group data.

Results: Focus group data was coded following a theoretical thematic analysis, where the constructs from the HBM were identified with the transcripts. Themes included barriers to eating healthy on campus, benefits of eating healthy on campus, consequences related to not eating a nutritious diet, likelihood of experiencing future health crises related to a poor diet, perceived capability of eating healthy while on campus, and helpful message cues for encouraging healthy eating while on campus.

Implications: Findings from this study provide important theoretical understandings regarding the influential factors related to healthy eating among college students. In addition, the analyses provide guidelines to help develop campaign and interventions messages that are needed to target the college-age population. Communication efforts, such as a campaign, are desperately needed to disseminate the importance of consuming a healthy diet while in college.

Uncertainty in the Process of Communicating Cancer-Related Genetic and Genomic Information with Patients and the Public

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Objective: In the era of precision medicine, the need for effective communication of genetic and genomic information to patients and the public continues to increase. Individuals may need to manage uncertainty related to complicated genetic information and unexpected mutation status, and make decisions based on uncertain information (see Brashers, 2007; Mishel & Clayton, 2003). As part of a scoping review of recent research on the communication of cancer-related genetic and genomic information, we identified the types of uncertainty studied/examined in these communication processes.

Method: For the scoping review, the following data sources were used: Medline, Embase, CINAHL, PsycINFO, ERIC, and Cochrane library. Studies were included if they were 1) written in English with some cancer genetic focus; 2) published between January 2010 and January 2017; 3) reporting communication of genetic or genomic information to patients or public; and 4) presenting empirical data. We identified 9,251 unique papers, and reviewed the full text for 1,303. 513 papers were included in the analytic sample. Of these, 55 (10.7%) articles measured and/or discussed patients' or the public's perceptions and/or feelings of uncertainty related to the communication process of cancer-related genetic/genomic information (i.e., genetic testing/counseling, communicating and interpreting genetic information, and managing genetic information/ condition). For this analysis, both qualitative research studies investigating uncertainty or ambiguity within genomic communication (e.g., uncertainty raised by an inconclusive result) and quantitative research articles measuring participants' perceptions or feeling of uncertainty in the communication process were included.

Results: Of the 55 included studies (qualitative: $n = 28$, 50.9%; quantitative: $n = 21$, 38.2%; mixed method: $n = 6$, 10.9%), five types of uncertainty regarding cancer-related genetic/genomic information were identified. These types were: (1) uncertainty about interpreting genetic information (e.g., interpreting uncertain information such as VUS (variant of uncertain significance) or high risk patients' non-carrier results) ($n = 14$; 25.5%); (2) uncertainty about future cancer risks ($n = 19$; 34.5%); (3) uncertainty about managing genetic information or mutation status (e.g., decisional conflict) ($n = 12$; 21.8%); (4) uncertainty about genetic test results (before testing or receiving the results) ($n = 10$; 18.2%); and (5) uncertainty about the utility of genetic information ($n = 4$; 7.3%). About half ($n = 10$, 47.6%) of the quantitative studies utilized the uncertainty items from the Multidimensional Impact of Cancer Risk Assessment (MICRA) questionnaire, which assess dimensions of uncertainty related to the test result and future plans. However, half of the quantitative studies ($n = 5$) using MICRA didn't specify the types or causes of uncertainty in the articles. A few studies ($n = 5$; 9.1%) measured and discussed other uncertainty-related perceptions such as need for certainty, uncertainty tolerance, illness uncertainty, and coping with uncertainty. Five studies (9.1%) were about exome sequencing and whole genome sequencing, a context of greater clinical uncertainty.

Conclusions: In this study, we have identified 5 types of uncertainty in the communication process of cancer-related genetic/genomic information with patients and the public. These 5 types of uncertainty can be a helpful taxonomy and guideline for developing and validating future measures of uncertainty in the context of genetic and genomic risk communication.

Understanding Society's Role: News Framing's Impact on Attribution of Responsibility for Depression, Obesity, and Drug Abuse

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How does a health condition become addressed in a society? This requires buy-in from the public, who, through voting and other actions, control policies that address health issues. The public must be willing to help, which often means the public believes society is responsible for aiding that particular health problem. However, there are barriers to public involvement. Health conditions often involve stigma, which results in the public distancing themselves from and discriminating against the stigmatized, meaning that the public may refuse to see society's responsibility to help address a health condition (Corrigan, 2004, 2005; Link and Phelan, 2001; Link, Yang, Phelan, & Collins, 2004; Thoits, 2011). To fight stigma, health communicators must help audiences understand the biological or societal aspects of a condition — addressing stigma means helping audiences see that often certain health conditions occur through no fault of the individual with the condition, or must help them see that addressing these conditions is a responsibility of and will be a betterment to the society as a whole (Barry, Brescoll, Brownell, & Schlesinger, 2009; Corrigan, Powell, & Michaels, 2013; Skitka & Tetlock, 1993). This study investigates the ways the mass media can frame messages about particular health conditions in order to help their audiences see the societal responsibility for the problem. Framing involves selecting certain aspects of an issue and making those aspects more noticeable to audiences (Entman, 1993). Within framing research, researchers have found the stories that are structured about an individual facing a problem (episodic framing) are more likely to cause audiences to blame that individual and believe that individual is responsible for fixing whatever the problem the story is about. On the other hand, thematic stories, which focus on general or broader cases, might lead to an understanding of a shared responsibility to fix the problem. At the same time, for certain health conditions, the view of the condition is stigmatized enough that the beliefs about that condition may transcend media effects. There is a rich research history examining the impact of thematic and episodic framing on audiences, including the impact on their emotions, attribution of responsibility, and behavioral intent (Gross, 2008; Hatley Major, 2009; Iyengar, 1991; Shah, Kwak, Schmierbach, & Zubric, 2004). Journalistic stories rarely function in a vacuum; most stories contain both thematic and episodic frames (Hatley Major, 2009). This study tests the impact of thematic, episodic, and a thematic/episodic combination frame on the ways audiences think and feel about three stigmatized health conditions: depression, drug abuse, and obesity. These conditions are all well-known and stigmatized in different ways. To examine the ways news framing impacts audience decisions on who is responsible for causing and fixing these health conditions, this project uses an experiment to gauge reactions to these different news frames. Participants ($n = 120$) read manipulated news stories about the different health conditions and answered questions after reading each story. This project is currently in the data analysis stage, and will be a complete manuscript at the time of the conference.

Understanding the Memorable Messages Parents of Children with Vascular Birthmarks Receive

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Vascular birthmarks are caused by abnormalities during vascular development (Buckmiller et al., 2010). While some birthmarks resolve on their own, many are present for life and can be associated with deformities and complex syndromes (Low & Jackson, 2017). The physical appearance of birthmarks often causes parents uncertainty about the potential for their child to be stigmatized by others (Kerr & Haas, 2014). Therefore, this study aims to understand the potentially stigmatizing messages parents of children with vascular birthmarks receive.

Memorable messages are statements we receive from others that we remember for a long period of time and perceive to have an impact on our life (Knapp et al., 1981). While parents are often examined as the source of memorable messages (Jackl, 2016; Thompson & Zaitchik, 2012; Waldron et al., 2014), our investigation focuses on the messages parents receive when their child has a potentially stigmatized condition. Specifically, we will examine the content, source, and valence of the messages parents identify as memorable. We will also contextualize the situations in which the message were received by exploring including parents' reactions to, attributions for, and beliefs about what makes the messages memorable.

Data are being collected using a cross-sectional online survey. We invited parents of children with vascular birthmarks who are members of online support groups and have received at least one memorable message about their child's condition to participate. The survey includes questions consistent with previous memorable messages research. We asked parents to recall the message they received, the situation in which they received the message, how they appraised the message, and why they perceived the message to be memorable. We allowed parents to describe as many memorable messages as they wished.

To date, 67 parents have described 84 messages. Parents reported positive (20.3%), negative (75%), and neutral (4.8%) messages from a variety of sources including strangers (38.1%), family members (22.6%), colleagues/acquaintances (14.3%), health care providers (13.1%) and friends (11.9%). Parents described both emotional (e.g., I was so hurt; I was dumbfounded) and behavioral (e.g., I just left; I educated them on vascular birthmarks) responses to receiving the messages. Parents attributed the sender's message as both intentional (e.g., They thought I harmed my child) and unintentional (e.g., ignorance, curiosity). Parents felt the messages were memorable because they were shocking (e.g., I thought it was so bizarre), novel (e.g., It was the first time someone had been so negative), or a salient reminder of their child's condition (e.g., It was the beginning of the very lonely and stressful journey of being a parent of a child with a hemangioma).

Our findings not only shed light on the types and characteristics of memorable messages parents receive about their child's vascular birthmark, but also provide insight into the messages that are more or less helpful to receive. Though the majority of the messages reported were negative, positive messages can be used by providers, for example, to provide encouragement parents and families.

Understanding the Process and Perceptions of External Message Development within a Government Health Agency

Katherine Hyatt Hawkins, George Mason University

The purpose of this project was to explore how a health organization communicates internally about its external messaging, specifically the intra-agency communication process involved in external message design including organizational members' perceptions of the process. Understanding this process can lead to disseminating more effective, timely messages to the public. A government health agency was used as a case study for its size, structure, frequency of external communications, and nature of communication with the public. The agency mainly produces risk communications. This project used semi-structured, in-depth interviews. Participants were agency employees, representing many departments and position levels. The research aimed to answer what employees knew about communication best practices and if they used those practices, and what other knowledge resources they relied on for message design. The research investigated the way knowledge was shared within the agency and what role intra-agency communication served in message design. Finally, the research explored how the agency's organizational structure influenced internal communication. Results revealed a lack of understanding of communication best practices by the agency's employees. It was clear some employees engaged in best practices, such as writing in simplified language and considering their target audience, but did not recognize these as best practices or call them by name. The most prevalent theme was reference to what employees called the review or clearance process. They explained the process as lengthy and a back and forth struggle between writing a communication the subject matter experts approved of but also one the public would understand. Participants talked about what happens to a communication draft and how they communicate about a draft, but mentioned little about actual message design. The communication process was different for each department which made it difficult when multiple departments worked together on a draft. It was hard for participants to articulate a clear process a communication went through from draft to dissemination. All participants expressed frustration with developing external communications. Participants communicated informally and mostly within their own working groups. Ultimately, exploring an organization's internal communication practices, patterns, and methods dealing with external communications will reveal areas of improvement. Articulating improvements surrounding message design and message clearance will lead to better communication with the public in terms of message content and dissemination, especially when dealing with communicating risk. The idea for this project came from a practical goal to establish the existing communication perceptions, practices, and perceived effectiveness within the agency of study so the agency's Risk Communication Staff could have a baseline of communication best practices. Results from this study helped inform a survey to assess the agency's communication practices. At this stage in the project, data has been collected, analyzed, and interpreted on a practical level. It is a work in progress. The researcher plans to further develop interpretations and investigate the conceptual implications to answer how the findings add to the literature on organizational communication and risk communication, specifically within the context of health, and how existing theories can explain this idea of communicating about communications.

Using a Simulation Game to Teach Registered Dietitians More Effective Communication Styles in the Acute Healthcare Setting

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Purpose

Registered Dietitian Nutritionists (RDNs) are the nutrition experts of the healthcare team and oversee the nutritional needs of patients in the acute-care setting. RDN recommendations are often missed or ignored by physicians, which can compromise the quality of patient care. Nurses are integral in helping RDNs communicate their recommendations to physicians, however in some cases, there is inadequate dialogue with nurses about patients' nutritional needs. This game creates a simulated environment wherein RDNs may safely explore three different communication styles to better understand their impact on physicians' willingness to follow RDN nutritional recommendations.

Method

Prior to game development, focus groups were conducted among practicing RDNs to ascertain and codify communication problems that routinely occur in acute care hospital settings. The focus groups were followed by in-depth interviews with hospitalists, gastroenterologists, leading national authorities on nutrition, registered nurses, RDNs, dietetic students, and dietetic interns to gain insights on typical communication styles, perceptions of effective & ineffective RDN communication styles, and patient nutritional advice needed. Following initial data collection and development of game requirements, the Emerging Technology & Media Department at Penn State was given instructions on programming the online game based on the primary research findings and the SBAR model. The game features a typical acute care unit, a representative patient with significant nutritional needs, an electronic medical record, two physicians, and several nurses. The player is presented with a patient situation that requires choosing from among three communication styles. The game also features a scorecard to show game-taker success. Following development of the initial beta version of the game, feedback on the game was collected from practicing RDNs, dietetic students, and dietetic interns on the usefulness and perceived benefits of the game.

Results

- (1) Primary research from this study shows there is a substantial need for training RDNs on effective communication styles within the acute care setting. The SBAR communication model has been validated in other healthcare models and should be considered as part of RDN training.
- (2) The use of a communications simulation game has merit and the perceived usefulness of such a game is high as a teaching tool, particularly among dietetic students and interns.
- (3) Feedback from the game users shows that the beta version of the game needs further refinement and development of the clinical case and usability.
- (4) Experience in working with non-medical, university-based game developers was disappointing in that deadlines were not met, the capabilities of the development team were underestimated, and the end product lacked sophistication and ease-of-use features.

Acknowledgement: This study was funded by a grant from the Academy of Nutrition & Dietetics.

Benefits of Presenting to the Kentucky Conference on Health Communication

- (1) Gain feedback from both practitioners and theorists on the value of using interactive gaming as a way to teach communication styles to healthcare professionals.
- (2) Receive opinions on the applicability of the SBAR communication model for this application.
- (3) Receive suggestions on ways to improve the game and its applicability to other healthcare settings.

What Difference Does a Platform Make? Online Discussions of Inflammatory Bowel Disease Stigma and Support

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Introduction/Literature Review

Inflammatory bowel disease (IBD) is an autoimmune condition that affects the digestive tract. The prevalence of IBD has been increasing at an unprecedented rate in America (CCFA, 2017). Importantly, a majority of IBD patients report some disease-related stigma which can lead to decreased social status and quality of life (Taft, Ballou, & Keefer, 2012; Taft, Keefer, Leonhard, & Nealon-Woods, 2009; Weiss, Ramakrishna, & Somma, 2006). Research shows that patients with IBD are increasingly accessing educational information on the internet (Guo, Reich, Groshek, & Francis, 2016), and as such, physicians should become familiar with various social media platforms their patients may be engaging with and how they are using them.

Method

A content analysis was conducted on text-based data that was mined from three social networking platforms: Reddit ($n = 331$), YouTube ($n = 300$), and Twitter ($n = 300$). These platforms were chosen based on their popularity and different affordances for discourse. The following variables were assessed in the coding protocol: Sentiment, type of stigma (enacted, perceived, or both), aspect of stigma (Bresnahan & Zhuang, 2011), social support (Coulson, 2005), presence of medical-related information, and interpersonal relationship mentions.

Results

Mentions of overall stigma varied across platforms. YouTube had the greatest incidence of stigma (20%). Among comments that included stigma on YouTube, mentions of perceived stigma (56%) were more prevalent. Twitter, on the other hand, had equal proportions of perceived and enacted stigma (36%). The most prevalent enacted stigma on Twitter was negative attribution (82%); Reddit had few instances of stigma (5%). YouTube was also the most supportive platform overall (64%), compared to a little more than half of comments on Reddit (53%) and a little less than half (44%) of tweets on Twitter. On YouTube, Esteem support was by far the most prevalent (77%). For Twitter and Reddit, the most common form of support was Information seeking (Twitter: 85%; Reddit: 76%). Finally, based on ANOVA results, there is a significant difference in the amount of social support, medical-related information, and interpersonal relationship mentions between all three platforms. In all, YouTube ($M = .80$, $SD = .71$) offered significantly more social support. YouTube ($M = .80$, $SD = 1.12$) and Reddit ($M = .74$, $SD = .93$) posts contained more medical-related discussion. Finally, Reddit ($M = .73$, $SD = .63$) posts provided more interpersonal relationship mentions.

Discussion

The purpose of this study was to analyze IBD-related discussion on social media platforms, and to examine the presence of stigma and social support within these discussions. The results from this study corroborate research from Guo et al. (2016), which suggests that medical and healthcare professionals can benefit from including existing and emerging social media platforms in their studies of stigma in chronic conditions, such as IBD. This kind of holistic research is important because even reviews of IBD resources on the web tend to ignore online resources such as Reddit (Bernard et al., 2007). This investigation shows that the way IBD is discussed on YouTube, Reddit and Twitter varies, thus indicating the need for a diverse examination of all three platforms to get a rich and exhaustive view of online IBD discussion.

What Does the Doctor Say? An Initial Content Analysis of Physician Generated Plans for Conversations about End-of-Life Care

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Background: Patient-provider communication is essential for the challenging decisions that arise during end-of-life in order to ensure the patient receives quality care. The aim of the current study is to investigate physician considerations in planning for conversations about end-of-life care. Planning theory (Berger, 1988, 2003) provides a conceptual link between communicative goals and communicative action and posits that communication success is due in part to the communicator's efforts to formulate and implement plans of action (Waldron & Lavitt, 2000). The investigation of physician plan generation regarding the content of discussions with patients is particularly informative in the context of end-of-life treatment discussions, as the content reported provides insight to provider goals and care the patient receives.

Method: Respondents ($n=26$ physicians) were asked to design a plan to communicate to the patient about their options for life-sustaining treatment. Specifically, providers were asked to report (a) how they would engage in the conversation with the patient and (b) what content would be discussed. Following the plan generation, demographic information was elicited. Of respondents 10 were female with an average age of 51.73 years ($SD = 11.49$). Length in career ranged from 1 to 35 ($M = 13.90$, $SD = 10.64$).

Results: In creating the plans, physicians most commonly reported soliciting patient goals (69.2%), followed by explaining the available treatment options (57.7%), investigating the patients' knowledge of current medical condition (38.5%), providing written resources (34.6%), establishing a surrogate decision maker (34.6%), inquiring about previous plans (26.9%), contextual considerations (23.1%), comforting (19.2%), inquiring patients emotional state (15.4%), offering opinion (7.7%), reference to a direct communication style (7.7%), and other (7.7%).

Discussion: An examination of physician generated plans suggest that providers are most concerned with assessing patient goals. A majority of plans integrated the need to gain insight to patient preferences, emphasizing goals of aligning treatment options with patient desires. Such content also included value system inquiry and emphasis on patient autonomy. Over half of the reported plans referenced the need to explain treatment options. Based on prognosis and patient preference, the choice can be made to limit or request designated medical interventions. Physicians commonly reported need to clarify options available in terms of what they entail and likely outcomes. Explaining treatment options was closely tied to assessing patient understanding noting common patient misperceptions. Notes of contextual considerations for the conversation such as timing, integrating others, and approaches to communication were noted.

Conclusion: Conversational plans afford scaffolding that physicians draw upon while engaging with patients regarding advance care treatment. The findings contribute to a call for communication scholars to address the paucity of research around what content providers prioritize during such conversations and which conversational goals are present (Scott, 2014). This research has the potential to afford insight into communication practices that many clinicians use regularly (Parry, Land, & Seymour, 2014). Further, it informs clinicians, policymakers and clinical educators what content is being emphasized and what is overlooked.

What Predicts Recall of Medical Information in Newly Diagnosed Cancer Patients?

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Background

Cancer patients forget substantial amounts of medical information provided by their oncologist. Particularly for older patients, processing and memorizing information is considered more difficult. Especially during the uncertain phase of cancer diagnosis and treatment planning, information is crucial for patients to make informed decisions and manage their disease, which further determines the successful course of their treatment. This study examines which patient characteristics, next to chronological age, affect recall of medical information in newly diagnosed cancer patients.

Methods

Data was collected from 91 colorectal cancer patients before and after their visit to a multidisciplinary fast-track outpatient clinic in The Netherlands. All proposed predictors were measured prior to the visit (T1), right after the consultation (T2), or derived from the videotaped consultations or medical file. Predictors included - but was not limited to - socio-demographic information, information preferences, health literacy, quality of life, frailty, anxiety, satisfaction with the consultation, and medical information like treatment goal and treatment plan. Information recall from the diagnosis and treatment planning consultations was assessed within 36-48 hours after the consultation took place (T3) using the Netherlands Patients Information Recall Questionnaire (NPIRQ).

Results

On average, patients forgot more than 40% of the information that was provided during the diagnostic and treatment planning consultations. The anxiety patients experience during consultations and education level significantly predicted patients' recall of information, even when controlling for influential factors such as socio-demographics, cognition, and health literacy. Patients that felt more anxious after the consultation took place, as well as higher educated patients, were less likely to remember information from the diagnosis and treatment planning consultation. Surprisingly, treatment goal (palliative vs. curative) did not play a role in explaining recall of information. While older patients were less likely to recall medical information, this effect was only marginally significant. Full statistical analyses and results will be presented at the KCHC conference.

Conclusion

The level of anxiety patients experience during the early diagnostic and treatment planning phase should not be underestimated. Moreover, clinicians should actively consider patients' anxiety, as it is negatively related to the amount of medical information patients can remember. While this study gives a first insight in the factors that explain recall of medical information in newly diagnosed cancer patients, further research is needed to deepen our understanding of what makes patients remember and forget medical information, to foster a successful course of treatment for the patient. The findings pose relevant opportunities for interventions to tailor and optimize information provision for cancer patients.

“When you hear the word cancer...?”: Appalachian Kentuckians’ Powerful Narratives to Inform Future Cancer Communication Efforts

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Background: In close-knit, rural Appalachian Kentucky (KY), story-telling and personal narratives are among the most powerful and effective means of communication. However, stories surrounding negative health experiences often create stigmas associated with poor health outcomes that may spread among peer and familial networks. Fatalism – the belief that a cancer diagnosis will ultimately lead to death – is found in the literature and often presents in the personal narratives of Appalachian community members. While it is true that KY men and women rank first in both cancer incidence and mortality (2008-2012), cancer survivorship is increasing with a national 5-year survival rate of 67%. In order for progress to be made in dispelling cancer myths, increasing preventive behaviors, and creating a more positive narrative of cancer survival, it is imperative that we first understand the community’s perspectives about cancer.

Methods: In 2017, the University of Kentucky Markey Cancer Center designed and administered a paper survey, “ASK – Assessing the Health Status of Kentucky”, in our 54 Appalachian KY counties. Items assessed a range of health topics including tobacco use, using the internet to find health information, cancer screening practices, and health beliefs surrounding cancer. Administration of the survey consisted of a probabilistic sampling of mailing addresses ($N = 3,200$) and a convenience sample of community members ($N = 200$). Herein, we present preliminary qualitative data from an open-ended question in the “Beliefs About Cancer” section of the survey that asked “When you hear the word cancer, what is the first thing that comes to mind?” The purpose of this assessment was to capture community members’ first reaction to the word “cancer” using their own words. Almost 700 participants ($n = 674$) provided a total of 718 unique responses.

Predominant qualitative themes are as follows:

- 45% of the responses were related to death and pain;
- 24% were a collection of “Other” statements such as: specific cancer types (e.g., breast, lung, melanoma), listing of family members who’ve experienced cancer, and feelings of sadness and dread;
- 9% of the responses focused on the idea of “treatment”;
- 7% of the responses focused on fear; and
- Only 5.4% of responses represented a narrative of hope, faith, or survival.

Conclusion: Based on these preliminary findings, residents in Appalachian KY provided narrative accounts indicating largely fatalistic and negative perspectives about cancer. These sentiments may be disseminated throughout their social networks through story-telling, thereby perpetuating cancer-related myths, increasing stigma, and decreasing hope. Communities would benefit from positive story-telling interventions that integrate local community members’ lived experiences with cancer, accurate cancer information, and culturally-sensitive cancer communication messages. These community-engaged and evidence-based strategies would work to dispel cancer-related myths, decrease fatalism, and increase community members’ perspectives on hope and survival surrounding cancer.

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Which Narrative Elements Persuade in Weight Loss Stories: Focus Groups with Philadelphia Females Seeking to Lose Weight

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Obesity, which has been linked to leading causes of death in the United States, continues to rise (CDC, Leading Causes of Death, 2017). The CDC found 29.6% of US adults were obese in 2016, with 35.2% being overweight (CDC, 2017). While health scholars and practitioners recognize obesity as a widespread issue, individuals with obesity face stigma, which negatively affects work, public life, health, and personal relationships, and more importantly, decreases weight loss motivation; furthermore, obesity stigma disproportionately affects young females, causing them to have low self-esteem (Chen & Brown, 2005).

Weight loss narratives in the US often reinforce obesity stigma, suggest that obese people earn respect from society by losing weight, and represent obese individuals as mentally flawed (Brown, 2014). Therefore, our study invites females seeking to lose weight to both share how pervasive weight loss narratives in our culture make them feel and rewrite the narrative to be less stigmatizing and more effective at promoting healthy weight loss.

Narrative persuasion, persuasion through a story, with its ability to close the gap between the audience and generalized other (character), has been highlighted as one potential way to overcome psychological barriers to getting healthier (So & Nabi, 2013). Previous studies in narrative persuasion for obesity have compared the persuasive effectiveness of informational v. narrative materials (Niederdeppe, Shapiro & Porticella, 2011), questioned whether to acknowledge obesity as an individual responsibility in policy narratives (Niederdeppe, Roh & Shapiro, 2015), and highlighted societal vs. individual causes of obesity in the narratives (Thibodeau, Thompson & Flusberg, 2017). Despite the vast research, there exists a gap in the literature as the majority of these studies utilized a quantitative experiment. This study proposes a participant-centric approach by utilizing focus groups to cultivate a more in-depth understanding of how various narrative elements present in weight loss stories influence and are interpreted by a vulnerable population of adult females seeking to lose weight; effective and ineffective narrative strategies will be identified using a grounded theory approach (Glaser, 1992).

Philadelphia area females aged 18-35 seeking to lose weight will be recruited for our January focus groups until data saturation is reached. Pennsylvania had an above average adult obesity rate (30.3%) with Philadelphia having the highest percentage of adult obesity within Pennsylvania (33.3%) (CDC, 2017; Philadelphia Department of Public Health, 2016). Participants will discuss (R1) what they think are prominent weight loss narratives in our culture, (R1b) investigate the positive and negative attributes these stories have, and (R1c) examine which positive and negative emotions these stories evoke. Additionally, the participants will be asked (R2) which narrative elements of weight loss stories they find relatable, (R3) which narrative elements increase their transportation into a weight loss story, and (R4) which narrative elements of weight loss stories lead them to feel empowered to adopt a healthy lifestyle, as all three conditions contribute to increased narrative persuasiveness.

Findings from this study can help health practitioners develop theory-informed persuasive and ethical health campaign messages about weight loss to help people live healthier lives.

Why Do People Keep Using “KEEP”: A Qualitative Study on Usage of Smartphone Fitness Application and Physical Adherence

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Many experimental studies report the promising news that smartphone fitness applications can facilitate significant positive behavioral changes to sedentary lifestyles. However, Physical Activity (PA) Adherence literature suggests that many people start and then give up physical activities within two to three months on average (e.g., Allen & Morey, 2010; Dishman, 1994; Venditti et al., 2014). More importantly, meta-analyses have found that the majority of mHealth (mobile health) research invited trial usage for no more than three months (e.g., Bort-Roig et al., 2014). Some studies even admitted their little confidence in the general population's long-term and regular usage in real life settings (e.g., Hebden, Cook, van der Ploeg, H. P., & Allman-Farinelli, 2012). This study explores the affordances and barriers in people's actual usage of fitness applications in natural settings from the perspective of PA adherence. All participants had downloaded and used the fitness application KEEP by themselves before the recruitment of this study. KEEP is chosen due to its popularity with more than 100 million registered users, mostly Chinese. Through snowball sampling, 15 one-on-one semi-structured interviews (30 to 77 minutes) were conducted in November 2017 with Chinese users (average: 26.67 years old). Using a grounded approach, this study found that social interactions with one's close friends or strangers in the virtual KEEP community were not so relevant among persistent users, who regularly used application for more than 6 months before the interview. This finding resonates with another qualitative mHealth study (Dennison, 2013). Persistent users claimed that they did not see the application as a social media platform and tended to practice alone with the application. They reported confidence in their levels of grit, existing regular PA habits, intrinsic motivation for health purposes, enjoyment of the gaming functions such as badges, welcome attitude to reminding messages, and strong trust in the effectiveness of application. On the contrary, both short-term trial users (used only a few times) and on-and-off users (used randomly and no more than 6 months before the interview) mentioned external motivation such as physical attractiveness more frequently. A few of them explained that the reminding messages made them feel guilty and other users' posts of successful stories frustrated them. On-and-off users reported low level of grit, and mentioned more about dieting during their usage. When they reached their original goals of weight-loss, they eventually gave up exercising and dieting. Short-term trial users complained about the self-learning mechanism built in this application because they had concerns of hurting their bodies while watching the video clips and doing the moves by themselves. This study suggests future applications should differentiate strategies for various groups of users (short term trial, on-and-off, persistent usage) in order to improve people's PA adherence. It also proposes a new model accounting for PA adherence and application usage for future research, which sheds light on variables seldom discussed in the existing mHealth literature: self-efficacy in PA adherence, PA habit, PA literacy, intrinsic/external motivation, reactions to reminding messages, and trust in the effectiveness of the application.

“Why don’t you just leave?”: Intimate Partner Violence Survivors’ Perceptions of Social Support

Kaylee M. Lukacena, University of Kentucky

Intimate partner violence (IPV) is a significant public health concern in the U.S. IPV is characterized by physical violence, sexual violence, stalking, and psychological aggression enacted by a current or former intimate partner (CDC, 2016). Approximately 37% of women in the U.S. experience IPV during their lifetime. IPV has been linked to acute and chronic, physical, mental, and behavioral health outcomes. Specifically depression, post traumatic stress disorder, and drug/alcohol abuse are likely to ensue following IPV (Breiding et al., 2014). One communicative method to reduce the negative effects and minimize the burden of abuse is the use of social support for victims (Coker et al., 2003). Research indicates that victims of abuse first need informal support from friends and family before they are willing to seek out professional sources of support (i.e. medical care, counseling). Understanding IPV survivors’ perceptions of social support is crucial to gaining a greater understanding as to who they sought support from and why, uncovering how they characterize social support efforts as helpful/unhelpful, and determining what communicative qualities they characterize as supportive. Participants were recruited via flyers and an undergraduate research pool at a southern university. Participants consist of young adult IPV survivors, ages 18-26, who experienced IPV from a former romantic partner within the past two years but were not currently in an abusive relationship. Participants engaged in one-on-one, in-depth, face-to-face or phone interviews for 30-45 minutes. Narrative elicitation was used to allow participants to organize and remember events while integrating their thoughts and feelings. Thematic narrative analysis, which uses individuals’ stories to investigate, represent, and present their lived experiences, will be employed (Saldaña, 2009). A priori concepts on the basis of Goldsmith and Albrecht’s (2011) types of enacted social support as well as verbal person-centeredness (Burlison, 1987; MacGeorge et al., 2015) will be used to generate thematic categories while also staying open to novel insights. Although data collection is ongoing, by April 2018 I plan to have conducted, transcribed, and analyzed 25 interviews or until theoretical saturation is achieved. Preliminary analyses of 12 interviews indicate emerging themes. First, the sources of informal support primarily have been parents, particularly mothers, as well as close friends. Second, there is a clear pattern in regard to the helpful types of social support and the support provider. For example, parents tend to provide more instrumental/tangible support, connecting their adult children with psychological resources whereas friends tend to provide emotional support and appraisal support. A helpful type of support enacted by friends and parents is “silent support” characterized by the simple physical presence of someone with little evaluative feedback. One type of support the majority of participants desired, but did not receive was information about IPV and a connection/access to an IPV survivor. Themes derived from these narratives have valuable implications for designing messages and support strategies to assist friends and family in providing quality support that is preferred and helpful according to young adult IPV survivors, as well as avoiding harm-inducing strategies.

“Wild and Daring” or “Gross and Weird”? An Elicitation Survey of Adolescents’ Perceptions of e-Cigarette Use and Peer Users

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Background: Elicitation surveys gather open-ended responses about performing a specific behavior from a population of interest (Fishbein & Ajzen, 2010). These responses reflect salient beliefs and determinants of behavior, which can serve as potential targets for communication campaigns. The open-ended nature of the method allows researchers to identify target beliefs and also insight into specific language used by the target population.

Method: To gather beliefs about occasional (1-2 times per month) and daily electronic cigarette (e-cigarette) use among adolescents, we conducted an online elicitation survey with 13-17 year olds ($N = 176$), 60.2% of whom were non-Hispanic White and 57.4% were female. 22.7% had ever used an e-cigarette, among whom 72.5% had used an e-cigarette in the past 30 days. Respondents were asked, “What do you see as the (dis)advantages of using any electronic cigarette daily (once or twice a month) compared to never use?” and were provided five short blank text boxes for each of their responses. Respondents were also asked to, “In a few words, describe the typical e-cigarette user your age.”

Results: We explored similarities and differences in responses about (dis)advantages from non- and ever users. Among non-users, the most frequently listed advantage of e-cigarette use was that there are none (35%), followed by beliefs that e-cigarettes are better (8%) and healthier (7%) relative to tobacco cigarettes. Ever users also most commonly reported no advantage to e-cigarette use (though less frequently than non-users, 14%), followed by advantages of e-cigarettes being healthier relative to tobacco cigarettes (9%), and promoting cessation or reducing cigarette consumption (9%).

For non-users, the most commonly reported disadvantages included general health risk (15%), addiction (14%), and no disadvantages (10%). Ever users more frequently cited no disadvantages to e-cigarette use (26%), followed by disadvantages of addiction (16%), cost (11%), and nicotine content (11%).

Non-users commonly described the typical e-cigarette user their age as someone trying to appear cool, as an outsider, or as someone performing poorly in school or socially. One respondent characterized a typical peer user as someone with, “Bad grades, bad health, moody, bad hygiene, troublemaker, [and a] rebel.” Ever users provided more favorable representations of peer users, noting that users are “cool” and “wild and daring.” One user acknowledged, “I’m a teen and a lot of teens do it so you also do it because of peer pressure and trying to look cool in front of others.”

Discussion: Findings from such open-ended responses are valuable for driving subsequent systematic research for choosing topics and developing campaign messages. Evidence suggests promising topics worth focused consideration and also that ever users and non-users differ in perceptions of e-cigarette use and peer e-cigarette users. Campaign planners should be sensitive to these differences when designing campaigns for particular audiences. This elicitation survey was part of a three-pronged approach including a literature review and topic modeling to generate candidate beliefs (topics) for a potential FDA campaign, underpinning subsequent survey research. The elicitation survey provided unique topics, underscoring its value in campaign development.

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Windows of Susceptibility: Pediatric & Caregivers Perspectives on Environmental Risk Factors for Breast Cancer

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Kami Silk, Michigan State University
Sandi Smith, Michigan State University
Brandon Walling, Michigan State University
Brandon Thomas, Michigan State University

Breast cancer claimed over half a million lives in 2015 alone (World Health Organization, 2015). While this staggering statistic can be partially attributed to non-modifiable factors, such as age and family history, lifestyle and environmental factors are also believed to account for breast cancer risk (Alteri et al., 2015). The Breast Cancer and the Environment Research Program (BCERP) supports a multidisciplinary network of scientists, clinicians, and community partners to examine the effects of environmental exposures (e.g. BPA, PFOA, DDT) that may predispose females to breast cancer throughout their lives, particularly during certain windows of susceptibility (WOS). WOS are specific time periods throughout the lifespan when exposures to environmental factors may directly or indirectly affect the risk of developing breast cancer (info.bcerp.org). The Michigan State University (MSU) BCERP focuses on the pubertal WOS and stresses preventative efforts for adolescent girls.

MSU communication science researchers will translate BCERP findings and recommendations into an online educational training for pediatric health care providers (PHCP) who treat children from 6 to 13 years old. Using the diffusion of innovation (DOI) framework (Rogers, 1982), PHCPs will be encouraged to serve as early adopters to promote breast cancer risk reduction recommendations to caregivers and patients. The objectives for the training are that PHCPs will be able to identify and evaluate breast cancer risk factors, integrate this information into interactions into well-child checks, and be advocates for the importance of communicating the relationship of early environmental exposures to later risk of breast cancer with other HCPs.

This presentation will present formative research results from focus groups and interviews with PHCPs ($n = 15$) and parents/caregivers ($n = 23$) that will inform the aforementioned continuing medical education and training for PHCPs. Results of focus groups and interviews found that despite routine discussion of lifestyle risk factors, both caregivers and PHCPs had little knowledge of environmental risk factors for breast cancer; thus, there was low concern for adolescent girls being exposed to environmental factors. Caregiver concern was higher if there was a family history of breast cancer. After environmental risk factors were ascertained, both groups identified barriers to avoiding them, such as: ease, cost and ambiguity. When asked specifically about knowledge of WOS, caregivers had little previous knowledge and PHCPs had none. After the definition was explained, interest and concern for avoiding risk factors increased. More information on the topic was requested and a need for integration into well-child checks was apparent, supporting the goal of the PHCP online training program. Assessment of toolkits, technology opportunities, and communication preferences were also discussed by participants. Implications of these findings will be presented as they relate to the content of the online education training for PHCPs.

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Working with Dental Professionals to Prevent Crystal Methamphetamine (“Meth”) Use in Rural Idaho Teens: A Qualitative Study

**Margie R. Skeer, Tufts University School of Medicine
Jennifer Towers, Tufts University School of Dental Medicine**

Context. Crystal methamphetamine (“meth”) use among youth living in rural areas, particularly Idaho, significantly exceeds the national average. There is a critical need for professional engagement in meth use prevention among adolescents in the state. New, unique communication channels should be utilized to engage healthcare professionals in delivering anti-meth messages to teens, along with preventive interventions. Given how drastically meth use affects teeth (known colloquially as “meth mouth”), and how imperative it is to hear messaging on substance use prevention from multiple sources, engaging with dental professionals in this effort may be a novel way to reach the intended audience.

Methods. We conducted key informant interviews with a convenience sample of six dentists and six dental hygienists from a total of nine practices in the Idaho Panhandle in 2015. These included practitioners in cosmetic, general, pediatric, and public health clinics. The objective of the interviews was to assess the feasibility and acceptability of incorporating meth use prevention messaging into dental visits with teenagers. One-hour, semi-structured interviews were conducted in person.

Findings. All dental practitioners were aware of the problems related to the prevalence of meth use, addiction, and consequences in the area, and believed that prevention was important. Generally, dentists who owned their practice or specialized mainly in cosmetic or pediatric dentistry did not see meth-related dental problems, and therefore were less amenable to incorporating prevention messaging into the dental appointments. Dentists and hygienists working in dental public health clinics saw the effects of meth use, particularly among adults, found the concepts acceptable and feasible, and were eager to help. While almost all hygienists felt that messaging around meth use and “meth mouth” would be in line with the type of prevention messaging they deliver to teens while cleaning their teeth in the dental chair (i.e., sugar-sweetened beverages, smoking, chewing tobacco), they expressed a lack of self-efficacy in delivering meth-specific content to teens and a need for further education on the drug and training on specific prevention messaging. Another primary barrier identified was concerns about parent buy-in on this topic, and wanting materials to share with parents to increase their acceptance. Some dentists and hygienists felt the need for parental permission before talking with teens about meth use – even prevention messages. Dental public health clinicians did not have this concern because many of their teenage patients came to the clinics without parents and, since many had parents who were addicted to meth or were incarcerated for crimes related to meth use, they felt comfortable discussing this topic with teens in their practices.

Next Steps. The qualitative data collected with dental professionals, along with qualitative data collected from parents and teens in Idaho in a separate study, are being used to develop a novel, theory-based, communication and behavioral strategy to integrate dental hygienists (primary audience) in the delivery of messages aimed at preventing the initiation of meth use among rural Idaho teens. The ultimate goal of the strategy is to reduce morbidity and mortality related to meth use in this population.

African-American Perspectives on End of Life Communication: Gaps and Hopes

Chair: Wei Sun, Howard University

Panelist: Tamara Owens, Howard University

Panelist: Finie Richardson, Howard University

Panelist: Colin Campbell, Howard University

Panelist: Sean Upshaw, Howard University

Respondent: Annette Madlock Gatison, University of Minnesota, Twin Cities

Studies have shown that the U.S. model of “end of life communication” focuses on autonomy in medical decision making. However due to differing cultural beliefs and preferences, ethnic minority members expect different treatment and care near end of life (Elliott et al, 2015; Searight & Gafford, 2005; LoPresti et al, 2016). While most European American prefer direct communication and more likely to opt for hospice service, African Americans tend to choose aggressive treatment, hospitalization, and to rely heavily on family care and spirituality for coping with life changing events and losses (Born et al, 2004; Townsend et al, 2017). Such decisions may lead to greater financial and emotional burdens and stress for ethnic minorities and their communities at large.

To reduce health disparities in end of life care, the panelists examine African American perspectives on end of life communication from various angles including: how fourth year medical students self-reflect after encountering end-of-life patients’ farewells; how Black churches discuss end of life to congregations; eulogies through mediated messaging on social media (Facebook); and how the Black press covers stories about end of life. The panel will enrich the cultural understanding of the end of life communication within African American communities, raise awareness about the disparities, and help to improve the quality of care for end of life patients.

Perceived Effectiveness Ratings of Health Messages: Useful or Overrated?

Chair: Marco Yzer, University of Minnesota

Panelist: Seth N. Noar, University of North Carolina at Chapel Hill

Panelist: Daniel J. O'Keefe, Northwestern University

Panelist: Lucy Popova, Georgia State University

Panelist: Marco Yzer, University of Minnesota

Respondent: Joseph N. Cappella, Annenberg School for Communication, University of Pennsylvania

Pretesting health messages is an important component of campaign development. It is an increasingly common practice to pretest candidate messages using ratings of their perceived effectiveness, but there are no clear agreed-upon best practices for perceived message effectiveness (PME). It is also unclear whether we can expect messages perceived as effective to in fact be effective when implemented. The goal of this panel is to advance our understanding of PME by critically discussing several interrelated issues. Seth Noar systematically reviews 75 studies in anti-tobacco communication, revealing significant variability across PME measures on persuasive constructs, use of referents, and referencing of behavior. Noar makes recommendations for more valid and reliable measurement of PME. Marco Yzer discusses whether variability in PME measures matters by presenting experimental findings of the relative performance of 18 different PME items. Lucy Popova builds on the observation that messages perceived as effective often are not associated with actual effectiveness, while messages perceived as ineffective can have actual effects. She uses illustrative data on possible predictors of PME to address the question of how we can best explain why people think a message is effective, raising the possibility that researchers and message recipients may think of "effectiveness" differently. Finally, Dan O'Keefe discusses 151 comparisons of messages' relative standing on PME and actual effectiveness, raising questions about the diagnostic value of PME data; he suggests that message effectiveness might perhaps be better diagnosed by pretesting actual (rather than perceived) effectiveness.

The Role of Communication and Information Science in Addressing Cervical Cancer Prevention and Screening in Vulnerable Populations

Heather M. Brandt, University of South Carolina

Panelist: Elisia L. Cohen, University of Minnesota

Panelist: Xiaoli Nan, University of Maryland

Panelist: Robin C. Vanderpool, University of Kentucky

Panelist: Katharine J. Head, Indiana University-Purdue University Indianapolis

Respondent: Heather M. Brandt, University of South Carolina

With a variety of tools including Human Papillomavirus (HPV) vaccination, Pap testing, and HPV testing, cervical cancer is one of the most preventable cancers in the world. Despite this, many women in the U.S., particularly those from vulnerable populations (e.g., racial minorities, under or uninsured, low SES) are still diagnosed with and die from this malignancy. Public health and health communication practitioners have long recognized the importance of social and behavioral science to promote adoption of preventive health behaviors such as those for cervical cancer. In this panel, we address the role of communication and information science in addressing the major “puzzle pieces” of cervical cancer prevention and screening in vulnerable populations, including: (1) evidence that identifies how (in contrast to reasoned-action approaches) a theory of low information rationality may better explain decision-making in cervical cancer prevention and screening, thus suggesting the need for different promotional strategies, especially in low health literate populations; (2) the use of targeted message design for increasing HPV vaccination in different populations; (3) perceptions and acceptability of self-testing for HPV in low-resource populations such as Appalachian women; and (4) how federally qualified health centers have addressed the challenge of communicating about new cervical cancer screening guidelines to ensure patient understanding and appropriate follow-up on abnormal results. Moreover, the panelists will discuss how these individual pieces must be seen as part of the larger “puzzle” of how communication and information science is essential in addressing health disparities within cervical cancer prevention and screening.

Rural Health Communication Research in the 21st Century

Chair: Melinda Krakow, National Cancer Institute

Panelist: Janice Krieger, University of Florida

Panelist: Jakob D. Jensen, University of Utah

Panelist: Heather Brandt, University of South Carolina

Panelist: Susana Ramirez, University of California, Merced

Panelist: Meghan Johnson, Markey Cancer Center

Respondent: Robin Vanderpool, University of Kentucky

Rural health is a priority area in public health research. One in five Americans lives in a rural-designated area, and rural communities are more likely to experience health disparities compared to urban counterparts, including increased poverty and unemployment, higher rates of smoking and chronic illness, and barriers to healthcare access. The health communication field is well-positioned to contribute to rural health knowledge (e.g., exploring regional cultural barriers to health behaviors) and communication-based interventions (e.g., telehealth programs; digital patient-provider communication). As rural health emerges as a national research priority (e.g., National Cancer Institute's Rural Cancer Control initiative; Rural Healthy People 2020), communication scholars are responding to the call. Thus, the proposed panel will introduce rural health as a priority research area through the lens of health communication. Through a moderated discussion, the panel will first provide working definitions of rurality and rural health and consider what "rural" means in an age of connectivity and digital communication. Next, the panel will identify the role of communication research in addressing key health issues affecting rural communities. Combined, panel represents perspectives and experience across diverse rural communities, including Appalachia, the Intermountain West, and central California. Panelists will also present empirical research highlighting social and behavioral determinants of rural health and discuss barriers to rural health and healthcare access. Time will be provided for questions and comments from the audience. The panel will conclude by highlighting academic resources available for investigating rural health communication and reflections and key takeaways provided by the respondent.