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Patient catharsis or health care brand capital? Authenticity, voice, and control in branded health care narratives.

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Storytelling is an act of healing that enables survivors of an illness to bring structure and meaning to a perilous life experience (Sharf & Vanderford, 2003). At the same time, patient narratives are powerful forces of persuasion that strategic health communicators leverage to attain consumer loyalty (Kreuter, et al., 2007). How strategic communicators capitalize on these branded healthcare narratives is an understudied facet of health communication. Modern consumers value authenticity, or the impression that a brand renounces imitation, alteration, and phoniness (Beverland, 2009). Patient narratives engender authenticity by facilitating a vicarious experience with a patient, or presumptive organizational outsider. Drawing from branding and narrative theories, we aim to explain how multiple voices – strategic communicators, video producers, doctors, and patients – converge to create a narrative product. We applied Goffman’s (1981) production format to examine how narrative control, voice, and authenticity manifest in branded healthcare narratives. We posited the following research questions:

- How do animators, authors, and principals co-construct the branded health narrative?
- What storytelling cues exude healthcare brand authenticity?

Method: We randomly sampled from a list of 303 American Academy of Academic Medical Centers. The PI visited each organization’s YouTube site and navigated to its top-viewed video. Patient testimonials were identified by reviewing headlines and descriptions for terms including “patient” or “story.” Two independent coders received training per established guidelines. We report on a pilot study for training purposes on a random sample of 25 videos, eliminating four that did not meet study criteria (n=21). Pearson’s correlation ($r=0.98$, $p<0.001$) and Krippendorff’s alpha for this pilot were acceptable (.77 to .89).

We categorized variables into three theoretical categories: narrative voice, brand visibility, and brand authenticity. We coded for the presence of the patient-storyteller as well as the health brand in each video by counting and categorizing brand marks and endorsements. Perceived brand authenticity was measured as the presence of quality commitments, heritage cues, uniqueness cues, and symbolic statements (Shirdastian, Laroche, & Richard, 2017). Patient presence was measured as the amount of time the patient was engaged in the act of storytelling.

Results: Preliminary results show healthcare narratives are imbued with strategic cues to exude authenticity and reinforce the brand, with 76% containing a symbolic statement suggesting a patient-brand relationship and 90% containing an explicit endorsement of the organization. Nearly all (95%) exhibited a brand mark during the patient narrative. Less than half (43%) contained a comment about the efforts of the health care “team.” Patient presence ranged from 0 to 7:42 (minutes/seconds) ($M = 1:21$, $SD=1:41$). Full analysis of all variables is in progress and will be presented.

Discussion: Our research aims to explore the characteristics of branded health care narratives. As evidenced by this preliminary data, the voice and semblance of the brand penetrate the patient’s authentic retelling of a healthcare experience. Our research will advance a neglected yet relevant area of inquiry, bridging theoretical perspectives in marketing, sociology, and persuasion. Importantly, this research generates practical recommendations for integrating marketing and media production strategy while preserving the cathartic potential of patient storytelling.

Dialogue Surrounding Maternal Mortality Among Black/African American Women

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Maternal mortality has been framed largely as an issue within developing nations. However, recent media attention and political rhetoric have highlighted maternal mortality as an issue within the United States too, particularly among Black/African American women. According to the Centers for Disease Control and Prevention (CDC) the risk of maternal mortality among Black/African American women is 3 to 4 times higher than those of white women (2018); this is within the context of the United States having the highest rate of maternal deaths amongst all developed nations (Martin & Montange, 2017). The dialogue surrounding maternal mortality among Black/African American women has been covered in the media raising issue awareness. The purpose of this qualitative content analysis study was to thematize the framing of Black/African American maternal mortality as an increasing public health concern that was publicized among different media, including: news articles, political discourse, and popular culture. The qualitative content analysis used issue framing as the guiding theoretical framework. Preliminary findings from this study suggest that while media coverage has intensified awareness of the issue there has been little or no concrete analysis of the reasons for maternal mortality disparities in the US or recommendations made about actions that could be taken towards mitigating the situation. Beyond the coverage of systemic racism, there is much to be examined regarding maternal mortality among Black/African American. Implications of this study suggest there are opportunities to reframe the issue of Black/African American maternal health, promote awareness within the health care community, and advocate for improved public policy. Furthermore, this study will contribute to health communication research, particularly among a historically disparate population.

The effects of climate change on maternal and neonatal health in developing nations

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The discourse surrounding climate change has continuously emphasized the adverse effects on developing nations especially among vulnerable populations—women and children. Globally, 7000 newborn and 830 women die daily with 99% of these deaths occurring in developing nations (WHO, 2018). According to the Intergovernmental Panel on Climate Change (IPCC), the negative influences of climate change on maternal and neonatal health in developing nations poses worse consequences if left unimpeded (IPCC, 2017). However, only a handful of studies have examined climate change effects on maternal and neonatal health in developing nations and how it affects the Sustainable Development Goal 3 (SDG) and Millennium Development Goal 5 (MDG) globally and nationally respectively. This qualitative study systematically reviewed scholarly articles to explore the relationships identified in prior research between climate change and maternal/neonatal health in developing nations and carefully examined the characteristics and findings from the selected studies. The quality of the systematic review was assessed using the Critical Appraisal Skills Program (CASP) guidelines for evaluating systematic studies. Hence, the purpose of this systematic review paper was to examine and specifically identify the adverse effects of climate change on maternal and neonatal health in developing vulnerable nations with the hope of creating awareness and motivating necessary actions among public health communicators' and/(or) policymakers towards mitigating the effects nationally and globally. The effects of climate change on maternal and neonatal health include, but are not limited to: low birth weight, stillbirth, incomplete gestational period, neonatal stress, preterm birth, and postpartum depression. Furthermore, this study highlights the impact of climate change on achieving MDGs and SDGs as it relates to maternal and neonatal health. The present study serves as foundational research for future scholars, as well as a proposed follow-up study that seeks to examine developing nations perceptions of the influences of climate change on maternal/neonatal health with the sole aim of creating awareness and designing messages towards mitigating carbon emission actions. Hopefully, this study sets an agenda for future research and necessary actions to enhance maternal and neonatal health outcomes in developing nations.

Relationship Building and Health Communication in Community Care Coordination

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While international and global health communication is a key theme to address in research, we believe local practices can help inform global understandings of health communication and thus we highlight one such local model that offers lessons learned for health communication in community care coordination efforts of healthcare organizations. The purpose of the proposed research is to illuminate best practices in communication and relationship building for community care coordination (CCC) efforts of healthcare organizations and their clients. CCC can be defined as the management of the various social and economic needs and behavioral health services that facilitate efficient and quality health outcomes. CCC is particularly critical for underserved health populations in high health risk areas. One such area is in Prince George's County, Maryland, the Maryland jurisdiction with the highest proportion (85%) of racial/ethnic minority residents, the third highest for immigrants, and the majority of whom are low-income. The County leads the state in chronic disease rate, Medicaid enrollment, low-birth weight rate, and inappropriate hospital use among other health challenges. CCC improve health outcomes by helping clients navigate paperwork, care and health services by coordinating for the client their primary care physicians, specialists, pharmacies, hospitals, mental health providers, and community services.

Our study applies a relationship management framework, an area of theory in public relations, to communication between clients and a healthcare organization engaged in CCC. The framework examines trust, control mutuality, satisfaction and other characteristics as aspects to incorporate into messages to clients to increase their intent to utilize the CCC services offered. The study method is focus group, and with the help of community health workers we plan on conducting two to four focus groups with clients to assess relationship characteristics and perceptions of communication channels and messages used in CCC.

One focus group has already been conducted with six participants about how they perceive and interact with the organization, its staff, and with its messages. Participants responded that they see CCC as contributing to their broad health considerations. Food, housing, and healthcare emerged as important services. Participant relationships with their community health workers influence their engagement with and trust of CCC messages. Participants indicated that they wish to receive health information via U.S. mail, and also said they like text messages that they translate into audio because they are not able to read well. Due to this and other factors, they prefer face-to-face communication.

Other focus groups are planned over the next two months. Data analysis will be an iterative process, using constant comparison approach of transcripts to derive themes that will be supported through participant quotes.

The research findings will then be able to derive best practices for communicating about CCC using a framework of relationship building. The study will contribute to scholarship by extending the use of relationship building theory into the arena of health communication. It will also have practical application by suggesting ways of communicating to healthcare organizations that rely on CCC for helping improve health outcomes.

Exploring the Knowledge, Attitudes, and Perceptions Toward Cervical Cancer and HPV Vaccines Among Young Adult Females in Nigeria

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Background: Cervical cancer is the most common cancer among women in the sub-Saharan Africa. Nigeria has one of the highest cervical cancer burdens in developing countries with 14,000 cervical cancer cases which has led to 8,000 deaths (Akinfenwa & Monsur, 2018). Nigeria ranks fifth among countries with the highest cervical cancer mortality in the world and the highest in Africa. Research shows that 60% of 15- to 24-year-old females in Nigeria are sexually active, mostly without protection, and that a quarter has even begun childbearing (Okafor & Obi, 2005). Over 30 million Nigerian females (≥ 15 years) are at risk of developing cervical cancer (Hyacinth, Oluwatoyosi, Ibeh & Osoba, 2012).

The World Health Organization (WHO, 2017a) notes that HPV vaccination is the most feasible method for preventing cervical cancer. Despite its availability in Nigeria since 2008, several studies have shown a low uptake of the vaccine (Afam, 2017). This study sought to explore the knowledge, attitudes, and perceptions of Nigerian female young adults towards HPV, cervical cancer, pap smear and HPV vaccine. It also sought to determine their information needs and preferred channels of communication so that we can develop more effective health communication campaigns tailored for this population group.

Methods: A survey was administered to a sample of 250 female undergraduates (ages 18 to 30 years) at the University of Abuja, Nigeria. Statistical analysis was done using SPSS computer software version 16. A P value >0.05 was equally marked significant.

Results: Of the 202 female students who participated in the survey, only about 20% had ever heard about cervical cancer. Additionally, only 8.4% knew about Pap smears and only 5% were aware of HPV vaccination as an important countermeasure against cervical cancer. Majority of the participants identified health practitioners and peers as their main sources of information about cervical cancer and HPV vaccination. Interestingly, no participants recalled having received information from the local mass media. The participants identified social media as their preferred source of information for future health communication campaigns.

Discussion: Overall, few young women in Nigeria are aware of HPV, cervical cancer and HPV vaccine. These findings suggest the need for a coordinated effort between various stakeholders including government agencies, parents, healthcare providers, and the media. Findings from the study will also be useful in improving and shaping national health policies that can address this urgent public health problem in Nigeria. Although the WHO (2017b) recommends including HPV vaccination in national immunization requirements, this is still non-existent in Nigeria due to the perceived challenge of effective coverage of at-risk populations, particularly minors who stand to benefit the most from early vaccination. Even so, countries with similar cultural context have successfully demonstrated broad uptake of HPV vaccine through school-based programs such as the Program for Appropriate Technology in Health (PATH, 2010). Research elsewhere also provides evidence of successful HPV vaccine programs that might be able to inform the development of effective and strategic health communication campaigns adapted for the Nigerian populace.

“You’re Not Alone in This”: Navigating Patients to Colorectal Cancer Screening in Appalachian Kentucky Communities

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In eastern Kentucky, some communities experience colorectal cancer (CRC) mortality rates as high as 25.9 deaths per 100,000 people (Kentucky Cancer Registry, 2018), which is significantly greater than the target goal of 14.5 deaths per 100,000 recommended by the Centers for Disease Control and Prevention and the National Institute of Health in the Healthy People 2020 objectives. Public health programs featuring innovative screening mechanisms that are coupled with patient navigation services may be the key to increasing screening rates and preventing unnecessary deaths in the region. One-on-one interviews were conducted with patient navigators (n = 9) serving Appalachian Kentucky communities who had conducted patient navigation or case management to individuals receiving a positive fecal immunochemical test (FIT) result to identify the best strategies for addressing barriers to CRC screening and successfully navigating patients to follow-up care (i.e., colonoscopy). Participants identified as community health workers (n = 5), patient navigators (n = 2), or nurse practitioners (n = 2). The core tenants of effective patient navigation programs (Freeman & Rodriguez, 2011) and theories of uncertainty and communication privacy management (Brashers, 2001; Petronio, 2002) served as the framework for thematic analysis of the interview data (Ritchie & Spencer, 1994). Six primary themes were discovered from the interviews with patient navigators. First, navigators cited the common barriers to screening presented by patients, such as a sense of medical distrust as a result of family experiences and the tensions they experienced with referrals and no-shows. Second, participants reported facilitating navigation through the system using relational capital. Participants attributed much of their success navigating patients to the relationships they had built with both patients and providers. Third, many navigators reported managing patients’ uncertainty using education, social support, and emotional appeals. Fourth, participants reported countering uncertainty and privacy concerns with their patients with strategies such as using stories of other patients facing similar circumstances. Fifth, navigators often accommodated and supported patients with privacy concerns. For example, navigators would recruit the help of another healthcare professional with whom the patient was more comfortable. Finally, navigators offered frank and honest advice for future navigators, such as advocating that they engage in networking and relationship building activities with healthcare professionals in the region. Findings from this study present novel communication strategies (e.g., telling stories to counter uncertainty and privacy concerns, using emotional appeals) that may be included in training and certification practices for patient navigators and community health workers. Additionally, this study identifies unique ways to overcome commonly-cited barriers to colonoscopy screening. For instance, data suggest the potential for matching male navigators with male patients who are reticent to complete screening due to psychological issues relating to sexuality and/or masculinity. Data from this study may be used to inform future patient navigation programs in regions similar to Appalachia and catalyze future research efforts designed to improve CRC screening rates.

Nationwide Newspaper Coverage of Prison Reform: Testing Community Structure Theory

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A community structure analysis (Pollock, 2007, 2013, 2015) compared city characteristics and nationwide newspaper coverage of prison reform in newspapers in 28 major U.S. cities, sampling all 250+ word articles from 05/23/11 to 09/09/18. A total of 380 articles were coded for editorial “prominence” (placement, headline size, article length, presence of graphics) and “direction” (government responsibility, societal responsibility, or balanced/neutral: coverage) and then combined into each newspaper’s composite “Media Vector” (range= +.7066 to -.1134 or .82. Twenty of the 28 newspapers (71%) yielded media coverage emphasizing government responsibility for prison reform.

Overall, three demographics patterns were confirmed. First, the “buffer/privilege” hypothesis (higher proportions of privileged groups “buffered” from economic uncertainty are linked with greater emphasis on government responsibility for human rights issues) was robustly confirmed. Cities with more hospital beds per 100,000 people ($r = .625$, $p = .001$) were linked to greater media emphasis on government responsibility for prison reform. This finding is consistent with similar patterns linking hospital bed or physician density to coverage emphasizing “government” responsibility for gun safety (Patel, et. al., 2017), institutional responsibility for rape and rape culture on college campuses (Pollock, et. al., 2018), and opposition to solitary confinement (Pollock, et. al., 2017).

In addition, a “vulnerability” hypothesis (media reflecting the interests of a community’s most marginal/vulnerable groups) reveals that cities with greater proportions of single parent households ($r = .343$, $p = .040$), higher homicide rates ($r = .325$, $p = .049$), and greater percents of African-Americans ($r = .403$, $p = .017$) were linked with more media coverage emphasizing government responsibility for prison reform. This “vulnerability” pattern is consistent with prior research confirming high unemployment levels and crime rates linked with favorable media coverage of US immigration reform (Pollock, et. al., 2014, 2015). Finally, a “belief system” measure confirms that greater percents of Mainline Protestants in a city ($r = .337$, $p = .040$) were linked with “more” media coverage emphasizing government responsibility for prison reform, more favorable coverage of detainee rights at Guantanamo Bay (Zinck et. al., 2014, 2015), and less favorable coverage of solitary confinement (Pollock & Street et. al., 2017).

Regression analysis revealed that cities with greater percentages of hospital beds accounted for 37% of the variance associated with “more” media emphasis on government responsibility, and a greater percentage of African-Americans in a city accounted for 11%, totaling 48%, of the variance associated with “more” media emphasis on government responsibility. Empirically, media coverage of prison reform confirms it as a nationwide “healthcare” and “vulnerability” issue. Methodologically, combining measures of both “prominence” and “direction,” highly sensitive Media Vectors highlighted the capacity of media to reflect community measures of “healthcare access” and “vulnerability”. Theoretically, emphasizing the influence of local demographics, community structure theory complements agenda-setting theory, re-confirming empirical findings of an originator 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 human rights.

Patterns of Social Support Evident in an Online Hemophilia Support Forum

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According to the National Hemophilia Foundation, hemophilia, an inherited condition in which one's blood fails to clot normally, affects an estimated 400,000 individuals worldwide. There is no cure for the disease, and those affected may experience chronic joint issues and pain due to bleeding in the joints, seizures and paralysis as a result of bleeding on the brain, and even death (Centers for Disease Control and Prevention, 2018). These serious effects and the complexities involved in preventing bleeds before they happen create significant support needs in this community (Cassis, 2007); however, due to the rarity of the condition, those affected may need to rely on the Internet to access support from peers (White & Dorman, 2001). Despite the potential significance of online support for those affected by hemophilia, the topic has received little attention from researchers. This content analytic study explores the patterns of social support evident in an online hemophilia support group. Using social exchange theory as a guide, I examined the reddit hemophilia support forum, and explored the benefits or rewards that people starting a discussion thread seek. The first thirty discussion posts were selected from the online platform, along with the longest (per word count) comment of each of these. The data was subjected to a thematic analysis, and the findings evidence the various rewards associated with posting in these forums. The benefits of posting included gaining information, receiving emotional support, verifying one's own experience, and venting. The results also indicated that the most common form of exchange was a direct one (i.e., where the exact information asked by was provided, and the information seeker responded), followed by productive exchanges (i.e., posts where the commencer and the commenter described shared problems and also talked of reward or benefits), and generalized exchange (i.e., someone posted a related question in the comments section of the discussion thread and it got answered). The results of this study can help people seeking support from online to understand what kinds of benefits they might expect from similar platforms. The study also demonstrates the relevance of social exchange theory to social support research.

Parasocial Relationships with non-professional health YouTubers

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As of 2018, YouTube ranks as the second most visited website in the world. It is a video sharing platform that allows users to watch and upload video content. The website drastically ranges in content topics, including music, sports, gaming, beauty, and health. Health has become a popular topic on YouTube, with over 52 million videos resulting from a keyword search. Thus, its popularity makes it an important topic for health communication scholars to examine. Past literature has found that people can form parasocial relationships with online influencers on Twitter and on YouTube (Frederick, Lim, Clavio, & Walsh, 2012; Chen, 2016). Parasocial relationships are generally one-sided and formed through exposure to a media source. These kinds of relationships have been found to influence attitudes, beliefs, and behaviors of viewers. In the case of health information by non-professionals, the sharing of health information has potential negative side effects. However, YouTube health videos by non-professionals have not been studied, and the possibility of parasocial relationships in this context is not fully understood. Thus, a content analysis of video comments from non-professional health videos was conducted to determine, 1) if there are indications of parasocial relationships in YouTube health video comments, 2) how people were expressing parasocial-like feelings towards the video creators, and 3) what are the comments sections in these videos being used for. Results from the study indicated that some parasocial relationships are being formed with health video creators. Further, seven themes emerged in the comments, including, question asking, cost of care, community, appreciation, humor, personal narrative sharing, and parasocial-like sentiments. Overall, this study is a first step towards understanding parasocial relationships with health video content creators on YouTube and begins to examine the ways in which people express themselves in this digital space.

En nuestra casa no hay chinchorros: A Youth-Oriented, Participatory Approach to Chagas Prevention in Loja Province, Ecuador

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Chagas disease is a neglected tropical disease that disproportionately affects impoverished rural communities in Central and South America. Unfortunately, because Chagas disease affects economically and geographically marginalized people, there is a long history of systemic underinvestment in efforts to prevent its transmission by governments and international organizations. When governments and international organizations act to prevent Chagas transmission, they usually adopt insecticide-based approaches to eliminate triatomine beetles, the vector for Chagas disease. These approaches are inconsistently performed, exorbitantly priced for the communities affected, and pose dangers to health and the environment. Longer-term, community-based strategies are needed. As part of a multi-year, multi-pronged approach to ameliorating Chagas disease in Ecuador, our study team offers an alternative approach. We seek the primary prevention of Chagas disease through the physical restructuring of homes and peridomiciles and the attitudinal restructuring of community and individual beliefs about Chagas. In the present study, we discuss one communication intervention that attempts to promote primary prevention of Chagas disease using principles of entertainment-education. Specifically, working with children in the community of Guara, a small community in Loja Province, national insect control workers, and academicians, we co-created a song that raises knowledge of easily implemented home-based practices that can prevent infestation by triatomine bugs and, thus, reduce exposure to the vectors for Chagas disease. We begin with a discussion of our approach, an approach based in principles of Entertainment-Education performed in Central and South America, with an emphasis on the song tradition. We then discuss the co-creation of the song to promote behavioral changes regarding Chagas and provide an analysis of this song and its messages. The children articulated three behaviors to prevent infestation: sweeping the home, erecting screens, and moving chicken nests. Their song also articulated the need for repeated performance of these behaviors. These are scientifically sound messages that reflect best practices for reducing infestation of the home by triatomine beetles. Thus, the songs promote beliefs that are likely to lead to actions to prevent home infestation. The children's song, however, assigned responsibility to mothers, reflecting patriarchal cultural norms and limiting the audience for change. Moreover, insect control workers insisted on adding an additional verse that returned from self-implementation to insecticide-based strategies that relied on the national government. Following this analysis, we offer implications that this co-participatory process has for implementing Entertainment-Education strategies in the context of neglected tropical diseases, as well as challenges to implementing an entertainment education approach when working with national stakeholders.

Shared Decision Making Tool to Tailor Post Surgery Pain Management: A Design Approach to Improve Health Communication

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While the US represents the 5% of the world's population, this country's population consumes about the 80% of the world's prescription of opioids, as the Centers for Disease Control and Prevention (CDC) indicates. From 1999 to 2016, more than 200,000 people died due to overdoses related to prescription opioids. (CDC 2017). Over-prescription of opioids to be used after surgery is an important factor causing the opioid epidemic. (Waljee, Brummett, and Englesbe 2017, 728).

This project focuses on the issue of reducing the number of opioid pills prescribed for opioid-naive patients in hysterectomy surgery. Particularly, this project investigates how to effectively engage these patients with their healthcare provider in order to tailor pain management decisions to their individualized needs. With the goal to decrease the number of opioid pills prescribed, researchers at a medicine institute within a large public university in the Midwest have created a shared decision-making tool and ran a pilot testing at hysterectomy setting. Patients are asked to make a decision about the number of opioid pills prescribed to them. This project builds on this effort and implements a research-through-design approach to improve the shared decision-making tool currently being used at this medicine institute. The new tool we prototyped as a result of this approach considers a holistic view of the surgical journey. It helps patients to set up post-surgery pain expectations, get information about pain management well before the medication is prescribed, and have time to consider the information and feel confident before making a decision. The research-through-design approach implemented in this research leverages knowledge and insights from two group of people as a type of implicit co-creation and dialectic act, namely, the team of designers and the group of patients, caregivers, and healthcare providers. This approach involves a constant iteration and refinement of the solution based on primary research. To inform the initial stages of the design process, the research has conducted an ethnographic study using non-participant observations of patient and provider interactions during the surgical journey in order to understand how communication about pain management happens between them. The findings and insights obtained from the ethnographic phase informed a design-oriented phase, which involved multiple iterations of the tool's design. Careful analysis of the feedback from different areas (design, psychology, healthcare) was taken into account for each iteration of the design. In this sense, this research entailed an agile process, which we labeled as "agile information design." Such a process consists in short, but multiple, feedbacks and iterations. That resulted in a more robust shared decision-making tool that could improve health communication around pain management between patients and providers. Thus, this research introduces "agile information design" as a process applicable to tailored health communication situations closely related to the so-called wicked problems, such as the opioid crisis, and it demonstrates its efficacy in the context of over-prescription of opioids.

Understanding the role of communication and two-way symmetrical social capital in sustaining health outcomes

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Building social capital is an underlying assumption for community development work that increases health outcomes. Social capital is “the actual and potential resource that is embedded in, available through, derived from social networks of relationships (Burt, 1997).” Kay (2005) suggests general agreement that “social capital is something that exists among individuals and organizations. This ‘something’ emerges from connections between entities and is further developed through trust, mutual understanding, and mutual actions, based on shared norms and values.” Most research assumes that social capital is a one-way proposition, provided from NGOs to communities. We also need to consider whether NGOs simply utilize existing social capital within communities or if they actually build social capital as is assumed. Another important question is how much pre-existing social capital is necessary for NGOs to successfully work with communities. When it comes to health outcomes, communities with higher existing social capital are well-placed for better outcomes because research has shown it is linked to increased diffusion of healthy behaviors, increased collective efficacy, increased access to services through social organizations that ensure access, and increased psycho-social processes among individuals living in communities with increased social capital. Islam and Morgan (2012) found that local NGOs’ communication and knowledge-sharing practices strengthened linking capacities with outside agents, and improved critical awareness among the local people about their needs. Thus, communication improved social capital building. This study seeks to examine the role of communication in building, enriching and/or draining social capital in communities. The authors conducted in-depth interviews with NGO staff and their beneficiaries in Nairobi, Kenya. The beneficiaries also completed a social capital questionnaire and network analysis map. Initial results suggest social capital may be two-way in that NGOs build social capital in some communities, relying on pre-existing social capital for better outcomes, however, communities also create social capital for the NGOs. A two-way framework for social capital also reveals a supply and demand conceptualization. The supply-side focuses on building the capacity of NGOs to meaningfully engage with local stakeholders, whereas the demand-side focuses on leveraging the existing capacity of the community to effectively engage practitioners. Practitioners have long voiced frustration and blamed project failure on stakeholders who do not have the capacity and skills to effectively engage. These skills are important to enable the community to effectively demand or utilize participation spaces. As a Kenyan staff member from an international NGO said, “It goes both ways. There are some communities that are empowered enough to demand and to say what they want and I guess this is where organizations shy away from community participatory processes and processes that build community social capital because then they start to demand and say what they want as opposed to docile quiet communities that you can push around.” Another Kenyan staff member reiterated this, adding, “the more social capital they have, the more they are able to influence the organizations.” We discuss the mutually beneficial role a two-way approach to social capital plays in facilitating community empowerment and sustaining health outcomes.

Gender and socio-economic position in an award-winning edutainment program focusing on HIV

Renee Botta, University of Denver

HIV/AIDS in Kenya is concentrated among the poor in urban areas but among wealthier adults in rural areas. HIV prevalence is also lower in higher educated women. And, disease progression is worse for those more entrenched in poverty. One-third of new HIV infections in Kenya occur among people under 24. Young women aged 15-24 years have up to eight times the rates of HIV infection compared to their male peers. The main mode of HIV transmission is through heterosexual sex. Millions of development dollars have been spent producing high quality edutainment focusing on HIV/AIDS in Kenya. Edutainment programs are very popular, thus it is important to understand how the story of HIV is told. Indeed, Khan (2014) criticized the dearth of textual analyses of health media campaigns. Darlington (2015) argued HIV Campaigns often “do not address the gender inequalities and power relations that define the context in which both genders are being asked to engage in HIV preventative behaviors.” Studies that examine the representation of women and HIV in African countries suggest women are often portrayed as passive receptors of HIV rather than active subjects with the agency and efficacy to effect change and improve their own lives. Gibbs (2010) argued that portrayals of the relationship between HIV and gender either pay no attention to the social context of women’s lives, or portray women as passive and unable to act. The ideology present in the social construction of HIV/AIDS vis-a-vis the gender and socioeconomic position of the characters in edutainment programming serves as an important site to navigate how and whether edutainment representations of HIV/AIDS inform conversation about HIV/AIDS and how viewers might identify with its content. In this study, I examine the ways in which HIV/AIDS is socially constructed on the Kenyan episodes of *Shuga*, an MTV-produced program which was designed to spread the message of responsible sexual behavior and tolerance of people living with HIV among adolescents and young adults. The reality of life for Kenyan youth is inextricably tied to socio-economic position. Therefore, the ways in which an edutainment program such as *Shuga* depicts these youths becomes part of the identity of HIV and whether it speaks to them in ways that resonate with their experiences. Results suggest *Shuga* is both groundbreaking and troubling. HIV is presented as inevitable in the first season but more preventable in the second season. Protected sex signals infidelity. Throughout both seasons, men’s desire for untethered sexual pleasure causes HIV, whereas for women, a need for love, attention and money causes HIV. Men control women’s sexuality with money, however, women are frequently shown taking charge of their sexual health. Moreover, men are often vectors for the spread of HIV. An oversimplification of female empowerment is shown in dealing with transactional sex because it condemns women’s behavior, attaching personal responsibility for contracting HIV without recognizing the structural conditions that create women’s “choice” for sugar daddies and transactional sex. Findings are discussed through a public health and feminist media studies lens.

Analyzing Patients' Responses to Intimate Partner Violence Screening during First Obstetric Visits

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Objectives: To analyze changes in communication style in patient-provider obstetric visits when the topic of intimate partner violence (IPV) is mentioned, in order to better understand why the rate of IPV disclosure is lower than the frequency of IPV.

Hypothesis: Patient responses to IPV screening often are marked by a shift in style due to the stigmatized nature of IPV and its seemingly tenuous connection to medical care. Patients are more likely to disclose IPV and less likely to deflect the question when asked directly.

Methods: 48 transcripts of patient-provider interactions during first obstetric visits at Magee-Womens Hospital were qualitatively analyzed for shifts in communication styles by marking differences in communication style with the Atlas Ti program. Questions asked by the provider were marked as direct or indirect, with direct questions explicitly mentioning any form of IPV, and indirect questions only implicitly asking about violence at home. Patient responses were compared to responses in the local speech environment and marked as shifted if patients switched from standard English to conversational English or vice versa.

Results: We observed that patients shifted in style in 15/24 (62.5%) cases in response to IPV screening. Both upward and downward style-shifting was observed, with downward style-shifting, including switching to nonverbal responses only, exhibited at a higher frequency. Shorter responses were also often discovered after style shifting. Of the four positive IPV disclosures, all four patients were asked directly about IPV by the provider, and shifted back to the original style of communication, usually a more formal mode of speech, when asked to elaborate.

Discussion: Patients were observed to switch to a more conversational or to a more professional style of communication in the discussion of IPV, which lead to either disclosure or to softening the nature of the question. According to previously collected data, women tend to be reluctant to disclose IPV compared to other types of medical information, thus providing an explanation for the change in conversational style. Social consequences discourage the disclosure of IPV, and thus style switching may indicate reluctance to disclose and the shift in attitude towards the subject. Nonverbal communication also served as a marker for discomfort in women asked about IPV, signaling the change in attitude towards IPV compared to other questions included in medical interviews.

Back Breaking Work: Investigating Graduate Student Knowledge of Ergonomics and Pain Associated with Prolonged Computer Use

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Research has demonstrated that working at a computer for prolonged periods of time is associated with musculoskeletal pain (Blatter & Bongers, 2002; Noack-Cooper, Sommerich, & Mirka, 2009; Village, Rempel, & Teschke, 2005). Longitudinal studies have shown that self-reports of musculoskeletal pain can be reduced by training individuals to become mindful of their posture and implement sound ergonomic practices while working at a computer (Amick et al., 2003; Brisson, Montreuil, & Punnett, 1999; Harrington & Walker, 2004; Mahmud, Kenny, Md Zein, & Hassan, 2015; Robertson et al., 2009). Graduate students, in particular, spend an inordinate amount of time working at a computer to meet the demands of graduate school, making them an at-risk population for musculoskeletal pain (Menéndez et al., 2009). Therefore, the present study serves as a formal quantitative needs analysis examining graduate students knowledge about ergonomics, their concern about the risks associated with extended computer use, as well as how frequently they experience pain when using a computer. Results of the study showed that graduate participants performed poorly on the assessment of ergonomic knowledge, scoring an average of 63% on the exam. However, a majority of participants did indicate that they were concerned about a musculoskeletal injury from extended computer use. Furthermore, a majority of graduate students surveyed reported experiencing lower back, upper back, shoulder, and/or neck pain while using a computer. This research demonstrates that graduate students do indeed experience pain while using a computer, and they are generally unaware of proper ergonomic practices that can help mitigate pain associated with computer use. Thus, the present study demonstrates a need for an intervention informing graduate students about best practices to safely utilize computers for extended periods of time in order to reduce their risk of musculoskeletal injury. Ideas for future informative and persuasive communication interventions targeted toward graduate students, practical implications, areas for future research, as well as strengths and limitations, are also discussed.

Nationwide Newspaper Coverage of Safe Drinking Water: Testing Community Structure Theory

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A community structure analysis (Pollock, 2007, 2013, 2015) compared city characteristics and nationwide newspaper coverage of opioid abuse in a national cross-section of newspapers in 28 major U.S. cities, sampling all 250+ word articles from January 1st, 2014 to April 7th, 2018. A total of 481 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 = 1.000 to .1698, or .8302). All of the 28 newspapers yielded media coverage emphasizing government responsibility for safe drinking water. Overall, community structure theory connecting city demographics and variations in coverage of safe drinking water responsibility was confirmed for one demographic cluster: “political identity.” Cities with greater proportions of Republican voters ($r=-0.447$, $p=0.009$) were linked to less media emphasis on government responsibility for safe drinking water. However, cities with a greater percent of Democratic voters ($r=0.426$, $p=0.12$) were linked to greater media emphasis on government responsibility for safe drinking water. The “vulnerability” hypothesis (economically disadvantaged groups linked with media coverage reflecting their interests) was substantially disconfirmed. Cities with greater population percentages below the poverty line ($r=-0.398$, $p=0.018$) and greater percentages of hate crime ($r=-0.318$, $p=0.050$) were connected to less (rather than the expected “more”) media emphasis on government responsibility for safe drinking water. Perhaps coverage regarding safe drinking water, rather than reflecting the interests of vulnerable populations, reinforces social inequality, mirroring the interests of established political and social elites, who presumably seldom suffer major concerns about safe drinking water, reflecting what Donohue, Tichenor & Olien (1995) called a media “guard dog” hypothesis. Regression analysis revealed that cities with greater percentages of Republicans accounted for 20% of the variance associated with less media emphasis on government responsibility, while greater percentages of Democrats accounted for 8.2% of the variance, connected to more media emphasis on government responsibility for safe drinking water. Empirically, media coverage of safe drinking water confirms it as a nationwide “political partisanship” issue. Methodologically, combining measures of both “prominence” and “direction,” highly sensitive Media Vectors highlighted the capacity of media to reflect community measures of “political partisanship” and “vulnerability.” Theoretically, 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.

Transitions during Blood Cancer Care: The Caregiver's Perspective

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Introduction: Transition into survivorship care has been recognized as a critical juncture for cancer patients as they shift focus from treatment to living a new reality as a cancer survivor. Although there has been significant research about caregivers' experiences during treatment, there has been less focus on caregivers' post-treatment experiences. Furthermore, there has also been very little focus on sequential transitions that occur in some blood cancers as patients and caregivers move first from primary treatment to maintenance treatment and then from maintenance treatment to no treatment. Jacobsen [1] recently called for a broader conceptualization of survivorship that would include these sequential transition experiences. This research fills significant gaps in the literature and will also inform the development of caregiver interventions and programs.

Aim 1: To understand the experiences, needs, and preferences of caregivers of patients with blood cancer as the patient sequentially transitions into survivorship care.

Aim 2: To examine differences and similarities of caregivers' experiences as they care either for children or parents.

Methods: We used semi-structured individual interviews to interview middle-aged caregivers of parents or children with blood cancer. In order to be included in the study, the patient must have completed primary or maintenance therapy in the past 1-18 months. We partnered with the Leukemia and Lymphoma Society to recruit eligible caregivers. We used a qualitative, thematic analysis process to address our aims.

Results: We interviewed 19 caregivers of a child and 19 caregivers of a parent with blood cancer. Caregivers ranged in age from 29-64 (mean=43.49). Patients who were children of their caregiver ranged from ages 2 to 28 years (M = 11.05). Patients who were parents of their caregiver ranged in age from 57 to 91 years (M = 72.06). Themes included: (1) diagnosis challenges: frustrating symptoms, misdiagnoses, and uncertainty leading up to the diagnosis of a blood cancer; (2) post-diagnosis blur: Most described the first few weeks following diagnosis as very difficult: upon reflection it felt like a blur, like they were on auto-pilot, just getting done what needed to get done; (3) silver lining: Almost all caregivers were able to name something "good" that had come out of their taking on the caregiver role; (4) shift in transition: Many described a shift in trying to get "back to normal" – often this meant starting to care for themselves again; (5) family communication: Family system dynamics often made caregiving and communication within families difficult; and (6) Provider-patient communication challenges: including a lack of information, explanation; 'warnings' to not go online.

Discussion: Both groups identified similar challenges of caregiving, however, our study also highlighted ways in which adult children caring for parents face challenges that were different than those caring for children. These included the role reversal of the child caring for parent and negotiating caregiving responsibilities within the sibling dynamic. Participants talked about challenges in looking online for information and the challenges of transitioning between treatments and into survivorship. Communication with families, healthcare providers, and online information emerged as areas needing intervention.

Nationwide Newspaper Coverage of Minimum Wage: Testing Community Structure Theory

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A community structure analysis (Pollock, 2007, 2013, 2015) compared city characteristics and nationwide coverage of minimum wage in newspapers in 13 major U.S. cities, sampling articles published between 040115 and 110618. Including all topic-relevant articles of 250+ words, the resulting 260 total 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”. All thirteen newspapers yielded media coverage emphasizing government responsibility for minimum wage.

Overall, community structure theory connecting city demographics and variations in coverage of responsibility for living wage was confirmed for two demographic patterns: “vulnerability” and “violated buffer”. The “vulnerability” hypothesis (economically or socially disadvantaged groups connected with media coverage reflecting their interests: Pollock, 2007, pp. 137-156) was confirmed directly or directionally. Cities with greater percentages of single-parent households ($r=.515$, $p=.036$), female headed households ($r=.454$, $p=.06$), or residents below the poverty line ($r=.411$, $p=.08$), were all linked to greater media emphasis on government responsibility for minimum wage. These findings parallel those of other community structure studies confirming a “vulnerability” pattern, linking poverty levels with media support for immigration reform (Pollock, Gratale, Teta, et. al., 2014, 2015) and percent Hispanics with media support for universal health care (Kiernicki, Pollock, & Lavery, 2013).

The “violated buffer” hypothesis” (privileged groups associated with negative reporting on “ominous “issues -- containing biological threats or threats to a cherished way of life: Pollock, 2007, pp.101-136) was also confirmed for two measures of women’s empowerment. Contrary to expectations linking “privilege” to favorable coverage of rights claims, Pearson correlations directionally revealed that the greater the percentage of women in the workforce ($r = -.403$, $p = .086$) or college educated women ($r=-.369$, $p=.108$), the “less” media emphasis on government responsibility for minimum wage. These unexpected findings may reflect women’s discomfort at backgrounding their struggle for workplace respect, reluctant to foreground issues like minimum wage at the expense of women’s occupational equity claims, threatening a “cherished way of life.” Consistently, previous research links percent women in the workforce to media opposition to immigration reform (Pollock, Gratale, Teta, et.al., 2014, 2015).

Regression analysis revealed that cities with greater percentages of single parents and poverty accounted for 32.6% of the variance associated with “more” media emphasis on government responsibility for minimum wage, while greater percentages of women in the workforce and college educated women accounted for 26.3% of the variance, connected to “less” media emphasis on government responsibility. Empirically, therefore, media coverage of minimum wage confirms it is connected to nationwide “vulnerability” and “violated buffer” reporting patterns. Methodologically, combining measures of both “prominence” and “direction”, highly sensitive Media Vectors highlight the capacity of the media to reflect community demographics. Theoretically, community structure theory re-confirms empirical findings of an originator 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 rights issues.

One Shot at a Time: Using the Theory of Planned Behavior to Predict College Students' Intention to get a Flu Vaccine

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Rationale: During the 2017-2018 flu season, over 30,000 Americans were hospitalized for seasonal influenza. College students are highly susceptible to the seasonal flu and know the dangers of the flu, yet a majority do not receive the flu vaccine. Guided by the Theory of Planned Behavior (TPB), the purpose of this study was to assess college students' flu vaccine intentions focusing on attitudes about getting vaccinated, family's support of getting vaccinated, and perceived behavioral control about getting vaccinated

Method: College students (N = 363) completed an online survey about the flu. Participants' age ranged from 18 to 24 years of age or older. A large majority of participants were female (n = 284) and identified as Caucasian (n = 307). Most participants reported not having the flu in the last year (n = 269) and did not receive the flu vaccine in the last year (n = 198).

Results: Positive significant correlations were found between the family subjective norm group and students' intent to get a flu vaccine, as well as attitudes about getting vaccinated and intent. A significant negative correlation was found between perceived behavioral control and intent to get vaccinated. These findings suggest that the more students thought their parents would support them getting the vaccine and the more they believed getting the vaccine was a good thing to do, the more likely they were to intent to get vaccinated. A forward regression found for intent to get the flu vaccine, 51.1% of the variance was significantly related to attitudes about getting vaccinated and perceived behavioral control.

Implications: Students' attitudes about the benefits of flu vaccines was the most significant predictor of vaccine intent. The attitudes scale for this study primarily focused on a protection attitude, emphasizing how the vaccine protects self and others. This is an extension of previous flu research, which emphasizes negative attitudes about vaccines. Focusing on the benefits, rather than the harm of vaccines, may be more impactful. Second, the results indicated that students' vaccine intentions were influenced by their family's belief they should be vaccinated.

Past research suggests that college students can be influenced by their family's vaccine communication. However, there is still a disconnect between students' knowing of their parents' vaccine approval and actually getting the vaccine. It is possible that by parents not being there to make their children get a flu vaccine, this influence is diluted. Future studies should examine how the proximity of a subjective norms group moderates the relationship between approval and action. Finally, students believed the more they had control over getting the flu vaccine, the less likely they were to get it. This may have to do with an underlying belief not in their ability to get the vaccine, but in the vaccine's ability to prevent the flu. Previous research suggests that past experience, although not a formal part of TPB, may be more predictive of intent than other elements. Future research should explore how past vaccine and flu experiences impact current vaccine intent.

Should I talk to my doctor? Examining patient-provider discussion of fitness tracker data

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While research on fitness trackers continues to touch on important topics including self-quantification (Bietz, Hayes, Morris, Patterson, & Stark, 2016; Kersten-van Dijk & Ijsselsteijn, 2016; Hoy, 2016) and privacy (Christovich, 2016), little research has looked at fitness trackers in patient-provider interactions. Some research has suggested that these could be an important diagnostic tool for providers (Pevnick, Fuller, Duncan & Spiegel, 2016) however; we have little data on how this is used in practical settings. Research has shown that fitness tracker users communicate about their behaviors with peers, but not with their health care providers (Kreitzberg, Dailey, Vogt, Robinson & Zhu, 2016).

In fact, researchers found that patients have little desire to share their data with health care providers and that those most at risk, are the least likely to share (Pevnick, Fuller, Duncan & Spiegel, 2016). With this in mind, we aim to examine whether individuals have had conversations with their providers about their fitness tracker data and if sharing their data would be beneficial to them. We examined two key concepts, patient-provider interaction and provider support/motivation, in relation to four behavioral outcomes commonly tracked by wearable devices: steps, miles, sleep, and calories. The goal was to determine whether communication with a provider or motivation from a provider would impact behaviors.

Regression analyses showed that there was no impact of patient-provider interaction on any of the commonly measured health behaviors. Only 17.4% of respondents indicated that their health care providers encouraged use a tracker. Encouragement did not lead to improved behaviors. Second, we asked how often a provider specifically asked about fitness tracker data. Participants indicated that there was little conversation about this information ($m = 1.67$). To understand if physicians generally discussed this information, we asked if providers asked about information that patients could track, but not specifically about the tracker. Results showed that providers did ask some questions about this type of information, but not much ($m = 2.59$). Finally, we asked about conversations that patients initiated based on their fitness trackers. Results showed that very few patients talked with their providers about this information or concerns about their data such as sleep patterns or lack of exercise ($m = 1.56$). However, when prompted to think specifically about health alerts that one might receive from a fitness tracker, patients indicated that they might be willing to discuss specific issues, such as blood sugar or stress, when prompted. Questions related to motivation and support from physicians revealed similar results and little impact on behaviors.

The results suggest that fitness tracker data is currently underutilized by health care providers to address patient concerns. However, patients may be willing to discuss health issues with their doctor if specifically promoted to do so. This paper explores the opportunities for using fitness trackers in patient-provider interactions and how advances in fitness tracker technology might be used to help address patient health concerns. Ultimately, we hope that in understanding how this data is used we can encourage more conversations and improve behaviors.

What motivates me? Examining intrinsic and extrinsic motivations for improving fitness tracker data

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The research regarding fitness tracker use and health behaviors has focused a great deal on the concept of the quantified-self (Bietz, Hayes, Morris, Patterson, & Stark, 2016; Kersten-van Dijk & Ijsselsteijn, 2016; Hoy, 2016). This research suggests that individuals track their daily activities through apps and devices like fitness trackers to better understand various aspects of their lives. In some cases, we see that self-quantification improves the health behaviors of those who track their activities (Wu, Sum & Nathan-Roberts, 2016). Some argue that this is the result of intrinsic motivation (Rupp, Michaelis, McConnell & Smither, 2016). However, other research suggests that the social aspect of fitness trackers, such as sharing your data or competing with others, improves health behaviors (Kreitzberg, Dailey, Vogt, Robinson & Zhu, 2016). This is more indicative of extrinsic motivation.

This research explores the relationship between both intrinsic and extrinsic motivation on behaviors. The goal is to determine which has a stronger relationship to behaviors; desire for self-quantification (intrinsic motivation), or social support (extrinsic motivation). These concepts were measured through a series of questions asking about attitudes regarding self-quantification as well as questions related to support from groups of importance to the individual. This allows us to compare the effects of each concept on behaviors including average step count and hours of sleep.

Results showed that participants felt moderate levels of support from those in their networks including family ($m=3.02$), friends ($m=2.93$), coworkers ($m=2.36$), and physicians ($m=2.86$). They also reported only moderate levels of motivation by these same groups; family ($m=2.92$), friends ($m=2.89$), coworkers ($m=2.24$), and physicians ($m=2.69$) to improve their health behaviors. A series of ANOVA tests showed no significant differences between groups, indicating that we are not necessarily more motivated by one group than another. Further regression analyses also showed that support and motivation were not predictive of the amount of steps a person recorded or the amount of sleep they reported receiving.

When examining intrinsic motivators, such as interest in self-quantification, we see that there is slightly more interest in knowing and improving data ($m=3.51$), however this still has little effect on behaviors. Regression analyses showed that self-quantification measures were not predictive of steps or sleep logged by a fitness tracker. To further assess this, we examined individual components of the measure, including attention to fitness tracker data, importance of data, need for quantification, and enjoyment of tracking. None of the individual measures were successful in predicting behaviors.

Despite the fact that the data analysis provided few significant results, it did provide interesting findings. One would expect that some type of motivation would help individuals improve their results; however, we find that neither external motivators, such as support from family and friends, nor internal motivators, such as the desire to quantify and track health data, actually lead to better outcomes. This might indicate that individuals

have little interest in improving behaviors or that they require additional types of motivation and support to do so. Possible reasons for these results and practical implications are discussed.

Gynecologic Cancer Caregiving: A Comparison of Patients' and Support Persons' Perceptions of Caregiver Burden

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Background: Gynecologic cancers are one the deadliest categories of all cancers. Most patients present with advanced disease and are treated with a combination of surgery and chemotherapy that has a modest cure rate, with a high probability of recurrence. The treatment regimen is intense and patients often experience significant medical complications. There is also a high prevalence of psychological distress among women undergoing treatment for gynecologic cancers. Though the effects of cancer most directly affect the individual with cancer, its impact extends to social network members who provide care to the person with cancer. Research indicates that caregiving can be physically, emotionally, and financially demanding for cancer caregivers. This study describes the experiences of gynecologic cancer caregivers and compares these experiences with patients' assessment of cancer's toll on their support person.

Method: Participants (N = 30, 15 patient-support person dyads) were recruited from a NCI cancer center of excellence in the northeastern United States. Patients were in treatment for ovarian (n = 7), uterine (n = 2), or endometrial (n = 7) cancers, were diagnosed between one to 16 months prior to participation (M = 4.22, SD = 3.37), ranged from stage 1 to stage 4, and many were advance-stage cancers (n = 10). Support persons included 7 women and 8 men who described themselves as spouse/partner (n = 7), adult child (n = 4), sister (n = 2), parent (n = 1), and friend (n = 1). Participants completed semi-structured individual interviews (M = 41.61 minutes, SD = 14.59). Interview questions focused on patterns of sharing and holding back information, perceived relationship changes attributed to gynecologic cancer caregiving demands, and effects of gynecologic cancer caregiving on support people. A series of potential follow-up questions/prompts for each area followed based on the participant's response.

Results: Data was coded inductively to identify themes and examples present within participants' responses. This process included open coding and creating categories. Five themes emerged: (1) difficulty managing health, (2) competing time demands, (3) coping with loss of partner and relationship, (4) need for self care, and (5) positive coping responses to caregiving stressors. Overall, there was 60% agreement between patient and support person responses.

Discussion: This study provides a comparison of patients' and support persons' perceptions of caregiver burden. The results may inform intervention development to address patient-support person communication, cancer caregiver needs, and ultimately improve support person quality of life.

Fruit and Vegetable Consumption Among Adolescents in Singapore: Extending the Theory of Planned Behaviour

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Background: In one's daily diet, a healthy serving of fruits and vegetables (F&V) is recommended for higher micronutrient and lower dietary fat intakes. Oftentimes, however, individuals' intakes of F&V do not meet the recommended number of servings, placing them at an increased risk of developing nutrition-related chronic diseases. While vast research has been done to investigate F&V eating habits among children and the elderly, less have focused on adolescents who have become vulnerable to unhealthy food options given their increasing purchasing power. Moreover, past studies on healthy eating have mainly examined personal influences, thereby disregarding the external factors present in one's day-to-day activities. Utilising an extended model of the Theory of Planned Behaviour (TPB), this study takes into account both the personal and environmental factors, thus providing a more holistic explanation for adolescents' F&V consumption.

Method: A nationally representative household survey was conducted among Singaporean citizens and Singaporean Permanent Residents with adolescent children aged 10-16 years old. Using a multi-stage cluster sampling procedure, a total of 210 households were surveyed, which included the parent, the child, and an inventory of food available at home. Multiple regression analyses were conducted to determine how TPB predictors (attitudes, subjective norms, and perceived behavioural control) and environmental factors (food availability at home and exposure to parental F&V intake) influence the adolescent's intention to consume F&V.

Results: Significant positive correlations between the three TPB predictors and behavioural intention were found. Perceived behavioural control was the strongest predictor, followed by attitudes, and subjective norms. Thirty four percent of the variation in the intention to consume F&V were explained by the model. The availability of F&V at home, as well as the exposure of the child to parents' consumption of F&V, were likewise found to be significant predictors of behavioural intention. The inclusion of these external factors increased the variance explained by the model by 8%. Exposure to parental F&V intake also had indirect effects on behavioural intention through attitudes and PBC. Consistent with TPB's main assertion, intention led to behaviour.

Conclusion: This study adds empirical support to TPB's application in the context of healthy eating behaviours. It also demonstrates that the inclusion of environmental factors increased the predictive strength of the TPB model. The model's extension likewise provides a concrete link that supports the pathway of relationship between psychosocial predictors, external factors, and behaviours in the context of eating F&V. Findings from this study provide insights useful for the development of dietary intervention programs that may have immediate nutritional benefits, as well as long-term learned healthful habits and preferences that can be carried into adulthood. Future research can build on this study's results to further examine the specificity of how personal and environmental factors influence one's healthy eating habits.

Perspectives of the Family Caregiver from the Home Setting of BMT Patients: Using Mobile Technology for Health Communication

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Introduction: Blood and marrow transplantation (BMT) is an intense, but potentially curative therapy for life-threatening cancers. Patients undergoing BMT require a full-time caregiver to help manage the long journey toward recovery. During the inpatient BMT, patients and caregivers are surrounded by their healthcare team. However, once discharged, they are required to carry-out all medical tasks and daily activities of living. Accordingly, caregivers are required to develop new skills and routines. Caregiving is often multi-faceted, such as symptom management, arranging transportation, and managing the living environment for the patients. Many caregivers report difficulties during this phase due to the unfamiliarity of their new routine, leading to significant burden. Moreover, caregivers are faced with challenges to navigate the long BMT journey.

Methods: We conducted 25 semi-structured interviews in the homes of BMT patients to capture primary caregivers' experiences in long-term illness management and the transition from hospital to home. We asked about general caregiver experiences in daily routines, barriers that interfered with post-transplant transitions to home, and adopting strategies of living with new rhythms/restrictions. During interviews, we focused on common emerging challenges that caregivers faced, caregiving needs, and coping strategies. In interviews, caregivers felt ill-prepared for the post-discharge stage. The transition from hospital to home heightened caregiver anxiety, particularly as responsibility for routine medical tasks, previously performed by nurses (e.g., line care, dressing changes, administration of medications), shifted to caregivers. These data suggest the need for more information and support throughout the BMT trajectory.

Results: In an effort to address the information gap without adding burden on clinical visits, our group developed a web-based application, BMT Roadmap, which allowed healthcare providers, and patients and caregivers undergoing BMT to access tailored health information throughout the hospitalization. BMT Roadmap was first developed on an Apple iPad tablet as a multi-component mobile app to provide patient-specific information, education, and skills- building exercises for caregivers. Based on the results of our qualitative home interviews, we identified caregiver information needs and their effects on caregivers' sense of burden with regards to transitioning from hospital to home. To that end, based on prior inpatient and outpatient setting interviews with caregivers, we sought to expand BMT Roadmap to address information needs of caregivers transitioning to home care and provide "caregiver-specific resources" and "positive activities" components. Home interviews were conducted to expand the themes that were previously identified in the inpatient and outpatient settings and to explore any new emerging themes. Through our data analyses, we identified five primary themes that BMT caregivers faced, including: (1) unfamiliar medical tasks required on behalf of patients; (2) routine medication administration; (3) caregivers' coping strategies while caring for the patient; (4) caregivers' changes in daily routine including complex medical tasks, limited mobility, and other restricting factors; and (5) reformation of social relationships with their close others.

Discussion: By understanding and capturing emerging themes from the caregiver's perspective in the home setting, we can develop design suggestions for BMT Roadmap that could contribute to their wellness.

Single-sided deaf patients' preferences and expectations during diagnoses and coping processes

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Single-sided deafness (SSD) refers to severe-to-profound hearing loss (≥ 60 decibels than normal hearing level) in one ear (Vincent, Arndt, and Firszt, et al., 2015). Most recent reports of prevalence rates in the US estimate 3-6% of the population to have SSD (Ross et al., 2010). Globally, there are approximately 200 new cases of SSD/million people, annually (Watkin and Baldwin, 2012). Individuals with SSD face physiological challenges such as: hearing in complex/noisy environments, localizing/lateralizing sound sources, vertigo, and tinnitus. (Kamal, Robinson, and Diaz, 2012). In addition to the physiological components of SSD, there are also social and psychological consequences (Lucas, Katiri, and Kitterick, 2018), including increased stress levels in social settings (Hansson, 1993; Wie, Pripp, and Tvette, 2010), higher levels of social isolation and exclusion (Wie, Pripp, and Tvette, 2010), increased levels of worry for alternative ear hearing loss, embarrassment related to hearing loss social stigma(s), and reduced confidence and self-esteem (Lucas, Katiri, and Kitterick, 2018). The complexities and nuances of SSD have led scholars to investigate its various outcomes and effects. However, less have focused on the desires or preferences of SSD patients in regards to their communicative and social processes, especially after a SSD diagnosis. Therefore, this qualitative study aims to explore what individuals with SSD communicatively and socially seek after being diagnosed. Combined, these components could help us better understand why individuals may experience detrimental outcomes and how negative health outcomes could be prevented with components attained from everyday processes.

To understand the communicative and social components that SSD patients seek after diagnosis, we conducted in-depth semi-structured interviews with 53 SSD patients. Interviews were digitally recorded, transcribed verbatim, and imported into Dedoose, a qualitative analysis tool. Interviews were coded using a thematic analysis approach, a three-step process of open, axial, and selective coding, to identify key categories. Results illuminated that a) SSD patients solicit more family member inclusion in the diagnoses and coping phases (i.e., family therapy, concrete guide/training programs for family members), b) SSD patients seek out networks of those undergoing similar experiences, specifically similar diagnoses causes (i.e., congenital SSD, SSD acquired later in life from various causes (acoustic neuroma)), c) SSD patients seek out online social network groups for informational support d) SSD patients emphasize retroactive hopes of multidimensional, interconnected, and cooperative medical teams during their diagnoses, and e) SSD patients suggest a patient navigator role to help “guide” them through various processes of their diagnoses. This study provides insights to what SSD patients seek post-diagnoses and during coping processes, in addition to providing a lens for understanding various process factors. The process is one of uncertainty that comes with a unique set of pressures: time sensitive decision-making, norms, various motivations and stakeholders, and perspectives. Emergent themes from the findings validate and extend theories of homophily and stigma frameworks. With a better understanding of what patients seek socially and communicatively, and their explicit suggestions to medical stakeholders, this study can assist medical teams achieve more holistic care and increase well-being for SSD patients.

Gynecologic Cancer Patients' and Supporters' Reports of Sharing (and Holding Back) Cancer-Related Information During Oncology Visits

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Cancer of the uterus and ovaries are the most common gynecologic cancers in American women. (American Cancer Society, 2018). During oncology appointments with healthcare professionals (e.g., initial diagnosis, radiation, chemotherapy treatments), cancer patients are expected to share personal/private health information. Primary support persons, such as a spouse, sibling, or adult child, often accompany patients to those appointments (Maly et al., 2006; Venetis et al., 2015). Little known research has explored the kinds of information gynecologic cancer patients share (and hold back from sharing) with their healthcare professionals when a support person is present, although a great deal of research establishes that patients withhold health related information from close others (Goldsmith et al., 2007; Venetis et al., 2015). To address this gap, we examined gynecologic cancer patients' and supporters' reports of sharing and holding back cancer-related information with healthcare professionals during oncology visits.

Method: Participants (N = 34, 18 patients and 16 supporters, 89% dyads) were recruited from a NCI cancer center of excellence in a semi-urban area of the northeastern United States. Inclusion criteria were: age 18 or older, English speaking, and consent to participate. Additional patient criteria included: in treatment for first appearance of ovarian, uterine, or endometrial cancers, between treatment cycles 2 and 5, and reported a spouse/partner/support person who attended appointments regularly. Supporter criteria included: support for the patient meeting above criteria and attending some or most cancer-related appointments with the patient. Participants completed audio-recorded telephone interviews. Average interview length for patients was 40.15 minutes (SD = 13.17) and for supporters was 41.61 minutes (SD = 14.59). The patients were all female. Supporters included seven (43.75%) women and nine (56.25%) men who described themselves as spouse/partner (n = 7), adult child (n = 4), sister (n = 2) parent (n = 1), nephew (n = 1), and friend (n = 1). Patients' average age was 61.33 years (SD = 10.75) and supporters' age was 57.50 years (SD = 12.76). Patients (n = 11) and Supporters (n = 11) were predominantly Caucasian. Average time since diagnosis was 4.22 years (SD = 3.37). Patients diagnosed with stage I to stage IV cancers. Participants responded to questions about sharing and holding back information during oncology visits.

Results: Data were coded using thematic analysis (Braun & Clark, 2006). Two themes emerged. The first theme, "Everything" is easy to share addresses quality of patient-supporter relationships, as well as their relationships with the oncology team. Participants discuss supportive relationships with dyadic partners and medical team that facilitate ease of sharing information. Patients and supporters elaborate certain topics are easier to share with the medical team, including positive reactions to treatment. The second theme, "Nothing" is held back addresses how participants initially report that "nothing" is held back despite later describing the types of information they do not discuss in front of, or with, medical providers such as "embarrassing" information (e.g., constipation), prognosis/future (e.g., chances of survival), and private fears/concerns (e.g., suspicion about validity of the cancer diagnosis).

How does Environmental-Media Exposure Influence Air-Pollution Knowledge and Risk Perception?

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In recent years, severe smog has become a major threat to public health in many large cities in China (e.g., Beijing). Among possible psychological constructs motivating people to take actions to reduce the threat of a hazard, risk perception of that hazard has been found as a positive predictor of protective behavioral outcomes. One possible way to increase individuals' risk perception is through delivering environmental news or campaigns to the public. Among all environmental campaigns, Under the Dome (UTD) stands out as the most influential documentary in China about smog and environmental protection.

In the Social Cognitive Theory (SCT) model, personal factors (e.g., cognition), environmental factors, and behavior are constantly influencing each other bi-directionally. SCT has been recommended as a framework for studying the effects of mass media. We identify media exposure as an environmental factor and knowledge and risk perception as cognitive factors. To date, no study has empirically examined the potential impacts of environmental-news exposure, as well as UTD exposure, on Chinese people's air-pollution knowledge and risk perception of smog. To examine Beijing residents' risk perception of contracting smog-related diseases, we relied upon SCT and proposed a model in which air-pollution knowledge serves as a theoretical mechanism accounting for the influence on risk perception of environmental-news exposure and UTD exposure.

Method: Data (N = 523) were collected from Beijing residents from February to March in 2017 through an online survey. Individual characteristics (e.g., gender, age, education, health status) were measured and treated as control variables.

Environmental-news exposure was measured by an item "In the past 6 months, how often have you watched environmental news on smog in the following media?" followed by four items (e.g., social media). UTD Exposure was measured by one item: "Have you ever watched UTD by Chai Jing?" Air pollution knowledge was measured by five items (e.g., I know the meaning of PM2.5). Risk perception is consisted of two dimensions: Perceived susceptibility was measured by three items (e.g., I am at risk of contracting smog-related diseases). Perceived severity was measured by an item "If I caught smog-related diseases, for me this would be a..." followed by three items (e.g., scary thing). A new variable was calculated by multiplying perceived susceptibility and perceived severity; then a square root transformation was performed.

Results: Environmental-news exposure is positively associated with both air-pollution knowledge and risk perception. Environmental-news exposure has an indirect effect on risk perception through air-pollution knowledge. UTD exposure is positively related to risk perception, but is not related to air-pollution knowledge.

Discussion: We argue that media exposure may function on risk perception through a mediating mechanism of knowledge, in addition to a main-effect model, thus answering a question that has not been addressed by SCT. This mechanism also suggests that rational assessment of hazard probability and severity is an important component of risk perception. UTD is a successful risk-communication model that can be imitated by other risk-communication practitioners. UTD has significant values to contemporary China in terms of enhancing public perceptions of risks related to smog.

Understanding public perception about HPV-associated oropharyngeal cancer (OPC) through Twitter

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Background: Human papillomavirus (HPV) has recently emerged as the leading cause of oropharyngeal cancer (OPC), surpassing tobacco and alcohol. We now have more cases of HPV-caused oral cancer compared to HPV-caused cervical cancer.

Objectives: Our understanding of what the public knows about HPV-associated OPC is minimal. What does the public know about it? What does the public discuss about it on social media? There is a strong need to understand communication gaps between the public and healthcare professionals regarding HPV-associated OPC. The goal of this paper is to bridge such gaps by demonstrating the public knowledge of HPV-associated OPC through social data mining, identifying the overarching themes of Tweets about HPV-associated OPC, and understanding public perception and attitudes regarding HPV-associated OPC. In doing so, we also paid a special attention to gender and racial/ethnic disparities and the discourse on the role of dental care and dentists in the prevention of HPV-associated OPC.

Methods: Tweets were collected using realtime streaming API over 41 weeks from October 2017 to July 2018. In order to retrieve tweets that are relevant to HPV-associated OPC, we used the combination of the following key terms for search: (HPV or Papilloma) and (mouth or oral or throat or pharyngeal or oropharyngeal or oropharyngeal or pharynx or neck or tonsil). The 41 weeks' retrieval resulted in 3229 unique tweets. All tweets were entered into nVivo 12.0 to conduct computer-assisted quantitative content analysis. The appearance and use of certain keywords, terms, or phrases was explored as indicators of themes in an inductive process.

Results: a) Analysis showed that the majority of discourse in over 3000 tweets focused on risk factors and prevention. Little information was available about how to detect and diagnose HPV-associated OPC, what treatment options are available, and how the cancer prognoses. b) Many hashtags and tweets promoted the HPV vaccination among boys and emphasized the risk of HPV-associated OPC among males. Given the low rates of HPV vaccination among boys, Twitter appears to alleviate gender disparities in HPV discourse. c) The role of dentists in the prevention and detection of OPC minimally appeared: Dentists were mentioned only 85 times out of over 3000 tweets. d) The public described OPC as oral cancer, head and neck cancer or throat cancer, instead of oropharyngeal cancer. e) The five most mentioned twitter users were located outside of the United States: New Zealand, Australia, and the United Kingdom.

Implications: The analysis on public discourse on Twitter indicates that a) the public can benefit from more information regarding detection, treatment, and prognosis; b) more educational campaigns are needed that teach the public about the roles of dentists and the importance of dental care for the prevention of OPC; c) campaigners and healthcare professionals need to use layperson terms such as oral, throat, or head and neck cancer to describe OPC; d) the US residents, who are the major users of Twitter, can benefit from more active involvement of US-based organizations as some currently available information is geographically irrelevant to them.

Computer-Mediated Support and Parkinson's Disease Patients: The Role of Disease Severity and Participation on Emotional Well-Being

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Parkinson's disease (PD) is a progressive disorder of the nervous system (Mayo Clinic, 2016) that is estimated to affect 7 to 10 million individuals worldwide (Parkinson's Disease Foundation, 2016). The major symptoms of PD, including tremors, limb stiffness, and difficulties with gait, tend to worsen at an increasingly fast rate over time (Duvoisin & Sage, 1996). These difficulties in mobility may interfere with daily life and can result in individuals with PD becoming socially isolated. This isolation can in turn result in psychological problems such as uncertainty, helplessness, and loneliness.

Computer-Mediated Support Groups (CMSGs) are a resource that can help PD patients cope with their psychological stress. When PD patients have difficulty moving and walking, CMSGs may allow patients to easily communicate with other individuals experiencing PD without geographic and temporal constraints (Wright & Bell, 2003). These characteristics provide PD patients opportunities to exchange various information supports (e.g., advice) and emotional supports (e.g., showing empathy, offering comfort) with other patients (Attard & Coulson, 2012; Wright, 2000). Through facilitating the exchange of supports, CMSGs may help PD patients reduce a sense of isolation, and as a result, relieve their negative emotions (Lawlor & Kirakowski, 2014).

Although much research has been done to identify the role of CMSGs in fostering emotional well-being in diverse health contexts (Rains & Young, 2009), there is little research of how CMSGs contribute to improving emotional well-being of PD patients. To fill this gap, this study investigates the effects of two types of perceived social support (i.e., information support, emotional support) on Parkinson's disease (PD) patients' emotional well-being (i.e., uncertainty, helplessness, and loneliness). Additionally, this study examines the moderating effects of disease severity and intensity of CMSGs participation between the two types of perceived social supports and emotional well-being.

For this study, we utilized an online survey of PD patients who used CMSGs. In particular, Korean PD patients were recruited from three of the four CMSGs that are officially approved by the Korean Parkinson's Diseases Association (KPKA, 2016). Participants voluntarily completed the survey and did not receive any compensation. A total of 174 patients participated in the survey. Among 174 responses, 51 respondents completed less than half of the survey questions and were dropped from analysis, resulting in a sample of 123. Survey data were collected from September 3 to October 18, 2015. To test the proposed hypotheses, this study employed the "PROCESS" macro (model 2: Hays 2013) with a bootstrap procedure.

Overall, this study found that when PD patients actively participated in CMSGs, perceived information support decreased their uncertainty, helplessness, and loneliness. Also, the study showed that when PD patients actively participated in CMSGs under a low disease severity condition, perceived information support decreased their uncertainty and loneliness. Finally, when PD patients actively participated in CMSGs, perceived emotional support decreased their loneliness. These findings offer practical insights for healthcare providers in a way that they should develop more tailored communication strategies by considering PD patients' disease severity and the level of participation in CMSGs.

Call the Police, It Won't Matter: The Need for Proactive TGNC Police Policies in the United States

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Christa Leigh Steele-Knudslie, Viccky Gutierrez, Celine Walker, Tonya Harvey, Zakaria Fry, Phylcia Mitchell, Amia Tyrae Berryman, Sasha Wall, Karla Patricia Flores-Pavón, and Nino Fortson are just a few of the names of the many transgender women and gender non-conforming (TGNC) people of color murdered in the United States in 2018. In 2018 alone there have been 22 TGNC people of color in the United States killed and numerous of their homicides have not been solved (Human Rights Campaign, 2018).

Nonetheless, not much research is being done to understand how police departments play into the violence against TGNC people of color. Leonore F. Carpenter and R. Barrett Marshall in their article, *Walking While Trans: Profiling of Transgender Women by Law Enforcement, and the Problem of Proof*, articulate, transgender women, especially women of color in particular, experience extraordinary vulnerability to violence by both private and state actors, in both public areas and controlled institutional spaces (Carpenter & Marshall, 2017). It is not uncommon for private actors to murder TGNC people of color namely those who are Black, there is every reason to believe that this trend is not new and that even with a more concerted effort to track murders of transgender women, we are not identifying every murder of this kind (Carpenter & Marshall, 2017).

Furthermore, State actors such as police departments have the ability to marginalize and hinder justice for TGNC people of color as well. Carpenter and Marshall iterate: Researchers have unearthed an alarming pattern in the behavior and responses of police officers to domestic violence calls in which the victim is trans-identified. Transgender victims of domestic violence report that calling the police frequently results in the transgender victim being arrested, violence from the police, or a total failure to respond to the situation. The ultimate effect is that transgender women frequently do not seek law enforcement assistance when they experience violence.

Hinging on Lizabeth Lipari's seminal work *Listening Otherwise: The Voice of Ethics*, where she explains, when receiving otherness, listening otherwise gives rise to ethics in a profoundly difficult way because it does so by disrupting ways of sameness and familiarity that already known and accepted. With there being a lack of TGNC seeking help from law enforcement around the United States; there has not been a strong concerted effort for police departments around the country to have ethical policies on how to communicate and interact with TGNC people. Not having TGNC police policies is a TGNC communal health crisis. This study posits police departments are not listening otherwise to ethically meet the needs of TGNC people specifically those of color in the United States. This paper focuses on whether current TGNC police policies are adequate or do they need to be enhanced. This paper does this by (1) discuss the current state of TGNC policing in the United States, (2) conduct a thematic analysis to examine existing police policies around the United States that deal with TGNC people, and (3) propose methods to enhance TGNC police policies.

African American Families living in United States with Autism

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This study addresses the significant disparities of African Americans that are affected with autism and the importance of religion, community and family involvement. By understanding the experience of African American parents living with autistic children, this provides insight to the health disparities. The problem brings into focus the religion, cultural, and social dynamics of how African Americans communicate or accept autism. An impactful intervention through local awareness in religious institutions and social organizations in African American community will provide a self-awareness of community involvement to minimize misrepresentation of autism. The issues at hand is that African Americans are misdiagnosed. The purpose of the problem explores the African American cultural and miscommunication of autism in African American community by lacking accurate resources and the challenges of a strong support system. The problem highlights the social dynamics regarding autism and the interactive interventions that African Americans have encountered. Investigating the role of health messages about autism and targeting African American families is a critical issue to identify the impact and influence in the health communication industry. This will develop awareness by bridging the gap and effectively communicating and developing skills in African American community to enhance a greater understanding of autism. "Understanding ethnic and cultural influences clinical interview can be a beneficial mediator when diagnosing and assessing patients from diverse groups." (Al-Issa, 1995; Lawson, Helper, Holladay, & Duffel, 1994; Neighbors et al., 1999) Lack of representation of culture and lived experiences from African American community learning about autism scaring factor. "Some families face healthcare issues and prohibitive costs of treatment, while some families just don't know the importance of diagnosis to move on to the treatment phase. The dialog between doctors and minority families during the diagnostic process is a critical movement." (Rentz, 2018) Healthcare plays a significant part in any community receiving accurate and timely treatment when facing autism. In 2011 review of autism in African American children published in Journal of Social Work and Journal of Public Health found that they have more disabilities due to lack of access to care. The research will focus on a qualitative method that will demonstrate the significance of the natural phenomenon, which includes the intricate fabric composed of minute threads, many colors, different textures, and various blends of materials (Crewell, 2012). The following research questions will guide the direction of the dissertation research proposal.

RQ1. What are parental experiences of coping with autistic children among African American community?

RQ2. How do the African American parents receiving clinical, social and emotional support in caring for their autistic children?

RQ3. What roles do African American churches play in providing support to families with autistic children?

In conclusion, the awareness of what is involved with Autism remains a crippled challenge in the African American community. This has hindered the lack of communication and misdiagnosis from the Healthcare industry to African Americans.

“And then they took me to the sick bush”: Using Framework analysis to explore family influence within health narratives in Liberia

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This qualitative study explores the role of familial influence on how individuals, in Flehla, Liberia, experience sickness. Flehla and neighboring villages are located approximately three hours outside the capital of Monrovia. This work is guided by literature addressing narrative theory, culture-centered approach, health narratives, and family narratives.

This analysis is part of a larger dataset 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 and 15 healthcare providers who live in and around the village of Flehla (Groleau, Young, Kirmayer, 2006). This project highlights the influences that impact the health experiences of individuals in rural Liberia. Using framework analysis, I have identified the following major themes: familial influence on how individuals know about sickness, familial influence on how individuals decide to treat sickness, and familial influence on how individuals cope with sickness. In addition to the primary themes, I identified the following minor themes: cultural practices and health literacy concerns.

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 how knowledge of sickness is passed from generation to generation in rural areas where the family structure is difficult to define. There is also a need to explore further how individuals make health decisions based on familial influence by exploring the role of cultural traditions and health literacy in decision-making. Finally, there is a need to understand better how to utilize familial support during health experiences; specifically, when the experience is compounded with socioeconomic and geographic barriers. Furthermore, this study adds to the existing literature in health communication by addressing the lack of familial health legacy research and health literacy in rural Liberia, which may be applicable to other similar settings.

“Spare the Rod, Spoil the Child”: The Influence of Incongruent News User Comments on Behavioral Intentions and Policy Support

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Recent work suggests news user incongruent comments containing firsthand experience and approval ratings on news sites can influence peer users' perceptions and behaviors. This source of peer influence may impact health campaigns, which use news stories to raise awareness about health risk behaviors and mobilize support for intervention policies. News stories about child corporal punishment often receive comments containing firsthand experience that is opposite to scientific reports and experts' advice. Child corporal punishment prevention campaigns have used news articles to change attitudes and behaviors. However, little health communication research has investigated the topic. This study addresses this gap, while also adding to scholars' continuing effort of expanding new media and health communication research to developing countries by focusing on Vietnam, a country that receives little attention from health communication scholars and has a high rate of child physical abuse. Based on the Integrative Model of Behavioral Prediction, this study conducted a 2 (comments: congruent vs. incongruent) x 2 (approval ratings: high vs. low) + control randomized between-subjects experimental design to examine the effect of comments on behavioral intentions and policy support toward child corporal punishment (N = 316). Findings indicate that incongruent comments are a background variable that provides resistance to an anti-corporal punishment news content. Specifically, the findings show that incongruent comments predict attitudes, descriptive norms, and injunctive norms that support corporal punishment. Moreover, mediation analyses indicate that incongruent comments directly influence intentions and policy support, as well as indirectly through attitudes. These findings have significant implications for research and health interventions using news media to convey anti-corporal punishment messages.

Enhancing the wellbeing senior citizens' through video games

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In the U.S., video games have been used for a variety of purposes for health-related purposes. Interestingly, while there has been some expressed concern that video games for children are “a costly habit” and that “the games may also take time away from more valuable activities” (Creasey et al., 1986, p. 252), it is generally believed that video games are beneficial for adults (Ijsselsteijn, 2007). Game-based interventions can provide senior citizens with cognitive, physical and social benefits. Video games specifically have been found to enhance the older adult’s motor skills and improve physical performance, among others (Messaris & Humphreys, 2004). Bleakley et al. (2015) found that interactive computer games (ICGs) are able to increase physical activity through immersing participants in stimulating environments. As per the latest statistics, the aging population is growing in the U.S. and other countries, and by 2025 over 1.2 billion people globally will be 60+ years old (Wiederhold, Riva, & Graffigna, 2013). In line with the World Health Organization (WHO; 2013), the number of people between 60 to 65 years old is going to increase in developing countries as well as European countries by 2030. Given that senior citizens are a vital part of the global population, innovative approaches such as gamification present novel opportunities. Specifically, games applied in health care settings allow individuals with limited physical ability to keep up with healthy behaviors. According to Bleakley et. al. (2015), physical activity decline is a normative part of aging for most although individual reasons why people became less active and dependent in life may vary (i.e., illness-specific). However, across studies independently of the reasons for inactivity, games have consistent evidenced efficacy (Gerling et al., 2011). The primary purpose of this study is exploring the additive benefits senior citizens gain by participating in games-based health interventions. As such, this study examines the following research questions from a qualitative perspective, utilizing a grounded theory approach: (1) What are the benefits of using health games (e.g., video games) for promoting health among senior citizens? (2) What are some examples of effective game-based health interventions targeting senior citizens? And (3) What factors should be considered in designing effective game-based health interventions for senior citizens.

A Family Affair: Tailoring Breast Cancer Environmental Risk Information to Promote Mother-Daughter Interaction & Lifestyle Change

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Background: Women are concerned about reducing their breast cancer risk, particularly if they have daughters. Although women seek information online they may not be obtaining scientifically based information. Moreover, they may not be aware that environmental exposures impact risk. Social media, like blogs, offer a way to disseminate health information and promote lifestyle changes. Blogs written by mothers are increasingly recognized as a channel that women utilize to make health-related decisions. Government initiatives have called for scientists and the community to partner and disseminate scientifically informed environmental risk information.

Objectives: Our study included two phases. For Phase 1, we developed a social media intervention teaming with “mommy bloggers” to disseminate an evidence-based infographic tailored to mothers and daughters within a blog post they constructed. We hypothesized the intervention would encourage interaction about among mothers and their social network, particularly with daughters. For Phase 2, we asked women to review materials hosted within a mother-daughter toolkit in the NIEHS Breast Cancer and Environment Research Program (BCERP) to identify strategies to better promote mother-daughter interaction about risk and lifestyle changes.

Methods: For Phase 1, we used a quasi-experimental design recruiting 75 mommy bloggers to disseminate the risk/prevention message in their blog and examined the impact of the intervention on encouraging interaction within social networks on 1) readers exposed to the intervention (n = 445) and 2) readers not exposed (n = 353). For Phase 2 we interviewed 51 mommy bloggers/readers. Women were ethnically diverse: 39% White; 30% Black; 22% Hispanic; and 3% Asian. A thematic analysis using the constant comparative method was used to analyze the transcripts.

Results: For Phase 1 a chi-square test revealed that women who recalled seeing the intervention messages were significantly more likely to share the breast cancer risk/prevention information they read with their daughters than those individuals who did not recall seeing them, $\chi^2(1) = 8.071, p < .01$. A follow-up correlation analysis revealed that the number of daughters participants had was significantly correlated with the likelihood of sharing the information gained from the mommy blog with others in the future, $r = .34, p < .001$. All other chi-square tests between recalling the intervention messages and sharing breast cancer risk/prevention information with other social network members were nonsignificant. For Phase 2, women suggested tailoring the materials with the following strategies to better promote mother-daughter interaction about risk: 1) include action-oriented tasks (e.g., scavenger hunt for products to identify/learn risk ingredients; 2) use a multi-phase dissemination approach (e.g., have a daily reminder like a magnet and monthly action plan); 3) provide scripts with age-appropriate language (e.g., use terms like germs instead of cancer); 4) align lifestyle habits with daughter’s age (e.g., adolescents are into nail polish, make-up; young adults concerned with fertility/pregnancy).

Conclusions: Mommy bloggers may be important opinion leaders for some women and key to disseminating environmental breast cancer risk/prevention information to mothers and daughters. Future studies could test the strategies to determine which are most efficacious in promoting mother-daughter interaction and behavior change.

Cross-national Newspaper Coverage of HPV Vaccination: Testing Community Structure Theory

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A community structure analysis (Pollock, 2007, 2013, 2015) compared national characteristics and newspaper coverage of HPV vaccination in a cross-section of nationally prominent or database-available newspapers from 16 different countries, examining all relevant articles of 250+ words from 07/13/06 to 11/02/18. The resulting 200 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 HPV Vaccination, then combined into composite “Media Vector” scores for each newspaper, from +0.7586 to +0.1426, total range 0.616. All 16 newspapers emphasized government responsibility for increasing HPV Vaccination.

Results strongly connect indicators of "privilege" with less media emphasis on government responsibility for HPV vaccinations, suggesting a "violated buffer pattern": linking levels of privilege in a country with less favorable coverage of biological threats or threats to a cherished way of life (Pollock, 2007, p. 101). In this case, a "cherished way of life" may include a zone of personal or family privacy surrounding sexual issues. Three indicators of privilege were significant or directionally consistent: broadband subscriptions per 100,000 ($r = -.526$, $p = .036$); male life expectancy ($r = -.438$, $p = .090$); and percent GDP Per Capita ($r = -.433$, $p = 0.094$). All national characteristics were connected to media emphasis on “less” government responsibility to increase HPV vaccination. Consistently, previous community structure research confirms similar connections between national measures of privilege, in particular media access and penetration (e.g., broadband subscriptions) and media emphasis on “less” government responsibility for water contamination (Wissel, et. al., 2014, 2015) and child labor (Kohn & Pollock, 2014, 2015). Perhaps privilege is associated with reluctance to interfere in historically or culturally-rooted family and sexual values, in particular regarding the roles of girls and women in society. Previous cross-national research on water contamination involves women as traditional water-carriers, and most child laborers are girls. HPV vaccination overwhelmingly affects girls and women, and its coverage manifests a reluctance to involve government in historically “private” issues. A regression analysis revealed that broadband subscriptions per 100,000 accounted for 27.7% of the variance, male life expectancy 36.1%, totaling 63.8% of the variance, both associated with coverage emphasizing less government responsibility for HPV vaccination. Country-level indicators of privilege were drivers of coverage emphasizing less government responsibility for increased HPV vaccination.

Empirically, this study confirmed privilege as linked to coverage emphasizing less government responsibility to increase HPV vaccination, confirming a “violated buffer” pattern. Methodologically, combining measures of “prominence” and “direction” generated highly sensitive “Media Vector” scores illuminating the capacity of media to reflect country level measures of privilege. From a theoretical perspective, as Funk and McCombs suggest (2017), agenda setting “top-down” perspectives are powerfully complemented by the “bottom-up” viewpoint of “community structure” theory’s indicators of community-level (in this case, national-level) demographics.

Rural Parent Perceptions of Telemental Health Services: Examining Message Design Techniques to Enhance Adolescent Service Use

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Adolescents living in rural areas experience greater rates of debilitating mental health disorders and an increased risk for death by suicide, compared to their non-rural counterparts. A root cause of this disparity is limited treatment access. Telemental health programs (i.e., online, telepsychiatry or other psychological services) are relatively cost-effective, and can reach at-risk youth across rural-urban contexts. Engaging rural parents of adolescents (ages 10-17) is particularly important to mental health service utilization, and therefore is critical for telemental health service uptake. Parents communicate with children about mental health (illness types, expectations for caregiving), and serve as crucial agents in adolescent's ability to access to mental health treatment. For this reason, there is a critical need to understand rural parents' attitudes and perceptions of telemental health services, as well as their intentions to encourage their adolescents to use these services. Targeted (audience personalized) messages that adhere to basic requirements (i.e., relevance, credibility, clarity, high-quality, informative) are the cornerstone for reaching and encouraging proactive health behaviors (e.g., health service uptake) among populations affected by multiple health disparities. This study aimed to develop a personalized telemental health service material based on these evidence-based requirements and assess rural parents' perceptions of the material and their likelihood of telemental health service uptake for their adolescent.

During the fall of 2018, 179 rural Floridian parents/guardians (68.2% mothers; $M = 41.10$, $SD = 6.45$ years old) to at least one adolescent between the ages of 10-17 ($n = 93$, 52% female; $n = 84$, 46.9% male; $M = 13.56$, $SD = 2.09$ years), completed an online survey. Rural parents reviewed a personalized telemental health service informational material, then reported their perceptions of the information (relevance, credibility, clarity, quality, informativeness), beliefs about telemental health (risk beliefs), eHealth literacy (eHL), and likelihood of adopting services.

A series of statistically significant ($p < .05$) general linear models were conducted to determine if perceptions of telemental health service messages differed based on rural parent/guardian characteristics, eHL, and risk beliefs. Perceived relevance of telemental health services information was influenced by rural parent race (non-white parents found the information more relevant), education, income, and risks beliefs. Perceived credibility was influenced by adolescent age and parent risk beliefs. Perceived clarity was influenced by rural parent eHL. Perceived informativeness was influenced by adolescent age, rural parent income, and risk beliefs. Information quality was influenced by rural parent risk beliefs. Across all models, perceptions of information relevance, credibility, clarity, quality, and informativeness were positively and significantly associated with parent's likelihood of adopting telemental health services for their adolescent. Results have positive implications for designing tailored telemental health interventions for rural parents and adolescents. Rural parents had more positive perceptions and likelihood of telemental health service uptake if the content was relevant, high-quality, clear, and informative. Given the perception of these critical message elements varied by rural parent race and socioeconomic status, as well as parent eHL, and risk beliefs, results indicate the need to tailor messages about telemental health services to these communicative and social factors.

Motivational interviewing and the integrated model of advice-giving: An experimental analysis of advice sequences in primary care

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Introduction: With preventable and modifiable illnesses on the rise in the United States (1), healthcare systems are experimenting with a range of strategies to improve the ways they respond to, engage with, and support patients (2). Lifestyle choices, such as the overuse of alcohol, lack of exercise, and stress are key contributors in the development and progression of preventable chronic illness (3). Primary care provides an avenue for preventative counseling and intervention, but advising patients on making behavior change within a brief medical visit can be challenging without provoking negative responses. Motivational Interviewing (MI) is a counseling technique that has been noted as effective in improving patient compliance with health advice through the elicitation of emotions and problem narratives (MI;4-8). The Integrated Model of Advice-Giving (IMA;9) has given direct attention to the impact of sequence in advising interactions, offering that advice is best given following an emotional support message and discussion about the problem. Combined with the conversational strategies identified in MI, IMA suggests that providers' lifestyle advice will be evaluated most positively when advice is preceded by a sequence of emotional reflection, open question, and summary. This study draws from both frameworks to examine approaches to providing effective counseling in the primary care setting. Specifically, we hypothesized that advice scenarios involving more MI techniques would yield more positive advice outcomes, and that a sequence derived from IMA would yield the most positive advice outcomes.

Method: Emerging adults ($n=642$) read and responded to hypothetical provider-patient advice scenarios spanning three topics—weight management, stress management, and approaches to alcohol. To enhance the ecological validity of these conversations, scenario dialogue was modeled on actual provider-patient interactions transcribed in a previous observational study (10). Transcripts included MI-compliant counseling techniques—emotional reflections, open questions, and summaries—and varied by the presence and order of these techniques. To align with the sequence provided by IMA, (a) emotional support was operationalized through emotional reflections, (b) problem talk and analysis was operationalized through open questions and summaries, and (c) advice was operationalized through statements that embody “good” advice in accordance with the advice literature (i.e., advice employing facework and articulating the response efficacy, feasibility, and absence of limitations; 11-12) Both hypotheses were assessed through analyses of covariance (ANCOVA) with scenario realism as a covariate.

Results: Results suggest that in comparison to advice following one technique, $F(2,635)=1.372, p=0.399$, advice offered following two or more MI techniques was not evaluated as higher in quality, $F(2,635)=0.129, p=0.879$, better in facilitating coping, $F(2,635)=0.920, p=0.399$, and was not associated with greater intention to implement advice. Results also suggest that advice offered following the moves of emotional support and problem inquiry and analysis were not judged to be higher in quality, $F(3,589)=0.863, p=0.461$, to facilitate coping $F(3,589)=0.606, p=0.611$, or to increase implementation intent, $F(3,589)=1.962, p=0.119$, than advice that did not follow this sequential pattern. ANCOVA results revealed no main effect for problem type, $F(2,631)=1.573, p=0.721$.

Conclusion: Results from this study have implications for our understanding of advice processes in primary care. Further work is needed to assess the sequencing of communication moves in primary care interactions.

The influence of symptom management advice on patient perceptions of non-antibiotic treatment for URI

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Antibiotic-resistant bacteria are a serious and increasing threat to public health, contributing to 23,000 deaths annually in the US(1). Unnecessary antibiotic prescribing is a major driver of antibiotic-resistant infections(1), and is especially high for upper respiratory tract infections (URIs; estimated at 50%; 2). Multiple factors contribute to unnecessary prescribing(3,4), including perceived patient expectation for antibiotics and related concern for patient satisfaction(5). Providers need effective communication strategies to support antibiotic stewardship while maintaining patient satisfaction and quality of care.

Providers can (and often do) advise URI patients on non-antibiotic treatments to manage discomfort during recovery, including over-the-counter medications and wellness behaviors (e.g., rest, fluids). In the absence of antibiotic prescribing, stewardship-relevant outcomes may be influenced by providers' communication of treatment advice, especially for those whose symptoms are more severe. We hypothesized:

H1: Quantity of symptom management advice will be positively associated with patient satisfaction, perceived availability of follow-up care, and capacity to monitor and manage symptoms.

H2: Associations will be stronger for those with more (vs. less) severe symptoms.

Method: This analysis examines data from a larger study at a northeastern university student health center. Medical visits (n=282) of patients presenting with upper respiratory symptoms and did not receive an antibiotic were included in this analysis. Visits were recorded, transcribed, and coded for quantity of symptom management advice. Coders achieved intercoder reliability for number of non-antibiotic treatment recommendations per visit ($\alpha=0.86$). Following each visit, patients completed a survey including measures of perceived severity of the illness (1-item), satisfaction with visit (2-item), symptom monitoring efficacy (3-item), and symptom management efficacy (3-item). Multivariate linear analyses were used to assess both hypotheses, and a median split was used to categorize patients into high and low illness severity.

Results: For patients who perceived their illness as more severe, quantity of symptom management advice significantly predicted evaluations of symptom monitoring efficacy ($R^2=.043$, $b=.016$, $t(335)=2.33$, $p<.05$), symptom management efficacy ($R^2=.021$, $b=.018$, $t(335)=2.12$, $p<.05$), and availability of follow-up care ($R^2=.039$, $b=.025$, $t(335)=2.86$, $p<.01$), but not patient satisfaction ($R^2=.039$, $b=.012$, $t(335)=0.29$, $p=0.78$). For patients who perceived their illness as less severe, quantity of advice did not predict any outcomes (all $p>.05$).

Discussion: Results indicate that providers giving more symptom management advice improves efficacy to monitor and manage symptoms and seek follow-up care among URI patients who were not prescribed antibiotics and who perceive their illness as more severe. This finding provides important guidance for providers, insofar as these patients may be more likely to seek unwarranted antibiotics for the current or future

illness than those with less severe illness. Surprisingly, patient satisfaction was not similarly affected, but this may reflect a ceiling effect (high mean and low standard deviation). Further analysis of this data will incorporate additional participants and examine the quality as well as quantity of providers' advice on multiple outcomes relevant to antibiotic stewardship.

The impact of medical scribes on provider experience in primary care pediatrics

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Introduction: Over the past two decades, the integration of electronic health records (EHR) have improved the delivery of healthcare in a myriad of ways, including strengthening continuity of care (1), offering patients greater access to their medical records(2), and improve the storage of personally identifiable health information by increasing cost effectiveness and security (3-7). Despite these improvements, EHRs have increased the time clinicians spend documenting visits, both during consultations and after clinic hours (8). Recent estimates suggest the average physician spends between 5-15 hours per week documenting (9), and as much as 50% of consultations can be consumed by typing. This overwhelming workload is a major cause of stress for clinicians, contributing to already high burnout, job dissatisfaction and attrition rates among healthcare clinicians (9-11). One promising solution is the utilization of medical scribing (12,13). A medical scribe specializes in charting physician-patient encounters in real time, such as during medical examinations--relieving clinicians of documenting responsibilities during both at work and at home. Research suggests that utilizing scribe support has the potential to reduce provider documenting workload by as much as 30% (14), as well as positively impact on clinician job satisfaction (15,16), and increase productivity during clinic hours (17,18). While there is a growing literature on the use of medical scribes there is a relative paucity of data on the use of medical scribes in primary care pediatrics. This is an important gap to fill, as over 41% of pediatricians reported having experienced burnout in a recent report (19), which also named charting as a leading contributor. The present study examines the implementation of a pilot scribe program in an academic outpatient primary care pediatric clinic and its effect on clinician stress and on clinician experience during care encounters.

Method: Data were collected on clinician-parent interactions from September 2017-June 2019, during which a pre-scribe, scribe, and scribe-withheld period were conducted. A professional scribe service was utilized. Clinician participants (n = 6) ranged in age (37-57 yrs.; M=45.5, SD=8.6) and years in practice (4-25; M=14, SD=8.85). Half of clinicians had some past experience with medical scribes. Survey data was collected from parents and clinicians after 726 patient encounters (107 pre-scribe, 516 with scribe, and 103 in the post-period but with scribes removed).

Results: Results from a Kruskal Wallis analysis of clinician surveys suggest a significant decrease in perceived distraction during visits ($p<.001$) and estimated time remaining to chart (min.; $p<.001$) Further, results suggest a significant increase in clinicians perception of their care quality ($p<.001$), ability to listen ($p<.001$), and estimated time remaining to chart (min.) following consultations ($p<0.001$). Scribe intervention did not significantly influence clinician perceptions of overall job satisfaction, job stress, or clinical atmosphere. The results from this study provide valuable insight into the efficacy of scribe use in the outpatient pediatric setting, particularly with regards to parent experience and clinician workload. Future studies should assess the efficacy of scribe interventions in larger, multi-clinic populations both in pediatrics and other medical settings.

A path model of psychosocial constructs predicting Zika vaccine uptake intent

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Objective: The recent Zika virus outbreak, while no longer an international public health emergency, is still a serious threat, particularly to pregnant women and babies born to pregnant women infected with the virus (World Health Organization, 2017). Currently, treatment for Zika is supportive only, and no vaccine is available to the public (Frieden, Schuchat, & Petersen, 2016); however, a National Institutes of Health (NIH)-developed vaccine entered Phase 2 clinical trial testing in March 2017 (NIH, 2017) and in August of 2018, vaccinations started in a human trial with 28 healthy, non-pregnant adults ages 18-50 (NIH, 2018). Once a Zika vaccine becomes available, it will be important to quickly promote vaccine uptake in women of reproductive age (Lipsitch & Cowling, 2016). This study examined the predictive effects of psychosocial constructs on self-reported intent to get a future Zika vaccine among women of reproductive age.

Methods: Data were collected using an online survey with a representative, nationwide sample of 339 women ages 18-49 from the continental United States. The survey addressed variables originating with the Extended Parallel Processing Model (EPPM) as related to future Zika vaccine uptake intent (Witte, 1992).

Results: Three-quarters of all respondents reported the intention to get a future Zika vaccine. Path modeling revealed a direct effect of perceived susceptibility, self-efficacy, and response efficacy on future Zika vaccine uptake intent, as well as an indirect effect of perceived susceptibility through both self-efficacy and response efficacy. In addition, the final model showed an indirect effect of perceived severity on Zika vaccine uptake intent through self-efficacy and response efficacy and accounted for 54.6% of the variance in vaccination intent.

Conclusions: These findings have implications for future Zika vaccine promotion campaigns. This study confirms the importance of the EPPM constructs of perceived susceptibility, self-efficacy, and response efficacy for use in Zika vaccine uptake campaigns; in addition, when using perceived severity, both self-efficacy and response efficacy should be considered in message design.

#HPVvaccine: Posts, Regrams, and Hashtags on Instagram

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Diseases caused by human papilloma viruses (HPVs) are among the most common sexually transmitted diseases. They are the primary cause of genital warts and cancers of the genital areas (Giuliano et al., 2015; Satterwhite et al., 2013). In the past 12 years, a vaccine against most of the HPV infections that can lead to cancer was introduced (Gallagher, LaMontagne, & Watson-Jones, 2018). Numerous studies have shown that the HPV vaccine is highly effective in preventing many HPV infections and cancers (Donken et al., 2018; Herweijer et al., 2016; Hariri et al., 2015). Despite the potential benefits of the vaccine, there are challenges limiting vaccine uptake (Gallagher et al., 2018). For example, many individuals are not aware the vaccine exists and/or do not perceive themselves at risk of HPV infections (Brewer & Fazekas, 2007). Furthermore, others have negative attitudes toward the HPV vaccine and towards vaccines in general (Holman, Bernard, Roland, Watson, Liddon, & Stokley, 2014), including some who are concerned about the safety of the HPV vaccine (O'Leary et al., 2018).

Past research analyzing social media content related to the HPV vaccine has utilized the Health Belief Model (HBM) (Rosenstock, 1974) as a guiding framework (e.g., Briones, Nan, Madden, & Waks, 2012; Madden, Nan, Briones, & Waks, 2012; Madden, Nan, & Briones, 2015). A main proposition of the HBM is that people's motivation for adopting healthy behaviors (such as HPV vaccine uptake) is determined by their perceptions of six factors: susceptibility, severity, benefits, barriers, self-efficacy, and cues to action. Utilizing the HBM in this study will aid the presence and understanding of these constructs on Instagram, and will inform future message design.

Visual social media platforms such as Instagram are increasingly used by the public seeking health information but remain understudied. To address this gap in the literature, the current study examined information about the HPV vaccine on Instagram. This platform, which launched to the public in 2010, had more than one billion users as of September 2018 (Instagram, 2018). The current study focused on a content analysis of 500 HPV vaccine-focused Instagram posts and analyzed the posts using the following research questions: RQ1: How is the HPV vaccine discussed on Instagram and how do users engage with these posts?

RQ2: Who posts about the HPV vaccine on Instagram?

RQ3: To what extent are Health Belief Model (HBM) constructs used in HPV vaccine-related posts on Instagram and how do users engage with these posts?

Early findings indicate that many posts reference skepticism of the HPV vaccine. In addition, few posts seem to be created by any type of public health or other health-related accounts on Instagram. The study is ongoing and will be completed by February 1, 2019. The final results will help health communication professionals understand current posting patterns related to the HPV vaccine on Instagram and provide formative research for future message design.

Ebola in the USA: Predicting Public Willingness to Support National Health Policies

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Ebola virus disease attracted extensive media attention in the USA during the 2014 outbreak in West Africa, which resulted in more than 11,000 deaths (WHO, 2016). During the course of this outbreak, eleven individuals were treated for Ebola in the United States, including two healthcare professionals who contracted the virus after treating a patient in Dallas, Texas (CDC, 2017). In August 2018, the Democratic Republic of the Congo announced what has since become the second largest and deadliest Ebola outbreak in history (WHO, 2018). These large outbreaks raise the possibility that the United States will need to enact policies related to Ebola virus disease in the future. This paper examines how messaging related to such policies should be structured by identifying the issues that would be most salient to audiences.

Undergraduate students ($n = 398$) were recruited from a large midwestern university during the height of the 2014-2016 outbreak. Participants were asked about their willingness to endorse different potential national policies consisting of isolationist air-traffic policies [group 1] (e.g., “Foreign passengers ... should be sent home”) and plans to help Americans and foreign nationals who have contracted Ebola [group 2] (e.g., “... bring foreign nationals back to the United States for treatment ...”).

Multiple regression was used to predict participants’ average support across each group of policies based on their perceptions of Ebola, treatment, and quarantines. For participants who were unwilling to allow individuals with Ebola to be treated in the United States at all, support for group 1 policies was predicted ($F(6, 106) = 4.897, p < 0.001, \text{adj. } R^2 = 0.173$) by perceived severity only. For participants willing to treat patients in the United States, but not in their own state, group 1 policy support was predicted ($F(6, 157) = 8.105, p < 0.001, \text{adj. } R^2 = 0.207$) by susceptibility only. Finally, for participants willing to have patients treated in their own state, support was also predicted ($F(6, 112) = 7.012, p < 0.001, \text{adj. } R^2 = 0.234$) by susceptibility only.

For group 2 policies, not-in-the-US participants’ support was predicted ($F(6, 106) = 9.390, p < 0.001, \text{adj. } R^2 = 0.347$) by treatment and quarantine self-efficacy, and by treatment response efficacy. US-only participants’ support was predicted ($F(6, 157) = 8.647, p < 0.001, \text{adj. } R^2 = 0.220$) by severity, treatment response efficacy, and quarantine self-efficacy. Finally, policy support among own-state participants was predicted ($F(6, 112) = 3.534, p = 0.003, \text{adj. } R^2 = 0.114$) by severity only. Implications for messaging design targeted based on audience’s proximity to potential outbreaks or patients will be discussed.

Understanding Young Adults' Knowledge of E-Cigarettes

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E-cigarettes are popular devices, particularly for young people. A recent study labeled these devices as the most popular tobacco product for teens, with 5.3% of middle schoolers using them and 16.0% of high schoolers using them (Kim et al., 2018). E-cigarettes are often marketed as healthy alternatives to cigarettes, but such marketing often makes scientifically unsupported claims. According to the CDC (2018), they are not an approved method for smoking cessation, as they have unknown long-term effects and contain harmful ingredients such as heavy metals. This is concerning for non-smokers because nicotine is an addictive chemical that impacts the brain's development, which continues until mid-20s (CDC, 2018). Considering that many young adults likely have some knowledge of e-cigarettes due to their growing popularity, we are interested in understanding what young adults actually know about e-cigarettes. Prior knowledge has been shown to affect message processing and behavioral intentions in various ways, with past studies indicating that objective (i.e., factual, accurate) knowledge and subjective knowledge have distinctive impacts.

To explore young adult's e-cigarette knowledge, we asked a sample from Amazon's MTurk platform to list up to five things they knew about e-cigarettes. First, a coding scheme was developed to assess the results. Four main categories were coded for: (1) factual knowledge, (2) valence of statement, (3) health claim, and (4) experience. Responses in the first text box contained 213 factual statements, accounting for 66.6% of the total responses. Forty responses (12.5%) were false, and all remaining statements were unrelated to factual knowledge (20.9%). Fifty-seven responses (17.8%) indicated a negative attitude toward e-cigarettes, whereas 101 (31.6%) indicated positive attitudes. Sixty responses (18.8%) indicated a perception that e-cigarettes were healthier than cigarettes and 46 responses indicated they were harmful (14.4%). Finally, just 78 out of the 320 statements (24.4%) indicated some experience with e-cigarettes. Importantly, participants who provided more accurate prior knowledge about e-cigarettes indicated more negative attitudes toward e-cigarettes.

Next, a thematic analysis was conducted to further illuminate the type of knowledge provided through the open-ended responses. Most responses fell into statements about the function of e-cigarettes, such as how the device works or how it delivers nicotine to the user (approximately 24% of the responses). Forty percent of responses commented on the health impact of e-cigarettes. Roughly 15% of the responses commented on the contents of the e-juice (i.e., comments on ingredients). Other categories included comments regarding flavor, brand, or costs of e-cigarettes.

Our results offer implications for research in curbing tobacco and vaping use in teens and young adults. We found that having accurate knowledge is important for desired attitudes toward these devices. We suggest that communication efforts specifically targeting young adults who use e-cigarettes should emphasize accurate information about the risks of e-cigarette use and nicotine, and must make it clear that social experiences with e-cigarettes do not equate actual knowledge about the risks associated with these devices.

Information Seeking and Sensemaking Among Parents of Children with Disabilities

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Parents of children with disabilities are continually receiving and seeking out complex information to help them care for and raise their child (Samios, Pakenham, & Sofronoff, 2012). Medical, educational and social information related to physical and intellectual disabilities can often be quite difficult to understand and process as well as emotionally overwhelming. The sensemaking process proposed by Weick, Sutcliffe and Obstfeld (1995) explains how individuals process, understand, cope with and take action on new information. Sensemaking research has typically focused on organizational or work settings, but has rarely investigated how the process works with parents of children with special needs (e.g., Maitlis, 2005). The limited amount of research done in this area has focused primarily on the coping aspects of sensemaking with little attention to message content, information processing and decision making (e.g., Samios, Pakenham, & Sofronoff, 2012). In addition and more narrowly, medical diagnosis communication research, which is piece of the sensemaking process, typically is conducted by medical scholars (e.g., Bartolo, 2002; McCabe, 2004). This research often lacks a reference to health communication theory and research. This proposed poster session will present the results from focus group interviews with parents of children with disabilities about their information seeking strategies and sensemaking processes. In particular, the role of emotion in giving information meaning was examined and how it influences decisions they must make as they address medical, educational and social concerns they have for their children. Twenty one parents will have participated in four focus group sessions that will be completed by January, 2019. The results of these sessions also will inform the development of a comprehensive survey instrument, which will be utilized in a second phase of this research project later in 2019.

College Students' Risk Perceptions of Climate Change Health Impacts

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Despite growing evidence demonstrating severity of climate change on human health, little action is taken by the public to mitigate these dangers, likely due to low risk perception and public knowledge. We used eye-tracking technology paired with survey data to measure how people view and respond to messages about climate change impact on health to understand how risk perceptions form. Studies on this topic have focused on the public's perception of climate change, attitudes, and concerns, with little regard in connection to individual health or community's health. Survey research has measured risk perception about climate change. Our study adds visual attention and information processing variables. It contributes to eye tracking methodology by reporting discrepancy between actual fixation duration and self-reported attention, advocating for the use and reliability of eye trackers in health communication research. Our study investigated how people perceive climate change-induced health impacts as threats to personal, community, and future generations' health. Participants (n=93) completed baseline surveys before coming to a biometrics lab to view randomly generated sequences of eight messages regarding health implications from air pollution, mental health, contaminated food, contaminated water, ticks, malnutrition, extreme weather, and extreme heat. Eye tracking was used to assess visual attention and information processing from viewing messages and included cognitive and emotional survey items. After message exposure, participants completed a post-survey. Preliminary results indicate 89.2% of college students in our sample are worried about climate change with positive correlation between worry about climate change and personal importance of climate change, $r=.527$, $p < .001$. Eighty-one percent of participants said climate change will harm future generations a great deal with only 19.4% indicating it will harm them personally. For perceived harm to the community within the next five years, participants most frequently ranked air quality (54.8%) in the top three out of the eight messages, followed by contaminated water (50.05%). Eye tracking data revealed that contaminated water had the longest fixation duration ($M=71.16$ seconds, $SD=30.55$), followed by air pollution ($M=66.95$, $SD=28.95$). Preliminary analyses only examined total time spent on the messages. Further data analysis will reveal which areas of interest within each message received highest fixation duration and count, which can reveal details about cognitive message processing and attention. Data will demonstrate whether the cognitive and emotional responses immediately following messages are stronger for individuals who consider climate change to have more of an impact to them personally versus the community. This has implications for whether raising awareness of health risks from environmental risks should target individual impact or community threat. Results indicate that messages should focus on how climate change is impacting college students directly and presently. The climate change and health issues that are most concerning to college students are issues that have received the most attention in the news or are the more obvious topics associated with change in climate. This points to the need to educate about other health impacts of climate change.

Attachment and Incarcerated Persons: an Examination of Prisoner Relationships Using Attachment Theory

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Conventional wisdom accepts that humans need other humans. Most of us have a need to communicate and associate with others. Relationships are integral components of the daily life of the typical human. The desire for human companionship does not cease once a person becomes incarcerated. With approximately one (1) in every 100 adult Americans incarcerated and more than 90% of those incarcerated having the potential for release back into society, it is important to explore prisoner relationships. If a prisoner does not have a secure relationship with someone while they are in prison, they are not likely to have a secure relationship when they are released.

A secure relationship should provide the prisoner with the support needed to function appropriately in society. If former prisoners do not have the kind of secure relationship that offers positive support upon release, they are more likely to return to the activities that effected their original incarceration increasing their likelihood for recidivism.

The purpose of this quantitative study was to explore the relationship dynamics of prisoners through the lens of Attachment Theory. Attachment Theory offers insight into whether the prisoners in the study were secure in their primary relationship. In this study, a primary relationship was defined as the person to whom the prisoner felt closest.

The results of this exploratory investigation showed that all but one of the prisoners indicated that their primary relationship was with someone outside of the prison. It also established that the surveyed prisoners do not associate with one particular attachment style. Prisoners, regardless of demographics, were affiliated with each dimension. These findings justify further research into prisoner relationships, which could lead to prison programming enhancements to reinforce these relationships. Programming that reflects the importance of prisoner relationships can lead to quality of life improvements for individuals while incarcerated in addition to quality of life improvements once they are released from prison.

Motivating Proper Disposal of Unused Prescription Opioids in Appalachia: A Community-Based Approach

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Nonmedical prescription drug use (NMPDU) is the second most common illicit drug use behavior in the U.S. (Center for Behavioral Health Statistics and Quality, 2015). Opioids make up the bulk of these misused medications (69.2%; CDC, 2018). This national crisis is multifaceted, and one promising avenue to reduce the supply of illicit opioids are the use of drug disposal dropboxes. Although these dropboxes are available as a secure means for disposal of opioids and other prescription medications, their uptake has been marginal. Recent studies show that only 0.3% of the estimated 70% of unused prescription medications are disposed of utilizing drop boxes and take-back events (Egan et al., 2016). We cannot hope to successfully encourage people to properly dispose of unused opioids without understanding how NMPDU impacts their community. This presentation reports the ongoing efforts of a funded study seeking to encourage proper opioid disposal. Using the Health Belief Model (Strecher & Rosenstock, 1997) we developed a focus group protocol examining how individuals in five Appalachian counties deeply impacted by the opioid crisis feel and think about opioid use and disposal, focusing on perceived susceptibility, seriousness, benefits, barriers, self-efficacy, and potential cues to action.

To date, the literature is deficient of qualitative approaches to determine the “why” of non-utilization of these disposal resources. Ninety-four individuals participated in 10 focus groups, with 2 groups held in each county. A qualitative thematic analysis was conducted that provides rich descriptions of community member attitudes. Data analysis process consisted of three primary stages: (1) two coders independently coded a subset focus groups using NVivo version 12, resolving any discrepancies through consensus; (2) a codebook was developed by reading over the coded transcripts again and refining categories; and (3) the remaining transcripts were coded independently, and analysis continued until we obtained theoretical saturation (Corbin & Strauss, 2015). Findings of this study reveal that participants: (a) feel at risk for theft or robbery by individuals seeking illicit opioids; (b) perceive the risks associated with the opioid epidemic to be quite serious, including concern for modeling drug use as a “family tradition”, health and legal consequences, and difficulty obtaining opioids for legitimate ailments; (c) perceived the benefits of disposal in protecting children and household members, avoiding robbery, and removing drugs that are expired; (d) perceive the barriers to disposal are fueled by keeping opioids “just in case” they are legitimately needed, particularly for those who can’t afford new prescriptions, selling on a secondary market for additional income, and the inconvenience of dropbox disposal or take-back event options; (e) described cues to action for potential message components - indicating the need to include risks associated with keeping prescription opioids, emphasizing protecting family and children, inherent mistrust of law enforcement; and (f) participants report a lack self-efficacy to properly dispose due to a general lack of awareness of dropboxes and their locations. The findings have implications for tailored message design in a forthcoming campaign which will be discussed.

Overestimating Preparation: An Examination of Perceived Disaster Susceptibility, Perceived Emergency Preparation, and Actual Preparedness Behaviors

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Since 1970 the number of natural disasters worldwide have quadrupled and are only expected to increase (United Nations, 2017). Despite the rising incidence of natural disasters, a recent study found that 48 percent of the U.S. population still feels that they are at a low level of risk for a disaster (FEMA, 2017). And while 68 percent of individuals believe preparing for a disaster will be helpful if an event were to occur, nearly two thirds of American households do not have an emergency plan (FEMA, 2017), and those who do overestimate their level of emergency preparation (Ablah, Konda, & Kelley, 2009). In addition, non-whites and women are among the most vulnerable to disasters, yet remain one of the least prepared population groups (Fothergill, Maestas & Darlington, 1999). Scholars have called for research to examine the gap between perceived emergency preparedness and actual preparedness behaviors (Basolo, Steinberg, Burby, Levine, Cruz, & Huang, 2009). This study answers that call by examining whether perceived susceptibility to natural and man-made disasters impacts perceived emergency preparedness and whether an individual has actually engaged in personal preparedness behaviors.

This study further examines the demographic differences in perceived disaster susceptibility, perceived preparedness, and actual preparedness behaviors to outline potential barriers to preparation and develop strategies for increasing emergency preparedness. Survey data used to assess community preparedness was obtained from the Department of Emergency Management in a midsize metropolitan city in the southeastern United States. Analysis revealed that participants reported greater perceived emergency preparedness than actual preparedness barriers, with males reporting greater perceived readiness than females. Those who reported the greatest perceived preparedness were likely to be older, non-white males who have been previously involved in past emergencies. However, white participants were more likely than non-whites to have actually completed prescribed preparedness behaviors. Findings also revealed that non-whites were more likely to believe that a terrorist attack or civil disturbance would occur within the area in the next two years. Race, age, sex, and previous experience in an emergency were found to have a significant effect on preparedness.

Research suggests that despite the recommendations for emergency management agencies to employ targeted and culturally relevant preparedness messages (Veil, Mitcham & Sellnow, 2012), the majority of risk communication messages are disseminated in an advanced level of English that appeal to a white English speaking audience (Eisenman, Glik, Gonzalez, Maranon, Zhou, Tseng & Asch, 2009). However, this study demonstrates that a 'one size fits all' communication approach is insufficient for vulnerable populations. When disaster strikes the fatal differences between perceived and actual preparedness will become a reality, disproportionately impacting non-whites. Given the government's role in disseminating disaster information, our findings offer support that the distrust of government agencies by non-whites may impact preparedness, perception, and acceptance of risk (Basolo et al., 2009). As the quantity and intensity of natural disasters continue to increase, and the United States is becoming increasingly diverse, communication strategies must be altered to consider the growing non-white and vulnerable audience.

Tweeting Genes: (Mis)Information and Social Network Communities Around Genetic Testing

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News and information on genetic testing, particularly expanded carrier screening (ECS), has risen sharply over the last several years. Studies have shown that news organizations and journalists have placed an emphasis on the novelty of such testing without offering contextualization of what exactly genetic testing is, its opportunities and challenges, and its cultural and ethical implications (Holton, Canary, & Wong, 2017; Canary, Clark, & Holton, 2018). Furthermore, these studies call into question the sources of information about genetic testing, noting a lack of genetic counselors and physicians within news coverage. Additional research has shown that sharing health information on social media in general is often done without including sources for the information or other forms of substantiation (Dunn, Surian, Leask, Dey, et al., 2017; Pershad, Hangge, Albadawi, & Oklu, 2018). As such, this study aims to not only uncover the conversation surrounding genetic testing and ECS on Twitter, but to also analyze who is participating in the conversation, if they are taking a position on genetic testing and ECS, and if they are supporting their claims and information and through what means.

According to the Pew Research Center approximately nine-in-ten adults get some form of news online (Pew, 2018). Prior research indicates that social media spaces such as Twitter offer robust environments for discourse about, and improved understanding of, health issues such as genetic testing (Canary et al., 2018). Therefore, to understand how the conversation surrounding genetic testing and ECS unfolds on Twitter, this study analyzes related tweets to pinpoint who is participating in the conversation, if they are supporting their claims and information, and through what means.

Tweets were collected for a 12-month period in 2017 with Crimson Hexagon using keyword and hashtags searches for genetic testing, expanded carrier screening, and ECS. From the resulting sample of more than 40,000 tweets, the top 60 most retweeted tweets for each month were culled. Key variables that were coded for in the sample are, the source or those participating in conversation, the tone and theme of individual tweets, if factual claims were made, and the type substantiation, if any, for the claim.

Preliminary results suggest that social media, Twitter in this case, may help amplify discourse around genetic testing. A wide variety of users, both individual and those representative of various organizations, appear to be leading the conversation, focusing less on the novelty of genetic testing and more on the ethical, societal, and health concerns of the testing. Additionally, when supporting claims surrounding ECS and genetic testing, the overwhelming majority of those tweeting linked back to news media websites. This may indicate that journalists and media organizations are simply promoting their own organizations' work. Furthermore, early results show a relationship between negative tones and themes of ethical and legal implications of ECS and genetic testing as well as a relationship between positive tones and the theme of breakthroughs and innovations. This may mean that competing conversations are occurring on social media surrounding the advancements in genetic testing and ECS.

The MyT1DHero Mobile App for Adolescents with Type 1 Diabetes and their Parents: A Pilot Study

**Bree Holtz , Michigan State University
Katharine Mitchell, Michigan State University**

Type 1 diabetes (T1D) impacts more than 165,000 individuals under the age of 20 in the United States. Management of T1D is complex and includes monitoring blood glucose levels and administering insulin several times throughout the day, regulating carbohydrate intake, making adjustments associated with the demands of physical activity. During adolescence, the child begins to take on responsibility for managing their diabetes. The transition period to self-management can be stressful for both the child and their parents, and can be associated with negative family communication and a deterioration in diabetes self-management behaviors, resulting in poorer glycemic control. Therefore, it is important to develop interventions to assist in the transition from parent to self-management by improving communication between the adolescent and parents and to improve health related outcomes for the adolescent. To accomplish this, a mobile app, MyT1DHero, was developed. Using social cognitive theory (SCT) as a guide, the purpose of the app was to help parents and adolescents negotiate these transitions through better communication. The objective of this study was to determine if MyT1DHero improved quality of life, self-efficacy, social support, adherence, conflict, and a diabetes outcome (i.e., glycosylated hemoglobin, HbA1c).

Families were recruited and screened from the local pediatric endocrinology clinic. Once eligibility was determined, enrollment and training sessions were held to consent the pairs, conduct pre-test surveys, and demonstrate the app. Adolescents were instructed to enter their blood glucose readings at least four times per day for three months. Immediately after the enrollment session, parents were asked to take their adolescent to the hospital laboratory for a HbA1c test. After each pair completed the three-month study, they completed the post-test survey and a second HbA1c test. Pre- and post-test surveys were conducted with adolescents and parents to measure quality of life, self-efficacy, social support, adherence and conflict. HbA1c was measured pre- and post-test for the adolescents only. All analyses were conducted in SPSS 24.0 statistical software. We conducted paired t-tests to measure the change in the means from pre- to post-test.

Twenty-six adolescent and parent pairs completed the study. The majority of parents was the adolescents' biological mother (85%) and identified as White (89%). Over half of the adolescents were between the ages of 11-13 years (62%). Half of the adolescents reported a diagnosis of less than five years. Results from our beta test indicate that there were positive trends in the adolescents' HbA1c (Pre M=8.69, SD=1.15; post M=8.68, SD=1.21) and a significant improvement in their perceptions of quality of life (pre M=22.57, SD=20.83; post M=16.14, SD=18.24, $t(20)=2.48$, $p=0.02$). This beta test was a three-month trial with no control group, and we were pleased to see positive movement in the study measures. This pilot study provides promising results for the potential of the mobile app, MyT1DHero to improve communication and related outcomes for adolescents and parents facing the transition to adolescent self-management.

Perceptions of the HPV Vaccine among College Males and Parents

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The human papilloma virus (HPV) is widespread among adults; the Centers for Disease Control and Prevention estimates that 80 million people in the United States have the virus and 14 million become infected annually. HPV causes cancer of the cervix, vagina, and vulva in women, penis in men, and anus and oropharynx (posterior tongue and tonsils) in men and women. Being vaccinated against HPV can reduce the incidence of these cancers. In 2017, 65.5% of teens had >1 dose of the HPV vaccine, and 48.6% had completed the recommended series of vaccine. It is increasingly being recommended for emerging adults who are entering a university setting, as this is when many individuals become sexually active. At a large Midwestern university, the overall self-reported HPV vaccination rate is approximately 58%; 64.4% females and 52.4% males. Additionally, due to the expense of the vaccine (\$300/injection) and aggressiveness of the schedule (3 injections, over 18 months), we believe parents also play an important role in this decision.

Before being able to increase vaccination rates among male college students, we need to understand the perceived barriers that prevent these students from getting vaccinated. The current research sought to investigate the rationale behind low vaccination rates among male college students, from both the student and the parent perspective.

To investigate this, the health belief model (HBM) and family communication pattern theory (FCPT) was employed to understand male college students' and their parents' perceptions and communication around the HPV vaccination. The HBM posits that an individual's likelihood to enact or partake in a specific health behavior is based upon various tenants including perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and one's self-efficacy. FCPT will guide our investigations of how different communication styles between parents and male college students influence students' intention to get vaccinated against HPV. Parental communication style characterized with high openness and frequent conversation is predicted to bring positive impact on the students' intention.

We are conducting focus groups and online surveys with undergraduate males and their parents to determine current knowledge, motivation, barriers, perceptions of the vaccine, susceptibility of these cancers, and parental communication style.

Using the HBM and FCPT, we will present research findings on male college students' and their parents' beliefs surrounding HPV vaccination. Key findings about what is preventing many male college students from getting vaccinated against HPV and how we can better tailor information to increase vaccination rates will be presented. Implications will be discussed as this serves as formative evaluation for a health campaign to increase HPV vaccination rates among college men.

Empowerment through the Instagram landscape: #t1dlooklikeme community

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Type 1 diabetes (T1D) is a chronic condition that is typically diagnosed in young people. It afflicts approximately 154,000 people under the age of 20, as well as parents and guardians who actively manage their child's condition. Like other chronic illnesses, one aspect of T1D self-management is through finding support of others going through the same condition.

Instagram is a very popular social media platform with younger audiences. With users utilizing this space for reasons of self-expression and shared experiences, this platform aids in community building. Being a part of a community can lead to reduced feelings of isolation. Many individuals, especially adolescents and teens, often feel like they are the only people with this disease. Furthermore, this sort of social community building and empowerment leads to social support within these communities. The presence and effects of social support from online health communities (OHCs) has been well documented. However, most discussions surrounding diabetes online have been explored in text platforms – and not ever steadily growing visual platforms like Instagram.

Therefore, this exploratory study employs a content analysis approach to investigate the representation of #t1dlooklikeme on Instagram in order to understand how individuals with T1D self-present, represent, and share their experiences.

Operationalizing 'community' through the number of hashtags, we predict the positive or negative nature of a posts (H1), attempt to determine if the positive/negative tone of the post predicts number of likes and comments (RQ1), and explore how community affiliation can predict the number of likes and comments (RQ2).

We randomly selected 500 Instagram posts that used the hashtag #t1dlooklikeme using Netlytic, a free online tool. This third-party data collection tool is able to gather publicly available data from Instagram. Because these data are publicly available, this project did not need IRB approval.

To conduct this content analysis, we developed a coding manual and then trained three coders. The coders were trained on how to define the overall sentiment of the posts, either positive, negative, or neutral. They determined this sentiment through examining the image and the caption. The number of likes, comments, and hashtags on each post were also be recorded. Once the coders were trained, we measured inter-coder reliability using Krippendorff's alpha, by having the coders independently code a small, random portion of the posts. Once reliability ($\alpha \geq .8$) was achieved, the sample was be randomly distributed among the coders.

Our findings provide insights into the landscape of how Instagram users with T1D use this platform for self-expression and find representation among others who are going through similar experiences as themselves. We observe the natural community building around this condition, that has in the past, been known to lead to social support – and social support is an important proponent of self-managing chronic conditions like T1D. Furthermore, images on Instagram may help us better understand healthy behaviors around these chronic health issues. This research can help health communication practitioners and researchers more effectively promote health campaigns to younger populations to improve health outcomes.

Understanding Challenges of Patient-Physician Communication and Needs for Patient-Centered Mobile Application among Vulnerable Families with Rare Diseases: A Qualitative Study in Taiwan

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Due to lack of information and understanding among patients with rare diseases and their families in Taiwan often feel helpless when they first receive the diagnosis (Fan, Hui-Yu, 2016). There is an uneven distribution of resources, slow flow of information, and relatively insufficient medical resources experienced by rare disease families in certain regions such as rural areas in Taiwan. Lack of rare disease knowledge among patients and their caregivers easily causes misunderstanding between physicians and patients' families and results in inappropriate caretaking method. Ineffective patient-physician communication affects quality of care. Health information can improve patients' health knowledge, reduce the cost of health decision-making, and retrieve the control of health and options (Marcus & Tuchfeld, 1993). A study shows that 88% of caregivers look up more health information than an average Internet user. Leonard (2004) believes that those parents of children with rare diseases share their experiences with others, and have higher needs for disease information. It is expected that more and more people will look up health information online, rather than using the traditional one-way route by asking health care professionals to gather related information (Fan, Hui-Yu, 2016).

This study aims to understand challenges of patient-physician communication experienced by rare disease families and their needs for a mobile application to facilitate their communication with professional providers.

Using a qualitative purposive sampling method this study collected data from 6 focus group discussions with a brief survey among rare disease patients, family caregivers, medical professionals, and community service providers. Grounded theory was used to analyze qualitative data obtained from 40 participants. Using NVivo to test inter-rater reliability three coders earned scores above 0.86 Cohen's kappa statistics, which indicates high reliability.

Emergent themes show that barriers to effective patient-physician communication and quality of care include high regard for authority, discrepancy between patients' self-learned knowledge and medical advice, patient families' low literacy about rare disease, lack of motivation, and being unable to seek for medical assistance timely. Survey results show that 50% patients and 85% of their caregivers use the app as medical appointment reminder. About 29% of family caregivers used Line to communicate with medical providers. Patient and caregiver participants expressed the needs for a mobile device with characteristics of self-care, social support and networking, and information updates and sharing. Qualitative findings suggest featured functions of a patient-centered mobile application including instant feedback from medical providers, reminders for medication and appointment, diet management, education of disease knowledge, connection with peer support groups, timely information of benefits, services, and social events.

Findings show that there is a trend of rare disease patients and their family caregivers using internet to seek for updated disease/treatment information and consult with medical providers; however, barriers to effective patient-physician communication might be improved by developing a mobile app to streamline

information provided from various institutions in public or private sector. Implications of this study suggest that a patient-centered mobile app tailored for rare disease families might improve communication among medical providers, social workers, and patients and quality of care.

A multilevel analysis of state tax on soda and percentages of obesity populations

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Nearly two of three adult Americans are either overweight or obese (Santos, Sniehotta, Marques, Carraça, & Teixeira, 2017). In addition to factors on sociological (e.g., ethnicity) and psychological levels (e.g., tax policy), economical factors are crucial in predicting obesity (Sutin et al., 2018). That is, taxes on specific merchandises (e.g., soda, fruit, vegetable) influence daily household expenditure in general. Less access to the grocery store could also be the cause of an unhealthy diet to obtain fresh food ingredient is difficult (Sutin et al., 2018). Being an ethnic minority may worsen this condition. Since the percentage of ethnic minority who lack access to the grocery differs by counties even within a state, the purpose of the present study is to examine how a state's taxes on soda/chip might interact with the percentage of the minority with low access to the grocery in influencing percentage of obesity in a county within this state.

The study used the United States Department of Agriculture database "Food Access Research Atlas". Multilevel modeling (Hierarchical Linear Model) was used to estimate if the county-level tax on soda/chip influenced people's purchase decision. In all 50 states and District of Columbia (level-2 unit), the average number of counties (level-1 unit, $n=3,145$) of each state was 61.63 (maximum=254 and minimum=1).

The between-state variance on the percentage of obesity explained 58% of the total variance. Meanwhile, the significant within-state variance (estimate=10.18, $p<.001$) also indicated the differences to be explained between counties. The results further demonstrated that, across the nation, the percentage of minority population who lack access to the grocery in a county was positively associated with the county's obesity rate (coefficient=.08, $p<.001$). This result indicated that the ethnic disparity along with rural-urban disparity in a state was associated with a higher obesity rates. However, from state-level, tax on soda alone did not increase each county's percentage of obesity ($p=0.41$). Alternatively, the interaction of state tax on soda and the percentage of the minority who have less access to grocery and supermarket (within 1 mile in urban area/within 10 miles in rural area) was found to decrease the percentage of obesity populations in the counties (coefficient=- 0.01, $p=0.01$).

Therefore, obesity is not only a public health issue but also a public policy one. To address growing concerns, such as differences in dietary patterns by social, demographic, and economical factors, but also influences food choice and diet quality from the economical channel. To decrease the percentage of obesity has always been a long-term goal for government and public health institutions. In order to deploy more effective interventions to solve this issue, the understanding of possible policy and social factors concerning obesity is indispensable.

How to tell a story: Health narrative constructs and entertainment industry guidance

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The power of entertainment content to influence health behavior has received increasing attention. Narrative and entertainment-education (EE) theories (e.g., Moyer-Gusé, 2008; Kreuter et al., 2007) have identified key attributes of narratives, including the ability to transport audiences and encourage identification with characters, that can lead to health-supporting outcomes like reducing counterarguing and changing perceptions of norms. Yet for health communicators seeking to utilize narrative power, missing from EE models is a guide for how to develop content with these attributes that will evoke the desired psychological states (e.g., Sood, Riley, & Alarcon, 2017; Igartua & Casanova, 2016).

To fill that gap this project turns to the entertainment industry, which is an untapped resource for story development expertise. Writers and producers can provide suggestions for how to create compelling and engaging narratives that integrate health messages and storylines. Although content creators are not likely to be familiar with EE models, their strategies may nevertheless align with elements of EE models. The goal of this project is to illuminate these practices and to show how they connect with theory-based models of entertainment effects. Thus, health communication practitioners and researchers working with narratives can have guidance that is informed by both theory and practice.

This is a work-in-progress that involves semi-structured interviews with 12-15 entertainment industry professionals who have worked on health-related content. Participants will be recruited through a snowball-sampling procedure, with key informants providing referrals to other potential participants. The interview protocol asks about how narratives are developed generally as well as specific strategies for achieving narrative attributes. The interview guide also includes questions about developing narratives pertaining to health categories such as prevention, detection, and treatment. Analysis of transcriptions will be guided by grounded theory (Glaser, 1998). A tangible outcome of this project will be a set of guidelines that connect theory-based constructs to industry practices and examples of successful executions. The guidelines should be helpful to health communication practitioners who are creating their own content or who are collaborating with creative content producers to promote health-behavior change.

Introducing interpersonal communication to CBPR practices

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Community-based participatory research (CBPR) is a research paradigm (Minkler & Wallerstein, 2003) that emphasizes equal partnership of the intervention design between academic researchers and community members (Abma et al., 2017; Brown & Stalker, 2018; McAllister, Green, Terry, Herman, & Mulvey, 2003). One of the most frequently cited justifications for the use of CBPR-based interventions is that when a community is engaged within the project, community buy-in and empowerment increases (Castro et al., 2004; McAllister et al., 2003). The popularity of CBPR has drastically increased in recent years (Brown & Stalker, 2018; Simonds, Wallerstein, Duran, & Villegas, 2013), and scholars seem captivated by the translational aspects of the approach. However, because CBPR lies across a continuum, there are few standards in the method and implementation process (Brown & Stalker, 2018). Specifically in marginalized populations and global perspectives on health interventions, many scholars have indicated a need for more analysis into the method of health communication (Rimal & Lapinski, 2009; Snyder, 2007).

Introducing interpersonal communication theories, such as uncertainty reduction theory, to the CBPR method could strengthen health communication methods while simultaneously measuring the impact the researcher has on the communities. Uncertainty reduction extends beyond simply reducing anxiety, and envelops analysis into managing relationships, clarifying roles within an organization, and negotiating unknowns of the project outcomes (Brashers, 2001). Interpersonal communication theory can help guide CBPR scholars towards building and maintaining strong relationships with community partners.

As researchers descend from the traditional ivory tower of academia and trod directly into communities around the globe, the effects of the researchers' presence and communication tactics of the researcher have to be analyzed. Incorporating interpersonal communication theory both into our methods and into our growing body of literature can aid CBPR scholars in reducing uncertainty for all members of the intervention organization.

Utilizing two CBPR-based fieldwork experiences as exemplars -- exploring protective health factors within Appalachians and working with police officers in Colombia to prevent the sexual exploitation of minors - this study examines the benefits of incorporating interpersonal communication frameworks in the communication and rapport building dynamics with community members. Additionally, these serve to justify why more research is needed pairing interpersonal communication to CBPR intervention designs.

Coping with outbreaks: Towards an infectious disease threat (IDT) appraisal model for risk communication

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Yan Jin, University of Georgia

Lucinda Austin, University of North Carolina, Chapel Hill

Brooke Liu, University of Maryland, College Park

Gregory Hancock, University of Maryland, College Park

In a world characterized by population growth and global mobility, infectious diseases (IDs) and their spread are a growing concern for both scientists and the lay public, necessitating effective public health strategies for monitoring and containment (Kott & Limaye, 2016). Although risk and health communication has been identified as a core component of such strategies, its integration in ID contexts is still developing, and the coping mechanism of nonaffected individuals in disease outbreaks remains an understudied area (Dickman et al., 2016; Guidry et al., 2017). Jin (2010) proposed connecting cognitive appraisals of crises and risks with emotional coping and identified three primary cognitive appraisal dimensions: predictability, controllability, and responsibility. Building onto and advancing this research, the present study proposes and tests a new infectious disease threat (IDT) appraisal model, focused on mapping individuals' coping strategy preferences according to their IDT assessment (i.e., perceived predictability and controllability of an IDT) and judgment of who/what is responsible for the IDT situation.

The study employed a within-subjects online experimental design, in which four IDT scenarios (sexually transmitted infection [STI]; waterborne ID; foodborne ID; vector-borne ID) were shown to participants in a counterbalanced fashion. Participants' IDT perceptions of responsibility, predictability, and controllability, and their emotional reactions, information seeking intentions, and intentions to take protective action were measured after exposure to each scenario. A nationally representative sample of 1032 individuals recruited by survey sampling firm Qualtrics participated in the study. The hypothesized model was tested through measured variable path analysis in MPlus Version 8.1, using maximum likelihood estimation. The fit of the model was good: CFI = .95, RMSEA = .056, SRMR = .09 (Hu & Bentler, 1999).

Within experimental conditions, results showed that higher perceived IDT responsibility increased positive emotions in all but the waterborne IDT condition and decreased negative emotions. Higher IDT predictability decreased positive emotions in the STI and foodborne IDT conditions, and higher IDT controllability increased negative emotions in the vector-borne IDT condition. Both positive and negative emotions, by and large, increased intentions to seek information using various channels. Overall, information seeking via search engines, using government and health organization's websites, and on government's social media accounts predicted intentions to actively engage in protective behaviors (e.g., follow official recommendations, get vaccinated if possible); whereas, seeking information via talking or texting/emailing with medical experts largely predicted intentions to engage in passive behaviors (e.g., waiting to see what friends/family are doing or reading posts and comments on social media before deciding how to respond). IDT appraisals also had indirect effects on behavioral intentions via emotions and information seeking. Differences in responses between the four experimental conditions also emerged.

Overall, results support the proposed IDT appraisal model, in which assessments of predictability, responsibility, and controllability of an IDT drive individuals' emotional, cognitive, and conative reactions. Findings provide insights into what information seeking strategies and IDT coping behaviors individuals prefer based on their differential IDT appraisals, thus suggesting how health organizations can communicatively intervene in IDT situations to maximize affected communities' adequate protective action taking.

The effect of potentially misleading cigarette ad tactics on U.S. young adults' perceptions of cigarettes and intentions to smoke

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Tobacco companies spend billions of dollars on marketing annually in an attempt to retain and attract consumers (Agaku et al., 2015; CDC, 2018). In 2016, the manufacturer of American Spirit (AS) cigarettes entered an agreement with the FDA to cease using the terms “natural” and “additive free” to describe its tobacco products (Neuhauser & Simoneau, 2017). The company, however, continues to use plant imagery and phrases such as “tobacco and water” and “eco-friendly”, which may mislead consumers. Our prior work has demonstrated that eco-friendly language and the “tobacco and water” claim convey inaccurate reduced relative product harm and addictiveness to consumers. We extend this work by examining the effect of these claims on a wider range of consumers' product perceptions and associations with use intentions.

In an online controlled experiment, 1,577 U.S. adults ages 18-24 were randomly assigned to view an AS cigarette package featuring one of five ad tactics: eco-friendly language; plant imagery; the phrase “tobacco and water”; all of these tactics; or none of these tactics. Participants reported their perceptions of AS cigarette healthfulness (e.g., healthy, natural, organic), potential to cause disease (e.g., deadly, causes cancer), attractiveness (e.g., fun, youthful, cool), wholesomeness (e.g., American, authentic, traditional), overall absolute harm, and intentions to smoke these cigarettes if offered by a friend. Analyses were conducted using SPSS Indirect Macro and demographics, smoking status, and familiarity with the brand were controlled for.

Results showed that the (separate) use of the phrase “eco-friendly” or plant imagery (versus control) reduced perceptions of healthfulness (beco = -0.71, 95% CI = [-1.14; -0.29]; bPI = -.84, 95% CI = [-1.24; -0.44]) and had an indirect negative effect on intention to smoke through perceptions of healthfulness and perceptions of absolute harm (beco->health->harm->intention = -0.011, 95% CI = [-0.02; -0.003]; bPI->health->harm->intention = -.02, 95% CI = [-0.04; -0.01]). However, the use of the phrase “tobacco and water” and the use of all three tactics together increased perceptions of healthfulness (btw = .43, 95% CI = [.01; .86]; ball = 1.66, 95% CI = [1.26; 2.06]) and had a positive indirect effect on intentions to smoke through perceptions of healthfulness and perceptions of harm (bTW->health->harm->intention = .01, 95% CI = [0.001; 0.05]); ball->health->harm->intention = .04, 95% CI = [0.02; 0.06]). Used separately, plant imagery, the phrase “eco-friendly”, and the phrase “tobacco and water” had no effect on AS cigarettes' perceived potential to cause disease. Yet, all of these ad tactics together significantly reduced perceived potential to cause disease (ball = -1.38, 95% CI = [-1.91; -0.85]) and had a positive indirect effect on intentions to smoke through perceived potential to cause disease and overall perceptions of harm (ball->disease->harm->intention = .03, 95% CI = [0.02; 0.06]). None of the ad tactics (versus control) had an effect on perceptions of cigarette attractiveness or wholesomeness.

These findings extend our prior work examining perceptions of relative harm, addictiveness and nicotine content by illuminating additional product and risk perceptions associated with use of AS cigarette ad tactics. We find that these perceptions are associated with increased intention to use the product, indicating that the ad tactics analyzed could contribute to smoking behavior. If further research supports these findings, it is worth considering regulatory action to restrict use of these tactics, as they may inaccurately convey reduced product.

Communicating about medical countermeasure drugs: Results from three experiments

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Over the past decades, the world has been threatened by a series of infectious disease outbreaks. Medical countermeasure (MCM) drugs can be life-saving for those affected by such diseases. The public has strongly negative feelings about MCMs and they are highly concerned about their use (Liu et al., 2017). Therefore, it is imperative that health officials communicate rapidly and effectively so MCM risks and benefits are understood. To do that, FDA developed and tested a series of MCM messages that it could use in the event of a public health emergency.

After obtaining feedback through a series of in-person focus groups, the messages were revised. We subsequently conducted three controlled experiments to investigate the public's emotional, cognitive, and behavioral responses to three MCM messages about an FDA-approved antibiotic MCM for anthrax, no MCM treatment for Marburg hemorrhagic fever, and a fictitious unapproved MCM described as being authorized for use to treat this Marburg outbreak under the Emergency Use Authorization (EUA) process. A total of 2,737 individuals were randomized to one of the three experiments, with half in each experiment assigned to either the control or experimental groups. All respondents heard an emergency announcement about the appropriate anthrax or Marburg scenario and answered a series of questions. Respondents in each of the experimental groups then read a detailed message about the relevant MCM, containing information about the MCM, including side effects; when treatment might be needed; symptoms of exposure to the threat, and where to find more information about the MCM and/or the threat; or no message (control). Analyses comparing post-exposure reactions between the experimental and control groups within each experiment are reported here. Demographic variables, self-reported health literacy and health status were controlled for in the analyses.

Overall the MCM messages (versus control) significantly reduced fear and anger, increased hope, crisis self-efficacy, overall trust in government, and perceived susceptibility and severity to anthrax or Marburg). The messages also increased perceptions of susceptibility and severity of side effects of the MCM treatment. In the MCM for Anthrax and no MCM for Marburg conditions, fear increased trust in government and risk perceptions. Hope, fear and anger all increased intentions to comply with instructions, including taking a recommended MCM. Across all three experiments, crisis efficacy and trust in government predicted increased intent to comply with instructions from government and people involved in responding to the public health emergency. Although the messages did not directly affect intention to comply with recommended behaviors, they had significant positive indirect effects on compliance through trust in government, crisis efficacy, and all risk perceptions. These findings show that messages providing detailed information about MCMs can successfully reduce negative emotional reactions and increase positive emotions, which lead to optimally increasing key behavioral predictors (crisis efficacy, risk perceptions, trust in government) and ultimately intentions to comply with government recommended actions, including taking a recommended MCM. These findings were consistent across threats and provide important insights into ways to develop and enhance MCM-related messages.

Family Influences on Chinese Young Adults' Smoking: Developing an Extended Model of the Theory of Planned Behavior

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Limited attention has been paid to the family influence on young adults' smoking. It is assumed that family will not impact people's health related attitudes and behaviors when they grow up. Nevertheless, such assumption needs to be examined. Considering the unique family-centered culture in China, the authors argue that family as a primary socializing environment, will continue shaping Chinese young adults' smoking. This study explored how family variables (parents' and siblings' communications about smoking, attitudes toward smoking, and smoking behavior) work as distal factors in the extended model of the theory of planned behavior (TPB), and in which way distal factors and proximal factors (attitudes toward smoking and self-efficacy) work together to predict the smoking behavior of Chinese young adults.

Overall 195 (ages 18 to 33, $M = 22.05$, 93% Han ethnicity, 56% males and 43% females) Chinese undergraduate and graduate students as well as recent graduates with B.A. and M.A. degrees completed online surveys. Parents' communication about smoking was measured with three items in a 5-point Likert scale (e.g. "My mother/father has told me that I should not smoke cigarettes because of the health risks involved"). Participants also reported their perceived impacts of the communication about smoking between their siblings and themselves (1 "very low impact" to 5 "very high impact."). Participants reported smoking behavior of themselves, their parents and siblings, as well as their perception of parents and siblings' attitudes toward smoking. Young adults' attitudes toward smoking were measured with three items in a seven-point-scale: "in your mind, smoking is: healthy [1]/ unhealthy [7], good [1]/ bad [7], exciting [1]/ boring [7]." Self-efficacy was measured with the following item: "in your mind, refusing a cigarette when one is offered by others is--." The options ranged from 1 "very difficult" to 5 "very easy."

Through developing a series of regression tests, this study evaluated the contribution of distal factors and proximal factors in predicting Chinese young adults' smoking behavior. The results suggest that mothers' attitudes regarding smoking ($\beta = .15$) and brothers' smoking behavior ($\beta = .22$) were significant distal predictors of Chinese young adults' smoking: $F(4,146) = 17.09$, $p < .01$. $R^2 = .32$. The most important proximal factor was the degree to which Chinese young adults viewed smoking as "exciting" ($\beta = .29$) followed by young adults' self-efficacy ($\beta = .26$). The findings indicate that anti-smoking campaigns in China should enlist the help of parents and siblings. More interestingly, brothers as the closest peers in Chinese young adults' lives, tend to be the role model of smoking. Such influence has been largely ignored by previous research. In addition, message design researchers and practitioners should devote their efforts to persuade smokers that smoking is not exciting. Furthermore, this study provides implications for extending the TPB model through examining family factors' contribution. It indicates that adding social context (e.g., family context) in the TPB model will help scholars predict individual's behavior.

Keywords: family influence, smoking, the theory of planned behavior.

The Presence of a Problem? Cultural Differences on Breastfeeding Challenges and Communication Across 3 Islands in Indonesia

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Breastfeeding is universally considered as the healthiest choice for infant feeding; thus nearly every public health agency worldwide continues work to increase breastfeeding rates. Indonesia uniquely frames breastfeeding as a public health priority as opposed to an individual lifestyle choice. Indonesia's disproportionately high prevalence of infant death from malnutrition and digestive illnesses related to lack of knowledge about sterilizing bottles and water for mixing formula, thus making it a prime context for exploring decision-making related to breastfeeding. Scholars have called for a close examination of health communication aspects of breastfeeding that addresses culturally-bound beliefs and attitudes. This project highlights the differences in communication about problems encountered while breastfeeding among mothers on Java, Bali and Flores Islands in Indonesia. 83 Indonesian mothers ≥ 18 years old, who had given birth since 2009, and breastfed their baby at least once participated in interviews and focus groups. Participants ranged from 20-45 years old and had 1-4 children. Two prominent themes emerged representing a dichotomy in orientation to the act of breastfeeding. These themes reflect whether a woman conceives of breastfeeding as a choice, which has implications on whether she perceives unpleasant breastfeeding experiences as problematic and decision-making about breastfeeding. Women from Java and Bali, representing a more educated, urban population, viewed breastfeeding as an optional part of motherhood, albeit an important and dutiful one. One woman on Java described challenges with pain while breastfeeding after developing inflammation of her breast tissue. "I wanted to give up," she shared despite her desire to breastfeed. She emphasized the importance of her husband's encouragement to continue with breastfeeding and her doctor's insight. She also expressed that she was "really glad" her husband "didn't let" her choose formula. Viewing breastfeeding as optional presents formula-feeding as a viable choice for these women.

Conversely, women on Flores, representing a more rural, less educated population, saw breastfeeding as a natural, inevitable part of motherhood. This view shapes women's orientations toward difficult experiences, accepting them as unavoidable. Nearly every woman on Flores denied consideration of formula and experiencing "challenges" while breastfeeding, but went on to discuss various experiences that were characterized as "challenges" by women from Java and Bali. This difference in orientation resulted in different behaviors. Instead of considering formula or struggling against unpleasant aspects of breastfeeding, mothers on Flores embraced all dimensions of their breastfeeding experiences. Findings have implications for understanding of the role of communication in decision-making about infant feeding for clinical and public health practitioners. This research highlights a dichotomy of conceptions of breastfeeding reflective of cultural values that may also reflect religious diversity across the islands and socioeconomic constraints among mothers who live in remote villages on Flores. Breastfeeding decisions are complex and interwoven with a woman's physical and mental health, support network, socioeconomic status, religious and social background, and her baby's health. By recognizing women's individual orientations toward breastfeeding and their perceived challenges and alternatives, healthcare workers may engage in more meaningful interactions that are supportive of mothers' intentions to breastfeeding and their infants' health outcomes.

The Use of Behavior Change Theories in Commercial Breast Cancer Mobile Phone Applications: A Systematic Analysis

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Introduction: Mobile phone applications (‘apps’) designed for the prevention and management of breast cancer and survivorship have the potential to extend current healthcare efforts and to reduce disparities in health outcomes. Theoretically-designed mHealth breast cancer interventions have shown success in achieving positive behavior changes. However, availability and quality of apps remains limited and little is known about the theoretical underpinnings of breast cancer apps available to the general public. Given that theories may strengthen mHealth interventions, the aim of this study was to assess the extent to which breast cancer apps available to users are based on behavior change theories.

Methods: Using a criteria-based screening process, we searched the two major app stores (Android and iOS) for breast cancer apps designed to promote behavior change. Apps were analyzed for behavior change theories following an established taxonomy of behavior change techniques. A correlation analysis was used to examine the relationship between apps’ user ratings and their use of behavior change theories.

Results: The search resulted in a total of 302 free apps, of which 108 were identified as including breast cancer content. Only 30 apps met inclusion criteria for supporting behavior change and were further analyzed. The majority of these apps customized content to users (63%), established a health-behavior link (70%), and provided instructions on how to change behavior (80%). Fifteen apps (50%) prompted intention formation, while less than half included goal setting (30%) and goal reviewing (23%). Most apps did not provide information on peer behavior (23%) or allowed for social comparison (20%), and none of the apps mobilized social norms (0%). Only half of all apps had user ratings, and the results of the Pearson r correlation suggested that there was a significant positive correlation between user ratings and apps’ use of theories at .422 ($p = .022$).

Conclusion: Our findings indicate that commercially-available breast cancer apps have not yet fully realized their potential to promote behavior change. While customization of content and inclusion of instructions are promising, the lack of interactive and user-centered features, such as goal setting and reviewing or content-sharing, are disappointing, particularly when considering their effectiveness in research-based studies. App developers should integrate behavior change theories into app design to increase their potential to promote healthy behaviors. This can also be supported by the significant correlation of user ratings and use of theories, suggesting that apps based on theories are rated more highly by users.

Pre-clinical medical students' group identification, feelings of impostor phenomenon, and links to feedback orientation

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During medical school, students develop their professional identity as a future physician.[1] However, this process may be complicated by the impostor phenomenon, or feelings of fear and self-doubt.[2] During their clinical rotations, students receive feedback from preceptors that can increase their self-efficacy as future physicians.[3] Though, the effectiveness of feedback depends on context-specific factors, including how it is received by the students.[4] Therefore, in the current study we ask: What are medical students' perceptions of their identity prior to beginning clinical rotations? How are their perceptions of identity linked to their feedback orientation?

We recruited 177 medical students (53.1% male; M age = 25.66 years) to complete a survey before third-year rotations. Students were mostly White/Caucasian (71.8%) and their intended specialties included internal medicine (19.6%), pediatrics (15.4%), emergency medicine (15.4%), family medicine (14.7%) surgery, (10.5%), obstetrics/gynecology (9.1%), and undecided (15.4%).

Our survey included the Group Identification Scale [4], adapted for medical students identification with the medical profession (M = 5.96, SD = .95, $\alpha = .91$), the Clance Impostor Phenomenon Scale [5] (M = 4.28, SD = 1.00, $\alpha = .92$) and the Instructional Feedback Orientation Scale [6], comprised of four dimensions of feedback: utility (M = 6.17, SD = .80, $\alpha = .95$) sensitivity (M = 3.60, SD = 1.18, $\alpha = .91$), confidentiality (M = 4.90, SD = 1.04, $\alpha = .80$), and retention (M = 2.75, SD = 1.16, $\alpha = .87$).

The results revealed that group identification is not related to impostor phenomenon ($r = -.05$, $p = .47$), but is positively related to feedback utility ($r = .51$, $p < .001$) and feedback retention ($r = .38$, $p < .001$). Impostor phenomenon is positively related to feedback sensitivity ($r = .52$, $p < .001$) and feedback confidentiality ($r = .17$, $p < .05$), and negatively related to feedback retention ($r = -.43$, $p < .001$). Impostor phenomenon significantly differs by specialty intention, $F(6, 136) = 2.34$, $p < .05$, as does feedback sensitivity, $F(6, 136) = 4.00$, $p < .01$, and feedback confidentiality, $F(6, 136) = 5.91$, $p < .001$. Post-hoc comparisons yield a distinct pattern in which students interested in surgery report the lowest levels of impostor phenomenon, feedback sensitivity, and feedback confidentiality, and students interested in OB/GYN reporting the highest levels of these variables.

Overall, pre-clinical medical students highly identify as a member of the medical profession, but they also experience moderately-high levels of impostor phenomenon. Though, increases in group identification do not necessarily lead to decreased impostor phenomenon and vice versa. Students with higher group identification perceive greater benefits of feedback from preceptors; whereas, those with higher impostor phenomenon may encounter challenges receiving and retaining feedback. Preceptor feedback is an essential element of learning during medical education, thus the practical implications of this study are that students would benefit from educators' attempts to increase their group identification and reduce impostor phenomenon. Moreover, these efforts should be tailored to specialties for which students report the greatest impostor phenomenon and challenges to feedback.

First-Year Pediatric Residents' Communication About Medical Uncertainty: A Multiple Goals Approach

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When communicating with parents, physicians manage several, often competing, goals. This notion is the basis of the multiple goals approach, which proposes that successful communication depends on a communicator's ability to address instrumental, relational, and identity goals simultaneously during interactions. Previous research suggests that residents experience anxiety when faced with medical uncertainty, yet little is known about their goals when communicating in situations of uncertainty. Therefore, the aim of the current study is to explore residents' goals when communicating with parents and attending physicians about their medical uncertainty. Understanding these goals can help communication scholars improve communication during a time of increased uncertainty and anxiety for parents and physicians.

We surveyed the incoming class of pediatric residents (N = 47) at a large Midwestern children's hospital. The survey included open-ended questions asking the residents to explain their goals when communicating with parents and attending physicians about medical uncertainty. We coded the open-ended responses for task, identity, and relational goals. The majority of the sample was female (70.2%) and White/Caucasian (63.8%), with an average age of 27.32 years.

When communicating with parents, residents focused primarily on task goals (57.4%; e.g., "To inform parents about their child's prognosis, status, and overall health."), followed by relational (48.9%; e.g., "Reassure but be honest in order to build trust & strong relationships."), and identity goals (44.7%; e.g., "To be honest about what I don't know in a way that still instills confidence/trust."). Of those who reported multiple goals (46.8%), they most commonly attended to task and relational goals (e.g., "To help parents know that they are fully informed and that the medical team is not withholding information; to establish meaningful rapport."). When communicating with attending physicians, residents overwhelmingly prioritized task goals (72.3%; e.g., "The goal is to learn from them."), followed by identity goals (38.3%; e.g., "Let them know that you are open to work on your flaws."), which were often situated within task goals (e.g., "My goal is to provide as much relevant information as possible and to be honest about what I know and what I don't know."). Relational goals (14.9%) were only mentioned in combination with task or identity goals, (e.g., "Address limitations & grow personally. May lead to more uncertainty & better relationship if attending can trust you to know what you don't know."). Overall, multiple goals were mentioned in 29.8% of cases. In conclusion, first-year pediatric residents' identify task, relational, and identity goals when communicating about medical uncertainty, but tend to prioritize task goals during conversations. Improving residents' ability to effectively manage relational and identity, in addition to task, goals may result in increases in shared decision making and trust. The results of our study suggest that residents should be made aware that these multiple communication goals in the medical encounter could present challenges (if they narrowly focus on task goals to the neglect of others), but addressing them could lead to better outcomes if managed skillfully.

Understanding pathways to protect ocean health: The mediating role of self-identity and empathy on behavioral intentions

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This study systematically examines psychological mediating mechanisms to promote global environmental health among the U.S. public. Ocean Acidification (OA) was chosen as a global environmental health issue for this investigation, as most experts consider it as important as climate change, but it is lesser known and understood among the public. Similar to climate change, OA is a problem resulting from humanity's excessive carbon dioxide (CO₂) emissions, as CO₂ dissolves into and acidifies ocean water. Oceans cover 70% of Earth's surface, but marine environmental issues such as OA are psychologically distant to many individuals and thus, less familiar to them compared to other environmental issues. Empathy is a multi-dimensional concept that includes both cognitive and emotional aspects of individuals. Previous literature argues that environmental identity and empathy can facilitate positive behavior change. For example, Walker and Chapman (2003) found that empathy significantly influenced pro-environmental intentions such as picking up other peoples' litter, paying higher fees to reduce poaching in public parks, and volunteering for public park-related projects. Similarly, Berenguer (2007) found that individuals with high empathy exhibited stronger environmental attitudes and behaviors, such as allocating funds for environmental protection. In our study we tested the hypothesis that environmental self-identity is positively related to environmental empathy and that empathy affects attitudes and behavioral intentions regarding ocean health. Participants were recruited from Amazon's online crowdsourcing workforce platform Mechanical Turk (MTurk) and paid \$0.70 upon survey completion. The data were collected between May 23, 2017 and June 4, 2017 and the final sample included 40% male, 74.7% White, with an average age of 38.1 years old. After running the Hayes's PROCESS model mediation analysis, we found statistically significant indirect effects from environmental identity to behavioral intention change, mediated through environmental empathy and then through perceived benefit, perceived harm, and concern for OA. That is, if a person had higher environmental self-identity (e.g., "Being environmentally friendly is an important part of who I am"), then that contributed to higher empathy toward ocean health (e.g., "How sympathetic do you feel about the ocean's current condition?"), which then led to higher perceived harm from OA, more concern toward OA, and greater perceived benefit of human-induced CO₂ emission reduction. Finally, these perceptions positively influenced behavioral intentions, such that the public were more likely to buy an energy efficient car or install equipment in their home that generated renewable energy. Direct effects among these variables were also statistically significant. Governmental responsibility (e.g., "How high or low a priority should it be for your government to take action on ocean acidification?"), however, had no significant direct or indirect effects on promoting behavioral intentions for the better. The study findings reveal more complex, yet nuanced pathways to behavior change and offer practical implications that environmental health practitioners, scientists, policymakers, and educators should consider individual characteristics such as identity and empathy and their mediating relationships when developing and implementing campaign messages or intervention tactics toward healthier behavior change among the public.

When Data Meet Supportive Communication: Advancing mHealth Design and Practice Informed by Social Support Scholarship

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As popular terms like “smart and connected health” imply, the advancement of digital health technologies may enable innovative approaches to healthcare. However, it also poses concerns and challenges regarding the effective and ethical use of electronic health data. Specifically, mobile health (hereafter mHealth) technologies have been increasingly adopted for both medical practice at clinical institutions and personal wellness management, which leads to an unprecedented level of access, collection, transfer, and sharing of health and behavioral data. As the use of mobile devices can be incorporated into individuals’ quotidian practice, various types of data can be gleaned and instantly sent to multiple parties. Despite potential risks, there is a growing interest in automating and quantifying health practice across healthcare markets and industries.

This chapter revisits the dominant views on mHealth technologies from a communicative perspective in order to improve mHealth design and practice, proposing a way to combine computational approaches and communicative approaches. First, this chapter reviews key components of mHealth applications (focusing particularly on the components linked to supportive communication) and discusses how we can take into account interactive and communicative factors when designing such components, instead of relying primarily on automatic logging and tracking. Synthesizing the findings of extant research, we suggest mHealth design principles that can help health practitioners effectively harness connective and communicative affordances of mHealth.

Second, this chapter reviews a range of coaching strategies that healthcare practitioners can use to advance social support practice by using electronic health and behavioral data as well as the affordances of mHealth. As coaches refer to users’ electronic health and behavioral records frequently, we offer a set of strategies for effective coaching, drawing on the analysis of successful cases of mHealth intervention program participants. The use of mHealth applications may enable healthcare professionals to: a) improve situational awareness of patients’ conditions and lifestyles; b) offer timely support based on the ongoing assessments of patients’ needs; c) engage in micro-level interventions that can be incorporated into patients’ everyday routines; and d) build rapport and relationships with patients through continuous contacts. In doing so, we will delineate how in-app interactions could enhance supportive communication, program compliance, and health promotion.

Finally, addressing the limitations of current mHealth applications that offer a pre-determined, universal set of technical features, we make recommendations for building more culturally-appropriate mHealth-based intervention programs. Despite the potential for individual tailoring, most mHealth applications fail to customize their programs, which can be perceived to be unhelpful, unwanted, or ineffective social support. We will review how data can be collected and interpreted to provide culturally-appropriate, individually-tailored intervention while protecting health practitioners from experiencing information overload.

Feasibility and Acceptability of a Group-based Digital Storytelling Workshop for Caregivers of Hematopoietic Cell Transplantation

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Purpose: Hematopoietic cell transplantation (HCT) is a demanding and intensive treatment used to treat multiple hematologic malignancies and some solid tumors. Caregivers play a critical role during the HCT process, and most transplant centers require HCT patients to have a caregiver available for 24 hours a day, 30-100 days post-transplant. Caregivers are at heightened risk for physical and psychological issues, but little attention has been paid to the impact of HCT on their psychosocial well-being. Storytelling interventions are accruing evidence in educational and therapeutic contexts. The purpose of the study is to conduct a 3-day digital storytelling (DST) workshop to discover more about the caregivers' lived experiences during HCT, to pilot test DST with a small group of HCT caregivers, and to assess feasibility, and acceptability using qualitative and quantitative measures.

Methods: The DST workshops were held over 3 consecutive 8-hour days led by two expert facilitators from the Story Center. Adult, English speaking HCT caregivers who had supported a HCT recipient within the past 2 years were recruited. Participants disclosed personal stories about HCT, shared them with the workshop group, and produced personalized (voice, images, script) digital stories, each 3 minutes long. Finally, participants watched the DS together and discussed their experiences from the workshop. Feasibility was measured by recruitment and retention rate, and data completion. Acceptability was measured by the end-of-workshop evaluation survey, field notes, and direct feedback from participants from focus group discussions and in-depth interviews. Participants were also asked to complete a short questionnaire at baseline and immediately after the 3-day workshop, using the Profile of Mood States subscales for depression and anxiety, the patient-reported outcomes measurement information system (PROMIS) social support scale.

Results: Six caregivers of allogeneic HCT survivors (M age =60.2 years) attended the workshop (80% female, 83% White). Of people who approached, 60% agreed to participate in this study. The retention rate for the 3-day DST workshop was high (83 %). On average satisfaction with the workshop was 5 on a 1-5 Likert scale. 83% of them indicated that it was worth of their time and the pace of the workshop was appropriate (M=4.6). Focus groups and interviews with participants further demonstrated high satisfaction and acceptability of the workshop format, setting, process, and structure. Preliminary efficacy showed that social support had an improvement from pre-test (M=1.84) to post-workshop (M=3.96), but did not show improvements in levels of depression and anxiety.

Conclusion: The DST workshop is found to be feasible, acceptable, and showing promise as a psychosocial tool among caregivers of HCT patients through telling their own story and listening to other similar story in a supportive group setting. DST offers multiple dimensions of the role of narrative as coping technique, in community-building, and in person-centered contexts within HCT. The content/stories developed in such workshops may be helpful in developing interventions for future caregivers to observe others' experiences to facilitate their own coping. Further research is needed to test the efficacy and effectiveness of digital stories as an intervention for HCT caregivers.

A Pilot Randomized Controlled Trial of a Digital Stories Intervention among Patients Undergoing Hematopoietic Cell Transplantation

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Purpose: Storytelling interventions have been used to understand patients' experiences of illness, to improve health communication and engagement, and to ameliorate distress. Patients undergoing hematopoietic cell transplantation (HCT) are at risk for reduced psychosocial distress. The process is extremely rigorous, requiring relocation to a transplant center, and is associated with multiple acute medical and psychosocial sequelae. HCT patients often report anxiety, depression, and social isolation due to the intense and aggressive transplant experience. The purpose of this pilot study was to examine the feasibility of a digital stories (DS) intervention and to evaluate its preliminary effect on distress and perceived social support among HCT patients.

Methods: This was a two group, single-blinded randomized controlled study. English-speaking adult HCT patients, recruited from the one of the cancer center in the Phoenix Metropolitan area, were randomly assigned to one of two conditions: the DS intervention (n=24, Mage =58.96 years, 58.3% male, 100% White, 56.5% allogeneic) or the Information Control (IC) video condition (n=16, Mage =59.63 years, 62.5% male, 93.8% White, 81.3% allogeneic). Participants in the experimental condition viewed 4 personal, emotionally rich DS (each 3 minutes long), while those in the IC condition viewed 4 videos containing information about post-HCT care. Distress using the Profile of Mood States (depression and anxiety subscales) and social support using the Patient-Reported Outcomes Measurement Information System were assessed at baseline and immediately following the intervention. 2 x 2 mixed ANOVAs were conducted to examine differences between the two groups over time. Effect sizes (η^2) were also computed as the mean change from baseline to post-intervention.

Results: 40 of the 54 enrolled patients completed the intervention and both assessments (74%); 14 patients could not complete after the initial consent because of feeling unwell or being admitted to the hospital prior to study intervention. There was a significant main effect of time on distress, $F(1,36) = 21.52$, $p < .001$, $r = 0.65$, such that distress decreased from pre- to post-intervention ($M = 0.85$ and $M = 0.36$). There was no significant group x time interaction, $F(1,36) = 2.05$, $p = .16$, thus both conditions were effective in reducing distress. There was no significant main effect of time on social support, $F(1,37) = 0.56$, $p = .61$; however, a significant group x time interaction emerged, $F(1,37) = 6.78$, $p = .01$, $r = 0.36$. Social support increased significantly in the DS group (4.65 ± 0.44 to 4.72 ± 0.38 , $p = .03$) from pre- to post-intervention, but did not change in the IC group (4.80 ± 0.30 to 4.75 ± 0.38 , $p = .15$).

Conclusion: This pilot study demonstrated the feasibility of testing narrative-based DS as a supportive psychosocial intervention in HCT patients. Watching the DS videos may help HCT patients to set up social support by identifying with the storyteller and context, engaging into the story, and building solidarity through personal relevance and mutual understanding. It is possible that accessing appropriate information could help patients to reduce treatment-related information needs, which could influence on reducing distress in the IC group. Further studies are needed to see how DS intervention affect HCT patients' psychosocial outcomes in large scale.

The narrative in individuals' stories in online fundraising sites for health charities

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While organizations led an individual's fundraising for health charities in the past, recent health charities have been raised by the person directly involved in the health issue along with the prevalence of social networking sites for fundraising, such as GiveForward and GoFundMe. Since medical procedures can need an expensive price, many people started to capitalize on online fundraising to help finance health costs (Jewell, 2016). So, the person who needs the financial help shares their story about health issues to appeal and persuade a large group of people to donate their money.

Narrative researchers have evinced great interest in examining the effects of the story to persuade the readers (Spence, 1983). Focusing on the distinctive characteristics of the narrative form of communication, the researchers have compared the narrative form to other forms of communication such as expository or argumentative communications, or explanations with statistics and testimonial in health communication area (Spence, 1983). Surprisingly, however, a little attention has been paid to narrativity and the elements of narrative in persuasion. Specifically, narrative forms consist of narrative formats and non-narrative formats. Based on the portion of narrativity formats of a whole story, the narrative has a different level of narrativity, which refers to all of the features or characteristics that a narrative includes; (White, 1980). For example, if a whole story includes narrative elements such as the concept of event, time, or space, the story has a higher level of narrativity (Barwise & Perry, 1996, Yevseyev, 2005).

Therefore, the purpose of this study is to look at the relationship between narrativity of individuals' appeal for fundraising to solve their health issues and amount of money each story has gotten. Specifically, which element of the narrative is more used would be conducted as well. A content analysis would be conducted Assuming the story with higher fundraising would have a higher level, 100 hundred stories would be collected vis GoFundMe site, an individual fundraising platform, in a range of stories.

Regulating Compassion: A Content Analysis of University Hospital Disclosure and Apology Policies

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Rationale: While the field of healthcare has made advances, medical errors still occur at an alarming rate. Additionally, there is a lack of attention given to healthcare organizational policies structuring communication regarding the medical error disclosure and apology process. Despite the Joint Commission's (TJC) patient safety standards and encouragement of the disclosure of unanticipated outcomes such as these medical errors (Legros & Pinkhall, 2002), not all hospitals have disclosure policies on file. Because error disclosure occurs at a vulnerable moment for both patient and provider, it is considered a prime opportunity for learning about disclosure and apology to occur (Bonnema et al., 2012). Therefore, this study explores how disclosure and apology is communicated to providers in public and private university system hospitals (USH) disclosure and apology policies.

Method: The researcher compiled a list of university hospitals (N = 63) and contacted each facility's Risk Management office. Fifteen hospitals had a disclosure and apology policy and nine hospitals' policies could be shared for the purposes of research, resulting in 55 pages of text. For this study, the nine texts were analyzed using Nvivo and queried separately for the word "apology" and any stemmed words ("apologizing", etc.); the texts were also queried for "empathy" and any stems of the word.

Results: Six hospitals included the word "apology" in their policies (66.7%), each defining the word differently, such as "natural human impulse to express sympathy", compared to when one "demonstrate(s) compassion and integrity". Some hospitals defined the term by explaining what an apology was not: "Apologies do not necessarily indicate fault and/or negligence" or providing a list of terms not to use in the apology process, such as "negligence" or "accident." Three of the nine hospitals that included apology as part of the disclosure process did not have a specific definition for how the apology is or is not to be structured. Of the three policies that did not include apology, only one included the word "empathy." Although this hospital did not use "apology" specifically in their policy, the word "empathy" appeared three different times in their disclosure process in their examples of appropriate communication during the disclosure and apology process.

Implications: There are several important implications for this study. First, of the 15 hospitals that admitted to having disclosure policies, only 60% could share these policies with individuals outside of their facilities. This raises concerns about the transparency of medical error disclosure and apology, especially in light of TJC's call for open and honest communication about medical errors. Second, of the nine disclosure policies, 77.8% of the disclosure policies mentioned words of assurance in either apology or empathy. This is important because disclosure and apology are often conflated (Sorryworks.net) and expected by victims of medical errors. In these cases, apology is an important part of the disclosure process. However, further research is needed to examine the lack of transparency of disclosure and apology policies.

Blood donation barriers & motivators among people with an African background: What measures may improve recruitment and retention?

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Background: African minorities and migrants are often underrepresented as blood donors, restricting the diversity of rare blood types in the donor pool. This poses a serious health risk for chronic transfusion patients of the same ethnic background. Therefore, it is of importance to recruit and retain more African blood donors. To achieve this, it is necessary to understand what hinders and motivates them to donate blood.

Aim: Explore the blood donation barriers and motivators of African-migrants, how these differ for various sub-groups and how they are associated with the intention and behaviour to donate blood.

Methods: Survey data was collected in 2018 among people with a Sub-Saharan, Afro-Surinamese and Afro-Caribbean background residing in the Netherlands and who are eligible to donate blood. The final sample includes 300 respondents who indicated for 26 barriers and 19 motivators on a 5-point Likert scale (from fully disagree to fully agree) to what extent it hinders or motivates them to donate blood. Intention was measured using three questions which were also rated on a 5-point Likert scale ($\alpha = .962$). Bivariate analyses were conducted to test differences in reporting barriers and motivators for various sex, age, ethnic background and donor status sub-groups. A stepwise regression analysis with forward selection were conducted to expose which the barriers and motivators are associated with the intention to donate.

Results: The main barriers on which most (fully) agreed were: never been asked to donate blood (51%), fear of needles (34%) and fear of pain/discomfort (33%). The main motivators on which most (fully) agreed were: receiving test results for infectious diseases (61%), the assurance that donating blood is safe (50%) and knowing there is a shortage of blood (49%). Women reported more often than men to be motivated by test results for infectious diseases ($p < .01$), but reported less often that they not wanted to donate for strangers ($p < .01$). People of 35 years and older were generally less afraid of pain/discomfort ($p < .01$) than their younger counterpart. Sub-Saharan Africans compared with other African groups, reported to be more motivated by knowing there is a shortage of blood ($p < .05$). Current donors reported to perceive more motivation by gifts ($p < .001$) and rewards ($p < .01$) than non-donors. Respondents who reported donation is scary or stressful ($B = -0.15$, $p < .05$), too time consuming ($B = -.24$, $p < .01$) and would be motivated if blood would stay inside the family ($B = -0.20$, $p < .05$), had a lower intention to donate. Those who reported to be motivated by receiving a request by the blood bank ($B = 0.36$, $p < .001$), the possibility to make appointments via Internet/smartphone ($B = 0.23$, $p < .01$), the availability of childcare ($B = 0.38$, $p < .001$) and a convenient place to donate ($B = 0.17$, $p < .05$), had a higher intention to donate.

Discussion: Many people of African descent in the Netherlands reported never being approached for blood donation as a barrier. Practical measures, such as requesting people to donate and enabling people to make appointments online may motivate more Africans to donate.

Unknown makes Unloved; Blood donation awareness and attitudes among people of White majority and African minority background

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Background: Blood type compositions are different across ethnic groups. Especially people of African descent have extended blood type variations almost non-existent in the White population. To help transfusion patients, it is important to match on these extended blood types. However, African migrants and minorities are generally underrepresented as blood donors. They are often not aware about blood donation in their host country. Also, various studies found that African migrants and minorities have a negative attitude towards blood donation, distrusting shortage claims and reporting negative and fearful associations with donating blood. **Aim:** To study the association and differences between blood donation awareness and blood donation attitudes for people of White ethnic majority and African ethnic minority background who had no former donation experiences.

Methods: Survey data was collected in 2018 among people of African background, university students and social media users, residing in the Netherlands. Only those who had never donated blood and who were eligible to donate blood, were selected. The final sample included 257 people with a Sub-Saharan, Afro-Surinamese or Afro-Caribbean background (63%) and 152 people of Dutch background (37%). Two types of awareness were measured: 1) awareness of the blood bank organisation and 2) awareness of other blood donors. Donation attitude was measured using six questions and could be equally divided into cognitive attitude (evaluative judgements towards blood donation) ($\alpha = .915$) and affective attitude (emotional reactions towards blood donation) ($\alpha = .863$). T-tests, Chi-square tests and multivariate linear regression analyses were performed to test differences between respondents of African and Dutch background and test the associations on cognitive and affective attitude.

Results: Of the participants of African background, 57% had never heard of the Dutch blood bank compared with 45% of Dutch background ($p < .05$). Of those familiar with the Dutch blood bank organisation ($n=194$), most had heard of it via family members (27%) and friends (26%). Regarding awareness of other blood donors, 53% of the participants with an African background knew at least one blood donor as compared to 68% of the Dutch participants ($p < .001$). Of those who knew blood donors ($n= 235$), for most those were friend(s)/acquaintance(s) (62%) and colleague(s)/fellow student(s) (24%). The participants of African background had a significantly lower cognitive attitude compared with those of Dutch background ($p < .001$), but no differences were found for affective attitude ($p = .18$). Having heard of the Dutch blood bank organisation ($B = 0.40$, $p < .01$) and knowing other blood donors ($B = 0.33$, $p < .05$) was positively associated with cognitive attitude, but it could not fully explain the negative association of African background on the cognitive attitude ($B = -.78$, $p < .001$). For the affective attitude, no significant associations were found.

Discussion: Awareness raising might be a valuable first step to increase the cognitive attitude towards blood donation and the social network seems to play an important role in this. However, the lower awareness cannot explain the lower attitude among people of African background, thus more strategies are needed to improve their attitude on blood donation and finally increase recruitment.

Message valence and arousal moderates the relationship between exogenous exposure to anti-smoking messages and message recall

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Introduction: Health communication campaigns require sufficient exposure to influence health beliefs and behaviors in a target audience. 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? Media effects theory and research suggest that message-induced emotional response and arousal can influence the depth of message processing and subsequent recall. We hypothesized that ratings of message-induced valence and arousal 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 ad recall from a rolling, cross-sectional national survey of 13- to 17-year-olds ($n = 5,695$), (2) ad-specific weekly Target Rating Points (TRPs), an exogenous measure of campaign reach and frequency, and (3) self-reports of ad-induced valence ("How positive or negative did this ad make you feel?") and arousal ("How intense were your feelings when you viewed this ad?") from a separate sample of 14- to 17-year-olds ($n = 41$). Survey respondents were assigned ad-specific cumulative TRP values based on survey interview date, and ad-specific valence*arousal ratings (averaged across participants from the second sample) for each ad recall item completed. We then estimated mixed-effect multilevel models, regressing ad recall on the interaction between TRPs and the ad-level valence*arousal ratings. Analyses controlled for potential covariates and accounted for clustering within each respondent and across ads.

Results: On average, survey respondents were potentially exposed to 971.5 cumulative TRPs per ad and recalled 4.9 exposures per ad in the previous 30 days. The ad-specific valence*arousal ratings significantly moderated the relationship between TRPs and ad recall. Results suggest that for ads that induce more intensely negative emotions, respondents with access to 1,000 more cumulative TRPs reported recalling 2.4 additional exposures ($p < .001$). In other words, ads that were rated by a separate sample as eliciting more intensely negative feelings were better recalled at the population level, given the opportunity for exposure. For ads that induce less negative and intense emotions, there appears to be no relationship between cumulative TRPs and ad recall.

Conclusions: Findings suggest that the extent to which messages induce negative emotions, and the intensity of induced emotions, can improve our understanding of how exposure produces campaign effect at the individual and population levels. We discuss implications of this approach as a strategy for identifying messages that will "stick" with the intended audience for a health communication campaign.

A culture centered lens on the lived health experience of Burmese refugees resettled in the United States

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Given the mass migrations occurring globally, the number of displaced person across national borders has significantly risen in the past two decades. In particular, forced migrants such as refugees of war or genocide experience the prolonged trauma of statelessness, lack of care and cultural transplantation, without adequate structural support. Through 15 in-depth interviews with Burmese community members resettled in the United States, medical practitioners and resettlement caseworkers enabling this transition, the current study examines the intersections of culture, structure and agency outlined by the culture centered approach in the lived health experiences of these resettled refugees. The data reveal that neoliberal ideals of self-sufficiency entrap resettled refugees in a cycle of poor health outcomes. The refugee resettlement process while theoretically presenting an opportunity to partake in the American Dream, continues and in some instances exacerbates the constraining structural barriers experienced by refugees of low-wage exploitative labor, cultural insensitivity to a diversity of health meanings and linguistic isolation. The study further reveals agentic avenues utilized by the Burmese community and policy recommendations through their narratives in charting a more culturally centered approach to health service provision for such displaced communities.

Communicating Risk in Low-Income Contexts: The Utility of the IMB Model in Explaining Use of Shared Sharps in sub-Saharan Africa

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Despite its parsimony and potential to explain the link between information, motivation and efficacy in risk communication and low-income contexts, the information, motivation, and behavioral skills (IMB) model has not been applied in communication studies. Using data collected from 621 respondents from a representative region of sub-Saharan Africa, this study is the first to examine the IMB model as a health communication theory-informing model with specific application to explaining potential public health risks underlying use of shared sharps in male hair salons. This study follows and cites a large body of empirical reports from microbiology and global public health studies drawing attention to the potential spread of skin and bloodborne pathogens through use of shared sharps in male salons (e.g., clippers and other tools). In particular, researchers have indicated that, due to a curly hair phenotype, males of African descent are more susceptible to a condition known as Folliculitis Pseudofolliculitis Barbae which irritates the skin and causes nicks as well as various types of bleeding during a shave.

The application of the IMB model took into account critiques advanced by international and global health communication scholars particularly admonition related to the inappropriateness of applying (western) cognitive models in non-western and low-income contexts. Consequently, the study started with elicitation (N=65) of culturally relevant beliefs (i.e., modal salient beliefs) underlying male salons use. Results of the elicitation study indicate that respondents use informational heuristics to assess hygiene and potency of disinfection products and are motivated by the need to maintain good social relationships in hair salons. Respondents' beliefs also call attention to low efficacy in different literacies needed for negotiating hygiene in hair salons (public negotiation skills) as well as low ability in practicing personalized and home-based haircare (private negotiation skills).

Before testing formal hypothesis and research questions underlying the specified IMB model (in the subsequent/main study), scales developed from elicited beliefs were validated using (EFA) exploratory factor analysis (N=217) and (CFA) confirmatory factors analysis (N=404). Furthermore, as campaign and message design literature encourage segmentation (of different populations in different conditions), item-level measurement invariance was conducted.

Structural equation modeling results generally support IMB mediation hypotheses through private negotiation skills but not through public negotiation skills. Due to hygiene and other structural differences in rural and urban salons (e.g., availability of water, electricity, disinfection products and pharmacies) research questions probing moderation effects across rural and urban populations were considered. There was no evidence supporting moderated mediation or moderation across individual paths suggesting that the IMB model may be robust to extreme structural conditions.

Implications for initial message development are discussed. Additionally, this study discusses the utility of IMB model vis-à-vis public health risk communication in low-income contexts and in relation to its parent social cognitive models (e.g., theory of planned behavior, theory of reasons action and cognate models). In particular, this study discusses specific ways in which formative application of the IMB model can afford risk communication researchers a distinctive perspective for deriving health beliefs and designing messages.

Measuring Public's Trust in Physicians and Nurses in The United States

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Trust is considered to be the essence of human relationships and the cornerstone of that between health practitioners and their patients. Yet, there has not been one single common understanding of what builds or breaks their relationships. Research has only showed a decline in the public perception of physicians, attributed in a large extent to the advancement of digital media channels. On the news, physicians are often portrayed negatively, while on television, they repeatedly have been characterized as heroes, raising the disappointment in real-world doctors.

The 2011-2013 survey data from a research study conducted by International Social Survey Program (ISSP), revealed that only 34% of Americans have great confidence in physicians, in comparison to 73% in 1966 (Blendon, Benson, & O. Hero, 2014). Moreover, data from recent surveys of public opinion from a cross sectional analysis of 23 countries also showed an evident decline of public trust in physicians, greatly affecting their reputation (Huang, E. C., Pu, C., Chou, Y., & Huang, N. 2018). On the other hand, according to the Gallup poll of 2014, nurses had the highest honesty and ethical standards among the 11 professions included. A total of 80% American respondents said nurses have very high, or high standards of honesty and ethics, in comparison to a sixty five percent of MDs. Nurses have topped the list for the last 18 years. (Riffkin, 2014).

For the purposes of this examination, the results from 200 national surveys conducted through Amazon's Mechanical Turk were analyzed. The purpose of this research was to measure the levels of trust based on how willing people are to take risk, and show vulnerability for the two medical professions. Two measurement dimensions were studied and compared. The first one, The Institute of Public Relations' guidelines for measuring relationships (Hon, L. C., & Grunig, 1999). The second one, an integrative trust model, published at The Academy of Management Review (Schoorman, Mayer & Davis, 2007).

Preliminary results demonstrate a continuous decline of trust in physicians, as opposed to that of nurses. The levels of trust in nurses proved to be notably higher in specific medical specialties and types of institutions. The answers from respondents also showed interesting disparities based on cultural and demographics differences, such as age, gender, race, ethnicity, education, income level, professional training and socioeconomic status. These findings underscore the urgent need for physicians to improve their public image in order to become more trustworthy, and enhance open two-way communication with patients. Higher levels of trust in healthcare providers as a whole are imperative to promote preventive care and wellness in the country. As such, this research will provide healthcare and communication professionals useful insights to better understand patient's needs and expectations, and ultimately fulfil their medical needs.

Managing cancer prevention information: Toward an alternate model of uncertainty management

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Background. Health-related uncertainty caused by conflicting reports of cancer findings and recommendations on preventive screening has led to increased public confusion and ambiguity. Accordingly, healthy individuals act irrationally and are driven to extreme reactions such as cognitive avoidance or chronic treatment search. Brashers' Uncertainty Management theory (UMT) was developed to explain the relationship between uncertainty and uncertainty management (e.g., information avoidance or seek). However, UMT is inadequate in explaining complex health uncertainties because it adopted a simple probabilistic model in which uncertainty is treated as a probability of occurrence. Extending on UMT, a new uncertainty management model, health-related uncertainty management model (HUMM), is proposed. HUMM expanded on the uncertainty constructs and proposed four factors, namely medical, social, economic, and efficacy uncertainty in predicting preventive cancer screening avoidance. In this study, we aim to (1) develop and validate a new set of uncertainty measurement for the four factors and (2) empirically test the relationship between medical, social, economic, and efficacy uncertainties and cancer preventive screening avoidance.

Methods. A representative sample (N=400) was collected to validate HUMM measurements and empirically test the model. We collected data from 200 participants in the first round to perform an exploratory factor analysis (EFA). A confirmatory factor analysis (CFA) is conducted using data collected from another 200 participants. Using the confirmed factors, we will conduct a hierarchical linear regression to test the relationship between the uncertainty factors and cancer preventive screening avoidance. Also, we controlled for family medical history, socioeconomic status, and individual differences (i.e., personality) to account for unexplained variance in the model.

Expected results. We defined medical uncertainty as informational ambiguity leading to a lack of understanding of cancer as a disease and its required treatment and skepticism on the reliability and success of cancer treatments and preventive screening. Social uncertainty is defined as the evaluation of how, if, being diagnosed with cancer, affect one's relationships with their spouses, family members, and friends and fear of social stigmatization. Economic uncertainty arises due to the unclear financial consequences relating to preventive screening cost and hefty medical treatments if diagnosed with cancer. Efficacy uncertainty relates to doubt in one's abilities to cope with the perceived treatment and survive. Because of the negative perspective and ambiguity, each of these uncertainty factors holds, we predict that individuals are more likely to avoid cancer preventive screening because they desire to maintain hope and avoid worrying about negative consequences if diagnosed with cancer.

Implications. Many theoretical frameworks tend to assume an optimistic view that human beings are rational actors who behave and make decisions in ways that reduce risk and improve personal well-being, but not everyone behaves as expected. Some individuals act irrationally despite risk and negative consequences of decisions. In developing HUMM, we intend to provide an alternative theoretical model predicting irrational health behaviors. By learning which factor deters people from health behavior adoption, practical interventions can be developed to reduce uncertainty and improve adoption rates.

Religious Leaders and Health Communication: A Quantitative Study of Health-Information Seeking Behaviors in Sierra Leone

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During the West African Ebola outbreak communicating public health measures and changing deep-rooted cultural practices linked to Ebola transmission were a major challenge in Guinea, Liberia, and Sierra Leone (WHO, 2015). In some areas, decreasing infection rates became associated with the influence of faith-based actors delivering health messages and mobilizing communities (Marshall, 2017). To explore the potential role of religious leaders in health communication beyond the epidemic, this study focused on Sierra Leone, one of the ten poorest countries worldwide (UNDP, 2018) with both traditional and biomedical health systems (Scott et al., 2013).

Promoting health behaviors through communication requires insights into health information-seeking behaviors (HISB) of the target population. HISB is influenced by health locus of control (HLOC), trust in health information sources and sociodemographic variables (Somera et al., 2016; Shieh, Broome, & Stump, 2010). Accordingly, we suggest:

H1: There is a positive relationship between religiousness, God HLOC, and trust on HISB from a religious leader.

Additionally, we aim to explore:

RQ1: What is the perceived trustworthiness of religious leaders as compared to other health information sources?

We conducted an oral, face-to-face household survey in eight rural and urban locations through four districts (February-May 2018). A systematic random route was performed to sample households; a Kish grid was used to sample respondents. The total sample size was $N = 296$.

The variables measured were: location, gender, age, education, income, frequency of attendance at religious activities, trust in and HISB from different health information sources. 24 items on multidimensional HLOC were derived from Wallston (2005). Allowing for literate and illiterate participants, a 5-point visual analogue scale was used.

At the bivariate level one of three hypothesized variables were significantly associated with HISB from a religious source. Religiousness had a significant negative association with HISB ($r(284) = -.25, p < .001$). As this relationship was not linear due to high religiousness across the sample, the initial hypothesis was rejected. A single-factor between-subjects ANOVA was used to analyze differences between sociodemographic variables and HISB. We found significant differences in HISB for education ($F(2,292) = 19.575, p < .001, \eta^2 = .118$). Games-Howell post-hoc-tests indicated differences at $p < .001$ between those with 1) no formal education ($M = 2.44, SD = 0.70$), 2) primary and secondary education ($M = 2.85, SD = 0.75$) and 3) tertiary education ($M = 3.28, SD = 0.55$).

Considering RQ1, trusted health information sources ranked as: 1) community-based sources with religious leaders rated highest; 2) external face-to-face sources, including government and NGO representatives; 3) mass media—for the exception of radio (ranked fourth). Digital media sources were the least trusted. Between-subject MANOVAs did not reveal significant differences between sociodemographic variables and trust in religious leaders.

Against the background of a highly religious society with low literacy rates (Statistics Sierra Leone, 2015), the data suggest that community-based, trusted religious leaders are potentially valuable health opinion leaders in Sierra Leone. Several limitations exist in this study: higher educated respondents were overrepresented and as this study did not focus on specific health topics, further research is needed about the appropriateness of religious leaders to communicate about diverse health behaviors, including conflicting topics (e.g. sexual health).

Exploratory Inquiry into Experiences of Women with Gestational Diabetes – A Patient-Provider and Communication Perspective

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Gestational diabetes mellitus (GDM) is defined as insulin resistance, or an intolerance to carbohydrates that occurs during pregnancy (Cheung, 2009). The prevalence of diabetes in pregnant women is up to 9.2% according to the Centers for Disease Control and Prevention (American Diabetes Association). The prevalence has the potential to be much higher as many cases go undiagnosed throughout the duration of the pregnancy. GDM is associated with many adverse outcomes for both mother and baby.

This study explores the experiences of women with GDM in order to better understand their plight and subsequently their patient-provider experience. The study intends to identify communication characteristics present in and preferred by patients for interactions with their providers in addition to the preferred communication channels. An exploratory, phenomenological approach is utilized. Likewise, the biopsychosocial model of health is applied in an attempt to conceptualize the problem from many different systems perspectives, each of which impact health behavior.

A total of 21 semi-structured telephone interviews were conducted in the Fall of 2013. Participants were recruited from a sample of women who attended GDM educational programs at an outpatient facility of a large hospital in central Kentucky. The semi-structured interview protocol was adapted from a study by Carolan et al. (2012). The questions were open-ended as to elicit as much of the patient's experience as possible. Diabetes educators and members of the research team reviewed the protocol for content validity. In addition, the protocol was pilot-tested with four women who met the inclusion criteria.

Thematic analysis was used to synthesize findings from the transcripts. An inductive approach was undertaken. Each of the themes and sub-themes were used to further analyze and interpret the meaning behind the data. Researchers attempted to make sense of women's experience with GDM, to learn the characteristics of communication with their provider, and to assess preferred channels for delivery of such health information.

Women indicated that their experience following a GDM diagnosis was both positive and negative, consisting of an optimal outlook towards future health but also concern for the health of their baby and themselves. Women described the diagnosis poignantly as disappointing, shocking and life-changing. These women prefer a mix of individualized education and information regarding their condition. Both are expected to be provided in both face-to-face interactions and on printed or digital media. These findings can help GDM and other health practitioners in the future to better accommodate patient's needs and improve health outcomes.

Effective education and patient-provider communication are critical in the management of such chronic conditions as diabetes. These factors can have significant impact on one's experience with GDM. The quality, effectiveness, skillfulness, and empathy utilized in patient-provider interactions can have significant impact on the outcome of disease management (Kushner, 2016). Specifically, patient-provider communication has been linked to diabetes outcomes (White et al., 2016).

Scare Them out of Opioid Addiction: Analyzing Fear Appeals and Perceived Character Similarity in the “Crisis Next Door” Campaign

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From 2015 to 2017, the number of estimated opioid deaths skyrocketed above all other drug overdose deaths, resulting in 30,000 fatalities which translated to approximately 43% of all drug overdose deaths in 2017 (National Institutes of Health, 2018). With a 22-hundred percent increase in opioid deaths since 2002 (National Institutes of Health, 2018), health experts, policy makers, and practitioners are seeking treatment and prevention solutions. In that vein, the White House Office of National Drug Control Policy and its partners launched an advertising campaign this June to prevent 18-24 year olds from abusing opioids. The ad series presents four 30-second videos, all titled as “[someone’s] story,” with the names of the main characters in those titles. Each ad shows the lengths the character was willing to go to get more prescription opioids, whether that be Kyle smashing his hand with a hammer or Amy driving her car into a building (White House, 2018). The videos end with a short, captioned message about the incident in the video, the danger of opioid dependence, and the message “Know the Truth. Spread the Truth” overlaid on X-ray images. The advertisements apparently attempt to elicit fear, but a substantive message to increase viewers’ opioid-prevention self-efficacy seems to be missing. The Extended Parallel Process Model (EPPM, Basil & Witte, 2012) predicts that a high fear appeal must be paired with a high self-efficacy message for individuals to engage in danger control rather than fear control, a state in which individuals cope with the fear they’ve experienced rather than enacting a behavior that averts the fear. Beyond fear appeals, the narrative elements of the advertisements are also highly relevant to fear induction, especially since perceived similarity to campaign characters has been shown to influence ratings of perceived susceptibility and severity (Rimal & Morrison, 2006). As such, the present study seeks to understand the relationship between perceived character similarity, perceived risk, and self-efficacy. I predict that perceived similarity to the campaign character will predict perceived risk. The present study also seeks to isolate the effects of self-efficacy when paired with high fear appeals, predicting that an ad paired with a high efficacy appeal will be most positively predictive of behavioral intentions, followed by an ad paired with a low-efficacy appeal, followed by the control group. To test these relationships, an online experimental study was conducted among undergraduate college students at a large Northeastern university. Participants were randomly assigned to one of three groups. The control group viewed only “Kyle’s Story,” the second group viewed “Kyle’s Story” plus a low self-efficacy message, and the third group viewed “Kyle’s Story” plus a high self-efficacy message. Perceived susceptibility, perceived severity, and opioid prevention self-efficacy were measured at both pre- and post-test. Perceived similarity, behavioral intentions to avoid opioid misuse, and behavioral intentions to share information about the harms of opioids were measured only at post-test after participants were exposed to the manipulation. Results should illuminate both theoretical and practical implications.

Effects of Communication and Political Trust on Policy Support and Personal Activism in the Context of Health Disparities

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The objective of this study is to contribute to theory and research on health disparities by examining whether exposure to information about health disparities from mediated and interpersonal sources interacts with trust in government and jointly influences public support for government actions and personal activism. To this end, we employ a two-wave panel survey design with a U.S. nationally representative sample. Both waves of data collection were completed in 2014, with a six-month interval between waves. A total of 796 respondents completed the first wave of the survey (i.e., baseline), and 571 the second wave (i.e., follow-up). We found that exposure to health disparities information at baseline did not predict the change in public support at follow-up ($\beta = .02, p > .05$) after controlling for possible confounders. However, trust in government moderated the effect of exposure to health disparities information on public support (interaction term $\beta = .11, p < .001$). More specifically, a negative relationship between exposure to health disparities information at baseline and public support at follow-up was apparent among respondents with the lower than the average level of trust in government. In contrast, respondents with the higher than the average level of trust in government appeared to increase their public support with increased exposure to health disparities information. Among respondents with the average level of trust in government, the relationship between exposure to health disparities information and public support was generally flat. Moreover, higher levels of exposure to health disparities information at baseline predicted increases in personal activism at follow-up ($\beta = .11, p < .01$) after controlling for possible confounders. However, trust in government did not moderate the effect of exposure to health disparities information on personal activism (interaction term $\beta = .01, p > .05$). Findings from this study would inform further theory development and empirical research to examine the impact of communication on public opinion, and civic engagement in addressing health disparities and other important social issues.

Cross-national Coverage of Food Security: Testing Community Structure Theory

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A community structure analysis (Pollock, 2007, 2013, 2015) compared national characteristics and newspaper coverage of food security in a cross-section of nationally prominent or database-available newspapers from 20 different countries, examining all relevant articles of 250+ words selected from 09/01/13 to 09/01/18. The resulting 304 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 food insecurity), then combined into composite “Media Vector” scores for each newspaper, from +1.000 to +.0788, total range .9212. Sixteen out of 20 Media Vectors (80%) emphasized government responsibility for reducing food insecurity.

Overall, measures of “vulnerability” (More “vulnerable” populations linked to coverage reflecting their interests: Pollock, 2007, pp. 137-156) were robustly connected to coverage supporting government responsibility for food insecurity. A composite measure of political/security instability, curiously named the “Global Peace Index” was connected strongly ($r = .522$, $p = .009$) to media coverage emphasizing government responsibility for food insecurity. Two other near-significant results were associated with another measure of vulnerability: “agricultural dependence.” Both percentage agricultural land ($r = .361$, $p = .059$) percentage of permanent cropland ($r = .361$, $p = .059$) were connected to media emphasis on government responsibility to reduce food insecurity. These results confirm similar findings from previous studies on coverage of GMOs (Pollock, Peitz, et. al., 2017) and of transit migration toward Europe (Pollock, O’Brien, et. al., 2016).

Contrary to prediction, privilege was a driver of coverage emphasizing “less” government responsibility for food insecurity. Although it was expected that higher privilege levels (populations “buffered” from uncertainty) would be associated with coverage emphasizing government responsibility (Pollock, 2007, pp. 61-100), this hypothesis was disconfirmed. Unexpectedly, the greater a nation’s GDP per capita ($r = -.339$, $p = .096$) and the greater the population covered by mobile phones ($r = -.304$, $p = .096$), both indicators of privilege, the “less” media emphasis on government responsibility to reduce food insecurity. These findings parallel previous research on water contamination (Wissel, et. al., 2014, 2015) and child labor (Kohn & Pollock, 2014, 2015). Countries with higher GDP per capita and more mobile phones may be less reliant on government and may have more societal resources to reduce food insecurity.

Empirically, this study confirmed that “vulnerability” indicators -- Global Peace (instability) Index and some measure of agricultural dependence -- were linked to coverage emphasizing government responsibility for reducing food insecurity while contrasting measures of privilege -- GDP/capita, mobile phone penetration -- were associated with “less” media emphasis on government responsibility, possibly revealing a privileged “indifference” perspective regarding food insecurity. Methodologically, combining measures of “prominence” and “direction” generated highly sensitive “Media Vector” scores illuminating the capacity of media to reflect country level measures of vulnerability and privilege. From a theoretical perspective, this food security study confirmed an empirical finding by one of the founders of “agenda-setting” theory, urging that agenda setting’s “top down” perspective is robustly complemented by the “bottom-up” viewpoint of community structure theory’s indicators of community-level demographics (Funk & McCombs, 2017).

Giving medical advice in abstract language: effects on patient ratings of shared decision-making, quality of care, and provider

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The delivery of treatment advice during clinical visits matters, as it affects patient satisfaction and perceived quality of care (Stewart, 1984; D'Angelo & D'Angelo, 2018). Moreover, when provider recommendations fail to address patient needs and wants, patients may become nonadherent to treatment, and motivated to seek alternative care. Patient nonadherence costs the healthcare system of the U.S. somewhere between \$100 billion and \$289 billion annually (Viswanathan et al., 2012). Understanding what makes medical advice effective is an issue of theoretical and practical import (D'Angelo & D'Angelo, 2018). The current investigation examines the effects of providers' language abstraction on patients' post-visit perceptions of shared decision-making and quality of care. Extant research has shown that greater use of abstract language in persuasive messages, including advice messages, increases perceptions of speaker power, expertise, and politeness (Stephan, Liberman, & Trope, 2010; Reyt, Wiesenfeld, & Trope, 2016), and reduces the perception of threats to behavioral freedom (Katz, Byrne, & Kent, 2017). This research, grounded in construal level theory (CLT; Trope & Liberman, 2010) and the linguistic category model (LCM; Semin & Fiedler, 1991), suggests that provider use of abstract language when making treatment recommendations might yield positive effects. However, setting specific goals is conducive to goal completion (Gollwitzer, 1999), suggesting that more concrete treatment advice might be perceived as more helpful. In the context of care, impeded by ailments and potential emotional distress, the patient might not be motivated or able to devote cognitive resources to process abstract communication. Therefore, we ask:

RQ1: Is the abstractness of providers' treatment advice associated with perceived shared decision-making, quality of care, and evaluation of the provider, and if so, how?

Appraising their own conditions, some patients might prefer prescription medicines over over-the-counter ones. For these patients, the character of the treatment advice might exert a smaller influence in the aforementioned perceptions. We ask:

RQ2: Is the influence of language abstraction moderated by factors such as type of treatment and severity of the illness?

Method: To answer the research questions, we are in the process of analyzing 457 sets of transcripts from acute care visits and corresponding patient surveys collected as part of a larger study focused on antibiotic stewardship in a university student health center. Provider post-diagnostic segments containing the majority of treatment advice are isolated from the transcripts by a team of coders, and analyzed using the Linguistic Inquiry and Word Count software (Pennebaker et al., 2015) and an LCM-based dictionary (Seih, Beier, & Pennebaker, 2017) for language abstraction data. (The LCM places words in categories of abstraction and constitutes a reliable and valid measure of construal level; Soderberg et al., 2015). Measures of patient outcomes from post-visit surveys include perceived shared decision-making, quality of care, and evaluation of the provider. Linear regression analyses will be performed to evaluate whether, and in what way language abstractness is associated with medical visit outcomes. The results will contribute to the development of theory with regard to medical advising and construal level theory, and suggest practical implications for provider communication.

Understanding Patients' Access to Online Medical Records

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Online access to medical records can help track personal health status, enhance patient participation, and in turn, improve patient health management and outcomes. Despite the increasing use of patient portals, adoption and utilization rates among certain groups are lower. Several studies have examined potential determinants of the adoption and utilization of online patient portals, including age, education, Internet use behavior and ability, and access to high speed Internet. Using a subset of data (n=800) from Health Information National Trend Survey (HINTS 2017), this study investigates potential factors that contribute to patients' utilization of online medical record access systems. In predicting patient access to online medical records, a hierarchical regression analysis was conducted to examine the roles of trust in doctors, quality of patient-provider communication, overall care quality, online health information seeking behavior, comprehension of online medical information, and perceived usefulness of the system. Overall the regression model explained a small but significant portion of the variability in patients access to online medical records (adjusted R square = .84). After controlling for age, health status, and self-reported English proficiency, patients' utilization of online medical record systems was positively associated with (1) previous online health information seeking experience (beta=.143, $p<.001$), (2) comprehension of information included in the online health record (beta=.144, $p<.001$), and (3) usefulness of online health records for monitoring health (beta=.150, $p<.001$). Patient-provider communication and overall quality of care did not show a significant association with patient access to online medical records.

Norms or Outcome Expectations? A Cross-Cultural Comparison of American and Chinese College Students' Physical Activity Intention

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Engaging in physical activity (PA) can reduce the risk of developing chronic illnesses, improving individuals' physical and mental health (CDC, 2018). One effective approach to reduce unhealthy behaviors is to change individuals' perception of social norms (Glazer, Smith, Atkin, & Hamel, 2010). Rimal and Real (2005) developed theory of normative social behavior (TNSB) which posits the mechanisms through which descriptive norms influence behaviors.

The current study has four purposes. First, we apply TNSB concepts to study PA, to answer researchers' call for examining TNSB in contexts besides college student drinking (Rimal & Lapinski, 2015). Second, we compare the effect of norms on American and Chinese college students' PA intention. Lapinski, Rimal, DeVries, and Lee, (2007) found more individualistically oriented people are less likely to be influenced by descriptive norms, which raises up a question regarding how TNSB constructs may function differently in individualistic (e.g., American) and collectivistic (e.g., Chinese) cultures. Third, we examined the mediating role of outcome expectations and group identity. Fourth, we added message elaboration as a mediator to investigate how message processing influences outcomes.

Participants were 200 American college students and 156 Chinese college students. In the online experiment, we randomly assigned participants to either a norms message condition, where the message contained descriptive norms and injunctive norms, or a control message condition. Participants responded to questions after message exposure.

Results showed that injunctive norms manipulation failed for both samples. American students in norms condition reported significantly higher descriptive norms, $t(198) = 3.13, p = .002$. However, norms message did not induce more descriptive norms for Chinese students, $t(154) = 1.17, p = .25$. In collectivistic cultures, individuals make changes collectively (Hofstede, 1984). Chinese college students may be influenced by what they already believed about their group behaviors rather than what was said in a message.

We conducted structural equation modeling (SEM) in Mplus 8 for American and Chinese samples separately. The final models demonstrated acceptable fit for American sample, $\chi^2(242) = 493.29, p < .001$, RMSEA = .07 (90% CI = .064, .083), CFI = .92, SRMR = .09, and Chinese sample, $\chi^2(313) = 618.32, p < .001$, RMSEA = .08 (90% CI = .07, .088), CFI = .89, SRMR = .08. American and Chinese students' perceived descriptive norms increased message elaboration ($B = .49, p = .001$ for Americans, $B = .49, p < .001$ for Chinese). For American students, message elaboration was positively associated with outcome expectations ($B = .26, p < .001$). Outcome expectations predicted more favorable attitude towards PA ($B = .43, p < .001$), thus higher PA intention ($B = .62, p = .001$). However, Chinese students' message elaboration was positively associated with group identity ($B = .48, p < .001$). There was a direct association between descriptive norms and PA intention ($B = .35, p = .001$). To conclude, American students are more likely to be influenced by the pros and cons of PA, whereas Chinese students' PA intention is more affected by their perception of prevalence.

Trust as Reason to Turn to Various Information Sources to Deal with Uncertainty

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For dealing with perceived uncertainties, information seeking behaviors are an important coping strategy (Barbour et al., 2012; Brashers, 2001; Lee & Hawkins, 2010). Within the process of information behaviors (Galarce et al., 2011) the form and evaluation of uncertainty results in turning to an information source. This step of selecting subjectively useful sources and information is important for the success of uncertainty management. Central to this is that each individual has access to various sources such as health professionals, online information or relatives. Instead of relying on individual sources of information, patients usually consult several sources and combine them (Hesse et al., 2005; Walsh et al., 2010). It can be assumed that the decision to turn to a source and attribute the potential to manage uncertainty to that source as well as whether and how different sources are combined is a question of trust. Thus, trust can help to explain why sources are selected and how they are combined.

Against this background, our study integrates the theoretical perspectives of uncertainty management and trust, pursuing to identify the role of trust in health-related information behavior. The focus of this study was on the question: What types of trust based combinations of interpersonal and media source use can be identified?

Method. To answer our research question, we conducted semi-structured interviews with 34 patients (aged between 42 and 88 years; 19 females) after a knee or hip implant surgery. We chose this subject of research, because the diagnosis calls for action and the patients' involvement in decision making about type and timing of treatment is relatively high; as a consequence thereof, there are many opportunities to develop informational needs and to seek information from various sources.

Findings. The interviews reveal that patients use a variety of different sources. Health professionals are the most trustworthy source, but relatives and the Internet also seem to be of high importance. With regard to the types of combined source usage, we distinguished between five types of information behavior using various sources. The types differ according to the sources chosen, their extent of use and the importance of the information received. Especially trust in physicians was an important differentiating factor and goes along with a dominant role of health professionals. A high level of trust in health professionals was associated with lower levels of uncertainties, lower information needs and a lower number of additionally used sources. However a large proportion of the patients interviewed seek a second opinion. Due to lower trust, patients turn to other sources and compensate for different unmet needs. Thus, trust provides an important explanatory contribution for the combined use of sources.

Discussion. The findings of this study highlight the significance to theoretically and empirically investigate the combination of different information sources. In addition, the different perspectives of interpersonal and mass communication need to be further integrated. For that matter, trust can serve as a link which emphasizes the necessity to search for additional information in alternative sources to a greater or lesser extent.

Empowerment by Infotainment? Perceptions of Television-Doctors and Television-Patients as Determinants of Patient Empowerment

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Today, patients are expected to make informed decisions and take an active part in their health provision. In this context, empowerment, i.e., the patient's willingness and ability to choose personally meaningful, realistic goals and to take action and control in reaching these goals that affect the own health is essential and requires self-management skills (Anderson & Funnell, 2009; Schulz & Nakamoto, 2013).

While many approaches of increasing empowerment focus on factual information and aim to trigger cognitive information processing, we argue that narrative communication and factual entertainment formats combining documentary reporting and information provision with entertaining features might particularly unfold persuasive and health promoting potentials (Hinyard & Kreuter, 2007; Krüger, 2010). Telling (success) stories about patients struggling with health problems and about productive and trust-based doctor-patient relationships may facilitate parasocial comparisons, raise self-referencing, encourage to reflect about the issue, and thus facilitate a more elaborated way of information processing. In Germany, a hybrid TV format launched 2015, integrating documentary reporting and entertaining elements of reality-TV called "E-Docs" ['Nutrition Docs'] has revealed as being very successful. Stories of patients suffering from very different chronic diseases are accompanied and counselled by a team of doctors over a period of half a year. Challenges and changes in nutrition behaviors are focused regarding their health enhancing potentials that finally help to deal with or even overcome the illness.

Against this background, we focused on the audience's perceptions of the main characters of the "E-Docs" and asked (1) if trust in the TV-doctors is associated to the audience's perceived empowerment, (2) if parasocial relationships with the TV-patients are associated the audience's perceived empowerment, and (3) if trust in the TV-doctors and parasocial relationships with TV-patients differ in their associations to the audience's perceived empowerment. In collaboration with a major German public broadcasting service producing the "E-Docs", we conducted an online survey among the "E-Docs"-audience. N = 2,651 persons participated in the study (mean age 57.6 years, 85% female).

Overall, the factual entertaining strategy seems to work well. The recipients appear as true fans of the "E-Docs", watching the series regularly, enjoying the reception, and feeling connected to the TV-doctors and -patients. Blockwise linear regression models revealed that both trust in the TV-docs and parasocial relations to the TV-patients are significantly related to the audience's perceived health- and nutrition-related empowerment. While trust in the "E-Docs" explains 20 % of variance of empowerment, the parasocial relationship to the TV-patients explains only 6 %. One explanation for the differences in proportions of variance explained might be that the "E-Docs", being sympathetic and empathetic, but also authority persons, are perceived as particularly important advice givers and trustworthy partners for patients suffering from a chronic illness one might wish to have oneself in real life. Another explanation is that, compared to TV-patients who appear only in single episodes, the TV-doctors are present in every episode and thus are a stable source of trust for the audience. These results and further findings are discussed.

Stop Looking for Your JUUL! Analyzing the Role of Narrative Persuasion in Deterring E-Cigarettes Use Among Youths

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Electronic nicotine delivery systems (ENDS), or e-cigarettes, featuring colorful design (e.g., JUUL) and tasteful flavors (e.g., menthol, fruits), have attracted many users, including teenagers and minors, resulting in increasingly younger age of initial usage. Nationally, e-cigarettes use among youths has become an epidemic. One in six high school students reported having tried e-cigarettes, and the number has been increasing in the recent years. As underage nicotine intake from e-cigarette use may result in long-term damage to lungs and brain development, as well as other behavioral and mental disorder such as addiction, it is of critical importance to address this problem. In order to achieve this goal, a better understanding of factors that influence young adults' e-cigarette use is necessary. Additionally, it is also important to explore effective communication strategies for the target population (i.e., youths) and persuade them to stop using or refuse to initiate e-cigarettes use in the future.

This study aims to examine the persuasive effect of a proposed communication framework. Specifically, a 2 (narrative vs. non-narrative) x 2 (gain vs. loss) design is used in this study. To simulate communication format that is familiar to young adults, all stimuli are delivered as mock-up tweets. Participants are recruited from an entry-level course open to all majors and given course credits for their participation. Participants provide responses to measures such as knowledge, current usage, risk perception, and attitude toward e-cigarettes, as well as behavioral intention. Findings related to the relative impact of gain vs. loss narrative persuasion and their implications for health communication practice will be discussed.

Audiovisual and Narrative Information in Decision Aids: Which Patients Benefit from This and what Role Does Cognitive Load Play

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Information in most patient decision aids is presented in a textual and factual style (Trevena et. al., 2013). This type of information can be difficult to process for older patients (McInnes & Haglund, 2011). Based on the results of a previous project, we know that providing information in a decision aid in audiovisual and narrative style increases satisfaction with the information and improve information recall. The aim of this study was to investigate whether cognitive load can explain these effects of audiovisual and narrative information as underlying mechanism. Besides, we expected that the effects of audiovisual information and narrative information on satisfaction with the information and information recall would be moderated by age (young [<65] vs old [$65+$]) and decisional style (emotional vs factual decision style). A 2(visual vs. audiovisual) x 2(narrative vs. factual) experiment was conducted. Participants were 232 analogue cancer patients. In total, 126 participants were older than 65 years old ($M = 73.02$, $SD = 4.85$, range 65-90, 54.8% male) and 106 younger than 65 years old ($M = 53.24$, $SD = 9.59$, range 21-64, 29.2% male). Cognitive load was measured on a 7-point scale with four items such as ‘Sometimes I felt lost while reading the information’ (Eveland & Dunwoody, 2001). Satisfaction was measured with ten items that covered attractiveness, comprehensibility, and emotional support (WSS; Bol et. al., 2015) ranging from 1 to 7. To measure recall, nineteen open-ended questions were formulated according to the NPIRQ (Jansen et. al., 2008). For each element that had to be included in the answer, the participant received one point. The points were added up, resulting in a sum score ranging from 0 to 38 points. The experimental stimuli were created based on an existing decision aid for colorectal cancer patients. Structural Equation Modelling was carried out. Results revealed that audiovisual information and narrative information had a marginally significant negative effect on cognitive load (resp. $\beta = -1.07$, $p=.067$, $\beta = -1.02$, $p=.081$). In addition, we found that cognitive load in turn had a negative significant effect on satisfaction ($\beta = -.35$, $p<.001$) and recall ($\beta = -.39$, $p<.001$). The sequential indirect effects of audiovisual information, via cognitive load, on satisfaction ($\beta = .04$, 95% CI [.00, .08], $p<.05$) and recall ($\beta = .04$, 95% CI [.00, .10], $p=.066$) were (marginally) significant as well. This means that both audiovisual and narrative information lead to less cognitive load, which in turn resulted in more satisfaction and better recall. The results did not show differences in the above mentioned effects for different age groups. However, we did find that narrative information resulted in more cognitive load for patients that relied more on emotions when making decisions, compared to patients who did not ($\beta = .17$, $p=.005$). This study adds to existing literature by providing knowledge about how different information provision strategies work for different types of patients. Based on our results, it can be argued that decision aids should include different types of information for different types of patients.

**Kairos and Chronos in #MyPainDay:
A Mixed Methods Analysis of Chronic Pain Discourse**

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Chronic pain is a condition in which someone suffers from pain either persistently or intermittently for at least three months. Tens of millions of Americans have a chronic pain condition, as do over a billion people worldwide (Goldberg, 2014; NIH, 2015; Selznick, 2017). The ability to communicate about one's chronic pain is necessary for acquiring medical, financial, and social support, but communicating about pain is difficult and often associated with disbelief and stigmatization (Aste, 2016; Jackson, 2000; Rhodes et al., 1999; Wailoo, 2014).

Much of the scholarship on the communication of chronic pain claims that pain resists language (Scarry, 1987) and therefore can never be communicated well. Expanding from this idea, other scholarship has claimed that pain is an inherently subjective experience—that is, only the person experiencing the pain can ever truly understand what that pain feels like—and therefore, attempts to objectify pain, such as the Numerical Pain Rating Scale, are inadequate (Graham, 2015; Goldberg, 2014). These scholars recommend that the field of medicine learn to value subjective knowledge, arguing that pain can never be communicated well in objective terms. Although we agree that the field of medicine must value subjective knowledge, we undertook this research to counter the claim that pain can never be communicated in objective terms. Specifically, we undertook a mixed methods rhetorical analysis to determine the extent to which persons with chronic pain can and do communicate about their pain in objective terms.

For this research, we analyzed 2,105 tweets with the “MyPainDay” hashtag. The international #MyPainDay movement began in November 2017, to raise awareness about the daily struggles and experiences of people living with a chronic pain condition. Using an open-source program, we created an archive of 2,105 tweets from the first two weeks of the movement. Because quantification is the ideal form of objective knowledge in the field of medicine (Matthews, 1995; Porter, 1996), we coded the tweets for references to quantified elements of the chronic pain experience. Specifically, we coded for references to quantified time (clock time or calendar time), dosages of pain medication, expenses incurred due to health and disability issues, and any other quantified elements, such as distance in miles from one's home to one's healthcare provider. We hypothesized that because medication use and disability-related expenses are stigmatized, tweets were more likely to include references to quantified time. To expand on scholarship about the rhetoric of time, we also searched for references to qualified time (known as kairos), the much more frequently studied counterpart of quantified time (known as chronos, and the root of chronic pain). We used SPSS statistics software to compare the frequency and likelihood of use of the different types of quantified references in tweets about chronic pain experiences.

This presentation reports on the results of this mixed methods analysis and recommends to health communication scholars new avenues for research on the challenges of talking about, writing about, and otherwise communicating about chronic pain.

NEVER TOO SOON OR TOO LATE: At-Risk Young Adults' Knowledge and Information Seeking Regarding STD Screening and Treatment

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Background: After decades of declining reports of sexually transmitted diseases in the US, for the past four years, STD incidence has been on the rise. Nearly 2.3 million cases of chlamydia, gonorrhea, and syphilis were reported in 2017 which is 200,000 cases more than that reported in 2016 [1]. Older adolescents and young adults (aged 15-24) are at a higher risk of acquiring STDs and account for half of the cases of STDs reported each year. About 45% of the reported cases of chlamydia in 2017 were among females between the ages of 15 and 24. Early detection through screening is critical for reducing the complications of infection and for preventing the transmission or acquisition of STDs. Most cases of STDs are asymptomatic and go undiagnosed which is why the CDC recommends routine STD screening for sexually active young adults [2] but uptake continues to be suboptimal among this group [3, 4]. Why are STDs on the rise particularly among young adults? While there are a number of efficacious intervention programs for preventing STDs and reducing associated sexual risk behaviors [5], exposure to these campaigns seems to be limited. Lindberg, Maddow-Zimet and Boonstra [6] found significant reductions in adolescents' exposure to formal sex education from schools and other community institutions between 2006–2010 and 2011–2013. Largely abstinence-based instruction has led to critical gaps in the types of information provided to adolescents (e.g., STD prevention, testing and treatment) and the mistiming of information (e.g., instruction received after sexual debut). Carr and Packham [7] analyzed the causal effects of state-level sex education policies from 2000–2011 on various teen sexual health outcomes and found that students who had never been exposed to comprehensive sex education were more likely to exhibit higher STD rates.

Method: The purpose of this study was to explore sexually active young adults' knowledge about and information seeking regarding STD testing and screening. We conducted four 1.5-hour focus group sessions (2 for each gender) with 15 males and 21 females (ages 18-24). Six coders used inductive thematic analysis to extract themes grounded in illustrative quotes obtained from FGD participants. Atlas ti was used to generate concept maps of themes linked to the coded data.

Main Findings: Participants revealed a general lack of knowledge about STDs and available services as well as limited exposure to comprehensive STD information – citing limited sex education received during K-12 as their main source of information. Most participants were not aware about the nature of STD testing and received little information about screening from traditional channels. Many cited their peers as their main source of information about sex but they rarely talked about STDs, testing and treatment. Results also revealed many points of misinformation and interesting gaps in knowledge, which for those who grew up during the AIDS scare, might consider very basic. The findings underscore the need for comprehensive sex education for adolescents and the need to increase exposure to effective STD prevention campaigns and programs among sexually active young adults.

The effect of public health information scanning on preventative behaviors during the Zika health crisis

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Background: During public health situations like pandemic outbreaks, the public are routinely exposed to information driving preventative health behaviors. While communication experts believe that crisis information can make the public aware of the health threat, few real-time empirical studies have examined whether and how information received (i.e., information scanning) from various media sources promote preventative behaviors to reduce the spread of disease outbreaks. In 2015, the Zika outbreak surfaced in Latin America, creating a worldwide menace in the subsequent years. This offered an opportunity to study how public health messages influence public response. Using the Protection Motivation Theory (PMT) as a lens, this research specifically assesses the impact of both traditional sources and new media sources in targeting PMT variables and preventative behaviors regarding mosquitoes.

Methods: The research was conducted in the context of the Singapore Zika outbreak (where the first locally transmitted case was reported in 2016 and which remains a threat). A nationally representative sample of 1,000 Singapore residents completed a survey that investigated the effects of information scanning about Zika from six sources (i.e., local government, traditional media, Internet media, social media, personal networks, and healthcare professional) on preventative behaviors against mosquitoes. Four components of PMT (i.e., perceived susceptibility and severity of Zika, response-efficacy and self-efficacy in preventing mosquitoes) were also explored as the mediators. Path analysis was then conducted to assess the impact of various information sources and the public's protection motivation against mosquitoes.

Results: The data analysis and findings surfaced three key findings. Firstly, there were no differences between the amount of Zika information received across different sources. Secondly, information scanning from traditional media, local government, and healthcare professionals predicted more preventative behaviors. The more people received information from traditional media, the more they perceived Zika as a severe disease, and the more they performed mosquito preventative behaviors. The more people received information from local government and healthcare professionals, the more confident they were in preventing mosquitoes, and the more they performed the preventions. In stark contrast, thirdly, information scanning from personal networks, Internet media, or social media had no effect on preventative behaviors.

Conclusions: This study is amongst the first to empirically examine the effect of information scanning on preventative behaviors in a major global health crisis. Our findings suggest that while new media is an emerging platform for health communication, traditional information sources are still the predominant sources that effectively promote preventative behaviors during a health crisis. Communication through new media should be further researched to maximize the full potential of these sources to impact positive health behavior change. Our findings have significant theoretical contributions in understanding the effects of health messages on promoting public responses to urgent health threats.

Longitudinal effects of intergenerational health education intervention for hypertension prevention on children and family members

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Hypertension is a leading risk factor to many co-morbid cardiovascular diseases and its risk increases with age.² However, a quarter of Singapore elderly are currently unaware of having hypertension and do not manage it.³

Recommendations for managing and preventing hypertension include self-monitoring and simple lifestyle changes.⁴ Compliance to these recommendations, however, are lacking, with many citing challenges in knowledge and circumstance.⁵

Lifestyle recommendations and monitoring are simple and suitable for teaching to young audiences. We deployed an intergenerational educative intervention to reach both students and their adult and elderly family members (AEFM) to increase knowledge and self-efficacy of hypertension prevention actions.

We utilized a two-condition design: Pilot vs Control, where grade five students bring/do no bring home the blood pressure (BP) monitor. The students were taught protective healthy lifestyle habits and were involved in a demonstration and hands-on BP measurement practice using the Omron BP HEM 7203. Thereafter, all students were given BP brochures and those in the Pilot condition were loaned a BP monitor to bring home to their families for one or two days.

All students were instructed to share the information they had learned with their families. Those in the Pilot condition were asked to perform BP measurements on different AEFM. Pre-intervention (T1), post-intervention (approx. 2 weeks later/T2), and longitudinal (approx. 3-6 months later/T3) surveys were administered to students and one AEFM. Knowledge, response cost (barriers to BP self-measurement), self-efficacy, and intention to perform BP measurement were assessed for AEFM. Knowledge and confidence in knowledge-sharing were assessed for students. Participants who completed all three surveys were included in the final sample, which comprised of 514 grade five students and 251 AEFM (aged 21 and above) from six schools. Data were analyzed using Repeated Measures ANOVA.

Self-efficacy of AEFM in Pilot condition showed significant increases at T1-T2, declined from T2-T3, but retained significant gains at T1-T3 whereas Control condition showed no significant differences across time. AEFM knowledge increased significantly from T1-T2 but decayed to a non-significant gain at T3 for both conditions. Response cost for both conditions reduced significantly from T1-T3. AEFM intention increased significantly in the Pilot condition but decayed to non-significant gain at T1-T3 whereas the Control condition showed no significant differences across time.

Knowledge of students from both conditions showed significant increases at T1-T2 and maintained significant gains longitudinally at T1-T3 despite declining at T2-T3. Confidence in knowledge sharing for both conditions increased significantly from T1-T2 and maintained significant gains at T1-T3; there was a significant decline at T2-T3 in the Control condition but not the Pilot condition.

Our intervention was successful in increasing AEFM self-efficacy and decreasing barriers to BP self-monitoring longitudinally as well as improving students' knowledge and confidence in knowledge sharing longitudinally. Favorable outcomes were more likely to be sustained longitudinally in the Pilot than in the Control condition. We recommend that future programs enable students to bring home the BP monitor over a longer period so that they can perform more BP measurements to consolidate learning gains.

The “Magic Fix”: Nature and Potential Consequences of Health Care Providers’ Talk about Antibiotics in Acute Care Visits

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In the U.S., approximately 50% of antibiotic prescribing for upper respiratory tract infections (URIs; e.g., colds, bronchitis, sinusitis) is unnecessary (Fleming-Dutra et al., 2016), contributing to the rapid rise of antibiotic-resistant infections (Smith et al., 2015; CDC, 2018). Healthcare providers frequently attribute injudicious prescribing to patient expectation for antibiotics and concern for patient satisfaction (McKay et al., 2016; Yates et al., 2018). However, providers may significantly overestimate patient expectations (Mangione-Smith et al., 2001; McKay et al., 2016) and could underestimate their own potential to influence patient knowledge and behavior (Cabral et al., 2016; MacGeorge et al., 2017). Recent work (Foley et al., 2018) also suggests that providers’ own ways of talking about antibiotics in medical encounters could inadvertently sustain inappropriately positive views of antibiotic treatment and thereby undercut motivation for antibiotic stewardship. To support the development of effective provider strategies for communicating about antibiotics with patients, the current study was designed to address the following research question:

RQ: How do providers discuss the value of antibiotic relative to non-antibiotic treatments in the course of medical visits for URI where they do not prescribe antibiotics?

Method: Qualitative discourse analysis was conducted on transcripts of provider-patient interactions (patient N = 409; provider N = 18) extracted from a larger study of medical visits for URI symptoms at a high-volume outpatient clinic (student health center at a large, residential northeastern university) between September, 2017 and April, 2018. These 409 visits involved patients who were ultimately not prescribed antibiotics. Visit recordings were transcribed verbatim by a professional transcribing service. Initially, five of the seven co-authors made detailed analytic notes on a 10% (N = 41) random sample of transcripts, focusing on a broader set of research questions relevant to the larger project. Variation in how providers’ discussed the value of antibiotic and non-antibiotic treatment emerged as one of multiple themes from this analysis. In a second and third round of analysis, the seven co-authors analyzed and discussed the remaining transcripts; results included sub-themes specific to the relative value of antibiotic and non-antibiotic treatment, as described below.

Results and Discussion: Providers routinely discussed antibiotics en route to recommending non-antibiotic treatments, and these discussions often characterized antibiotics as the superior, preferable treatment in various ways. Specifically, the analysis revealed four repeated themes across interactions: a) antibiotics are quick and easy (vs. non-antibiotic options are slow and effortful), (b) antibiotics are “treatment” (vs. not a real treatment) (c) antibiotics are reliable (vs. uncertain), and (d) antibiotics make providers and patients powerful against bacteria (vs. weak against viruses). Although each of these discourse themes contain elements of truth with regard to the efficacy of antibiotics against bacterial illness, they also have potential for fueling patient disappointment with treatment, misguided hope for contracting bacterial rather than viral illness, and resistance to antibiotic stewardship efforts. This analysis suggests that providers may can better support antibiotic stewardship by restraining positive talk about antibiotics when they are not warranted for the patient’s condition and instead emphasizing the appropriateness and efficacy of non-antibiotic treatment.

Social Strain and Type 2 Diabetes Risk among Adults in the U.S. and Japan

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Often conceptualized as the perception of receiving emotional or tangible aid when needed, social support is an important factor for a number of positive health outcomes (Umberson et al., 2010). For instance, social support has been linked with better treatment outcomes for individuals with a chronic illness (Trief et al., 2004), and fewer negative health behaviors such as smoking (Peltonen et al., 2017). In contrast, negative interactions such as criticism or unsolicited advice have been linked with poorer health including heart disease outcomes (Orth-Gomér et al., 2000). The present study examines a link between social support, strain, and Type 2 Diabetes (T2D) risk.

Health Context: Glycated hemoglobin (HbA1c) is a biomarker that indicates an individual's general glycemic control over the past two to three months (O'Sullivan et al., 2006). Within clinical settings, HbA1c is used as a way of monitoring patients with diabetes' blood glucose control over a two- to three-month period (Global Diabetes Community, 2015). HbA1c is also an indicator of T2D risk (Edelman et al., 2004).

Method: The present study uses wave 2 of the Midlife in the United States data and wave 2 of the Midlife in Japan sample of adults (see Ryff et al., 2007 and MIDUS, 2016 for more detail). Measures include composites of social support and strain from friends, family members, and spouse/partner, as well as relevant control variables. In order to reflect a pre-diabetes level, HbA1c was dichotomized to reflect levels of 5.7 or above (Mostafa et al., 2010).

Results: Two hierarchical logistic regression models were conducted to compare HbA1c's association with social support and strain among adults in two countries. Among adults in the United States, the results show that those who report high levels of support from friends are 18.4% less likely to have a high HbA1c level ($\beta = -0.20$, $SE = 0.09$, $p = .019$).

Conversely, among adults in Japan, those reporting higher levels of friends' support were twice as likely ($OR = 2.21$) to have high HbA1c levels ($\beta = 0.79$, $SE = 0.25$, $p = .001$). Higher levels of strain from a spouse/partner were associated with a 38.7% decreased likelihood of having high HbA1c levels ($\beta = -0.49$, $SE = 0.24$, $p = .04$). A similar relationship is seen with spouse/partner support. There is a 74.6% decreased likelihood of having high HbA1c levels for those reporting higher levels of spouse/partner support ($\beta = -1.36$, $SE = 0.31$, $p < .001$).

Discussion: This abstract summarizes an analysis of social support and strain's association with HbA1c levels using nationally representative data. Within both country's samples, higher levels of friends' support was associated with higher HbA1c levels. One reason for this may be due to the type of interactions that friends provide, compared with spouse or family support (LaGreca et al., 1995). The spousal strain and support results, with higher levels of both being associated with high HbA1c levels, may reflect health-related interactions among partners such as criticizing diet or supporting exercise attempts. Follow-up research is planned to further delve into these details.

A Parent's Dilemma: Communication Privacy Management and Parental Disclosure Decisions Regarding Adolescents' HIV Status

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In 2016, 2,225 children under 13 years were infected with HIV and 81% of these infections were due to perinatal transmission (Centers for Disease Control and Prevention, 2018). One difficult conversation facing both parents and pediatric health care providers is how and when to disclose HIV-status to these adolescents. The American Academy of Pediatrics (2013) encourages full HIV-status disclosure at a child's transition to adolescence. This information is essential for their ability to manage their health condition and prevent transmission to others. Parents struggle with determining whether, when, and how much of their private information to disclose to their adolescent so as not to disrupt the parent-adolescent relationship (Tenzek, Herrman, May, Feiner & Allen, 2013) or bring shame to the family (Li, Qiao, Harrison & Li, 2017). HIV disclosure may be especially difficult for the parent who transmitted HIV to the child because this disclosure might exacerbate feelings of guilt and a fear of difficult questions focusing on the parent's personal history. Furthermore, family privacy rules regarding health information are influenced by a family's communication patterns (Hays, Maliski & Warner, 2017). An additional challenge for providers is gaining an understanding of the communication patterns implicit in the family around disclosing private health information. Using Petronio's (2010) Communication Privacy Management Theory (CPBM), this qualitative study examines the management of family privacy boundaries within the context of pediatric health care.

Methods: A focus group was performed with seven health care providers at a hospital-based pediatric HIV clinic. A chart review was conducted with a culturally diverse sample of 40 patients. Demographic and anecdotal information, if available, was collected regarding disclosure conversations with patients and their parents from each chart. The anecdotal information was coded using codes developed directly from the data (emic) and data was also coded using concepts derived from Petronio's (2010) CPBM theory (etic).

Results: Findings from the provider focus group indicate that health care providers must navigate the tension between their obligation to inform patients about their HIV status and their perceptions of the internal family privacy boundaries around the HIV status information. Findings from the chart review indicate that providers insist that parents disclose an adolescents' HIV status when two emergent issues present. First, when patients are non-adherent and second, when the adolescent starts engaging in sexual relations. When these two emergent issues are absent, parents generally agree with the provider's recommendation to disclose HIV status when adolescents began asking many questions about the medications they were taking. In addition, sibling relationships have emerged as a possible factor influencing the disclosure process. Next, we will interview patients and parents about parent-adolescent communication about HIV status and other factors, such as sibling relationships, which may influence communication within the family and may play a role in the disclosure process.

Conclusion/Implications: These findings provide empirical support for CPBM theory and insight into the catalysts leading to disclosure of stigmatized health information. Results also have implications for supporting families for whom communication patterns around health issues are less open.

Coping with Health Effects of the Great Recession: The Role of Communication and Local Communities in Greece

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In 2008, a combination of factors led the global economy into a crisis, the magnitude of which the world had not seen since the Great Depression of the late 1920s and 1930s. In 2017, nine years later, the European Union's economy as a whole continued to struggle, as recovery has been uneven across member-states, and economic inequalities have deepened social and political divides across the continent along familiar lines; notably between the North and South. For several reasons, Greece has been at the epicenter of this ongoing crisis. The effects of the crisis have been widespread. Among the most alarming have been those on population health.

Health and well-being indicators in Greece have deteriorated sharply since the beginning of the latest economic crisis. In 2013, it was estimated that 60,000 individuals over the age of 65 were going without necessary medical care and that the proportion of Greeks seeking medical care at "street clinics" set up by the international non-governmental organization Doctors Without Borders had increased tenfold, from 3% before the crisis to 30% (Stuckler & Basu, 2013). Moreover, every year from 2009 onward and compared to 2007 (before the crisis), more Greeks indicated that their health was "bad" or "very bad." Since the onset of the crisis there has also been a substantial increase in the prevalence of depression among most age groups, with younger Greeks more likely to exhibit depression (Economou et al., 2013).

This paper reports on early findings of a project to identify strategies that individuals and families employed and continue to rely on to cope with health-related effects of the crisis. A key aim of the project has been to reveal determinants of successful strategies, emphasizing the roles of communication and local communities. The project is grounded in socio-ecological perspectives to health communication and public health. Central to the proposed study is the notion of a field of health action (FHA), which provides an ecological framework for understanding how a community's material environment together with residents' understandings of that environment influence health (Matsaganis & Golden, 2015).

The larger study was based on a mixed-methods research design. Findings reported in this paper are based on 45 semi-structured, in-depth interviews with residents, conducted face-to-face across four communities of Athens, the country's capital, but also on 20 interviews conducted with key personnel working in municipal and other local social services.

Findings speak to how residents of these four communities thought about the economic crisis and how they coped with its impact, particularly with respect to their physical and mental health. These qualitative data also speak to the perceived role of media during the crisis and how they affected individuals' mental health, the initiatives undertaken by municipal social services and other local organizations to help residents cope with the crisis, and challenges in connecting residents in need to available resources. Analyses provide insight into how to better prepare local communities to effectively cope with economic crises and their health-related effects.

Meeting the Challenges in the Communicative Construction of Meaning in Chronic Pain Treatment

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At least 100 million Americans suffer from chronic pain; pain is a major cause of suffering, disability, and healthcare utilization. Communication is an integral—but often overlooked—aspect of pain management. Communication is involved in initial pain assessment and history taking, discussing and deciding on treatment plans, and evaluating and adjusting these plans. The centrality of communication is especially evident given that no “objective” measure of pain is available, and traditional imaging results (e.g., MRIs, X-rays) often fail to provide relevant diagnostic information. Thus, for a pain clinician, communication with the patient is the single most important source of information. However, reliance on communication about chronic pain presents unique dilemmas. The literature describes mutual distrust and discord between patients and providers, often centering around disagreements about opioids. Although some approaches to improving pain management have sought to improve communication, these approaches have largely focused on skills, such as shared decision-making or improving patient engagement. While these approaches can contribute in important ways to communication about pain management, they represent a limited and limiting range of opportunities for improved care.

The skills approaches that dominate efforts to improve communication in pain care reduce communication to discrete instrumental communication tasks rather than providing a comprehensive, powerful, and practical understanding of the nature of communication. For instance, one of the most influential frameworks for teaching and assessing communication skills training in medical schools, the Kalamazoo Consensus Statement, casts the “essential elements of communication” as set of seven tasks or skills (Makoul, 2001). In six of these, communication is implicitly conceptualized as a linear or unelaborated transactional process: opening discussion, gathering and sharing information, understanding the patient’s perspective, providing closure. Only in its consideration of a seventh skill, “the fundamental communication task” of building a relationship (Makoul, p. 391) does the consensus statement broach the idea that communication is not simply uni- or bidirectional transfer of information, but a constructive process (Pearce, 1989). However, rather than explaining the nature of this communication process, the Consensus Statement foregrounds relational conceptions of healthcare (“patient-” and “relationship-centered” care). The nature of communication per se is ignored.

We argue that the skill-centered approach is not well adapted to the challenges of the treatment of chronic pain. Linear and simple transactional views of communication provide little insight into the vicissitudes, uncertainties, and complexities of the experience of pain, pain treatment, patient and provider identities, provider-patient relationships, and the broader complexes of social, cultural, economic, and political meanings that shape these encounters. Even more sophisticated training in relationship building skill generally does not provide explicit instruction about the nature of the communicative construction and negotiation of meaning. As a result, current approaches to improve communication, informed largely by a linear view of communication, have yielded limited results. We argue that conceptualizing communication as the co-construction of meaning is essential for providers to effectively address the uncertainties and other troubling meanings that pervade the experience and treatment of chronic pain. Only then will we make important advances in improving pain care.

Cross-national Coverage of Promoting Condom Use: Testing Community Structure Theory

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Community structure theory (Pollock, 2007, 2013, 2015) was used to compare cross-national newspaper coverage of condom promotion in leading newspapers, one per country, in 18 countries, analyzing articles of 250 words or more from January 22, 2006 to October 3, 2016. The resulting 159 total articles were coded for “prominence” and “direction” (“government responsibility,” “society responsibility,” or “balanced/neutral” coverage) and combined into composite “Media Vector” scores for each newspaper (range 0.25 to -0.4543, a total range of 0.7043). A majority, 15 of 18 (83.33%) of Media Vectors reflected “government responsibility” for promotion of condom use.

Pearson correlations revealed three significant indicators associated with a “vulnerability” reporting pattern (confirming coverage mirroring the concerns of vulnerable groups: Pollock, 2007, p. 137) were linked with coverage emphasizing “government” responsibility for promotion of condom use. Specifically, percent of agricultural land in a nation ($r= 0.496$, $p= 0.018$); percentage of permanent cropland ($r= 0.496$, $p= 0.018$) – both indicators of national vulnerability to capricious variations in international commodity prices; and Global Peace Index, in reality a measure of “instability” ($r= 0.460$, $p= .028$), were all associated with more media emphasis on “government” responsibility for promotion of condom use. A regression analysis revealed percent of agricultural land and instability (respectively, 24.9% and 14.7% of variance) as the two most significant variables, collectively accounting for 39.6% of the variance. Contrary to conventional assumptions and previous scholarship (Donohue, Tichenor, & Olien, 1995) that media typically act as “guard dogs” reinforcing the interests of political and economic elites, this systematic research on national-level demographics closely linked “vulnerable” national-level indicators with media emphasis on “government” responsibility for condom use.

Empirically, measures of “vulnerability” -- economic vulnerability manifest in dependence on agriculture and cropland, and political instability – are closely linked to cross-national media emphasis on “government” responsibility for promoting condom use. Methodologically, combining measures of both “prominence” and “direction,” highly sensitive Media Vectors highlighted the capacity of media to reflect community measures of “vulnerability” Theoretically, emphasizing the influence of local/domestic demographics, community structure theory complements agenda-setting theory at the national level, re-confirming the empirical findings of an original founder of agenda-setting (Funk & McCombs, 2015), that both media themselves (agenda setting) and national demographic characteristics/concerns (community structure) can affect coverage of critical global and national issues.

Examining Student Definitions of Sexual Assault Before and After a Major Event

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Background: Sexual assault is a prevalent problem for college students in the US, as it is estimated that 23.1 percent of female and 5.4 percent of male undergraduates have experienced rape or sexual assault during their time in college. Media coverage continues to increase around social movements such as #metoo, which have been in response to multiple sexual assault allegations on widely known individuals, including Larry Nassar, a previously well-respected physician for Michigan State University (MSU) and USA Gymnastics. Research is needed into the possible implications of this inundation of media coverage displaying the pervasive, systemic impacts of sexual assault within our society.

Objective: The objective of this work was to explore students' definitions of sexual assault and how one specific publicized case of sexual assault, that of former MSU physician, Larry Nassar, may have impacted college students' knowledge and understanding about sexual assault.

Methods: An online survey was administered to MSU students. Inclusion criteria included being an active student and being between the ages of 18-25 years of age. Students were prompted to define sexual assault. Definitions were hand-coded into themes, including 1) Completely accurate definitions, 2) Confusion between sexual assault and sexual harassment, and 3) Completely inaccurate definitions. Themes were based on use of the university's definition of sexual assault. Coders first established inter-coder reliability on a sub-set of the definitions (n=20%), with any disagreements being resolved via discussion. The remaining definitions were randomly assigned to coders.

Results: After duplicates and incomplete responses were removed, a total of 560 students completed the survey either pre or post the event (pre: n=397; post: n=163). Approximately 86 percent of participants were between 19-22 years old. The majority of participants identified as male (63%), and described themselves as white (62%). Based on the data, many students' definitions portrayed a confusion between what constitutes sexual assault versus sexual harassment and this confusion was not alleviated after the event (at post-test). Additionally, it was determined that definitions of sexual assault in the post-event group were statistically significantly more accurate than those from the pre-event group ($U = 29463$, $p = .046$), indicating that individuals who participated in the research after the event (at post-test) were more likely to fully comprehend and define sexual assault.

Conclusions: This study sought to understand the impact of the media coverage of the Larry Nassar case on college students' understanding of sexual assault. Students were better able to accurately define sexual assault after the media coverage had begun about the Larry Nassar case. We posit that the pervasive coverage about this event positively impacted students' understanding of sexual assault, specifically their ability to define it. Additionally, we propose that knowledge gain through repeated exposure may impact disclosure and reporting over time. However, more research is needed in this area as other work indicates that knowledge gain alone does not necessarily lead to behavior change.

The Effect of Participation in Korean Thyroid Cancer Patients' Online Community to Patient-Provider Interaction

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As patients became the most significant stakeholders for their survival, healthcare organizations strived to satisfy healthcare needs of the public and maintain ongoing relationships with patients. Moreover, the social media has been used to promote patients to become more empowered not only by providing patients with more health information but also by allowing them to develop online patient communities through which they can share various kinds of computer-mediated social supports. While South Korea is considered one of the fastest growing social media users, it is not clear the relationships among computer-mediated social support, patient and doctor-patient communication. During November 2017 to January 2018, a total of 272 Korean thyroid cancer patients responded to surveys regarding the influence of online community activity on doctor-patient communication. A path analysis was used to analyze the relationship between Korean thyroid cancer patients' online community activity and perceived social support, and the relationship between perceived social support and their behavioral intention to participate in doctor-patient communication. The results show that the more Korean thyroid cancer patients participated in online communities, the greater they showed perceived social supports from online community members. This study also indicates that Korean thyroid cancer patients have actually perceived informational, emotional, and esteem support from online community members. Moreover, patients who participated in online community activity had a strong intention to actively participate in patient-provider interactions. The findings from this study will not only contribute to the theoretical understanding of computer-mediated social support but also provide fundamental knowledge about patient-provider interaction for healthcare specialists.

Nationwide Newspaper Coverage of Gun Safety: Testing Community Structure Theory

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A community structure analysis (Pollock, 2007, 2013, 2015) compared city characteristics and a national cross-section of coverage of gun safety in newspapers from 21 major U.S. cities, sampling 250+ word articles from 06/12/16 to 11/05/18. The resulting 388 articles were coded for editorial “prominence” (placement, headline size, article length, number of graphics) and “direction” (government responsibility, society responsibility, or balanced/neutral: coverage). The scores were then combined to yield each newspaper’s composite “Media Vector” (range = .5128 to -.3478, or 0.8606). Sixteen of 21 newspapers (76%) manifested media coverage emphasizing “government” responsibility for gun safety. Community-level measures of families with children of different ages (“position in lifecycle”) and health care access drive US coverage of gun safety. Political partisanship (Democratic, Republican) doesn't matter. Children do.

Overall, a “position in life cycle” hypothesis (coverage reflecting the interests of families with children of distinct ages) was confirmed. Higher percentages of families with young children ages 6 to 12 ($r = .430$, $p = .029$) and to a lesser extent children under 6 ($r = .286$, $p = .111$) were linked to “more” media emphasis on government responsibility for gun safety, perhaps reflecting special concerns for young children following the Sandy Hook, Connecticut grade school massacre. By contrast, higher proportions of families with children 13-17 were directionally linked ($r = -.344$, $p = .063$) to coverage emphasizing “less” government responsibility for gun safety, consistent with prior research (Pollock, 2007, pp. 171-183) suggesting that families with older teens, who are disproportionately both victims and perpetrators of gun violence, may manifest a “vigilante” self-protection perspective regarding gun safety.

By contrast, a “buffer- healthcare access” hypothesis (municipal spending on healthcare and availability of hospital beds and physicians -- indicators of an economically “buffered”/privileged population -- are linked to coverage reflecting human rights claims; Pollock, 2007, p. 99) was disconfirmed. The greater percentage of hospital beds ($r = -.409$, $p = .037$) and, directionally, of municipal spending on health and welfare ($r = -.344$, $p = .063$), the “less” media emphasis on government responsibility for gun safety. These 2016-18 findings contrast sharply with earlier 2013-16 research finding “more” nationwide media emphasis on gun safety associated with both physicians and hospital beds/100,000.

Regression analysis yielded greater proportions of families with children ages 6 to 12 accounting for 19.6% of the variance associated with media coverage emphasizing “more” government responsibility for gun safety. However, the number of hospital beds per 100,000 (19%) and spending on health and welfare (5.3%) combined for 24.3% of the media variance, emphasizing “less” government responsibility for gun safety.

Empirically, nationwide media coverage of gun safety displays greater emphasis on government rather than societal responsibility. Methodologically, the calculated Media Vectors sensitively portray combinations of “prominence” and “direction” to reflect communities’ perspectives on gun safety responsibility. Theoretically, by emphasizing the influence of local demographics, community structure theory complements agenda-setting theory, one study by an agenda-setting founder (Funk & McCombs, 2015) highlighting empirically the way both nationally prominent newspapers and local demographics affect coverage of significant human rights issues.

Examining Data Visualization vs Game-Based Approaches for Educating Young Adults About the Hazards of Prescription Drug Abuse

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Currently, the use/misuse of opioids in the U.S. has been categorized as a national epidemic, presenting a devastating public health crisis (HHS, 2017) with approximately 120 people dying each day from opioid-related causes (CDC, 2017). After marijuana, prescription drugs – including opiates – is the second most common form of illicit drug use among youth, with an estimated 2.5 million Americans ages 18 to 25 suffering from some level of opioid use disorder (SAMHSA; 2016). Research indicates that opioid dependency among youth has detrimental consequences, such as educational failure, criminal activity, higher risk of human immunodeficiency virus (HIV) transmission, and heroin abuse among others (SAMHSA, 2013). Furthermore, an estimated 80% of heroin users report to have first misused prescription opioids (Muhuri et al., 2012).

Despite prevention efforts, opioid overdoses are on the rise -- 2017 saw an increase of 30% in 45 states from 2016, with the Midwest increasing at an alarming rate of 70% (Vivolo-Kantor, 2018). Beyond the consequential effects on human life, the opioid crisis carries an “economic burden” of \$78.5 billion annually (CDC, 2018), thus making interventions critically important. Given the susceptibility of youth for opioid misuse efficacious, cost-effective tailored interventions that address the specific norms, attitudes (e.g., self-perceptions of risk), and behaviors of this age group are critical.

Previous studies have found multichannel interventions to be efficacious in drug misuse prevention (ONDCP, 2018). The overarching goal of this project is to test the efficacy of health communication strategies using different levels of interactivity as potentially efficacious and innovative approaches for educating young adults about prescription drug abuse and increasing their self-perceptions of risk. As such, the current study examines key differences among two approaches: (1) interactive data visualization which optimizes user experience and knowledge acquisition by translating large data information to lay audiences in innovative and accessible ways; and (2) game-based experiential interaction that presents information within a personalized narrative experience that counteracts reactance, message resistance, and disrupts ideologies and held schemas within a protected environment. Of particular interest is evidencing the underlying mechanisms of each strategy, as well as providing a robust understanding of the conditions necessary for the efficacious use of a specific channel or a combination for additive effects.

A randomized controlled trial (RCT; pretest-posttest design) will be conducted to compare the efficacy of interactive data visualization and game-based experiential interaction designed to promote positive attitudinal and behavioral outcomes related to prescription drug abuse, such as reducing risky behaviors and engaging in preventative strategies. We will be presenting preliminary results of Phase 1 of the project which is focused on developing and pretesting the two interactive approaches among young adults, ages 18-25.

Examining the Role of Culturally-bound, Experiential Training for Increased Engagement

Juan Sebastian Muhamad, Florida State University

Hispanics represent the fastest growing racial and ethnic group, at 16.7% of the total U.S. population (CDC, 2014). Although the fastest growing ethnic group in the U.S., recent data suggests Hispanics have the lowest rates of autism spectrum disorders (ASD), with rates of 2 to 3 times higher among white, Non-Hispanic counterparts (Palmer et al., 2010). According to the American Psychiatric Association (2013), autism spectrum disorders (ASD) consists of a succession of complex neurodevelopmental disabilities affecting one or more areas of development (social, emotional, communicative, or behavioral). To date there is a lack of clarity on whether there is a lower prevalence of ASD among the Hispanic population or if it is an issue of underdiagnoses. Evidence does suggest, however, that Hispanic children are diagnosed at an older age than white, Non-Hispanics (Mandell et al., 2002).

Given the growing prevalence of various forms of neurodivergence (e.g., autism spectrum disorder, sensory integration disorder) among minorities, it has become essential to examine the ways in which to develop targeted interventions with the purpose of increasing participant engagement and prosocial attitudinal and behavioral change. Currently, the vast majority of interventions focusing on minorities stem from evidence-based practices developed from the study of white sample groups (Mandell et al., 2002). Unfortunately, more often these interventions tend to be translations of English-based programs and as such often lack culture-specific competencies. Within these attempts at tailoring to a specific minority group it is often the case that interventions hinge on generalizations. Among Hispanics it is often macro concepts such as collectivism, family values, and religion that garner all the attention. All valid, these are only single components of a multidimensional identity.

Given the complexities of identity, for this study Hispanic identity is conceptualized as multidimensional (e.g., varying levels of assimilation, enculturation, acculturation) and complex (e.g., immigrant, transnational, exile). In order to examine feasibility of specialized training modalities, this study will investigate engagement through cultural and systemic frameworks. This study explores mechanisms that might enhance communicative efforts (e.g., engagement, reciprocity) through the implementation of specialized training for school-based therapists. Through examining the role of culture, disparities in diagnosis, and treatment, as well as both, traditional and nontraditional treatment methodologies, this study lays the foundation for understanding the needed specificities for interventions aimed at Hispanic populations. More poignantly, there exists a significant gap in the literature on potential barriers to parent engagement that might manifest due to therapist culture schema and training.

Curbing Excessive Pornography Consumption Using a Health Message and a Relationship Role Identity-Based Message

**Krishnamurti Murniadi, Universitas Prasetiya Mulya
Nichole Egbert, Kent State University**

Introduction: The advent of Internet technology allows many communication activities to move online. One of those activities includes pornography. Unfortunately, excessive consumption of pornography leads to detrimental effects. This study addresses the health issue of sexual compulsive and at-risk pornography consumption. Specifically, this study investigates what kind of persuasive messages would deter individuals from viewing pornography excessively.

Fear appeals are popular tools to use in persuasive health messages. Of all the fear appeal models, Extended Parallel Process Model is the most theoretically extensive. EPPM states that perceived threat is moderated by perceived efficacy in creating behavioural intention. However, health messages using the EPPM at times fail to create adequate levels of fear and/or efficacy due to: (a) presenting the wrong threat and (b) message failure in building self-efficacy among audience. Hence, this study introduces the concept of social threat within EPPM, which can be induced by making social identity more salient. One social identity that is relevant in addressing the issue of pornography is the identity of being a romantic partner.

Methods: Men between the ages of 18-75 who viewed pornography and were in a romantic relationship were recruited (N=137). First, they filled out a questionnaire that measured their level of relationship role identity importance. After that, they were randomly divided into two groups who were exposed to two different fear appeals messages that have previously been tested in terms of their credibility and believability. The first group (n=67) read information about health risks that would affect the person should he continue his pornography consumption along with information on how to limit his pornography consumption (health message). The second group read (n=70) read information about how pornography habit might hurt his romantic partner together with information on how to limit his pornography consumption (relationship message). Next, the perceived threat and the perceived efficacy of the two different groups after viewing the messages were measured before finally their behavioural intention on changing their habit were measured.

Results: hierarchical multiple regression analyses indicated that: (a) perceived efficacy solely predicted behavioural intention for both the first group receiving the health message ($\beta = .35$) and the second group receiving relationship messages ($\beta = .21$) suggesting an additive model of EPPM, and (b) level of relationship role identity importance was moderated by perceived threat in predicting behavioural intention for those receiving the relationship message ($\beta = .21$).

Conclusion: identity is an important factor to examine in subsequent studies involving fear appeals messages within excessive use of pornography context. The findings of this study could also benefit other health message designers. There different methods and variations in delivering fear appeals messages, such as by highlighting individual differences in terms of their identity.

Effects of Time Orientation and Episodic Future Thinking on Responses to Health Warning Messages

Xiaoli Nan, University of Maryland
Yan Qin, University of Maryland

Past research has consistently shown that people have the tendency to discount future outcomes. However, most health messages emphasize the long-term consequences of behaviors. Building upon past research on temporal discounting, time orientation, and construal level, the current research examines how dispositional time orientation (present and future) predicts health behavior intentions and the impact of situationally activated future orientation through episodic future thinking (EFT) on the persuasiveness of long-term health warnings. An online experiment was conducted with 946 African American smokers randomly assigned to engage in either future thinking or present thinking prior to viewing a series of graphic cigarette warning labels. Results suggested that a stronger present time orientation predicts greater intentions to smoke while a stronger future time orientation predicts greater intentions to quit smoking. Additionally, future (vs. present) thinking significantly increased intentions to quit smoking through enhanced perceived self-efficacy for quitting smoking. Theoretical and practical implications of the findings are discussed.

I Will Never Be Cut: An Analysis of a Campaign Against Female Genital Mutilation

Liza Ngenye, La Sierra University

It is estimated that more than 200 million girls and women around the world have undergone female genital mutilation, and 3 million girls are at risk every year. To understand this global phenomenon, The Guardian, a British newspaper, publicly posted an investigative film that interviewed victims and campaigners against Female Genital Mutilation in Kenya. The investigative film provided the basis of this paper to analyze the issues behind the practice of FGM, and explore efforts to curb its spread in a community in Kenya. Using qualitative textual analysis, this paper employs Diffusion of Innovation Theory as a framework to understand how public health campaigns can penetrate existing societal and cultural beliefs by introducing alternative health practices. This paper demonstrates how community-based interventions produce effective public health outcomes.

ADEPT: Building a Model of Communication for Athletic Training Students

Candy Noltensmeyer, Western Carolina University

Scott Eldredge, Western Carolina University

Meissa Snyder, Western Carolina University

Kahanov (2001) found that communication skills are among the most important characteristic when hiring an athletic trainer. This finding is reflected in the newly adopted standards by the Commission on Accreditation of Athletic Training Education (CAATE) that go into effect July 2020. Three standards fall under the core competency of patient-centered care which views communication as an essential skill and one that is needed in athletic training curriculums.

Because patient-centered communication involves the provider effectively assessing patient preferences for their level of participation and amount of information (Silverman, Kurtz, & Draper, 1998), the challenge is to develop a model of communication that incorporates a relational approach to the interaction, understands the patient's needs and motivations, and allows for flexibility in the use of a variety of communication behaviors and messages to support both relationship-building and information-gathering. Thus, the ADEPT model, as presented here, is designed to teach Athletic Training students communication behaviors that fall in line with a patient-centered approach while also encouraging the patient to perform communication behaviors that help them achieve their goals and fully participate in the medical alliance. The ADEPT model is an acronym that stands for the four communicative areas of focus: Assess, Disclose, Empathize, and Perspective Taking. These four areas conceptualize a relational approach to effective patient-provider communication by focusing on specific communicative concepts in a given interaction. This poster will explain the four quadrants of the ADEPT model, best practices for teaching the model, and discussion on the value of the model within health-related curriculum.

**A Bruise Without a Name:
Investigating the Terminology of Intimate Partner Violence**

Karin Nordin, George Mason University

The language used in health campaign efforts to target collegiate victims of intimate partner violence (IPV) can impact the effectiveness of prevention messages (Lederman & Stewart, 2003). The purpose of this study was to understand how demographic factors (couple marital status, perpetrator gender) and situational factors (provocation) impact bystander preferences for intimate partner violence terminology. 498 college students from a large southern public university participated in a 2 x 2 x 2 experiment where they read a vignette depicting intimate partner violence and rated the appropriateness of various IPV terms. A MANOVA showed main effects for marital status, perpetrator gender, and provocation on recommended terminology. Bystanders were most likely to rate the term “domestic violence” as appropriate when the perpetrator was male, the couple was married, and the violence was unprovoked. Appropriateness of the term “domestic violence” and “intimate partner violence” also positively correlated with ratings of vignette severity, and negatively correlated with victim blame. Overall, the results of the study indicate the need to expand college students' held definitions of what “counts” as IPV, and point to terminology choices as an area worthy of future health communication research. Implications for health communication campaigns and future research directions are discussed.

Red Flags Raised: A Theory of Planned Behavior Analysis of an Intimate Partner Violence Campaign

**Karin Nordin, George Mason University
Andie Malterud, George Mason University**

College students believe intimate partner violence (IPV) is difficult to identify and struggle to help peers who may be victimized (Fifth & Pacific, 2010). Consequently, teaching bystander intervention behaviors has been a significant focus of IPV research over the past decade (Jouriles, Krauss, Banyard & McDonald, 2018). College campuses using bystander intervention programs have significantly lower victimization rates than those without such programs (Coker, Fisher, Bush, Swan, Williams, Clear, & DeGue, 2015).

The Red Flag Campaign (Virginia Sexual and Domestic Violence Action Alliance, 2007) was designed to be a low-cost tool colleges and universities could implement to increase bystander intervention behaviors. The campaign uses a series of posters to highlight behaviors that might be warning signs of IPV, followed by example responses which encourage friends and peers to intervene verbally.

This study surveyed 300 college students at a large Mid-Atlantic University. Participants were either exposed to the Red Flag Campaign poster or put into a control condition with no exposure to the campaign. Using the Theory of Planned Behavior as a framework, participants were asked about their perception of social norms, their attitudes, self-efficacy, and behavioral intentions regarding IPV bystander intervention. Results will determine if the Red Flag Campaign is an effective method to increase college student's bystander intervention intentions when witnessing IPV. Implications of this study could determine if this campaign is effective and if it should be adopted by other campuses. We predict the gender of the bystander will impact willingness to intervene in IPV situations.

**Hooking Up in College:
Predicting Sexual Behavior using the Theory of Planned Behavior**

**Syahgena St. Onge, George Mason University
Hilda Patricia Garcia, George Mason University**

The high susceptibility of college students to risky sexual practices is not surprising. Such behaviors could range from conventional dating norms to the increasingly popular “hooking up,” a brief sexual encounter between two strangers or acquaintances. Given the increasing prevalence of STDs incidence and the popularity of hookups, more research should be conducted to enhance practitioners understanding of what motivates students to engage in such behavior, to better develop appropriate educational campaign and intervention programs. Our study uses the theoretical model of the Theory of Planned Behavior to assess predictive factors of hooking up among students (N=174) in a highly diverse East Coast university in the United States. Two regressions and two multinomial logistic regressions were conducted to investigate the predictors to hookups. Findings suggest that attitude, perceived behavioral control, and past behavior are strong predictors of hookup intention. Subjective norms, however, do not predict intention to hookup, suggesting that what other think or do in terms of hookup does not impact students' intention to hookup. Following this findings, public health practitioners should focus on attitudes and perceived behavioral control as important variables in developing their health communication interventions to reduce the prevalence of STDs incidence among college students. The current findings may inform future research to assess the differences among different cultural groups to analyze the importance of subjective norms in each cultural/ethnic group.

Emergency Department Nurses' Engagement in Stigma Communication When Discussing Substance-Using Patients

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Hospital emergency departments (ED) are experiencing increased visits by people who use substances (PWUS; CBHSQ, 2012). Since healthcare settings are one context where PWUS experience stigmatization (Chang, Dubbin, & Shim, 2016), it is possible that PWUS are stigmatized when visiting EDs. Such stigma is constructed through communication and leads to message reactions such as the development of stereotypes, and message effects, such as dissemination of the stigma message (Smith, 2007). These outcomes have detrimental impacts on PWUS as the stigma is further perpetuated (Brener, von Hippel, von Hippel, Resnick, & Treloar, 2010). Since nurses typically spend the most time with patients in the ED setting, the current study sought to understand if and how ED nurses engage in stigma communication when discussing substance-using patients.

A phenomenological approach guided 12 semi-structured interviews with practicing ED nurses. Participants were recruited through nursing groups on Facebook and received a \$25 gift card as incentive for participating in the study. Following confirmation of informed consent, nurses responded to prompts like: “How do you determine if a patient is abusing substances?”, and “Describe a recent interaction you had with a patient who abuses substances.” Saturation was confirmed and transcriptions of the interviews, totaling 153 pages, were analyzed utilizing Atlas.ti and Tracy’s (2013) iterative approach.

Findings revealed ways that ED nurses mark, label, attribute responsibility, and associate peril with substance-using patients, therefore indicating that ED nurses engage in stigma communication (Smith, 2007) when discussing substance-using patients. Marks included ways nurses recognized patients as being PWUS: “They just have the track marks...they've got the needle marks all up their arms.” (Participant 4). Labels such as ‘drug-seeker’, ‘frequent flyer’, and ‘meth-head’ functioned to indicate that substance-using patients belonged to a separate social entity. ED nurses often attributed responsibility for the substance abuse to the patient: “the heroin users are typically—sometimes they're just angry with the world and angry at life because they know their life sucks because they destroyed it.” (Participant 11). Finally, ED nurses discussed the social and physical peril of caring for substance using patients: “They take a lot of time that you could be using on other patients.” (Participant 11). Together, these context cues form stigma messages as defined by Smith (2007).

This study exemplifies a need to address ED nurses’ engagement in stigma communication about substance-using patients. Nurses’ stigma attitudes toward substance-using patients can lead to differences in the level of care provided to these patients (Peckover & Chidlaw, 2007). Additionally, negative perceptions and discrimination by healthcare workers serve as barriers to seeking, receiving, and completing treatment for substance-using patients (Brener et al., 2010). Continuing education or intervention programs should work to reduce stigma toward substance-using patients in EDs, though research reveals that education should be accompanied by role support to be most effective (Ford, Bammer, & Becker, 2008; 2009). This study also contributes to health communication by offering a novel application of Smith’s (2007) model of stigma communication, as no current research has qualitatively investigated how stigma communication is enacted by healthcare professionals.

eHealth Literacy and Preferred Online Sources for Treatment Information Seeking: A Rural-Urban Audience Segmentation Approach

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Background: The Internet delivers personally relevant and literacy-sensitive patient education resources from preferred sources (patients, providers, both patients/providers) to reach medically underserved communities. The Internet is especially useful to alleviate rural-urban health disparities; however, limited empirical attention has examined differences in rural and non-rural patients' use of online media to navigate treatment information (e.g., diagnosis, clinical trials). As such, knowledge about patients' online source preferences for treatment information seeking remains dismal. Increasing attention has been paid to the disproportionate burden of Chronic Obstructive Pulmonary Disease (COPD) in rural regions and the potential of technology to alleviate these disparities. Patients with COPD generally have low health literacy and report challenges appraising online information and source credibility; however, little is known about how eHealth literacy (i.e., ability to understand, evaluate, exchange, and apply online health information) shapes COPD patients' preferences for online sources across rural-urban contexts. This study applies an audience segmentation approach, partitioning rural-urban participants into homogenous groups, to identify how online source preferences for treatment information seeking vary by eHealth literacy.

Methods: In April 2018, 575 patients (71% with COPD; 44.5% female; $M = 55.28$ and $SD = 13.36$ years old) from a university-based research registry and website listing completed an online survey. The survey measured rurality, numeracy, eHealth literacy (eHL; $\omega/\alpha = .87-.92$), and online source preferences (peer/healthcare provider/combination) for information about clinical trials and medical diagnoses. eHL was operationalized as self-efficacy to understand (functional), exchange (communicative), evaluate (critical), and apply (translational) online information.

Results: Chi-squared analyses did not detect rural-urban differences in online source preferences. Providers were the preferred online source for information about medical diagnoses (75%) and clinical trials (53.7%). However, 30% of participants preferred clinical trial information from both sources. Independent samples t-tests found that rural participants had lower numeracy and eHL scores than their non-rural counterparts. One-way analysis of variance and Bonferroni post-hoc analyses revealed online source preferences for information about a medical diagnosis varied by eHL. Rural participants with high numeracy, functional and translational eHLs preferred information from a provider. Non-rural participants with high numeracy and eHLs preferred information from a combination of providers and peers; however, if required to choose one, they prefer providers to peers. Rural-urban differences in preferred online sources of clinical trial information also existed by eHL. Rural participants with high numeracy and translational eHL preferred information from a combination of providers and peers, or providers alone. This finding was similar for non-rural participants across all eHL dimensions; however, those with high translational eHL preferred information only from providers.

Discussion/Implications: Rural adults had lower critical and communicative eHL than non-rural adults, who preferred treatment information from both online providers and peers. A high volume of online information is user-generated; therefore, increasing rural adults' critical and communicative eHL and numeracy is an important step to alleviate rural-urban disparities in treatment information seeking. Patient-oriented online forums should be cautioned for rural adults. Online interventions for rural adults using peers as a source of information should incorporate literacy-sensitive methods that reinforce recommendations from providers.

Extending Communal Coping to Young Adult Cancer Survivors, Romantic Partners, and their Overlapping Support Networks

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Approximately 70,000 young adults (i.e., YA; 18-39) are diagnosed with cancer each year (National Cancer Institute, 2018). While cancer survival rates have improved significantly in children and older adults since 1979, they have remained stagnant in YAs (Liu et al., 2018). Researchers have partially attributed this ongoing disparity to YAs' underrepresentation in research; lack of access to coping and support resources; and unique support challenges caused by evolving relationships with family, friends, and romantic partners at an already tenuous life-stage (e.g., Kent et al., 2012; Zebrack, 2014). Additionally, YA romantic partners have reported uncertainty, distress, and frustration as they provide intense support at an unexpected point in their life (Carlson et al., 2000). Effective coping is also associated with better mental health outcomes in cancer survivors (Andrykowski, Lykins, & Floyd, 2008). Thus, we use the communal coping model (Afifi, Hutchinson, & Krouse, 2006) to explore how YAs and their romantic partners communicate to cope following a cancer diagnosis.

Method: We conducted individual interviews with 12 YA cancer patient-partner dyads (N=24). At diagnosis, 7 dyads were dating, 3 were engaged, and 2 were married. Three independent coders initially coded 30% of data to identify possible themes. Two additional coders met twice monthly over 7 months to code all transcripts, identify new themes, establish consistency, reach saturation, and achieve 100% reliability through constant comparison (Strauss & Corbin, 1998).

Findings: Within couples, most YAs used communal coping ("our problem, our responsibility") to handle cancer-related stressors, such as sharing responsibility of attending appointments, making treatment decisions, and updating others. Some YA patients used individual coping ("my problem, my responsibility") with partners to maintain independence and control of treatment decisions, while other YAs transitioned from individual to communal coping as their support needs increased and treatment side effects worsened. To a lesser extent, couples used protective buffering by avoiding difficult emotional disclosures (e.g., anger, fear, grief) to reduce burden on romantic partners. Most YA couples used communal coping with other social groups (e.g., parents, friends), but some YAs used different coping styles with different groups. For example, some couples experienced contagion ("my problem, our responsibility") with parents, siblings, and friends who were overly engaged or completely disengaged in offering support, or who added to YAs' stress by demanding private information and by expressing anger when they were not immediately notified of YA cancer changes. Thus, we found that YAs and their romantic partners coped with cancer in multiple and complex ways across different social groups.

Implications: Our study demonstrates that YAs' cancer coping challenges reflect their normative attempts to establish identities and relationships at a tenuous (and unique) developmental stage. YA cancer patients and partners want to feel more prepared and in control of their coping while also decreasing patient isolation and YA partner stress; thus, future YA cancer coping interventions should include informational and emotional support for expected stressors, responsibility and role changes, diverse couple and family communication patterns, and effective coping styles of other YA cancer patients and romantic partners.

Marijuana knowledge, confidence in the knowledge, and self-efficacy in marijuana information literacy as risk factors of marijuana

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In recent years, marijuana use among college students became the highest while the perceptions of risk and social disapproval became the lowest, since researchers began tracking the trends systematically (e.g., Schulenberg et al., 2017). Coinciding with the attitudinal and behavioral trends is the proliferation of marijuana-related information in young people's communication environment. Albeit limited, existing studies indicate that the tone of mainstream news coverage of marijuana and marijuana legalization became more positive than negative in recent years (McGinty et al., 2016). As individuals, young adults are also inundated with misinformation about the safety and benefits of marijuana use through social media and other online sources (e.g., Bierut, Krauss, Sowles, & Cavazos-Rehg, 2017; Cavazos-Rehg et al. 2016). To date, however, intervention research has paid little attention to knowledge and information literacy as risk factors of marijuana use among college students.

To explore this potentially important relationship, an online survey was conducted. Participants were drawn from introductory-level classes on a university campus located in a state where recreational use of marijuana was legal for people older than 21. A total of 138 college students completed the survey. Their mean age was 19.6 (SD = 2.66) and 84% of them were between the ages of 17 and 20.

Intention to use marijuana in the next six months was regressed on three sets of variables: (1) peer approval of marijuana use, perceived risk of marijuana use, self-efficacy in marijuana refusal; (2) marijuana knowledge, confidence in one's marijuana knowledge, and self-efficacy in marijuana information literacy; (3) marijuana use. The regression analysis and subsequent path analysis revealed that inclusion of the second set, knowledge-related variables, significantly improved the explanatory power of the regression model. As individual variables, confidence in one's marijuana knowledge and self-efficacy in marijuana information literacy were positively related to marijuana use and intention to use whereas objectively measured marijuana knowledge was negatively related to the current use and future intention. Confidence in marijuana knowledge and self-efficacy in marijuana information literacy were positively correlated with each other, but not related to marijuana knowledge itself. When the intention to vote for further liberalization of marijuana regulation was regressed on the same sets of predictor variables, confidence in one's marijuana knowledge and current marijuana use were identified as direct positive contributors whereas perceived risk was a direct negative contributor to the voting intention. In conclusion, well-informed students were less likely to use the substance that is still illegal under the federal law and prohibited on college campuses whereas students who considered themselves well-informed and well-equipped to deal with marijuana information were more likely to use it. Future intervention efforts will benefit from incorporating accurate information about marijuana science and regulations as part of the educational curriculum while counteracting students' misplaced confidence in their knowledge and ability to acquire high quality information about marijuana.

Marijuana Education among College Students: Piloting a group-oriented universal brief intervention program

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Significance of college attendance as a risk factor for marijuana initiation escalated since 2013, the year when Colorado and Washington legalized recreational use of marijuana (Mlech, Patrick, O'Malley, & Johnston, 2017). Marijuana became the most commonly used illicit drug on college campuses, with a majority of past-month users reporting multiple negative consequences (Pearson, Liese, Dvorak, & Marijuana Outcomes Study Team, 2017). Emerging research also suggests that the complexity of the regulatory framework for marijuana use and its ongoing changes is causing confusion among college students (Cheng, Ahn, Lewis, & Martinez, 2017). Amid the policy changes, increasingly visible pro-legalization messages and unfounded claims about the benefits of marijuana use reach the young adults (Park & Holody, 2018), potentially furthering the confusion and misinformation about the safety and social acceptance of marijuana use. However, there have been only a few known coordinated efforts to keep the public accurately informed of the legal changes regarding recreational use of marijuana and to prevent negative health consequences on underage users (Brooks-Russell, Levinson, Li, Roppolo, & Bull, 2017; Colorado Department of Public Health & Environment, 2015; Oregon Health Authority, 2017 June).

Hence, a pilot study was conducted with the aim of increasing college students' knowledge of marijuana as it pertains to the four areas: health, state and university laws and regulations, college experience, and social issues. The participants were recruited from freshmen courses on a university campus where recreational marijuana use by people aged 21 or older was legal. In the first phase, 138 volunteers completed an online survey. A set of 25 questions assessing the students' marijuana knowledge was posed in the survey, along with other marijuana-related attitude and behavior measures. Item analysis revealed that five questions had a high discrimination index (.4 or higher), 14 questions had a moderate discrimination index (between .2 and .4), and six questions had a low discrimination index (.2 or lower). Based on the item analysis results, six questions with low discrimination indices were dropped and a 19-item marijuana knowledge scale was established.

In the second stage, a subset of the 138 students ($N = 34$) received an informational intervention delivered in their classes. Subsequently, they completed a post-test that assessed their marijuana knowledge as well as other marijuana-related attitudes and behaviors. Comparison of the pre-test and post-test answers revealed significant increases in their marijuana knowledge. The knowledge gain was more pronounced among those who exhibited lower confidence in their marijuana knowledge in the pre-test. In addition, the intervention reduced perceived acceptance of marijuana use among peers.

This pilot research laid a foundation for future marijuana education efforts on college campuses by developing and testing a marijuana knowledge scale. Additionally, the improvements in marijuana knowledge and perceived social norm demonstrate potential efficacy of a harm reduction approach to this growing problem.

Needle Phobia & Vaccine Hesitancy: A Theoretical Communication Model

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Needle phobia is an anxiety disorder that affects 24% of adults and 63% of children (Taddio et al., 2012). This has increased from only 10% of adults and 25% of children in 1995 (Hamilton, 1995). This correlates with an increase in vaccines received before age 6. From 1983 to 2018, the number of vaccination shots children receive has increased from just 6 to at least 25 vaccination shots (Baxter, Cohen, Burton, Mohammed, & Lawson, 2017; CDC, 2018). This does not include the annual influenza vaccine shot, which would add another 7 vaccinations at the minimum, the rotavirus vaccine, which is administered orally, or additional vaccinations recommended to high-risk groups (CDC, 2018). Combination vaccinations can reduce this by approximately 8 vaccination shots (CDC, 2018). Most children develop a fear of needles between the ages of 4 and 6, which is when children begin to form memories they will retain into adulthood (Du, Jaaniste, Champion, & Yap, 2008). Adults with needle phobia are less likely to get the flu vaccine, the HPV vaccine, or vaccinate their children (Baxter et al., 2017; Salmon et al., 2005; Taddio et al., 2012)

The CAUSE model established by Rowan, Sparks, Pecchioni, & Villagran (2003) addresses the five key obstacles to effective risk communication: a lack of Confidence in the message source, a lack of Awareness or Understanding of the risk, a lack of Satisfaction with the risk solutions, and a lack of Enactment of emergency preparedness and safety tips. Using the CAUSE model, a theoretical communication method was developed to address the connection between needle phobia and vaccine hesitancy in adults. The message focuses on the A and the U in CAUSE: lack of awareness of how needle phobia develops and lack of understanding of how this impacts the rest of the child's life. The primary target for the message is pediatric nurses, and the secondary audience is parents of young children. The message gives background information and three action items for nurses and parents: Be PEP—patient, empathetic, and prepared. The method of mental models interviewing was used to ensure topics were understood, the message was clear, and to address any concerns or requests for additional information conducted with a convenience sample of nursing students, end-of-career nurses, and parents of children aged 4-6. Creating messages to target where the problem develops and explain why it is important is vital to addressing the several factors associated with reduced vaccination rates.

The role of attention in the effect of risk perception and subjective norm on risk information seeking: A RISP approach

**Di Pei, George Mason University
Sojung Claire Kim, George Mason University**

Climate change is a complex global hazard that not only poses difficult challenges to the development of human society, but also causes negative impacts on individuals' wellbeing (Melillo, 2014). A recent nationally representative survey shows that, although a majority of Americans believe climate change is happening, most people still have limited knowledge about the health impacts of climate change and the vulnerable populations to these impacts. (Maibach et al., 2015). With the goal of increasing public knowledge about climate change, and especially its impact on public health, it is important to encourage active information seeking and deliberative information processing.

The Risk Information Seeking and Processing model is a comprehensive framework that addresses the motivational factors that predict the degree to which people will seek and process risk information in a careful and thoughtful manner. Previous research has applied RISP to different risk settings including climate change and health, yet few study has tested the RISP model in an experimental setting, where participants' affective and cognitive reactions were reported immediately after exposure to informative environmental messages. The present study replicates and extends the RISP model by incorporating an in-lab message reading process, and hypothesizes that: Perceived hazard characteristics and informational subjective norm jointly predict attention to messages, which then predicts negative affect and information insufficiency, and finally predict information seeking intention.

Method: The study was conducted in two stages. Participants first finished a pre-survey online answering questions measuring perceived hazard characteristics, subjective norm, and baseline information seeking intention. In stage two, participants read eight messages about climate change impacts on different health topics such as air pollution, contaminated water, and extreme heat. Immediately after reading all the messages, they finished a post-survey examining their attention to the messages, perceived information insufficiency, and future information seeking intention.

Data were collected from various classes at a large public university in Northern Virginia. Students in these classes were from different majors, and received research credits or cash for participation. After cleaning the data, the final sample size was 93.

Results:Data were analyzed using hierarchical linear regression. Demographic variables were entered as control variables. Baseline information seeking intention was also controlled to examine changes caused by message exposure. The results show that, at step one, perceived hazard characteristics and informational subjective norm were not significant predictors of information seeking intention about climate change. Adding attention to the environmental messages ($\beta = .37, p < .05$) at step two significantly increased the variance explained by the model, $\Delta R^2 = .07, F(1, 78) = 10.489, p < .05$. Finally, the addition of negative affect ($\beta = .50, p < .05$) and information insufficiency ($\beta = -.002, p > .05$) explained an additional 12% of the variance and ΔR^2 was significant, $F(3, 75) = 8.078, p < .05$.

In the final regression model, informational subjective norm ($\beta = .18, p < .05$), attention to messages ($\beta = .33, p < .05$), and negative affect ($\beta = .50, p < .05$) were found to be significant predictors of information seeking intention.

An integrative checklist model of health communication campaign planning to examine the HIV prevention campaigns in Chile

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Health communication media campaigns are an important public health tool. They can reach large audiences, and even though the magnitude of the behavioral change attributable to campaigns is small, the large scale of their effects makes them worthwhile. In order to maximize their potential effectiveness, campaigns should incorporate in their design a series of principles that have been widely discussed in the literature, such as audience segmentation, formative research, message design, channel selection, process, and outcome evaluation.

These principles are connected to one another, however, the manner in which those connections should be addressed when designing the campaigns has not been fully discussed in the literature. This study builds on previous literature and proposes an integrated model for explaining how campaign principles influence each other in the campaign planning process. This model is presented as a checklist of considerations and it is used for analyzing the advertising briefs of seven HIV campaigns in Chile.

In Chile, 99% of HIV cases are sexually transmitted, and males between 15 and 29 years are the most affected population. Since 1990 the ministry of Health has carried out mass mediated campaigns as part of the country's response to the pandemic. However in less than a decade, from 2010 to 2017, HIV cases in the country have doubled.

In order to study the campaign planning process, seven campaigns advertising briefs (between 2009 and 2017) were analyzed. First, using a coding scheme, the texts were categorized by two independent coders to identify which portions of the documents corresponded to each element: Epidemiological information, campaign's goals, audience, messages, dissemination strategy, formative research, process, and outcome evaluation. Agreement between the two coders was 92% and disagreements were revised and discussed until consensus was reached. Then, using the checklist model, a qualitative assessment was performed in order to (1) evaluate the extent to which campaign elements were address according to recommendation and (2) evaluate the degree to which those elements were adequately connected among them.

No mentions to formative research, process or outcome evaluation were found in the revised briefs. One brief did not identify an audience, but all of them had some epidemiological information, proposed campaign goals, messages, and a dissemination strategy.

The campaigns' goals were rarely behavioral focused. Most of them were not attainable or measurable, and they did not specify a timeframe in which they were supposed to be evaluated. Even though audience segmentation was in place, there was no audience prioritization, as generic messages prevailed and dissemination strategies followed a "kitchen sink" approach. Campaign messages included more than one behavior (e.g. condom use, abstinence, and fidelity), as well as other advocacies, such as no discrimination.

All in all, HIV prevention campaigns in Chile between 2009 and 2017 are characterized by being insufficiently specific in their definition of goals and audiences, which is associated with generic messages and broad dissemination strategies. Campaign-related decisions are not based on formative evaluation and no plans for outcome evaluation are made when planning the campaign.

An analysis of four blocks of factors associated with cancer-related information seeking

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Cancer is a leading cause of death whereas a substantial number of cancer cases are preventable. Information seeking promotes knowledge and behavior change, which is conducive to curbing the spread of cancer (Anker, Reinhart, & Feeley, 2011; Kobayashi & Smith, 2016). In addition, cancer patients seek for more information to understand the risks and benefits associated with particular treatment plans against cancer before making informed decisions (Fagerlin, Wang, & Ubel, 2005; Kim et al., 2018). Thus, information seeking is an important part of informed decision-making in cancer prevention and treatment. More research is necessary to further understand antecedents influencing how and why people seek more cancer-related information.

The present study conducted an analysis on the 2017 Health Information National Trends Survey dataset (HINTS-5) (N=2,314 excluding missing data) (National Cancer Institute, 2018). The multivariate logistic regression analysis was used to examine which factors in four blocks (internet use, information literacy, cancer beliefs, and patient-provider interaction) predicted whether or not using the internet to search cancer-related information. Four predictors in the first block related internet use explained 7.6% variance in the likelihood of using the internet to search cancer-related information (Nagelkerke R²). Increasing device ownership (B5) was not a significant predictor ($p > .05$) but more general uses of internet for health (B4) increased the likelihood of searching cancer information ($\exp(B) = 1.24, p < .001$). Adding information literacy explained 1% more variance. Information literacy (A4) increased the likelihood of searching for cancer information ($\exp(B) = 1.14, p < .01$) but confidence in getting health advice (A5) decreased the likelihood ($\exp(B) = .84, p < .01$). Adding cancer-related beliefs increased the variance explained by the model to 14.9%. Cancer fatalism (N2e) was not a significant predictor ($p > .05$) but perceived susceptibility to cancer (N1) and cancer worry (N4) increased the likelihood of searching for cancer information (N1: $\exp(B) = 1.29, p < .001$; N4: $\exp(B) = 1.49, p < .001$). Lastly, the model explained a total of 15.2% variance after including the quality of patient-provider interaction. Higher quality of patient-provider interaction (C4) decreased the likelihood of searching for cancer information ($\exp(B) = .97, p < .05$).

In sum, the analysis suggested cancer-related information-seeking was consistent with how one uses online media for health. Nevertheless, increased accessibility to online health information alone does not predict information searching behaviors. It is possible that deficient patient-provider communications would increase the needs for information from other sources (e.g., online forums and blogs). This result underlines the central role of healthcare providers in cancer-related decision-making of patients. Individuals need sufficient health literacy to process online cancer-related information. Additionally, cancer worry and perceived susceptibility to cancer were two significant indicators of seeking out more online information to reduce risk and uncertainty. However, the relationship between inadequate patient-provider interactions and cancer worry or perceived susceptibility remains unclear. Thus, future studies may explore more possible relationships among susceptibility to cancer, patient-provider communication, and information-seeking behavior.

How we feel fatalistic: A structural equation modeling of factors associated with information seeking and cancer fatalism

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Cancer fatalism describes a belief where cancer diagnosis inevitably leads to death (Powe & Finnie, 2003). It is a major barrier of adherence to cancer treatment and screening (Niederdeppe & Levy, 2007). Negative information seeking experience is one important antecedent of cancer fatalism (Arora et al., 2008). Online information (e.g., stories from personal blogs and forums) commonly causes confusion and uncertainty regarding cancer treatment and prevention, which usually challenge suggestions from health providers (Hesse et al., 2005). As cancer-related information is increasingly available through different sources, individuals' perception toward cancer will become muddled with experiences of online information-seeking (Fergie, Hilton, & Hunt, 2016). Thus, how online information influences cancer fatalism needs to be further understood.

A structural equation modeling (SEM) was conducted on the 2017 Health Information National Trends Survey dataset (HINTS-5) (N=2,997 excluding missing data) (National Cancer Institute, 2018). The path model fit the data sufficiently, $\chi^2=91.89$, $df=12$ ($p<.001$), CFI=.95, TLI=.90, RMSEA=.05 (CI90%=.04-.05), SRMR=.03. The results showed information literacy (A4) was positively associated with confidence in getting health information (A5) ($b=.09$), use of new media for health (B4) ($b=.43$), and quality of patient-provider interaction (C4) ($b=.11$). Trust in the internet (A6e) was also positively associated with confidence in getting health information ($b=.22$) and use of new media for health (B4) ($b=.59$). Confidence in getting health information was positively associated with quality of patient-provider interaction ($b=1.32$) but not significantly with the use of new media for health. Quality of patient-provider interaction was negatively associated with the use of new media for health ($b=-.03$). Using more of new media for health was associated with greater cancer worry (N4) ($b=.02$) and higher perceived susceptibility of cancer (N1) ($b=.03$). But the higher quality of patient-provider interaction was associated with less cancer worry ($b=-.02$). Higher perceived susceptibility of cancer was associated with greater cancer worry ($b=.35$), which was associated with lower cancer fatalism ($b=-.29$). Perceived susceptibility was positively associated with cancer fatalism ($b=.07$). All coefficients reported above were statistically significant at $p=.05$ level.

In sum, the analysis showed that trust in the internet and information literacy were two important predictors of online information-seeking. Also, trust and literacy improved self-efficacy of getting the necessary information to make informed decisions. Interestingly, higher self-efficacy was associated with improved interactions with providers, rather than motivating information-seeking directly by patients themselves. Interacting more with providers reduced cancer worry but using more of new media actually increased worry and perceived susceptibility. It is thus evident that even as new media are widely used in health decision-making, providers are still a more valuable and trustworthy source of health information than online media (Hesse et al., 2005). In addition, cancer worry reduced cancer fatalism but perceived susceptibility increased it. It is possible cancer worry represents a stage where patients worry about potential risks but still consider prevention is useful (Consedine et al., 2004). By contrast, perceived susceptibility suggests a prominent belief that cancer and associated fatal consequences are considered highly probable. Future research can further clarify these relationships.

Multilevel modeling of the effects of income and SNAP on diabetes prevalence

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Low income may influence food intake pattern and food stamp further exacerbates this insecurity. First, people with lower income tend to buy cheap and low-quality diets (Drewnowski, Darmon, & Briend, 2004; Franz et al., 2003). Second, people receiving government food stamp benefits (or SNAP, Supplemental Nutrition Assistance Program) may experience cyclic eating pattern (Dinour, Bergen, & Yeh, 2007). People may choose to restrict food intake during shortage but binge eating when food and income become more adequate (Urbszat, Herman, & Polivy, 2002). These dieting behaviors result in a higher risk of diabetes (Seligman et al, 2007). Thus, the purpose of the present study is to explore the relationship between median household income, the percentages of diabetes population, and the population receiving SNAP benefits.

The current analysis used the United States Department of Agriculture database “Food Access Research Atlas”. The dataset included all 3,143 counties or county-equivalents, i.e., borough, parishes in all 50 states and District of Columbia (level-2 unit). County units were nested in the states. The study used Hierarchical Linear Modeling to explore the effects of county-level median household income on diabetes population in counties and further modeled the influence of state-level SNAP populations.

About 35.71% of the within-state variance in the percentage of diabetes was accounted for by the addition of county median household income. About 30.79 % of the true between-state variance in the county percentage of diabetes was accounted for by the addition of SNAP population percentages on the state level. The analysis did not find the main effect of median household income on the county percentages of diabetes populations ($p = .20$). However, the state percentages of SNAP populations significantly predicted the mean percentage of county diabetes populations (coefficient=0.29, $p < .01$). In addition, the analysis showed a significant cross-level interaction effect between state-level SNAP population and county-level median household income on county percentages of diabetes populations (coefficient= -0.004, $p = .04$). The results suggested the relationship between the percentages of diabetes in counties and county median household income was moderated by state SNAP populations. In other words, states with lower percentages of SNAP populations were less affected by county median household income than those with higher percentages of SNAP populations.

The results demonstrated the influences from both state- and county-level factors on diabetes. The family and local income is not a direct predictor of diabetes prevalence. The relationship between income and diabetes can be influenced by food insecurity related to SNAP benefits. People receiving the SNAP benefits are less able to afford healthy food and keep a balanced dieting behavior (Dinour, Bergen, & Yeh, 2007). Further, states with larger SNAP populations may provide less governmental or social support to low-income families and further worsen food insecurity. Thus, rather than prescribing individual lifestyle change, the immediate need should focus on providing low-income consumers with food and nutrition assistance on a higher level of support (Palar et al., 2017). Promoting healthy food choices through SNAP can also be a direct approach to reducing diabetes prevalence (Shenkin & Jacobson, 2010).

Social Media Fail - Active but Unpopular Facebook Accounts of Student Health Centers Nationwide: A Content Analysis

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Background: Social media use among today's college-aged youth is almost universal; 80% of people aged 18-24 use Facebook, 78% Snapchat, 71% Instagram, and 45% Twitter (Pew, 2018). Therefore, it is no wonder social media are advocated as a prime channel through which to reach this population with health-related messaging (see references). The term "social media" itself implies some level of sociability, interactivity, or engagement with audience members. However, as previous research finds, the "social" is often missing from organizations' use of social media. Most organizations tend to use social media as billboards, to push information/content to their audiences, not actively engage with them.

No formal research has been conducted on the popularity of student health social media accounts at universities nationwide. A cursory look at social media pages of health centers at large and small universities find somewhat lean followings, despite the continuous amount of content they produce. This makes one wonder, who is seeing all of this content being produced? Therefore, this study seeks to determine how widespread of an issue across the United States content creation – seemingly promoted into the ether – is among colleges and universities. Facebook pages were chosen because Pew (2018) cites them as the most popular social media channel for college-aged youth.

Methods: Our sampling frame included all 1,121 colleges and universities in the NCAA. A research assistant searched Facebook to see if each college had a page dedicated to its student health center. If an account was found, the researcher documented six pieces of information: the number of "likes," "follows," the date, content, and purpose of the last post (promotional/interactive), and the year of page creation. All data collection took place Fall 2018 on Tuesdays-Fridays to obtain a more valid representation of the frequency of posts during a normal week.

Results: A total of 224 pages for student health centers were found (20% of all NCAA schools); D1=120; D2=39; D3=65. Nearly two-thirds of the pages were considered active, operationalized as posting within the past 14 days (n=138, 61.1%). The average year of page creation was 2012. The median number of likes and follows across the 3 Divisions ranged from 200-500. Only 15 (6.7%) of the centers' last posts were coded as being "interactive," with 209 (93.3%) being "promotional." Interactive posts were operationalized as two-way communication; posts seeking engagement with the audience (e.g., asking students to submit ideas, or share their thoughts). Promotional posts were operationalized as one-way communication; simply advertising information to students (e.g., come to this flu shot clinic).

Conclusion: The majority of student health center Facebook pages are actively posting, despite meager followings. Most pages (n=185; 82.5%) had fewer than 1,000 "likes" despite being in existence for an average of 6 years. These results indicate that few, if any, people are seeing posts from these student health centers. Unless more attention is given to growing their reach (e.g., more frequently interacting with users), resources used to consistently post content might be better placed elsewhere.

Pilot test of a community-level intervention to increase breast cancer screening in rural Bangladesh

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Background: The rising incidence and mortality due to breast cancer is affecting low-to-middle-income countries (LMICs) like Bangladesh in multi-faceted ways. Being an LMIC, Bangladesh lacks the resources to provide medical treatment and screening facilities to its highly dense population. The most adversely affected part of the population is the rural women. It is largely due to the stigma that comes with less-known non-communicable diseases like cancer and the social barriers of talking about female body, like breast, in the public sphere. Women in the rural Bangladesh are often financially, and socially dependent on their husbands which makes it even more challenging for them to take necessary health decisions like going to the doctor or to get screened for breast cancer.

Objective: Considering the existing barriers, along with the cultural context of rural Bangladesh, this study experimentally tests the effects of a breast cancer related folk song on the perceptions of women and men in rural Bangladesh. Drawing from the extended parallel processing model (EPPM; Witte, 1992), we examine whether exposure to an intervention talking about the threat of breast cancer as well as the efficacy of screening, increase intentions to get screened among Bangladeshi men and women living in ten villages. Based on the theory of planned behavior (TPB; Ajzen, 1991), we also examine whether talking about breast cancer and screening influences the intention of getting screened by impacting social norms about, attitude towards, and perceived barriers to screening.

Methods: The study was conducted via a field experiment using a posttest-only control group design with random assignment. Data was collected via quantitative interviews in 18 villages in Bangladesh (N= 1508; 64.8% women, 35.1% men). All constructs from the EPPM and TPB were measured with two items each. 10 of these villages were randomly assigned to experimental condition where the villagers viewed a folk song with the topic of breast cancer, and participants of the other eight villages watched a folk about environmental issue.

Results: Results showed significant increase in perceived severity of breast cancer among both males and females. Males had significant increase in norms towards breast cancer screening while women showed partially increased norm and response efficacy. Males showed significantly higher perceived severity and norms pertaining breast cancer, and response efficacy about breast cancer screening in the experiment group. Males also showed partially higher self-efficacy than females. Access to screening was significantly correlated to self-efficacy and response efficacy.

Conclusion: While talking about breast cancer seemed to increase perceived severity of breast cancer, lack of access to breast cancer screening seemed to have influenced the efficacy of breast cancer screening. This finding goes in-line with the existing disparities in health infrastructure in rural Bangladesh. It is interesting that men were more likely to believe that women had more support from their families to get screened for breast cancer, than women themselves were. This alludes to the gender-based socio-cultural difference in rural Bangladesh where women's actual access to health-related support might be overrated by husbands.

Predictive genetic testing in the news: Coverage and framing in USA Today (1994 – 2018)

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Introduction: Over the last two decades, predictive genetic testing (P-GT) has attracted a significant amount of news media attention. P-GT is presymptomatic testing used to detect gene mutations that may increase an individual's future risk for adult-onset disease. News media contributes greatly to public understanding and discourse around emerging health technologies. However, current representations of P-GT have been criticized for fostering misperceptions about personal genetic risk and the clinical utility of P-GT results. This paper examines content on P-GT in USA Today, the nation's most widely read newspaper.

Method: The Nexis Uni database was used to identify publications on P-GT in USA Today between 1994- 2018. Guided by the theoretical framework of framing theory, an inductive content analysis (N = 82) was conducted to identify prominent framing elements of P-GT coverage. Frames were interpreted by evaluating the problem definition (i.e., health condition), causal attribution (i.e., responsible actors), moral evaluation (i.e., benefits and risks), and overall judgment (i.e., tone). Inter-coder reliability was established at Krippendorff's Alpha = 0.914.

Results: A majority of news coverage on P-GT was published in the Life (n = 37; 45.1%) and News (n = 35; 42.7%) sections of USA Today. Average article length was 840 words (SD = 574). P-GT for cancer risk (n = 37; 45.1%) emerged as the most widely covered topic. Most articles reported on P-GT from the perspective of scientific communities (i.e. research centers) (n = 37; 45.1%) and the government (n = 30; 36.6%). P-GT was generally framed as beneficial to specific populations (n = 42; 51.2%) compared to the population at large (n = 32; 39%). The primary risks associated with P-GT were psychosocial consequences after results disclosure (n = 23; 28%), low clinical utility of results (n = 20; 24.4%), and discrimination (n = 21; 25.6%). Overall tone of P-GT coverage was mostly positive (n = 36; 43.9%) or neutral (n = 33; 40.2%), in that articles provided both benefits and risks associated with P-GT.

Discussion: In USA Today, P-GT was primarily framed as a major scientific advancement, to which scientific communities and the government have largely contributed. However, several articles also reported on P-GT in an unbiased tone, and both positive and negative consequences of testing were highlighted. P-GT was framed as beneficial to specific populations, such as individuals with a family history of cancer. Finally, P-GT risks were largely framed around results disclosure, suggesting that individuals should be prepared to make difficult decisions after receiving P-GT results. News media representations are influential in shaping public beliefs and attitudes around P-GT, which, in turn, motivates behaviors. Future research should explore and compare other popular news media outlets' representations of P-GT.

Developing Multimedia Social Impact Programming on Healthy Aging for Hispanics in the United States

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Introduction: Social impact entertainment programming has gained traction in the United States, with media studios and corporations now operating whole social impact divisions, and academic centers studying the effects of mass media projects designed to inspire social change. Social impact entertainment programming is analogous to the global health communication strategy known as entertainment-education (Singhal & Rogers, 2004). Most published research on social impact entertainment programming in the United States has focused on impact evaluation. There is a gap in the literature, however, of formative research that describes the development and design of such programs. This gap contributes to not only a lack of information available to replicate this work domestically, but also a weakness in placing U.S.-based social impact work within the ongoing global theoretical conversation of how such health communication interventions engender change.

In 2017, the social impact unit at Univision, the most-watched Spanish language channel in the United States (Forbes 2017), partnered with The SCAN Foundation to initiate a program designed to inform Hispanics about preparing to age (Fowler, Gasiorek, & Giles, 2015). The present study was conducted to answer the following research questions (RQs): RQ1) Why did Univision engage in social impact entertainment programming regarding healthy aging?, RQ2) How did the process of creating social impact entertainment programming regarding healthy aging unfold?, and RQ3) What materials were created and implemented as part of this social impact entertainment campaign?

Methods: This research utilized a qualitative study design. We conducted semi-structured interviews in English with a convenience sample of members of Univision and The SCAN Foundation staff (N=9). Our interviews represented all but one individual who had any role on the healthy aging project. The study was conducted from January to March 2018. A three-page interview protocol framed the conversations. Questions and probes were added and removed as appropriate. The interviews ranged between 38 minutes and 62 minutes, with an average interview length of 45 minutes and 39 seconds. The interviews were transcribed and imported into the qualitative software program NVivo, v. 11.4.3. An iterative coding process led by grounded theory directed our analysis, as a specific communication theory was not available for this applied research (Glaser & Strauss, 1967). As a final step, we employed a process of member checking, whereby we sent our findings to each of the participants to ensure their perspectives were understood and to confirm our interpretations and conclusions.

Results: The findings indicated that media and foundation professionals were compelled by higher-value inclinations, the process of creating content included strategy and research integration, and materials included television, digital, social media, and community events.

Conclusion: Making a compelling entertainment narrative, a highly creative process, takes on a different level of collaboration, thought, and strategy when the objective for that entertainment is to foster positive change about health issues that matter to families and communities. Future social impact entertainment work should continue to identify and integrate best practices for shaping projects to meet individual and social change objectives using both evidence and theory.

A Community-based Participatory Approach to Combating Malnutrition in Older Adults: Formative Intervention Evaluation

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Older adults (loosely defined as those age 60 and above) face numerous health issues. A crucial and often unrecognized health issue is that of malnutrition. Contrary to popular belief, malnutrition is not an adverse health outcome that plagues only adolescents and adults with eating disorders. Rather, it affects those whom we least expect, primarily, older adults. The World Health Organization (WHO, 2016) defines malnutrition as “deficiencies, excesses, or imbalances in a person’s intake of energy and/or nutrients.”

In the last decade, many studies have attempted to assess the prevalence of malnutrition among this population. In 2013, a systematic review was conducted, examining the risk of malnutrition among nursing home residents. They found that 20-39% of residents were malnourished while 47-62% were at-risk for malnutrition (Bell et al., 2013 as cited in Reed Mangels, 2018). More recently, several researchers documented the prevalence of older adults at-risk for malnutrition in the Kentucky population of those receiving benefits from the Elderly Nutrition Program. Percentages of those at-risk ranged from 16-47% in participating counties (K. Tucker, personal communication, April 30th, 2018). While the percent of individuals at-risk for malnutrition may vary, one cannot ignore the many problems associated with this prevalence, both from a public health standpoint and a financial one.

Malnutrition, as it stands, is undoubtedly a complex, multi-faceted problem. Fortunately, it is preventable, especially with communicative means. Specifically, health campaigns and tailored health interventions aimed at educating older adults on the risks of malnutrition and how to minimize them. This study utilizes the transtheoretical model and two-sided message strategies to improve such intervention efforts.

Specifically, this study presents ongoing efforts to evaluate a nutrition education intervention that was developed to address poor diet quality among older adults participating in the Kentucky Elderly Nutrition program. Formative research conducted in May and June 2017 revealed nutrition topics pertinent to this population. The 12-unit intervention will be implemented over a 6-month period by a trained nutrition professional. The population will consist of older adults participating in the Elderly Nutrition Program in two Kentucky counties: Kenton and Fayette.

Both quantitative and qualitative means will be utilized to assess individual stage of change, decisional balance, and self-efficacy both pre and post-intervention. Qualitative focus groups aim to identify barriers and facilitators to healthy eating in this population. The survey will aim to measure stage of change of the individual at two prospective points in time in order to assess intervention effect. This formative work is intended to guide the refinement of the intervention in order to support long-term behavior change. The ultimate outcome, or overarching goal, is to decrease the percentage of older adults at-risk for malnutrition in the pilot counties in Kentucky.

A Content Analysis of HPV Vaccine Online Continuing Medical Education Purpose Statements and Learning Objectives

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The human papillomavirus (HPV) is the most common sexually transmitted infection and is associated with several forms of anogenital cancers. However, HPV vaccination rates among adolescents remain low. The primary reason for suboptimal rates include missed clinical opportunities for clinicians to provide sufficient and consistent vaccine recommendations. Numerous online HPV vaccine educational interventions have been created and implemented to decrease missed clinical opportunities and increase clinicians' strong and consistent vaccine recommendations. However, no research on purpose statements and learning objectives' content has been reported for online HPV vaccine continuing medical education (CME) activities. Purpose statements facilitate complex processing, help organize content for learners, allow for deliberate practice, and encourage the effective transfer of knowledge. Moreover, learning objectives detail what a participant can expect to learn from an educational activity. Without data evaluating the purpose statements and learning objectives used in online CME activities for clinicians, there will be a lack of evidence for ensuring rigorous curriculum development, refinement and outcomes. Thus, the aims for this study were to 1) conduct a content analysis of the purpose statements and learning objectives for online HPV vaccine CME activities and 2) identify themes and gaps in the purpose statements and learning objectives. We conducted a systematic search of online HPV vaccine CME activities with available and current CME credits any time during the study period starting in August 2016 up to August 2017. The initial search identified 178 online HPV vaccine CME activities. Of the 178 online CME activities, 21 met the following inclusion criteria. Nearly one third of online interventions did not feature purpose statements or learning objectives. Open coding identified the following purpose statements topics: 1) delivering recommendations, 2) HPV epidemiology, 3) HPV vaccine, 4) guidelines, and 5) medical news. The following topics for learning objectives were identified: 1) delivering recommendations, 2) strategies, 3) HPV epidemiology, 4) HPV vaccine, 5) guidelines, 6) prevention services, 7) HPV vaccination advocacy, and 8) disparities. Phrases about guidelines for vaccine administration and vaccine recommendation were the most common for purpose statements and learning objectives, respectively. Phrases about providing medical news to clinicians, science supporting the guidelines, and HPV vaccine hesitance were also frequently mentioned. However, the majority of purpose statements and learning objectives did not contain phrases pertaining to addressing missed clinical opportunities for vaccine recommendation. This finding is consistent with prior research of online HPV vaccine CME modules and is concerning considering the primary reason for low HPV vaccination rates is missed clinical opportunities. Due to their economic and geographical flexibility, web-based interventions will continue to be used to provide continuing medical education for clinicians. Thus, there is a need for the purpose statements and objectives to effectively orient the learner to the type of knowledge and skills addressed in the activity. Clear and intentional purpose statements and objectives must be used to guide the development of high-quality educational interventions that allow for meaningful evaluation which subsequently demonstrate decreased missed HPV vaccination opportunities.

HINTS Studies Concerning the Human Papillomavirus: A Systematic Literature Review and Analysis

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Purpose: Health Information National Trends Survey (HINTS) has been utilized to track health communication within cancer prevention. While there are various studies used to assess national trends regarding the human papillomavirus, there is no systematic review of these studies. The purpose of this study was to conduct a systematic literature review to determine trends, practices, and needs in HINTS data used to study human papillomavirus knowledge, perceptions and communication.

Methods: We conducted a systematic literature search of Academic Search Complete, CINAHL Plus, Communication & Mass Media Complete, Consumer Health Complete, Education Research Complete, ERIC, MEDLINE, Psychology and Behavioral Sciences Collection and PsycINFO. Inclusion criteria included being in a peer reviewed journal, using HINTS data, and focused on human papillomavirus. We identified 21 eligible articles. We extracted the following information: study purpose, use of theory, data set, independent and dependent variables, and statistical analyses methods.

Results: The majority of the articles were published in 2017 (n=6), with HINTS 3 being the most used dataset (n=7) followed by HINTS 4, Cycle 4 (n=5). Twelve (57%) studies assessed knowledge and/or awareness of HPV. Additional outcome measured included parents or care givers' intentions to vaccinate their daughters against HPV (n=5), communication with a healthcare provider about the HPV vaccine (n=2), and pap testing perceptions (n=1). Almost half of the articles (n=10) assessed the association of sociodemographic variables (sex, age, race/ethnicity, household income, education, health insurance) with one of the four outcomes.

Discussion: This review provides an evidence base for understanding how HINTS data have been used to better understand HPV vaccination rates. While a majority of studies have focused on knowledge and awareness, studies should examine communication practices including social media, internet, and clinicians. These findings inform next steps in fully optimizing these datasets to develop effective communications interventions about HPV and the vaccine.

Risk Information Exchange During Pregnancy: Exploring Women's Perceptions of Risk Communication With Providers During Pregnancy

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In 2014 over 50,000 women experienced severe maternal morbidity, with 700 of those cases resulting in death (CDC, 2018). Providers make choices about what risk knowledge to share with patients and when to share that information (Hird, Yoshizawa, Robinson, Smith, & Walker, 2017). Research has been mixed in terms of risk perception agreement between providers and women, with some research findings differences in perception such that women and providers view risk differently, and other research finding no difference in risk perception agreement (Lee, Ayers, & Holden, 2012). A recent study demonstrates a difference in severity of risk, specifically, they found that women with a high-risk pregnancy were aware of the risks but did not perceive them as severe (Lee, Ayers, and Holden, 2012). Difference in risk perception, and/or lack of risk communication is consequential because, if health care providers do not engage in risk communication with pregnant women then those women may not view themselves as at risk (Bayrampour, Heaman, Duncan, & Tough, 2012). This research explores the exchange of risk information during pregnancy from the perspective of the patient and asks patients to recall how risk information was shared with them during pregnancy, as well as how they sought risk information during pregnancy.

Semi-structured interviews were conducted with women (N=13) who gave birth less within the previous year via phone and face-to-face. Participants were recruited through snowball sampling. After obtaining consent, participants were asked a series of questions related to risk information exchanges between themselves and their provider. Participants range in age from 25-38, and were highly educated (N=12). Additionally, the participants were majority Caucasian (N=10). Interviews were recorded, and transcribed. First and second level coding was done individually and then the researchers met together to discuss the second level codes and to decide upon the finalized themes.

A lack of risk communication was found to take place between the women in the study and their providers. A majority of the women in the study indicated that they had to initiate risk related conversations with their providers. In addition, informal sources were sought for risk related information such as google searches, friends, and family. When processing risk related information, prior experiences with pregnancy and complications influenced the ways in which the women communicated about risk with their providers, and sought information. Overall the extent of information that was exchanged about possible risks during pregnancy was very limited. Many women stated that they were not given detailed information about possible risks until after a complication had occurred.

The CEM-SDM (Mikesell, Bromley, Young, Vona, & Zima, 2016) emphasizes that patient and provider expertise and involvement in communication and information exchange is vital to facilitating shared decision making. In order for shared decision-making to take place, both providers and patients need to share information. In the case of risk communication during pregnancy, it appears that providers are highly selective in their knowledge sharing and this likely has consequences for shared decision making during pregnancy.

Challenges of a Frame-shift from Mental Illness to Health: The Role of Media Coverage, Health Professionals' and Public Perception

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Public health promotion efforts should take into consideration how the 'public's communication environment' is shaped, particularly by the media. They create frames that people use and thereby construct reality (Dorfman, Wallack, & Woodruff, 2005). The public, meanwhile, recognizes those frames, makes sense of them through preexisting models and personal experience, and uses them to understand the world they live in (e.g., Entman, Matthes, & Pellicano, 2009; Gamson, 1995).

But in many cases, the way the media frame health issues conflicts with preventive goals. Using the example of mental health, it must be assumed that emphasizing protective factors in a positive, salutogenetic sense is not an issue in the media at all. Instead, the mass media cover mental illness from a pathogenetic, risk- and problem-oriented perspective. The issue is linked to danger, dangerous and peculiar people, and violent crime. The media portrayal emphasizes social distance from the outgroup—i.e. people affected from mental disorders— and their individual responsibility for being affected while neglecting social and structural factors. Overall, media coverage of mental illness is estimated to convey inaccuracies, exaggerations, or misinformation, perpetuating misconceptions and stigma instead of increasing resilience- and prevention-oriented beliefs (Aragonez et al., 2014; Coverdale, Nairn, & Claasen, 2002; Goulden et al., 2011; Henson et al., 2009; Klin, & Lemish, 2008).

To develop successful health promotion efforts, we not only need to know how the issue is covered by the media, but also, how members of different target groups perceive the media environment. Therefore, we investigated how health experts and members of the public perceive the media coverage.

First results of semi-structured interviews with 16 health professionals and providers and 44 members of the public in a local German setting reveal that their perceptions of media depiction correspond to the dominant negative media stereotyping with mental health and illness predominantly being treated as issues of individual responsibility. They further attribute strong effects of media coverage of mental illness on society, as well as on people affected, and their relatives and they criticize stigmatizing effects of portrayals focusing on crime.

Members of the public only perceive few media coverage overall and they've noticed an emphasis on burnout and celebrity suicides. As potential reasons for a lack of media coverage on mental health, health professionals identify a knowledge gap about the issue and a media focus on sensational topics. Both health professionals and members of the public claim for media portrayals of positive examples, success stories of people affected by mental illness and for more background information. Health professionals and providers note the potential of accurate and positive media portrayals to improve public understanding—not only regarding mental illnesses and treatment options, but also regarding resilience, prevention, and protection.

In the following research steps, we will contrast health professionals' and the public's perception of media coverage with data from a quantitative content analysis of newspapers and delineate challenges and options for a mental health communication strategy particularly focusing on media advocacy (Wallack & Dorfman, 1996).

**Different Online Sections for Different Patients' Needs:
Using the wealth of online data to understand cancer patients' needs**

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Background: Patients increasingly acquire Online Health Information (OIH) to fulfill their cognitive and affective needs (from now on 'social support needs'). Most research involving OHI focuses either on predictors or outcomes of using OHI. However, what drives these outcomes (i.e., what content users read online), remains understudied.

It is believed that different sections on websites (i.e., expert vs. peer-generated sections) fulfill different needs. To be able to test this assumption, we first developed the model of patients' social support needs. According to this model, patients' needs can be fulfilled by receiving different kinds of social support (i.e., social support categories) covering certain topics (i.e., social support topics). This model guided our computational analysis and the interpretation of our results. Two research questions were proposed:

1. What social support topics can be distinguished on different peer- and expert-generated sections of a health website, and to what extent do these topics fit in the model of social support needs?
2. How do peer- and expert-generated sections differ from each other in terms of the social support provided?

Method: The model was applied on sections from the largest Dutch cancer website (www.kanker.nl). Peer-generated sections on this website included blogs and discussion groups. Expert-generated sections consist of the medical library and expert questions. To answer the first research question, topic modeling was conducted on all blog posts and replies, forum entries, expert questions and answers, and entries in the medical library (N = 52.990). Topics within expert- and peer-generated sections were analyzed. To answer the second research question, a MANOVA was executed.

Results: In total, 25 topics were found, matching most of the topics in the model. These topics addressed patients' cognitive and affective needs. An additional topic was identified: sharing status, encompassing users sharing their current, previous, and relatives' experiences.

Peer-generated sections mainly covered interaction between users on affective topics and expert-generated sections mainly covered informational topics. Additionally, differences within types of sections (i.e., within peer-generated and within expert-generated sections) were found. For example, patients shared their status differently on the two peer-generated sections: While on blogs patients proactively shared their current status, on discussion forums they mainly shared previous experiences reactively to other users.

Discussion: The current study shows the usefulness of conducting topic modeling based on a theoretical framework. The model of patients' social support needs was adequate to fit the topics that were found online. Our results demonstrate differences both between sections of a health website as well as within these sections. The current study highlights the importance of making a distinction between different OHI sections, since these sections differ in the social support needs they can fulfill. The results can be important for researchers, patients, relatives, and health care providers. Researchers could expand and validate the current model to other diseases, while being specific in stating what section they studied. Understanding the differences between sections helps patients and families to find the right platform to fulfill their needs, and helps providers to direct patients to the relevant sections.

Crossing Boundaries Online: A hybrid method study on patients' convergence of mass and interpersonal communication on forums

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Introduction: To gratify informational and emotional needs, patients often combine mass and interpersonal communication (i.e., convergence). For example, patients learn about their disease through a consultation with their health care provider (interpersonal communication), validate the advice of their health care provider by visiting a website (mass communication), and exchange experiences on online forums (interpersonal communication). However, how patients combine these sources is currently understudied. Until now, research on how patients fulfill their needs often focused on one medium. As a result, current research does not provide a holistic view of how patients gratify their needs.

A starting point to investigate how patients combine communication sources and fulfill their needs is by analyzing online health forum posts for references to previously used sources (i.e., signs of convergence), the outcomes of those communication efforts, the goal of the forum post, and the disclosure of personal information in those posts. We used this starting point to answer the following research question: To what extent do forum messages contain signs of convergence and how do forum post characteristics relate to this?

Method: The current study used a hybrid method consisting of the framework method and supervised machine learning (ML). The benefit of this approach is that it allows to combine unique features from both approaches. The framework method started from a theory-based codebook and was then further developed through an iterative process of coding the data on a small subsample of the data. Next, the coded subsample was used to code the whole sample using ML, thereby transferring qualitative data to data that was suitable for statistical analysis. Forum opening posts were retrieved from the largest Dutch cancer website (i.e., Kanker.nl; N =1708). Descriptive analysis and multinomial logistic regression analyses were used to answer the research question.

Results: Of all forum opening posts, 30.80% contained signs of convergence, meaning that the posts were the result of either mass or interpersonal communication. If patients referred to the previously used sources, they most often referred to mass media (i.e., webpages, television and newspaper; 43.20%) compared to interpersonal communication (i.e., medical experts and family members; 26.20%). Patients reported higher unfulfilled information needs after previously being exposed to interpersonal compared to mass communication. As a result of these unfulfilled information needs, patients started a post because they preferred to read experiences (44.62%), build a community (34.50%) or share information (18.55%). After being exposed to interpersonal communication, patients disclosed more information about their disease and were more interested in hearing other users' experiences compared to patients who perceived unfulfilled needs due to mass media communication.

Conclusion: Patients are posting different posts as a result of being exposed to either interpersonal and mass media communication. Thus, sources that were previously used affect how patients behave on an online platform. Results of this study can be used to tailor and adapt the way health care providers guide and help patients to obtain the right information at the right time.

Research Participants' Preferences of Sharing Genetic Test Results with Family Members and Providers

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Introduction: Professional recommendations for researchers exist to facilitate disclosure of some individual genetic test results (e.g., hereditary cancer) to research participants who undergo genomic testing. However, participants are primarily responsible for sharing genetic test results with their family and healthcare providers. Studies have investigated family communication about genetic test results from clinical genetic testing for known hereditary risk, but little is known about research participants' intentions to share with family and discuss with healthcare providers. This study used data collected as part of the Electronic Medical Records and Genomics (eMERGE) study to explore genomic research participants' intention to share results with their family and providers.

Methods: Participants (N = 3,000) were recruited from clinics at Northwestern Medicine. Participants were eligible if they (1) saw a Northwestern Medicine physician; (2) were 18 years or older; (3) were able to speak and read English or Spanish; and 4) agreed to have their genetic results placed in their electronic health record (EHR). Enrolled participants completed a baseline survey and provided a blood sample for genetic testing on 88 genes associated with risks for developing conditions such as heart disease and cancer. Approximately one month following genetic test results disclosure, a sub-sample of participants completed a follow-up survey, which collected demographic information and intentions to share genetic test results with family and discuss results with providers. Descriptive statistics and crosstabs were conducted on demographic data and information-sharing and discussion intentions.

Results: Of the 3,000 participants recruited, 346 completed measures included in this sub-study. On average participants were 56 years (SD = 15.9), and the majority were white (n = 300; 86.7%), female (n = 224; 64.7%), the plurality held a post-graduate degree (n = 170; 49.1%), and were working (n = 161; 46.5%). Most participants received negative genetic results (n = 328; 94.8%), and of those, the majority intended to share their results with at least one family member (n = 235; 71.6%), but did not plan to discuss their results with healthcare providers (n = 256; 78.5%). Of those who received a positive result (n = 18; 5.2%), the majority intended to share their result with at least one family member (n = 16; 88.8%), and intended to discuss their result with healthcare providers (n = 11; 61.1%).

Conclusion: Consistent with previous studies among patients, we found research participants in our study intended to share their results with family members. However, the majority who received negative results did not intend to discuss them with their healthcare providers, and just over half who received positive results intended to do so. Participants may not understand the importance of discussing negative results (i.e., for personalize risk management strategies, avoid redundant and costly tests). Moreover, participants may believe having their results placed in their EHR will prompt their provider to initiate a discussion about their results. However, that is not always the case. Communication frameworks to support results disclosure to family and messages encouraging participants to discuss their results with healthcare providers are needed.

“It felt like this dirty little secret”: A qualitative analysis of women’s experiences with communication about formula feeding

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Despite clinical guidelines and global public health initiatives that promote exclusive breastfeeding for at least 6 months, 81% of mothers in the US supplement breast milk with formula by this time for a variety of reasons (Centers for Disease Control and Prevention, 2014). “Failing” at breastfeeding is associated with depression, shame, guilt, and feeling like a failure (Lakshman, Ogilvie, and Ong, 2009). Widely implemented and expanding programs, such as the Baby Friendly Hospital Initiative, may increase the dilemmas and stigma of women struggling to breastfeed exclusively (Fallon et al., 2017). Communication is integral to these experiences, yet the role communication plays in these dilemmas is largely unexplored. This study’s purpose was to explore women’s perceptions of the communication they experienced regarding formula feeding during the postpartum period, and how they believed this communication affected their feeding practices, social interactions, and health.

In-depth qualitative interviews (N=22) were conducted with women who had used formula any time in the first year and were ≥ 18 years old. This project reports on emerging themes guided by a grounded theory analysis of the first 14 interviews, conducted in-person and through videoconferencing. 85% of participants were White, 7% African American, and 7% Asian. 14% held an associate’s degree; 86% held a bachelor’s degree or higher. Child age at time of interview ranged from 2 months to 4 years.

Emergent themes include that mothers 1) identified a dearth of reliable, evidence-based information about alternatives to exclusive breastfeeding, and 2) drew strong associations between their feeding experiences and their own mental health if they perceived using formula as harmful to their infant’s health. One woman said of the absence of information, “I don’t even know how to formula feed a child at all. How much to give them. What formula to give them, and how often to feed, and so I felt very lost and confused.” Regarding a tie between mental health and infant feeding, a woman revealed, “I absolutely 100 percent think there’s a tie, and I don’t feel like I was prepared for all of the difficult emotions that came up as a result of it.” Findings suggest that health communication campaigns and programs promoting exclusive breastfeeding may cause a boomerang effect in a subset of mothers and negatively affect mental health during a vulnerable period. As one woman said of her concerns, “Was this the right thing to be doing for my kid? Am I ruining her?” Because the World Health Organization has identified maternal mental health as a priority to address in addition to exclusive breastfeeding, it is critical to design communication campaigns that take both into account. These processes do not operate in isolation. Future directions could include creating evidence-based materials that provide information on maternal mental health, combination feeding options, donor milk procurement, and information about quality of formula types for mothers who face challenges in exclusive breastfeeding.

I DON'T KNOW; I AM ASHAMED; I AM ALONE!
At-Risk Female Young Adult's Perceptions and Concerns about STD Self Testing

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Background: Chlamydia, gonorrhea and syphilis incidence in the US is on the rise with 200,000 more cases reported in 2017 compared to 2016 according to an alarming report released by CDC [1]. Late adolescent and young adult females ages 15-19 and 20-24 respectively, are the second highest to the most at risk groups for STDs among any other age group. Women are two times more likely than males to contract chlamydia as 85% women with chlamydia are usually asymptomatic [1]. If left untreated, chlamydia and gonorrhea can lead to serious complications such as pelvic inflammatory disease, while syphilis can lead to adverse pregnancy outcomes. The U.S. Preventive Services Task Force recommends routine STD screening for sexually active females aged 24 years or younger every year [2]. Uptake of screening services, particularly among adolescents is limited due to various reasons including quality concerns, lack of transportation, long waiting times, cost, and inconvenient clinic hours, as well as concerns about confidentiality and fear of being judged or discriminated against [3]. Home-based self-testing is an acceptable and feasible alternative to clinic-based testing. STD test kits can be ordered online, mailed to consumers, who then mail self-collected specimens back to the lab. While these kits have been available for more than 10 years, uptake is limited [4].

Method: As part of a larger study, we conducted two focus groups with 18- to 24-year-old (n=21) females to explore their knowledge, perceptions, and attitudes toward STD screening in general and at-home STD testing in particular. After each session, we offered participants STD test kits for them to try out. We conducted a follow-up survey to determine their perceptions after experiencing doing the test themselves. Six coders used inductive thematic analysis to extract themes grounded in illustrative quotes obtained from FGD participants. A standard qualitative analysis tool (Atlas ti) was used to generate concept maps of themes linked to the coded data.

Results: Analysis of core thematic constructs reveals that young females did not feel the need to learn more (don't want to know) about STDs in general and about STD testing for prevention purposes. They largely did not know about the accuracy, confidentiality, applicability of self-testing. As a result, they were unlikely to complete the steps. They were concerned about stigma attached to STD testing in general and were concerned about whether at home STD tests can help them feel safe and less stigmatized (I am ashamed). Young females were also reluctant to make an intention to self-test due to the lack of relational and professional support (I am alone) when ordering and in receiving the kits, and in case test results are positive. These results give us insights into the perceptions and concerns at-risk young females may have about online ordering of STD test kits and efficacy of specimen self-collection. In turn, these can help us design more effective health messages that can address these concerns and that can encourage sexually active young adult females to adopt at home STD testing.

‘Dr. Google’s’ Global Diagnosis – Patterns of patient’s online health information seeking and interactions with their clinicians

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The internet is changing the way patients around the world learn about health, share medical conditions, and interact with clinicians. In the United States 80% of the online adult population report seeking health information from the internet. This trend has been the topic of growing literature on patients' information seeking behaviors. Studies found that seeking is associated with outcomes such as healthy lifestyle behaviors, improved nutrition, and increased likelihood of cancer screening. Patients' online information seeking has also been linked to feelings of self-efficacy, confidence and even patient empowerment. Health communication scholars suggest this sense of empowerment may facilitate patient's participation and an increased role in shared health care decision making. At the same time, active patients armed with information from the internet may encounter negative responses by some clinicians, who may feel their authority undermined or threatened by a perceived shift in power relations. This study contributes to health communication research by focusing on patient's online health information seeking patterns, outcomes, and interactions with clinicians among a diverse sample of patients.

This study's conceptual framework draws from literature on patient-clinician information exchange (Lewis et. al, 2009; Martinez et al. 2009, Nagler et al, 2010) and patient-centered communication (Epstein & Street, 2007). These approaches emphasize the importance of information seeking and information exchange between patients and their practitioners, and their effects on treatment adherence and treatment satisfaction. This study probes internet usage among three distinct groups of patients: (1) individuals who seek information online in response to a particular health concern; (2) individuals who seek information about a chronic condition (e.g., diabetes, heart disease or cancer) about which information is readily accessible; and (3) individuals with a rare disease, and acute needs for specific information (and other resources).

This study describes results of in-depth interviews conducted among 30 patients from 10 different countries. Discourse analysis is applied to reveal common themes and patterns of online experiences. The findings describe communication strategies used by patients to negotiate their relationship with clinicians. Patients who have serious and rare diseases express strong motivation to find information, as their physicians are less likely to be informed about their specific condition. Consequently, these patients take a more active role in seeking information and bringing that information to their clinician. Informed patients not only engage their practitioners, but also challenge the boundaries of patient empowerment and active decision making. Heightened engagement may lead to a clinician-patient partnership model as noted in current literature and upheld by many participants of the study. At the same time, however, the study points to limitations and some opposition to this emerging clinician-patient model, and the growing reliance on the internet for medical information which may not always be accurate.

The international scope of this study and the attention given to the understudied population of rare disease patients, offers an important contribution to research on health information seeking. The study offers a new perspective on the benefits and challenges that patient's online health information seeking may pose to the clinician-patient relationship.

User Perspectives of an App Developed to Improve Communication in Families Regarding Type 1 Diabetes

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Children with Type 1 diabetes (T1D) require a family caregiver to help manage their long-term illness and minimize further complexities. Although children must begin to conduct appropriate self-management activities once they become adolescents, they often struggle to successfully manage their condition due to the lack of support in terms of their smooth transition. In this regard, many adolescences with T1D report difficulties during this transition phase and caregivers are also faced with challenges to define their role in long-term care. This leads to low self-care adherence and has negative consequences with regard to managing their health. This study is a part of a larger study, consisting of three phases: mobile app development, prototype testing, and usability testing with the actual user group. In Phase 3, that is, the current study, we conducted a usability test using semi-structured phone interviews in order to capture the existing barriers in using the app for further refinement.

With the aim to facilitate adolescent self-diabetes management by relieving the caregiver burden to track health information, we developed a mobile app for Android smartphones. As a health communication app, it provides a way to easily communicate health information for adolescents and parents when they are separated. The goal of the current study was to iteratively expand and enhance the app to be better utilized in the families' daily lives by capturing participant views regarding the app.

We conducted semi-structured phone interviews with adolescents aged 10–15 years (n=23) with T1D and their parents (n=23). Nineteen (82.6%) of the parents were the biological mothers, 43.5% were between the ages of 35-44 years. Fourteen (60.9%) of the adolescents between 11-13 years old, and 11 (47.8%) had been diagnosed for five or more years. The interview captured their experiences in using the app for diabetes management. Specifically focusing on their daily routine to manage diabetes, general impressions app, common emerging barriers of incorporating the app in their life, and design suggestions that would motivate people to use the app. All interviews were audio recorded and transcribed verbatim. Emerging issues were discussed among study team members in a group meeting and led to an affinity clustering.

Through our qualitative data analysis, we found that participants considered the app to be useful, allowing them to conveniently generate a message without much effort. We identified four primary themes that patients and caregivers faced, including: (1) challenges to track health information while adolescents are at school; (2) need to incorporate the app into their daily routine to not to forget tracking information; (3) necessity of addressing different levels of family needs; and (4) the usefulness of strategies to prompt better communication between adolescents and parents (e.g., pre-designed messages).

By capturing the primary themes in living with the app from the user perspective, we will develop iterative design guidelines for adolescents with T1D and their family caregivers. With these guidelines, the refined app would better support adolescents' transition to young adults with responsibilities in their self-care and wellness.

Understanding Family Caregiver's Information Management: Opportunities and Challenges in Cancer Caregiving

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Within the healthcare context, chronic illnesses, such as cancer involve a high degree of uncertainty for both the patient and the caregiver. Informal caregivers providing care for cancer patients experience uncertainty due to issues surrounding the nature of the disease, for instance, the amount of medical information they are asked in order to manage the patient, unpredictable progress of the illness, potential side effects, or the unfamiliar medical activities that a caregiver performs (Kent, Weber-Raley, & Associates, 2016; Kim & Given, 2008).

Although information management has been studied extensively in the healthcare context, which includes ascertaining effective information sources and the impact of that information, information avoidance in spite of being important in information management remains under-evaluated and is not actively studied (Afifi & Weiner, 2004; Babrow & Kline, 2000; Brashers, Goldsmith, & Hsteh, 2002). There is still a paucity of understanding in when and why information is desired or undesired and how this impacts an individual's illness experience. In this regard, despite the development of support interventions in the healthcare context, interventions designed for caregivers can be utilized in ineffective ways (Shin et al., 2018). Considering the potential impact on the process and the physical and emotional adjustment to an illness, information management should be investigated in long-term illness care.

We conducted semi-structured interviews in the outpatient clinic setting with 25 caregivers who provided care for patients undergoing first-time hematopoietic stem cell transplantation (HSCT) to collect data. Each interview lasted approximately 15 minutes and was focused on: (1) caregiver's daily experiences after patient's HSCT, (2) types of information they have desired to know throughout the treatment process, (3) types of information artifacts they use, and (4) how they acquire and manage necessary information to provide care. All interviews were audio recorded, transcribed verbatim and coded into NVivo Pro 11. Main findings were extensively discussed among study team members in a group meeting and led to qualitative thematic analysis.

A majority of caregivers were of direct relationship to the patient, including parent, spouse, or child (88%) and female (76%). 84% were allogeneic and 16% were autologous transplants. The median age of the patient was 56 years (range, 4 to 73). The median number of days after patients received transplant was 98 days. Our data analysis reveals four primary themes caregivers addressed, including (1) different ways to receive information depends on the urgency; (2) caregiver's own strategies to organize health information; (3) prefer simple health communication platforms which is easy to access; and (4) barriers in communicating with clinicians outside of clinic. The theory of motivated information management (TMIM) (Afifi & Weiner, 2004) is used here to discuss how a caregiver can manage information effectively and how this impacts the caregiver's role across their patient's illness trajectory.

The Effects of Social Support on Caregiver Anxiety, Depression, Health Status, and Provider Interactions

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Rationale: A sense that one is loved, cared for, and listened to are emotionally sustaining qualities of social support (Umberson & Montez, 2010). Social support has the ability to reduce stress and foster a sense of purpose. The emotional benefits of social support may indirectly impact an individual's health through the reduction of symptoms attributed to stress. The stress response, when activated by chronic stress, can have a negative influence on the immune, endocrine, and cardiovascular systems. Enhancing social relationships can serve as preventative medicine due to the evidence that links social support to lower mortality risk and more positive physical and mental health behaviors. As the population of older adults increases, so will the number who are in need of informal caregiving for physical disabilities and cognitive impairments. To meet these health care needs, informal caregivers are expected to play an even greater role in the delivery of complex health-care services. The experience of caregivers is highly individualized and therefore difficult to characterize. Caregiving can be emotionally rewarding, but some circumstances may cause caregivers to perceive greater stress and burden due to their role. Research has attempted to define this burden and outline the risk factors associated with this stress, but the findings have been conflicted.

Method: A secondary analysis was conducted using data from the 2017 Health Information National Trends dataset. The sample contained 3,285 respondents with 490 identifying as caregivers. Social support was defined by asking, "Is there anyone you can count on to provide you with emotional support when you need it, such as talking over problems or helping you make difficult decisions". A new variable was created to categorize caregivers with (N = 415) and without (N = 75) social support.

Hypotheses: It was predicted that compared to caregivers without, caregivers with emotional support are more likely to report feelings of anxiety and depression (H1). In addition, it was predicted that caregivers with social support will have higher confidence in their ability to take care of own health (H2). H3 predicted that compared to caregivers without, caregivers with social support are more likely to report better overall health status. Finally, H4 predicted that participants with social support would report more positive interactions and communication with health care providers.

Results: Compared to caregivers without, caregivers with social support were less likely to report loss of interest, feeling hopeless, feeling nervous, feeling worried, and feeling depressed (H1). Caregivers with support, reported higher confidence in their ability to take care of their physical and mental health (scale from completely confident to not confident at all, H2). Caregivers with support had higher self-reported health status, compared to caregivers without (scale from excellent to poor, H3). Finally, participants with support reported higher scores on items including: My provider spends enough time with me and my provider explains things in a way I can understand (H4). Further research is needed to clarify the relationship between social support and the allostatic load of informal caregiving.

Attribution of Attribution of Responsibility in a TV Drama and Support for Abortion Policy

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This study investigates the effect of attribution of responsibility framing in an audiovisual narrative on participant attitudes toward abortion rights. A large sample (N=788) of American women of reproductive age were randomly assigned to view one of three videos adapted from the third season of the television program *American Crime*. Two of the conditions told the story of Shae, a 17-year-old commercial sex worker who is seeking an abortion in the restrictive legal context of a state that requires parental permission for the procedure to be performed (North Carolina). The clips were edited to frame Shae's situation as being either attributable to her own decisions (internal) or attributable to forces beyond her control (external). The control group viewed an unrelated video edited from the same season of *American Crime*, in which a male opioid addict is forced to pick tomatoes in order to support his addiction. Individuals exposed to the internal attribution condition were more likely to perceive the situation as being Shae's responsibility, expressed lower levels of identification with the character, and higher levels of reactance compared to the external group. Internal condition participants were also more likely to say that women who have abortions are "to blame" for their situation. Individuals exposed to the external condition expressed greater compassion for women who have had an abortion (compared to the control) and were more likely to agree that "a woman's decision to end a pregnancy is not made easily." The experiment failed to detect significant direct effects on policy attitudes from assignment, however, support for abortion rights at post-test was positively associated with identification, transportation and reactance, while negatively associated with attribution of responsibility to the character. Theoretical implications for attribution theory as applied to narrative persuasion are discussed.

Analysis of the Effectiveness of Anti-Cyberbullying Campaigns

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Background: Cyberbullying is recognized by many – including the Centers for Disease Control, National Academies of Sciences, Engineering and Medicine, and The White House – to be a serious public health problem. Cyberbullying often occurs when an individual, or group of individuals, target a person online to initiate bullying. Its effects range from depression, anxiety, isolation, physical health issues, and lower academic scores, all of which can persist from childhood into adulthood. In addition, cyberbullying has been linked to a great number of suicide cases in young people. MITRE undertook exploratory research and analysis of the cyberbullying issue.

Methods: Assessed the state of cyberbullying research via a literature review, and analyzed the effectiveness of 4 anti-cyberbullying campaigns (StopBullying.gov, Stand Up To Bullying, I Am A Witness, Stomp Out Bullying) through social media analysis using Crimson Hexagon’s ForSight tool.

Results

Literature Review

- Definitions of what constitutes cyberbullying and measurement approaches vary widely. Studies draw on different target populations, making it hard to estimate cyberbullying’s prevalence.
- Lack of a common measurement hampers research into cyberbullying intervention effectiveness. There is very limited rigorous research on the subject. For example, there are relatively few randomized controlled trials of interventions (Cantone et al., 2015), and many programs score higher on ease of implementation criteria than on scientific merit (Della Cioppa et al., 2015).
- A sizable portion of youth cyberbullying victims do not tell anyone about their experience, and are more likely to recommend passive strategies for coping.
- Products aimed at preventing cyberbullying using predictive analytics exist, but these products rely on simplistic key word searches and are often only able to monitor activity on individual social media sites (Schwartz et al., 2016, p. xiv).

Social Media Analysis

MITRE collected data on the general topic of cyberbullying as well as four campaigns for the time frame of January 2016 to April 2017. 3,641,906 posts were identified and analyzed in aggregate in the general conversation. The intent was to provide a baseline for comparison between general conversation trends and specific cyberbullying campaign trends.

- The majority of posts came from Twitter (public), more posts than expected appeared on other platforms.
- The majority of posts belonged to people over 34.
- Of the posts that had identifiable gender, 65% came from females.
- Posting peaked with celebrity involvement.

Conclusions and Implications for Research

- Findings suggest the topic has a large audience spanning demographics.
- More rigorous research on the effectiveness of cyberbullying intervention programs is needed.

- Developing common measures of effectiveness (MOEs) would help in assessing program effectiveness.
- Having a celebrity sponsor on a campaign may create more awareness of the issue.
- Incorporating more campaigns and exploring volume peaks would help to understand trending patterns.
- Anti-cyberbullying campaigns may more effectively target youth (and males) by determining who the stakeholder groups are with relation to cyberbullying, and develop campaigns to each group.
- Comparing types of educational programs versus social media campaigns, could help determine if one (or combination) is more effective.

Assessing the differences among college students with mental and chronic physical illnesses: Implications for intervention

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Chronic illness affects almost half of all American adults. These types of illnesses are often thought of as physical illness, such as diabetes, asthma, and cancer. Many individuals with a physical chronic condition, often experience mental health issues, most notably, depression. Notwithstanding, mental illnesses, which can also be chronic, impact emotions, mood, thoughts, and behaviors. Both mental and chronic illnesses can have severe implications on an individual, which are often be triggered by life events.

One such event is leaving home for college. During this pivotal phase in an individual's life, the individual might be faced with situations in which they have never had to be exposed to, or do so on their own. For example, such individuals who have been diagnosed with mental or chronic illnesses may have had parental help in managing illness and may feel frustrated or lost as they attempt to manage it independently. Prior research shows that such conditions can be a hindrance to one's academic success. For example, health problems have been linked to lower grade point averages in students and higher rates of dropping out when compared to students who do not suffer from such conditions.

Numerous factors may be linked to a students' academic success, some include self-esteem, loneliness, depression and social anxiety. This study reports on an investigation into self-esteem, loneliness, and interaction anxiety among college students with either a mental or chronic health condition.

We surveyed college students through an online survey at a large Midwestern university. Our initial sample included 857 students; we are reporting on the 99 students who indicated they had a physical chronic condition (i.e., diabetes, cancer, or asthma) or who had been diagnosed with a mental health condition (i.e. depression, anxiety, etc.). Fifty-two participants reporting having a mental illness and 47 reported having a physical illness. Using validated and reliable survey measures for each of the constructs, we conducted an independent samples t-test. We found significant differences in self-esteem among those with a mental illness ($M=2.08$, $SD=.48$) and physical illness ($M=1.68$, $SD=.54$); $t(94)=3.89$, $p<.000$ those with mental health issues have lower self-esteem. There was also a difference in individuals' perceptions of loneliness. Those with a mental illness ($M=2.15$, $SD=.49$) experienced greater loneliness than those with a physical illness ($M=1.92$, $SD=.47$); $t(94)=2.32$, $p=.02$. There was also a difference in social anxiety scores. Those with a mental illness also reported feeling more social anxiety ($M=3.11$, $SD=.19$) than those with the physical illness ($M=2.50$, $SD=.68$), $t(36)=2.42$, $p=0.21$.

Students enrolled in college are often experiencing independence for the first time and have to manage their illnesses on their own. For students with mental illnesses, this may be more exhaustive due to the stressful and demanding nature of the college experience. This study shows that there is a significant need for different interventions to help individuals with mental and physical chronic illnesses.

Antagonism about an Ebola vaccine trial in Ghana: What's the media got to do with it?

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Background: In July 2015, an approved Ebola vaccine trial was suspended by the Ministry of Health of Ghana, amid protests from members of parliament and the general public. Explanations of safety from experts leading the trial did not seem to make any difference, as Ungar (2001) had noted that “a safety model ... is not readily sold to a public whose demands for a yes/no risk evaluation hardly countenances a cost-benefit analysis.” The trial was approved to start again in November 2015. What was the media’s role in ‘inciting’ this fear and panic about the vaccine trials juxtaposed against their responsibility to inform and educate the public?

Purpose and relevance: The purpose of this study was to investigate the role of the media in the suspension of the 2015 Ebola vaccine trials in Ghana. This research is relevant now, as emerging infectious diseases such as Zika, MERS, chikungunya, present security health threats, and the need for vaccines to address them heightens. The legacy media in developing countries represent major sources of health information for the population and this role needs to be assessed. Again, how various channels and modes of communication support or impede vaccination development and dissemination efforts in developing contexts, should be of interest to health communication scholarship in general.

Literature/ theoretical underpinnings: The study draws on literature on moral panics (Cohen 1972) and risky society (Berk, 1992, 1995) to expose ‘ignorance/misinformation’ and institutional violations by the media that are passed on to the public, and which impede health education efforts.

Method: Using semi-structured interviews with 18 media personnel in Ghana, and qualitative analysis of some media publications about the Ebola vaccine trials, the study investigates the part the media played in stirring up antagonism against the trial.

Findings: The study found among other things that 1) In situations of high anxiety, the media’s quest to break a story may be prioritized over the need to cross check facts; 2) Historical, political and cultural underpinnings have a strong influence on biomedical practices; 3) Moral panics, may reflect and reinforce risk perception consciousness; 4) In contexts where there is low knowledge about health and science in general, health education could be hampered by the very forces that are expected to implement it.

Implications: This study highlights the complexity and challenges of undertaking much needed vaccine tests in societies, where the notion of drug trials has underlying historical and sociological baggage. It also reflects the low knowledge of science and health communication in general among the media, and the need for health communicators to engage the media generally on health and science issues. The study throws light on the need for integrated public health risk communication in every aspect of public health management, in a way that is sensitive to context, audience values and culture.

Recovering from Poisoned Water: Flint Registry Focus Groups and the Context of Trust

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Although the national attention on the Flint Water Crisis (FWC) has declined, public health recovery from the toxic exposure and emotional trauma is an ongoing effort. In a corrosion of democracy and driven by austerity, the drinking water in Flint was switched in April 2014 from pre-treated Great Lakes water to the untreated Flint River. Failure to adequately treat the water resulted in, among other issues, over 100,000 individuals consuming corrosive lead-contaminated water. To this day, residents still struggle to access clean and affordable water. As part of efforts to support the recovery of Flint residents, a registry (<https://www.flintregistry.org/>) was created to identify individuals exposed to the FWC, connect residents with resources to mitigate the impact of the crisis, and measure health and child development concerns. As part of the Flint Registry's community-informed planning and development, several formative assessment focus groups were conducted to inform the design, content, purpose and outreach strategy of the Flint Registry.

Eight focus groups consisting of 68 participants were conducted with various sub-groups including populations of the deaf or hard of hearing, children, Hispanic, employees, parents and others. Conversations centered on knowledge and awareness of the Flint Registry, use of and need for specific services the registry could incorporate, reactions to the Flint Registry goals, and possible motivators for Flint Registry enrollment. This investigation reports findings of perceptions of trust among Flint residents. Inductive theme generation of focus group transcripts revealed that the topic of (mis)trust was dominant, including the various sources of such.

Trust has long been a construct of interest in communication and public response to community/population crises (Mellinger, 1956). In this domain, trust has been conceptualized in several ways. In the context of public responses to public health and government recommendations, Peters and colleagues' (1997) identified three dimensions of trust and credibility: perceptions of knowledge and expertise (one's perceived competence and predictability), perceptions of openness and honesty (perceived views of objectivity) and perceptions of concern and care (perceptions of committing to the goal at hand, caring and fiduciary responsibilities). Additionally, Meredith and colleagues (2007) conducted eight focus groups consisting of 75 African American individuals to examine the relationship between trust and public health messaging. Results found fiduciary responsibility, honesty, competency, consistency, faith and other as key components of trust.

Using these conceptualizations to frame our investigation, an analysis of the Flint Registry focus group transcripts is currently underway with trust as the central construct of interest. This presentation will identify dimensions of trust/mistrust with exemplars, in addition to information on the role of trust in adhering to public health messaging. Results will demonstrate communication challenges academic and community organizations are facing as they strive to enroll individuals into the Flint Registry in the post-crisis context of inherent and justifiable mistrust.

When Threats to Emotional & Social Well-being Outweigh Physical Harm: The Role of Risk Saliency within the RPA Framework

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The Risk Perception Attitude (RPA) framework segments audiences based on individual perceptions of risk and relevant efficacy beliefs (Rimal & Real, 2003). The framework hypothesizes that the responsive group (high efficacy, high risk) will exhibit the greatest self-protection behavioral intentions, followed by the proactive (high efficacy, low risk), avoidance (low efficacy, high risk), and indifferent groups (low efficacy, low risk). While some tests of the RPA framework have shown results consistent with four distinct attitudinal groups (Mead et al., 2012; Rimal & Real, 2003, Study 2), the general trend is a main effect for efficacy, such that the responsive and proactive groups report significantly higher behavioral intentions than the avoidance and indifferent groups (Rains, Hingle, Surdeanu, Bell, & Kobourov, 2018; Rimal & Real, 2003, Study 1). That said, researchers have used various measures of risk perception and efficacy beliefs when testing the RPA framework across health contexts. These nuanced differences in measures are important to consider when judging the utility of the RPA framework for creating tailored health interventions.

For instance, previous research has shown that the physical risks associated with obesity are not salient for many college students; young adults often perceive being overweight or obese as more risky to their emotional and social well-being (Corsino et al., 2014; Ledford & Underhill, 2018). This project explores whether the type of perceived risk and efficacy beliefs measured will provide differential outcomes when testing the RPA framework.

A total of 490 undergraduate students at a university in Appalachia were offered a small amount of extra credit to participate in an online survey. Perceived physical, social, and emotional obesity risks were measured, followed by measures of general health self-efficacy, exercise efficacy beliefs, and demographics. Six tests of the RPA framework (risk type x efficacy type) with behavioral intentions to engage in physical activity as the outcome variable were conducted. Results first showed that participants reported significantly higher perceptions of emotional and social risks than physical risks of being overweight or obese. Their self-reported general health efficacy and exercise efficacy did not differ significantly.

When examining the 6 tests of the RPA framework, important differences emerged. For physical risk (the least salient type), results showed only a main effect for efficacy type; but when social risk or emotional risk were used, more support for the RPA framework emerged. Specifically, there were significant differences in behavioral intentions that created three of the four hypothesized RPA audience segmentation groups, such that clear indifferent/avoidance, proactive, and responsive groups emerged with significantly different levels of behavioral intentions in the predicted direction.

Overall, this study highlights how the type of perceived risk measured can make a significant difference when testing the RPA framework. These results can be used to craft more effective persuasive health messages that fully address college students perceptions for distal risks like obesity. Moreover, this study reinforces examining the emotional and social risks of stigmatized health conditions and the need for more research of them within the RPA framework.

**Evaluating prostate cancer decision aids:
Focus group research with African Americans survivors**

Sean Upshaw

Prostate cancer remains a health challenge for U.S. adults, especially African American men, who have higher rates of prostate cancer diagnosis than other racial/ethnic groups. The study evaluated five prostate cancer decision aids (PCDAs) via qualitative focus groups with 12 African American survivors of prostate cancer. Findings show that PCDAs can expand patient knowledge and promote education but lack cultural competency concerning message identity.

Cross-national Coverage of Child Hunger: Testing Community Structure Theory

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A community structure analysis (Pollock, 2007, 2013, 2015) was used to compare national characteristics and newspaper coverage of child hunger in a cross-section of 18 nationally prominent newspapers, one per country. All relevant articles with 250+ words published between 01/01/2015 and 10/31/2018 were examined and coded for “prominence” (placement, headline size, article length, and presence of graphics) and “direction” (“government responsibility,” “societal responsibility” or “balanced/neutral” coverage of child hunger). Then, prominence and direction measures were combined to yield “Media Vector” scores for each newspaper, ranging from +1.00 to +0.00. Excluding Rwanda and Ghana, with balanced/neutral coverage, all countries’ newspaper coverage emphasized government responsibility for addressing child hunger.

The privilege “buffer” hypothesis (relatively privileged countries “buffered” from economic uncertainty are associated with coverage emphasizing respect for human rights claims: Pollock, 2007, pp. 61-100) was robustly confirmed. Physician density ($r = .560$; $p = .010$) was strongly correlated with coverage emphasizing “government” responsibility for addressing child hunger. Other indicators of abundance such as a high Crop Production Index ($r = .502$; $p = .020$) as well as oil consumption ($r = .376$; $p = .072$) were also significantly or directionally correlated with government responsibility for child hunger.

A regression analysis revealed that physician density accounted for 31.3% of the variance, crop production index (13.3%) and oil consumption (8.2%), totaling 52.8% of the variance linked to media coverage emphasizing government responsibility for child hunger. Finding that measures of privilege are linked to media support for government responsibility for human rights issues resembles previous research on coverage of human trafficking (Alexandre, et. al., 2014, 2014) and HIV/AIDS treatment access (Etheridge, et. al., 2014, 2015). Although it was expected that privilege would be linked to coverage emphasizing government responsibility, it was striking that indicators of vulnerability directly proximate to the experience of child hunger, national levels of poverty and malnutrition, were not significantly associated with variations in coverage.

Empirically, this study confirmed empirically that three national characteristics indicating privilege -- physician density, crop production index, and oil consumption -- were linked to newspaper coverage emphasizing a domestic government’s responsibility to reduce child hunger. Methodologically, combining measures of “prominence” and “direction” generated by the highly sensitive “Media Vector” facilitated sensitive measurement of the capacity of media to reflect country-level measurements of privilege. From a theoretical perspective, community structure’s findings are consistent with an originator of agenda-setting theory’s empirical confirmation that agenda setting’s “top-down” perspective is complemented by the “bottom-up” viewpoint of community structure theory and its focus on community/country-level demographics (Funk & McCombs, 2017).

Child-Oriented Promotional Features on Cereal Packaging: Differences by Sugar Content and Self-Regulatory Pledge

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Background: Within the last few years, major food companies began imposing regulations upon themselves to show they are taking active steps to not market unhealthy products to children (Kunkel, Castonguay, Wright, & McKinley, 2014). These self-imposed regulations were enacted, in part, due to links between food marketing and childhood obesity (Kraak & Story 2015). The “pledges” by major cereal manufacturers assert that each included company will only market “healthy dietary choices or better-for-you foods” to children under age 12 (CFBAI, 2016, p. 34), though their nutritional designations and reduction strategies are vague (Kunkel et al., 2014). While concern over this issue has grown within recent years, there has been little research conducted, especially after these self-regulations were adopted in 2009 (Kunkel et al., 2014).

Purpose: This study examines child-oriented promotional techniques on Ready-To-Eat (RTE) cereal packages, and whether these tactics vary between cereals manufactured by companies with or without CFBAI pledges and by sugar content.

Methods: A content analysis of 125 Ready-To-Eat cereal packages is underway, examining each box for trade-characters, licensed spokes-characters, child-directed games or activities, and other features shown to entice children. Name- and generic-brand cereals were purchased from two grocery stores, serving lower- and upper-income neighborhoods respectively. A literature review informed coding scheme development.

Results: While coding is underway, 81 cereal boxes have already been coded for presence of games/activities (30% double-coded for interrater reliability; kappa = 0.81), trade-characters (kappa = 0.80) and spokes-characters (kappa = 0.65). This subsample reflects variety with regards to low sugar (0-6g per serving; 32.9%), moderate sugar (7-9g per serving; 26.8%) and high sugar content (10 or more grams, 40.2%), and whether the manufacturer has made a CFBAI industry pledge (63.4%; majority of name-brand cereals) or not (36.6%). Preliminary findings indicate that 30.9% of boxes contain trade-characters and 37.8% contain child-oriented games or activities. Trade-characters are found on more boxes with higher-sugar content (45.5%) and moderate-sugar content (42.9%), compared to lower-sugar content (3.7%, $\chi^2(2, N=81) = 14.04, p < .001$). Cereals owned by companies with CFBAI pledges are more likely to have trade-characters (45.3%), compared to those outside of the self-regulation (3.6%; $\chi^2(1, N=81) = 14.94, p < .001$). Similarly, games/activities are more common on boxes of higher- and moderate-sugar content cereal, compared to lower-sugar content (54.5%, 45.5%, and 11.1% respectively; $\chi^2(2, N=82) = 12.67, p < .01$). Games/activities are also found on more cereals with CFBAI pledges (50.0%), compared to those without CFBAI pledges (16.7%; $\chi^2(1, N=82) = 8.99, p < .01$). Spokes-characters are only found on 3.7% of boxes, with no difference in presence based on sugar content or CFBAI pledge.

Conclusion: Preliminary findings suggest the cereal industry has limited the use of licensed spokes-characters on packaging. As prior research has found substantial spokes-character presence on major name-brand cereals (Page et al., 2008), this may reflect compliance with industry self-regulation. However, cartoon trade-characters and games/activities on packaging remain common, particularly on higher sugar-content cereals and those covered under industry self-regulation. Greater efforts may be necessary to clarify and enforce these.

Linking and Amplifying User-Centered Networks through Connected Health (L.A.U.N.C.H.): An Appalachian Kentucky Demonstration Project

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Objectives: The 2016 President’s Cancer Panel Report highlights the importance of connected health and its contributions to improved management of cancer care through technology. The vision for connected health is the ability to use technology to facilitate efficient and effective collection, flow, and use of health information. Added to this, the Cancer Moonshot Blue Ribbon Panel Report identified cancer symptom management as a top recommendation for rapid innovation. In response to these respective calls to action, the Linking and Amplifying User-Centered Networks through Connected Health (L.A.U.N.C.H.) demonstration project was established to bring together cross-sector partners to address these priority issues in rural communities that experience the double burden of high cancer rates and low connectivity, including Appalachian Kentucky.

Project: Key stakeholders, including the National Cancer Institute, Amgen, Federal Communications Commission, University of California San Diego Design Lab, and the University of Kentucky Markey Cancer Center, are working together in a novel public-private collaborative to design, implement, and evaluate a connected health innovation to improve cancer outcomes in Appalachian Kentucky in a multi-year project. In addition to the research team, community partners, oncology providers, caregivers, and patients are contributing to project design and implementation.

Findings: The partnership is led by a Steering Committee, which has charged multiple subcommittees with addressing specific components of the demonstration project. The proposed presentation will focus on findings from the Community subcommittee, which has been tasked with conducting formative research among health care providers, community organizations, caregivers, and patients to understand their experiences in managing cancer symptoms and assess acceptability and feasibility of using connected health intervention to help manage their care.

Conclusions: Culmination of this work will lead to a connected health centered intervention to better manage cancer symptoms among a vulnerable rural population. Our work will contribute to the larger goal of bridging the technology gap that exists in rural communities through connected health while addressing one of the top recommendations of the Cancer Moonshot Blue Ribbon Panel.

**Critical socioecological model:
A critical perspective to historicize health inequities in New Mexico**

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Historically, In the U.S, people of color lead shorter lives, receive worse medical care, live in hazardous conditions, and occupy more menial jobs. This paper is a theoretical piece and aims to improve how we construct and conceptualize health inequities by providing a new model that will allow researchers, practitioners, public policy makers and advocates to situate health inequities within the historical context of particular groups and identify all the ways in which historical, political, environmental, organizational, interpersonal and individual issues of injustice effect health outcomes for particular populations. The current work aims to borrow from the critical tradition, specifically Critical Race Theory and apply it towards the humanist perspective, particularly Skole's Socio Ecological Model of Health as a way to theorize, explain, understand and improve health inequities. A new theoretical model is proposed blending from the two traditions.

When we apply a critical race lens to the current model we are able to see how the ordinariness of racism permeates the multiple levels influencing health. In order to reveal the underlying racism that exists within the socioecological levels we must use CTS's call to context (Delgado & Stefancic 2001). Which means that we must extend the SEM model to include the history of the people's social ecological conditions.

When we examine the health outcomes of groups and situate them within the historical context, we can see how privilege and oppression are markers of health outcomes and trickle down into all levels of the SEM. By adding a historical level to the current SEM we can see how racialization, slavery, segregation, colonialization brought impoverishment for people of color and also how different groups have been racialized through history and how these racializations have effected their ability to thrive and thus equate to poorer health outcomes. Inversely we see how through over 20 generations, privilege has been inherited unjustly from these same devices and benefitted whites exclusively as public policy has been enforced that marginalize people of color and contribute to these outcomes. Political and economic forces contribute to the lived experiences of individuals and have effects for individuals living under those systems.

Furthermore, people of color are affected disproportionately by environmental and spatializing practices sanctioned by US policy (Bullard, 2001) such as the placing of landfills, polluting factories, and mining in or near the homes of ethnic minorities and poor. Principally influenced by the historical impacts of colonization, eurocentrism, capitalism and nationalism issues of space and place are important to consider when looking into environmental effects of health.

In this paper the model is then applied to explore health inequities in New Mexico and in particular McKinley county and Rio Arriba county. Using census, information, mapping and histories of peoples through a critical lens this example is explored as it relates to current health disparities in New Mexico. This serves as an example of the scope and use of the model to contextualize and identify the multiple levels of influence on health outcomes for marginalized populations.

Source credibility of a virtual health assistant communicating colorectal cancer screening messages among black women

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Background: Virtual health assistants (VHAs) are a promising eHealth technology for communicating health messages widely to diverse populations and may promote positive behaviors such as engaging in cancer screening. Black women are underrepresented in cancer research using technology, highlighting a gap in knowledge about how eHealth cancer interventions may help reduce cancer burden among racial minorities. Furthermore, little is known about what source characteristics enhance credibility of VHAs among black women.

Objective: This study 1) describes a team-based process of developing a black female VHA avatar to communicate colorectal cancer (CRC) screening messages, 2) describes acceptance-promoting and acceptance-inhibiting source characteristics of the VHA and 3) evaluates overall credibility of the VHA for communicating health messages among black women.

Methods: An iterative, user-centered approach informed the development a CRC screening intervention, voice, and appearance of a VHA. Insights were collected from rural, black women, who commented on evolving versions of a black VHA. Participants tested the intervention administered via a mobile app.

Results: Black women (N=41) between 50 and 73 years old, participated in focus groups (n=7) and think-aloud interviews (n=2). Researchers used qualitative data to prioritize changes when modifying the VHA, including feedback on hairstyle, voice, and skin. Participants desired a VHA who appeared “realistic”, “friendly”, “attractive”, “feminine”, “natural” and sounded “black”. Earliest versions of the black VHA were critiqued for looking “stressed out”, “stiff”, “robotic”, “angry”, “stern”, “virtual”, “like a simulation”, looking like she had an “attitude”, and “sounding too young” or “too scripted”. Early focus groups expressed a preference to communicate with their real doctor for information regarding CRC and described concerns about not being able to ask questions of the VHA. As the development of the VHA evolved, researchers noted a shift in women’s willingness to engage with the app. Women who saw updated versions of the VHA expressed a desire to interact with her and share the app with friends and relatives. The final version of the VHA was described as “very convincing” with participants agreeing that she looked like a “real person” and a “real doctor”. One woman said, “that’s the way it made me feel, like my doctor is talking to me” and another commented, “I wasn’t thinking she was no video person...she was a real person, like I’m talking to my doctor. It was like, ‘Oh, yeah, thanks doctor for helpin’ me out. I’m gonna’ go be checked’”. As credibility of the VHA improved through this iterative process, comments revolved less around physical features and more around the positive experience of interacting with her. Overall, source characteristics associated with improved credibility of the final VHA included looking like a doctor and like a live person, with women finding her a convincing and knowledgeable source of information.

Conclusion: Specific source characteristics contribute to the credibility of a VHA among black women, who expressed interest in engaging with CRC screening messages communicated through a mobile app. Black women’s willingness to engage with eHealth interventions may help overcome barriers including screening disparities among this underrepresented population.

Latino Fathers' Content Validation of Padres Activos (Active Fathers), an Experiential Learning Obesity Prevention Intervention

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Approximately 79% of Latinos are overweight compared with 71% of non-Hispanic White men and 69% of non-Hispanic Black men (Ogden, Carroll, Kit, & Flegal, 2014). Moreover, overweight Latino children/teens (youth) are at greater risk for diseases such as heart disease, high blood pressure, hypertension, cancer, and diabetes – in fact, half of Latinos born today will develop diabetes in their lifetime (Croyle, 2009). Based on these figures, the development, evaluation, and implementation of obesity-targeted interventions for Latinos is essential. Various theories have emerged in an effort to identify factors that might impact obesity among the Latino population (e.g., Centrella-Nigro, 2009; Perez-Escamilla, 2011). Most of these studies have centered solely around the process of acculturation and the correlation between duration of residency in the United States and increased weight gain, thus leaving a significant gap in understanding.

Despite the limited research, understanding how Latino fathers influence their children's diet is especially important given their central role in the family system (Parke et al., 2004) and the observations that Latino fathers spend more time in caregiving activities than fathers from other ethnic groups (Hofferth, 2003). As such this study examines Latino fathers' perspectives of the four specific content areas included in a culturally adapted experiential learning intervention, aiming to improve knowledge and behaviors related to: (1) food consumption and (2) preparation, (3) physical activity, and (4) stress management. Topics were adapted from evidence-based curricula and based on extensive formative research. *Padres Activos*, a community-based behavioral intervention that targets Latino fathers specifically to create healthier lifestyle choices, demonstrates the advantages of utilizing refined methodologies in the delivery of sensitive programs.

This paper explores the findings of the *Padres Activos* intervention through a qualitative framework to highlight the importance of culturally appropriate interventions to create a healthier generation of Latinos in the U.S. Of particular interest is the exploration of nonfood-related systemic inequalities that persisted such as limited time due to multiple occupations and the effects of residential segregation.

Communicating about pain to build trust: A two-phase exploratory study

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More than 1 in 10 American adults experience chronic pain, defined as daily pain for at least three months (U.S. Department of Health and Human Services, 2012). Due to the largely invisible nature of pain, patients often have difficulty communicating their experience to those around them. Friends, family, and co-workers are sometimes suspicious when pain is not accompanied by a visible, physical, or measurable cause, such as an injury (Monsivais, 2012). Chronic pain has been shown to negatively impact marriages (Flor, Kerns & Turk, 1987) and friendships, because patients often feel that others do not truly understand the impact of their pain (Slade, Molloy, and Keating, 2009). Such results imply a lack of trust: patients may not trust their loved ones to fully comprehend their needs, while loved ones may not trust patients' descriptions of symptoms. Whereas researchers have explored the power of trust between pain patients and physicians (e.g., Buchman, Ho & Goldberg, 2017; Buchman, Ho, & Illes, 2016), this two-phase, exploratory study also examines how chronic pain patients attempt to build trust within their personal networks.

Phase 1 was a focus group, centered on the following research question: How do chronic pain patients communicate about their experience in a way that fosters trust? Six adults participated in the focus group, held Sept. 27, 2018. Participants were mostly female (n=4), mostly white (n=5), and mostly within the age range of 50-69 (n=4). Four had received an official diagnosis for their pain. The group was audio-recorded and transcribed verbatim; the two primary investigators coded the transcript to identify recurring themes. Preliminary results indicate three prominent themes within the data: (1) trust, or lack thereof, between patients and friends, loved ones, and health care professionals, as well as the patient's own trust in him or herself; (2) identity, in that chronic pain creates complexities and discrepancies in one's overall sense of self; and (3) uncertainty, in terms of seeking an official diagnosis and effective treatment plan, and because constant pain changes one's expectations for the future.

Phase 2 of the study will consist of semi-structured, individual interviews, with research questions for this phase aligning with the main themes from Phase 1: (RQ1) How, if at all, do chronic pain patients communicate their pain to others (i.e., people in the medical system, friends, family members) to promote understanding and trust ?; (RQ2) How, if it at all, does the onset—and official diagnosis—of chronic pain change someone's overall sense of identity?; and (RQ3) How, if at all, is chronic pain associated with uncertainty for patients, their loved ones, and their health care providers?

This study has implications for millions of chronic pain patients, their loved ones, and the health care professionals who work with them. By understanding how chronic pain is associated with trust, identity, and uncertainty, we can help patients and those around them better understand and manage the unique communication difficulties associated with chronic pain.

Continuing Medical Education as a Translational Science Opportunity for Health Communication Researchers: The BCERP Model

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Health communication researchers often engage in research bridging the gap between bench scientists and practitioners. Through this work, researchers attempt to share information with individuals who make important health decisions such as via established relationships between health care providers and patients. This translational activity is essential to increase the likelihood that emerging science from the laboratory makes it into the hands of health professionals who can integrate it into their everyday practice with patients (Woolf, 2008). The ultimate goal is for emerging science and related risk reduction recommendations to be utilized by the lay public. This study uses the diffusion of innovations approach (DOI: Dearing et al., 2010; Rogers, 2003) to identify pediatric health care providers as opinion leaders within health information systems who can skillfully disseminate information to (Boster, Kotowski, Andrews, & Serota, 2011).

An translational approach underutilized by communication researchers is the development of continuing medical education (CME) interventions that incorporate a communication science approach to the uptake of new recommended practices based on developing science. CME programs aim to keep healthcare providers up-to-date with knowledge advancements to increase provider competence and ultimately improve patient health (Fox & Bennett, 1998; Levinson & Roter, 1993; Mansouri & Lockyer, 2007). The current study explains the nature of translational science, showing that the role of CME is an integral strategy for reaching pediatric health care providers. The exemplar used is a training project funded by the National Institute for Environmental Health Sciences for the Breast Cancer and the Environment Research Program. An evaluation of the history of CME interventions will be presented, with a specific focus on communication CME interventions, followed by a discussion of the DOI framework in relation to the role of healthcare providers as opinion leaders for caregivers and patients. Next, formative research with pediatric health care providers and caregivers of patients will be presented, highlighting the gap in provider knowledge of risk recommendation strategies, and identifying the need for a CME training in the area of communication strategies related to breast cancer environmental risk factors.

Lessons learned are discussed as they relate to developing a translational opportunity for the BCERP utilizing CME interventions. Translational research designs are fundamental for health communication research. Specifically, communication scientists are uniquely trained in communication theory, research methods, and behavioral sciences, putting them in a position to move emerging science across social systems to put knowledge into practice. CME interventions provide health communication scholars with an avenue to reach the individuals who can influence caregivers and patients to act on new findings. By establishing partnerships, using theoretical frameworks (like DOI) to guide content, considering the delivery format with audiences in mind, and by utilizing CME interventions to award CME credit to participants, health communication researchers can use CME courses to share results from scientific studies with providers who can influence health decision-making. These opportunities are underutilized and health communication researchers should consider taking advantage of this route to share information.

Windows of Susceptibility and Concern About Breast Cancer and the Environment: Results from Community-Based Formative Research

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The Breast Cancer and the Environment Research Program (BCERP) is a transdisciplinary consortium funded by the National Institute of Environmental Health Sciences and the National Cancer Institute (bcerp.org). This program brings together biologists, epidemiologists, breast cancer advocates, and communication scientists to research and translate findings regarding exposure to endocrine disrupting chemicals early in life and implications for breast cancer risk as women age (Birnbaum & Fenton, 2003). A primary focus is to understand the impact of exposure to these chemicals during periods of increased vulnerability to environmental risks, known as windows of susceptibility (Biro & Deardorff, 2013). These windows are marked by rapid hormonal changes and cellular growth that leave breast tissue cells vulnerable to damage or mutation when exposed to endocrine disrupting chemicals.

One of the BCERP's main goals is outreach and engagement with the public to effectively communicate emerging scientific evidence regarding the cancer-environment connection (Silk & Totzkay, 2018a). To do so, BCERP communication scientists have frequently employed focus group discussions to better understand who the audiences are that are being served, how audiences respond to certain risk reduction appeals, and the barriers and facilitators audiences experience to engaging in recommended behaviors (e.g., Silk et al., 2014; Silk et al., 2006; Volkman & Silk, 2008). However, to date, BCERP research has not fully addressed the diversity of audiences who are impacted by environmental breast cancer risks, as well as what lay theories regarding the environment-cancer link are held by these audiences.

To tailor and maximize the effectiveness of outreach and engagement efforts, formative audience research is required with diverse groups of women (Silk & Totzkay, 2018b). Focus groups provide one strategy that allows for breadth and depth while working with a wide range of ethnic populations (Mahoney et al., 2014). Past BCERP research has partially addressed this, though narrow regional recruitment for focus groups has not fully captured perceptions of the role environment plays in cancer risk. More research with a greater orientation toward community participation is needed with breast cancer advocates embedded in the communities of interest to the BCERP.

This study addressed these downfalls by comprehensively sampling the diverse audiences served by the BCERP, exploring new topics that have emerged in recent BCERP work. This was done via focus groups moderated primarily by community partners trained by communication scientists for audience analysis. Community partners aided in the design of the final moderator guide that aimed to provide a more refined understanding of how lay persons may make the cancer-environment connection and the implications related to learning about new concepts, like windows of susceptibility.

Preliminary findings indicate a generally low concern about breast cancer and little knowledge about the concept of windows of susceptibility, however, participants indicated greater concern about breast cancer with knowledge of the "windows of susceptibility" concept. This suggests providing information on windows of susceptibility might motivate preventive action earlier in life. Analysis regarding other inductively derived themes are underway and findings with implications will be presented in full.

Disclosure Strategy, Interpersonal Response to Disclosure, and Social Support Offered in the Context of Mental Illness Disclosures

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Despite findings that self-disclosure is a key step on the road to appropriate diagnosis and recovery for individuals experiencing symptoms of mental illness (Bell et al., 2011), research on concealable stigmatized identities (CSIs) (Chaudoir & Fisher, 2010; Frey, Hans, & Cerel, 2016) and stigmatized nonvisible illnesses (Chang & Bazarova, 2016, Choi et al., 2016) has shown that these individuals are uniquely aware of stereotypes, stigma, and prejudices associated with their identity, which decreases the likelihood and effectiveness of disclosures (Frey & Fulginiti, 2017; Rusch, Brohan, Gabbidon, Thornicroft, & Clement, 2014). Disclosure researchers have posited that individuals use a continua of strategies to share personal information (Afifi & Steuber, 2009; Greene, 2009), ranging from direct to indirect methods, with different levels of elaboration. Further, responses to disclosures result in a continua of outcomes, ranging from positive to negative and from confirming to disconfirming (Cissna & Sieburg, 1981; Dai, Shin, Kashian, Jang, & Walther, 2016; Lepore, Ragan, & Jones, 2000; Reis & Shaver, 1988). Previous research has indicated that disclosing sensitive information can be an effective means of obtaining social support when responses to disclosure are positive (Collins & Feeney, 2000; Horowitz et al., 2000; Kirsh et al., 2016; Rubin, Evans, & Wilkinson, 2016; Talebi, Matheson, & Anisman, 2016; Velez et al., 2016). The current study used content analysis to measure the disclosure strategies used and the interpersonal response to disclosure and social support offered in response to disclosures about mental illness in a depression help subreddit.

Reddit has been used to investigate how individuals seek support and encouragement through recovery from drug addiction (Sowles et al., 2017) and how individuals express views and share social dialogues about mental illness and quitting addictive substances (Sharma, Wigginton, Meurk, Ford, & Gartner, 2017; Wang et al., 2015). One specific subreddit of relevance to the current study is called “r/depression” (<https://www.reddit.com/r/depression>) (Reddit). The description on the homepage reads “a supportive space for anyone struggling with depression” and the posts are often individuals disclosing their own experiences with symptoms of depression, seeking support, or just looking for a place to discuss their mental status and symptoms. The current study utilized this subreddit as a unique platform to examine how different disclosure strategies yield different types of social support and interpersonal response to disclosure. The initial posts in this subreddit are often self-disclosures and, for the purpose of this study are conceptualized as self-disclosures and support-seeking attempts, and the direct comments to the initial post are conceptualized as interpersonal responses to those initial disclosures. On a given day, there is anywhere from 200-300 new initial posts in the subreddit, with an average of 3.5 comments per post.

Initial posts were categorized by level of direct and indirect disclosure strategies, and responses were coded for interpersonal response to disclosure and types of social support. Results and findings are presented to demonstrate the relationship between disclosure and support-seeking strategies and the types of interpersonal responses obtained with different strategies.

**Enabling Technologies:
Leveraging Tailoring Methods for Just-in-the-moment, Adaptive Interventions**

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A just-in-time, adaptive intervention (JITAI) is an emerging type of intervention that provides tailored support at the exact time of needs. It does so using enabling new technologies (e.g. mobile phones, sensors) that capture the changing states of individuals. To provide support for the increasing popularity of JITAIs, this meta-analytical review examined 33 empirical studies that used JITAIs. We found moderate to large effect sizes of JITAI treatments over (1) waitlist-control conditions ($k=9$), Hedges's $g=1.65$ and (2) non-JITAI treatments ($k=21$), $g=0.89$. Also, participants of JITAI interventions showed significant changes ($k=13$) in the positive direction ($g=0.79$). Those effects persist despite of differences in behaviors of interests (e.g. blood glucose control, recovering alcoholics), duration of the treatments, and participants' age. Two aspects of tailoring, namely: (1) tailoring to what (i.e., both people's existing behavioral patterns and states of need) and (2) approach to tailoring (i.e., using a human agent and/or using an algorithm to decide tailored feedback), are related to JITAIs of higher efficacy. Implications of tailoring on technological-enriched interventions are discussed.

**#theblackmancan #blackboyjoy:
Using Social Media to Challenge Perceptions of Black Masculinity on Instagram**

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Background. The mental health of Black men is a national, public health concern. According to literature, Black men are exposed to unique stressors, such as everyday racial discrimination and lack of social support, which not only increases risk of psychological distress, but also can exacerbate depressive feelings, leading to poor psychological health. Current prevention efforts have targeted many of these factors; however, there is little research examining the social ecological risk factors. More specifically, there is a paucity of research addressing media representation as a risk factor for poor mental health among Black men. Historically, mass media has portrayed Black men in problematic ways, creating narratives that Black men are hypermasculine, uneducated, and violent. Such portrayals can reinforce Black male negative stereotypes and promote social constructions of male behavior that negatively influence healthy behavior, increasing men's risk of developing poor mental health and engaging in maladaptive coping. With user-generated content, social media platforms are increasingly challenging stereotypical media portrayals and promoting positive representations of Black masculinity. An understanding of this and the change in representation can aid in the improvement of societal perceptions of Black men and their mental health distress. Taking an assets-based approach, this project analyzes social media messages portraying positive black masculinity.

Method. This study content analyzes a random sample of 500 Instagram posts containing the hashtags #theblackmancan and #blackboyjoy, two popular hashtags used by Black males. These posts are analyzed to evaluate how users are illustrating black male positionality on Instagram and challenging negative stereotypes through positive imagery and text. To guide the analysis, one theoretical framework, Social Cognitive Theory (SCT), will be used to assess how these posts relate to attitudes, beliefs, and values associated with race, gender, and social support.

Results and Conclusion. The analysis is ongoing and will be completed early spring. However, based on preliminary analyses and current literature, the results are expected to show that Black men's social media use counters historical and current negative stereotypes associated with their race and gender. The findings from this study will provide insights into how to communicate positive black masculinity in visual mediums from the perspective of the target audience. Understanding the images that users find engaging and reflective of their experiences could aid in designing more effective public health communication campaigns for this population.

Perceptions of Safe Workplace Practices in the Veterinary Profession

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Previous research shows that those working in veterinary medicine are three times more likely than medical doctors to sustain injury and acquire disease from occupation-related practices. Using the Health Belief Model, veterinary professionals can make informed health-related decisions and take preventative measures to reduce or eradicate the risk for injury and disease. However, veterinary professionals often do not understand the potential harmful effects of working with hazardous drugs or materials on the job. The purpose of this study was to understand perceptions about current workplace practices, and to determine potential communication channels, health behaviors, and opportunities to change current health perceptions, specifically as it related to the handling of hazardous drugs and materials. The Health Belief Model was employed through qualitative and quantitative research methods using survey instrumentation, interview and focus group techniques with different staff (e.g., veterinarians, veterinary technicians) from local veterinary health clinics in a large Mid-Atlantic community (N=19). Analyses show that veterinary professionals had no formal training for handling or using hazardous drugs and materials, which caused miscommunication and incorrect perceptions about susceptibility and severity of sustaining injury or acquiring disease. Examination and interpretation of the data, suggest implications for the health of veterinary professionals. Specifically, the need for training to educate veterinary professionals on the proper handling and use of hazardous drugs and materials, which can potentially reduce current rates of injury and disease.

Peer Influence and Long-Acting Reversible Contraceptive Interest: A Pilot Study on the Strength of “Weak” Ties on Twitter

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Peer influence has been shown to be a significant contributing factor to women’s birth control use decisions (Anderson et al., 2014). Information women receive on birth control from other women in their social networks is often seen as more valuable than information from providers, despite there being a chance that the information might not be entirely accurate. Women seeking to try a new birth control method tend to rely, in part, on anecdotal evidence from friends and family to make their decision. In the specific case of long-acting reversible contraceptives (LARCs), such as intrauterine devices (IUDs) and sub-dermal implants, social communication has been found to be one of the key determinants of adoption (Bharadwaj et al., 2012). Information on LARCs obtained from networks is said to be more trusted than that from physicians because of a perceived lack of nuance in the information given by providers and their lack of personal experience with them (Anderson et al., 2014; Yee & Simon, 2010). However, little evidence exists to suggest that social networks online can be just as influential as these traditional, in-person networks. Thus, the goal of the study is to determine whether information obtained from other women on Twitter is just as trusted and persuasive on one’s interest in the adoption of long-acting reversible contraceptives. In this preliminary iteration, a small sample of adult women participated in an online survey. It was found that information on LARCs from peers on twitter does have an effect on women’s interest in adoption of these contraceptive methods.

An anonymous online survey was disseminated on Amazon Mechanical Turk to capture women’s LARC information-seeking behavior on Twitter and their interest in LARC adoption. Those allowed to complete the survey were women (n=51) living in the United States with active Twitter accounts. Participants had to be at least 18 to fill out the survey. The relationship between LARC information seeking and interest in LARC adoption was assessed through multivariate linear regression.

Results of the multivariate linear regression showed that LARC information obtained from peers on Twitter was negatively associated with interest in LARC adoption. These findings suggest that interest in LARC adoption decreases as one obtains more information about them from peers on Twitter. This can likely be attributed to the salience of negative information. Negative information is more noteworthy and memorable than positive information, and negative experiences are more likely to be shared and then sensationalized online.

Despite the small sample, the findings of this preliminary iteration of the study were interesting enough to support further investigation of this question. The main purpose of these initial findings was to show justification for a much larger data collection effort in the future. In the second round of this study, access to more financial resources has allowed for the recruitment of a more restricted, yet larger and more representative sample. A larger sample will allow for a better analysis of the interactions effects of race on the outcome measure, which is of particular interest to this study.

College Students' Use and Perceptions of Health-Related Technology and its Influence on Overall Health

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We investigated how students are using online health sources, including mobile applications, social media accounts, Fitbits or similar products, gaming devices, and how health technology use contributes to their overall health or perceived needs or barriers to health. We explored the frequency of use of these technologies while taking into account personal health factors. A nonprobability sample of college students ($n = 191$) and cross-sectional survey design was used. Results revealed that college students most frequently surf the Internet for health information compared to other health technologies, but report using a Fitbit, or other related device for the most amount of time per day. Twitter was ranked highest in terms of degree a health technology has changed health behavior. A regression analysis using BMI, perceived stress, alcohol consumption and smoking, fruit and vegetable consumption, and sleep as control variables revealed that only Wii usage minutes per day and number of days of exercise per week predicted overall student health scores suggesting that health gaming might be an important means of encouraging physical activity. A regression analysis using BMI, perceived stress, alcohol consumption and smoking, fruit and vegetable consumption, and sleep as control variables revealed that greater use of health-related support groups ($M = 2.07$; $SD = 10.13$) and greater use of Instagram were predictive of increased overall student health scores. A regression analysis revealed that higher BMI scores ($M = 24.20$; $SD = 4.25$) were predictive of larger health-related stigma scores ($M = 22.34$; $SD = 10.51$), $\beta = .20$, $p = .006$, but higher BMI scores were not predictive of greater perceived stress, $\beta = .13$, $p = .07$. Ability to get information quickly was reported as the most important motive for using health technologies while privacy concerns were reported as the highest barrier. From a uses-and-gratifications theory perspective, convenience is frequently mentioned as a key motive for media use. Our findings demonstrate that this also appears to be the case. In terms of source amount and credibility, college students report using doctors, parents, and Internet the most, but perceive doctors, health classes, and parents to be most credible. This finding has implications for health technology intervention development since it suggests that face-to-face or interpersonal sources of health information are perceived as more important than online sources. This is consistent with research saying health information is a two-step process. These findings lay the ground work for future research on how social media and other technological sources of health information interact with more traditional interpersonal (face-to-face) sources in ways that reinforce message acceptance and influence health behaviors. Social media platforms are often tied to a specific location in the face-to-face world, and this may help to connect individuals who share similar health concerns both in cyberspace and in the face-to-face world. Findings can be used in message design and dissemination and draw attention to the overlap and influence of virtual and face-to-face support.

**If not inspirational, then what?:
A thematic analysis of #fitspiration on Instagram and health implications for social media users**

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Kelly Tenzek, University at Buffalo**

In 2017, it was estimated that over 81% of the U.S. population uses social media in some shape or form ("Social Media," 2018). In particular, one increasingly popular social media platform is the application, Instagram. With over 800 million active monthly users, Instagram users are able to view and interact with others remotely in addition to viewing content posted by celebrities, companies, and others they esteem or are interested in following. Furthermore, Instagram users are able to create hashtags to categorize the content they post. In turn, others users can follow these hashtags and develop microblogging communities, allowing users to connect internationally with one another (Tsur & Rappoport 2012).

While there are benefits to having access to such a large body of shared content, exposure to certain trends can have negative effects on viewers (Engeln-Maddox 2005). One popular trend which has heavily saturated social media is fitspiration. Fitspiration is an online trend created to inspire viewers to pursue a healthier lifestyle by promoting exercise and healthy eating habits (Tiggemann & Zaccardo, 2015; Talbot et al. 2017). The creation of fitspiration occurred after the popular trend thinspiration, which refers to content that showcases images of thin women, negative portrayals of overweight women, and motivational quotes meant to motivate viewers to lose weight (Boepple & Thompson 2015). However, thinspiration content was heavily criticized for promoting unrealistic and unhealthy lifestyles such as eating disorders. Because of this, the fitspiration trend was established to remedy the negative effects of thinspiration content.

However, fitspiration content has proven to be more similar to thinspiration content than different, causing similar negative effects in viewers. Specifically, studies have repeatedly shown that while fitspiration content may contain some inspiration or encouragement for viewers, the content also contains potentially hazardous messages which have negatively affected the self-esteem and self-image of individuals (Tiggemann & Zaccardo, 2015; Boepple & Thompson, 2015). In order to examine the qualitative nuance of the hashtag #fitspiration, we applied the conceptual lenses of communication privacy management (Petronio, 2007) and Goffman's frontstage vs. backstage (Goffman, 1959). We aim to understand how users are sharing personal fitness information and how traditional interpersonal communication boundaries are challenged within microblogging communities across the world.

The current study examines fitspiration discourse posted on the social media application, Instagram. Posts were collected systematically over the course of four weeks from publicly shared accounts and thematically analyzed (Braun & Clark, 2006). Seven overarching themes were found within the studied discourse including promotion of self or other, setting of the shared post, self-presentation, the verbal and nonverbal expressions exhibited by users, progress, community engagement between users nationally as well as internationally, and lastly a miscellaneous category which included content related to mental health and wellness. Implications related to the dominant presence of physical health posts, importance of setting, and benefits of connecting with others in the microblogging community can also function as an exclusionary practice because of the lack of posts related to bio-psychosocial, and spiritual discourse, including mental health.

Is Online Health Information Seeking Behavior Associated with Perceived Harmfulness of E-Cigarettes? Findings from HINTS 5 Cycle 1

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Electronic devices have become one of the primary avenues for health information seeking. However, due to the scientific uncertainty surrounding electronic cigarettes (e-cigarettes) and the lack of gatekeeping on electronic platforms, the online communication environment may not objectively portray the risks and benefits of e-cigarettes. For instance, content analyses documented that e-cigarette-related texts were mostly positive/pro-e-cigarette on websites and social media (e.g., Grana & Ling; 2014; Luo et al., 2014). In the same vein, a longitudinal nationally representative survey reported that the e-cigarette information seeking of youth and young adults, who are heavy users of Internet and social media, significantly predicted their e-cigarette use six months later, and the information they sought were predominantly pro-e-cigarette (Yang, Liu, Lochbuehler, & Hornik, 2017). Therefore, due to the pro-e-cigarette online environment, individuals' online health information seeking behavior (OHISB) may be associated with their lower perceived harmfulness of e-cigarettes.

To test the hypotheses, the 2017 Health Information National Trends Survey 5 (HINTS 5) Cycle 1, conducted between January 2017 and January 2018, was analyzed. HINTS is a nationally-representative survey about the American public's use of cancer-related information that has been sponsored and administered by the National Cancer Institute (2017) using a two-stage sampling process. Sampling weights were incorporated in the analyses to statistically correct the demographic differences, as well as non-response and non-coverage biases. Data were analyzed with STATA 15.0.

OHISB was measured using the following two items: "In the past 12 months, have you used a computer, smartphone, or other electronic means to do any of the following: a) looked for health or medical information for yourself, and b) looked for health or medical information for someone else". The two questions were dummy coded as 1 = Yes, 0 = No, and are positively correlated ($r = .55, p < .001$). Participants' perceived harmfulness of e-cigarettes was measured by asking "Compared to smoking cigarettes, would you say that electronic cigarettes are?" with responses ranging from 1 = much less harmful to 5 = much more harmful after reverse-coding to have higher values indicating lower perceived harmfulness. Logistic regression model was conducted and controlled for potential confounders (i.e., age, gender, race/ethnicity, income, smoking status, and health status). The regression analysis with perceived harmfulness of e-cigarettes as the dependent variable showed that OHISB ($b = .10, p < .05$), age ($b = -.10, p < .05$), Hispanics ($b = -.08, p < .05$), and African Americans ($b = -.08, p < .01$) are significantly associated with lower perceived harmfulness of e-cigarettes.

The finding that OHISB is associated with individuals' lower perceived harmfulness of e-cigarettes is consistent with existing research of a pro-e-cigarette public communication environment (particularly on social and online media). Such pro-e-cigarette information could influence individuals' attitudes towards and risk perceptions around using e-cigarettes and support their vaping behavior. The large, weighted, nationally representative sample enhances the generalizability of the results, which will inform FDA's regulations regarding e-cigarettes online marketing, and correcting e-cigarette-related misinformation available to young information seekers.

How road-safety interventions can incorporate social norms: A Gender-driven approach

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Background: Normative influences have been explored across a variety of health domains and have increasingly been the targets of theory-based health communication efforts. The Theory of Normative Social Behavior (TNSB) offers unique insight into the social and environmental context in which these norms influence health behavior. However, the explication of TNSB has largely been across health behaviors rather than populations. Demonstrated gender differences in health-related risk factors demand that gender must be considered as a context for normative influence. Within the realm of road traffic safety, males carry three times a greater risk for crash than females, yet communication efforts have failed to target norms through a gendered lens. The urgency and stark gender-based differences in road traffic incidence risk provides an opportunity to investigate the normative influences across gender-based contextual differences. The current study applied TNSB to road traffic safety behaviors in male and female adolescents in order to understand these gender-based differences in normative influences.

Method: In this quasi-experimental study, high-school age students were exposed to a road traffic safety presentation in their school. Surveys were administered to both treatment and control schools before the intervention, immediately after, and 6-months after, exploring social norms and high-risk driving intentions. Independent samples t-tests were used to test whether social norms and high-risk driving intentions differed across males and females. Zero-order Pearson correlations and hierarchical regression equations were used to investigate the association between social norms and high-risk driving intentions among males and females. Hierarchical regression equations were also used to investigate the moderating effects of collective norms and injunctive norms on the relationship between descriptive norms and high-risk driving intentions among males and females.

Results: Males and females differed in social norms and high-risk intentions. Additionally, descriptive norms were found to significantly predict change in high-risk driving intentions among females ($\beta=0.14$, $p=.001$), and marginally predict it among males ($\beta=0.08$, $p=.085$). The relationship between descriptive norms and change in high-risk driving intentions was moderated by collective norms among males, while it was moderated by injunctive norms among females.

Conclusion: The findings support the hypothesis that descriptive norms are associated with behavior intentions, however, the context surrounding road traffic safety risk moderates the influence descriptive norms have on behavior intentions. Among the constructs of TNSB, gender must be considered as a contextual factor that shapes this relationship. In the context of road traffic safety, Perceptions of social approval interact with perceptions of behavior prevalence in females in a way that doesn't occur in males. On the other hand, the influence of descriptive norms on intentions is strongest in males when collective risky behavior is low.

**Accountability to communities in patient-centered research:
Recognizing the journey and building relationships**

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Paige Powell, University of Memphis
Shukura Umi, University of Memphis
Jessica Escareno, University of Memphis**

Formed by the Patient Protection and Affordable Care Act, the mandate of the Patient-Centered Outcomes Research Institute is to fund patient-centered research that brings all stakeholders together: researchers, clinicians, patients, family caregivers, and community leaders (Kia-Keating, Santacrose, Liu, & Adams, 2017). One of the key components of PCOR is accountability to community partners by 1) developing research questions that are important to patients and other stakeholders and 2) focusing on outcome measures that reflect what the community finds meaningful. Ultimately, the goal of PCOR is to address needs of the most vulnerable patients and community members, and to effect policies that will address health disparities (Frank et al., 2015; Brody et al., 2015). In this talk, we will report on a PCORI-sponsored project in which we engaged community members in developing communication training materials for cancer researchers. We have learned that collaborations with community members make research activities more relevant, provide insider perspectives, increase community support, create more translatable outcomes, and focus on quality of life. Among the most important outcomes of the community collaborations are a strengthening of trust. It is important, therefore, to gauge the experiences of community members as projects progress. To ensure our accountability in this project, we conducted interviews with our own community stakeholder council members to gain a better understanding of their experience of working on the PCOR project. Themes that emerged from the interviews included the power of storytelling, journeying, ownership, and relationship. Findings from the interview study indicate that while members felt respected and valued, we must do more to incorporate the unique expertise of each member. We also learned each member felt that he or she was on an individual journey, separate from the journey of the team, in which they grew in their understanding of their cancer or caregiving experience and in their ability to inform professionals about the needs of their community.

"It's a death stick, don't get it": Identifying Memorable Messages About LARCS

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Reducing the percentage of unwanted pregnancies has been one of the top objectives of the national health promotion "Healthy People" since the early 1980s. As the increase of unwanted pregnancies continues, research is necessary to uncover factors that influence the decisions women make about their contraceptive methods. The current study examines the topics, context, and sources of memorable messages regarding long-acting reversible contraceptive (LARC) methods.

The first research question addresses what are the message topics about LARC's that young women report as memorable? The analysis revealed that women recall messages that have both rule-structure and non-rule structured elements as established by Knapp, Stohl, and Reardon (1981). The rule-structure messages that were found have the element of consequences and adherence. The messages with consequence and adherence elements contained short-term and long-term consequences as well as having positive and negative valence. The non-rule structured messages had elements of observation or interpretation, as well as having positive and negative valence. The second research question seeks to identify the main sources of memorable messages about LARCs among young women. Participants revealed messages from many sources, particularly their mothers, girlfriends, doctors, and the media.

To address the research questions, this study analyzes interviews conducted with young women at a public South Eastern University. The present study consisted of a sample of young women ($N = 25$), consisting of 80% Caucasian ($n = 20$), 8% African American ($N = 2$), 8% Asian ($N = 2$), and 4 % ($N = 1$) Other. Study participants ranged in age from 18 to 26 years. Twenty-one (84%) of the participants currently had a contraceptive method, while 4 (16%) participants did not currently use a contraceptive method. The data in this study was analyzed using a framework analysis methodology (Ritchie & Spencer, 2002). This framework is useful to study contextual questions (i.e., identifying the form and nature of what exists).

This study is a formative research of memorable messages in the context of contraceptive methods with the goal of giving insight into characteristics to better target young women when promoting contraceptive methods, especially LARCs. This study uncovers many messages that young women consider memorable and influential in their lives. Findings illustrate how there is a major knowledge gap about LARCs and how many memorable messages are inaccurate. Debunking myths and misconceptions about LARCs and improve overall health literacy about these methods among young women and their mothers should be a top priority. The results of this study contributed to the memorable message literature by proving that the rule structure characteristics can be applied to sexual health messages. Also, the findings prove that women are also seeking more information that is not currently being targeted to them.

One of the most valuable outcomes of this study is a detailed understanding of what young women consider relevant and influential when it comes to contraceptive methods. Health promoters can be guided by the information seeking needs women revealed in this study. There is now a better possibility of creating effective and targeted messages.

Harnessing Online Social Networks to Understand Health Behaviors and Outcomes: A Systematic Review of Literature from 2000 to 2016

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Social network sites (SNSs) and online health communities have opened up new possibilities for prompting health behavior change and improving health outcomes. Hence, understanding the impact of online social networks (OSNs) is of great significance to the design of effective health interventions. A social network approach serves as an invaluable perspective for understanding health in this digital age. This structural embeddedness perspective provides rich contextual information about individuals' health behaviors and outcomes. Despite enormous research on the health implications of social networks, there is a lack of systematic reviews of existing literature. As opposed to examining the generic use of social media, we adopt a social network perspective to understand the influence of OSNs on health behaviors and outcomes.

To identify relevant literature for the current review, we searched eight electronic databases for public health and social science. The search query included the following keywords: (a) "health", (b) "online" OR "internet" OR "web", and (c) "social network(s)". We searched those keywords in the title, abstract, and keywords of the existing literature. Only peer-reviewed empirical papers that documented the relationships between OSNs and health behaviors and outcomes published online between 2000 and 2016 were included. The initial search in databases yielded 1,551 articles. After removing 599 duplicates, we screened the remaining 952 articles by titles and abstracts; 62 papers were retained after the initial screening based on titles and abstracts. Then the two authors performed a full-paper screening. Our final sample consisted of 19 papers that met the inclusion criteria.

Our findings suggest that individuals are directly or indirectly influenced by the health attitudes, beliefs, and behaviors of others in OSNs. We highlight three mechanisms by which online social networks could affect health behaviors and outcomes, including social contagion, homophily, and social capital. In particular, a number of network attributes (e.g., network centrality, size) play a vital role in influencing health behaviors and outcomes. As such, a social network approach allows researchers to interrogate the contingent, non-linear, and sometimes paradoxical impact of social networks on health behavior and outcomes. However, our review reveals a paucity of discussion regarding social network theories or models. Further research should draw on theoretical frameworks to understand the mechanism by which online social networks influence human health.

Drawing on the findings of this review, we highlight that OSNs can provide insights into: (1) health behavior change intervention, (2) risk behavior detection, and (3) infectious disease prevention. First, given that network information can be used to accelerate behavior change, OSNs can be utilized for health behavior change interventions. Second, the accessibility and visibility of social media data provide tremendous opportunities for early diagnosis and prevention of health issues, such as mental disorders and suicidal ideation. Third, OSNs also enable researchers to study the spread of disease and identify target individuals and areas for intervention efforts. Social media offer rich data regarding the illness-related messages and online social interactions, making it easier to identify infected individuals, opinion leaders, and at-risk populations and deliver interventions accordingly.

Providers' Strategies for Explaining Diagnosis and Treatment in Outpatient URI Visits: Implications for Antibiotic Stewardship

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The evolution of antibiotic-resistant bacteria is a growing public health crisis, currently accounting for over 23,000 deaths annually in the US (CDC, 2018). Reducing unnecessary antibiotic use for upper respiratory tract infections (URIs) is essential to address this crisis as approximately 50% of US antibiotic prescribing for URIs is unnecessary (Fleming-Dutra et al., 2016; Smith et al., 2015). Patient expectation for antibiotics contributes to injudicious prescribing (Cabral et al., 2016; Mangione-Smith et al., 2001), so healthcare providers need approaches to communicating with patients that effectively reduce interest in obtaining unnecessary antibiotics. In the clinical context, explanation of illness and treatment is a crucial component of effective provider-patient communication that facilitates patients' understanding of treatment recommendations (Filipetto et al., 2008; Stewart, 1995). However, there has been little research examining how providers explain their decisions when they do not prescribe antibiotics, or what implications such explanations might have for antibiotic stewardship. The current study addresses the following question: How do providers explain stewardship-relevant aspects of diagnosis and treatment to patients?

Method: Qualitative discourse analysis was conducted on 409 transcripts of provider-patient interactions taken from a larger study of medical visits for URI symptoms at a high-volume outpatient clinic (student health center at a large, residential northeastern university). Eighteen providers participated. These visits involved patients who were not prescribed antibiotics. Visit recordings were transcribed verbatim by a professional transcribing service. Initially, five of the seven co-authors made detailed analytic notes on a 10% (N = 41) random sample of transcripts, focusing on variation in the way providers explained (a) the diagnostic process, (b) the relationship between diagnosis and treatment, and (c) risks of using antibiotics. Over multiple meetings, these co-authors synthesized their observations into a document describing six preliminary themes. In a second round of analysis, all seven co-authors independently analyzed a 10% random sample to determine whether existing themes adequately represented the data. Based on discussion, one theme was broken into three parts, and one was added, resulting in 10 themes. In a final round of analysis, currently in progress, all co-authors will review the remaining 20% of the data against the existing themes. Current results are based on the 80% of transcripts already analyzed.

Results: Observed variation in explanation across the interactions included marshalling diagnostic evidence (type and quantity of evidence noted in diagnostic statements), sharing diagnostic logic, placing the diagnosis (dispersed across interaction, summarized, or both), specifying the diagnosis (more or less precisely), referencing prognosis (forecasting of symptom progression), validating illness (conveying that patient's illness is more or less "real"), relating diagnosis to treatment (e.g., clarity of link between bacterial illness and antibiotics), conveying the value of treatment (antibiotic vs. symptom management), discussing antibiotic risks, and correcting patient misconceptions.

Discussion: Our analyses identify explanatory variation that has potential implications for patient understanding of URIs and antibiotics, offering a foundation for future research testing how providers' content, organization, and style can improve stewardship outcomes. They also provide a preliminary framework for discussion and training with providers to improve their communication with patients about antibiotics.

