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THE ASSOCIATION OF SOCIAL MEDIA USE AND VACCINE HESITANCY DURING PREGNANCY

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Introduction: Coronavirus disease 2019 (COVID-19) vaccination is a safe and effective approach to prevent infection, even among pregnant women. Vaccine intervention success depends not only on its effectiveness, but also its acceptance by the population. Vaccine hesitancy is defined as “the delay in acceptance or refusal of vaccination despite availability of vaccination services”. Social media (SoMe) is an important source of information among the young. Its role in vaccine hesitancy or acceptance among pregnant women is unclear.

Methods: A cross-sectional survey to assess SoMe exposure and sources of information among pregnant women in September 2021 was conducted. Those who attended a regular follow-up appointment or were admitted to labor and delivery were surveyed using an electronic tablet at a maternity hospital in north Mexico. The survey inquired about the sociodemographic characteristics, SoMe use and sources of information. Vaccine hesitancy was defined as not having received a COVID-19 vaccine and either being undecided or declining to be vaccinated during pregnancy. Univariate and a multivariate logistic regression models adjusting for age and urban living were employed to estimate the association between SoMe time and vaccine hesitancy.

Results: 912 responses were recorded. 531 (58%) had been previously vaccinated, 15% were underage. Median weeks of gestation was 37 +/- 7. Median number of hours dedicated to SoMe was 2 +/- 2, SoMe as primary source of COVID-19 information was reported by 27%. Among the unvaccinated, 181 (48%) were undecided, and 117 (30%) denied wanting to get vaccinated during pregnancy. In our cohort, higher SoMe time per day was associated with less vaccine hesitancy (OR 0.88 [0.81-0.97], p=0.011). Multivariate analysis yielded similar estimates.

Conclusions: SoMe is an impactful source of information among pregnant women. Efforts to deliver relevant and accurate information regarding the pandemic and vaccines through this means may inform decision-making in the population.

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COVID-19 PERSPECTIVES AMONG PREGNANT WOMEN AND RISK FOR VACCINE HESITANCY

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Introduction: Vaccine hesitancy (VH) is highly prevalent among many populations and represents a public health threat, especially amid the coronavirus disease 2019 (COVID-19) pandemic. Pregnant women are at increased risk of severe COVID-19, although limited data on safety and efficacy in this population may beget VH. Describing and understanding perspectives among vaccine hesitant individuals may inform policy and decision making to address VH.

Methods: We conducted a cross-sectional study to assess VH and COVID-19 perspectives among pregnant women in September 2021. We surveyed patients attending regular follow-up appointments or those who were admitted to labor and delivery at a maternity hospital in Monterrey, Mexico. Survey items included demographics, and personal, and obstetric/gynecological history. We defined VH as not having received a COVID-19 vaccine and either being undecided or declining to be vaccinated during pregnancy. Vaccinated individuals were excluded from analyses. Unadjusted and adjusted logistic regression models adjusting for age were employed to estimate the association between COVID-19 perspectives and VH.

Results: 1,041 responses were recorded, 431 (41%) were unvaccinated, and 177 (17%) had VH. The largest age group (44%) was between 18-24 years. Median weeks of gestation was 37 (IQR 32-39). In bivariate analysis, items associated with risk of VH were: belief that 1) COVID-19 variants are not more dangerous (n=568 [54%]; OR 1.49 [1.07–2.08]), 2) COVID-19 vaccines are not effective (n=113 [11%]; OR 5.9 [3.9–9.1]), 3) COVID-19 vaccines may affect fertility (n=106 [10%]; OR 3.53 [2.29–5.44]), and 4) COVID-19 vaccines are a threat to their unborn child (n=221 [21%]; OR 9.72 [6.79–13.9]). Estimates were similar in adjusted models.

Conclusions: VH is highly prevalent among pregnant women. Our study disentangles beliefs and rationale behind VH among pregnant women. Addressing these beliefs may improve vaccine uptake and aid transmission and COVID-19-related complications among pregnant women.

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INSIGHTS TO ADDRESSING COVID-19 VACCINE HESITANCY AMONG UNDERAGED PREGNANT WOMEN

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Introduction: Coronavirus disease 2019 (COVID-19) in pregnant women is associated with worse prognosis and risk of obstetrical complications. Global consensus endorses routine vaccination for pregnant women. Nevertheless, vaccine hesitancy remains a problem, hampering vaccination efforts especially among the young. Our study aims to describe COVID-19 and vaccination perspectives among underage pregnant women.

Methods: A survey to assess sociodemographic factors, and COVID-19 vaccine perspectives was applied to pregnant women who attended a regular follow-up appointment or were admitted to labor and delivery at a third level maternity hospital in Mexico during the weekdays for 4 weeks starting in mid-September, via an electronic tablet. Vaccine hesitancy was defined as being unvaccinated and declining to be vaccinated during pregnancy. Underage was defined as being less than 18 years of age. Results of logistic regression models to assess the relationship between being underage and perspectives of COVID-19 and vaccination are expressed as (Odds Ratio (OR) [95% Confidence Intervals]).

Results: A total of 912 pregnant women responded to the survey; 134 (15%) were underage, of these, 4% had received a COVID-19 vaccine, and 60% reported having received other vaccines during pregnancy. 97% reported being homemakers, and 8% having finished high school. Being underage was associated with a higher likelihood of vaccine hesitancy, but also of being influenced by incentives and by social restrictions (OR 10.2 [6.6-15.4]; 1.8 [1.16-2.03]; 1.4 [0.97-2.03], respectively). Results for the likelihood of believing vaccination affects fertility, pregnancy

being a risk factor for severe COVID-19, and that vaccines are effective interventions were non-significant compared to their adult counterparts.

Conclusions: Underage pregnant women have an increased likelihood of being vaccine hesitant. However, they may be more prone to policy interventions such as social restrictions or monetary incentives to accept the vaccine.

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NARRATIVE CHARACTERISTICS OF A STORY TO PROMOTE HIV TESTING AMONG AFRICAN AMERICAN WOMEN IN THE SOUTH

Alyssa G. Robillard & Chelsea Perry

Purpose: Black women account for 55% of women newly diagnosed with HIV. Prevention remains critical to reduce HIV incidence. The Model of Culture-Centric Narratives in Health Promotion posits that story effectiveness is based partly on cultural resonance. The purpose of this pilot study was to preliminarily assess the relationship between narrative characteristics of an HIV prevention story and HIV testing intentions in a sample of African American women.

Methods: This cross-sectional pilot study recruited a convenience sample of African American women (N=51) to complete a web-based survey after listening to an audio story entitled, "I Knew Better." Study measures included: narrative characteristics, identification, transportation, social proliferation, and behavioral intentions for HIV testing. Results: The sample varied in age and was highly educated (80% reporting a Bachelor's degree or higher). Approximately 61% had either never been married, or were separated, widowed, or divorced. Over 50% reported being somewhat or very likely to get tested for HIV after hearing the story. Women who were not married were significantly more likely to report an intention to get tested after hearing the story. Ordinal logistic and generalized linear regressions were conducted on HIV testing intentions after hearing the story. Covariates included perceived HIV risk, HIV testing history, marital status, and education. Perceived HIV risk, transportation, and social proliferation were significant positive predictors of HIV testing intentions. Higher scores on each were associated with increased odds of getting tested after listening to the story. Conclusions: This pilot study suggests story resonance with the sample. Transportation, social proliferation and perceived risk emerged as factors significantly related to HIV testing intentions. Findings regarding social proliferation suggest narratives may be a useful tool for story diffusion within this population.

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DO LAW ENFORCEMENT COUPLES EXPERIENCE MORE MISCARRIAGES: A PRELIMINARY STUDY

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Purpose: We examined preliminary data on pregnancy complications and outcomes in law enforcement couples versus law enforcement officers (LEOs) whose partners did not work in law enforcement. We hypothesized that the risk of miscarriage would be higher in LEO couples, likely due to adverse effects of both partners' occupational behaviors (e.g., shift work, occupational stress, environmental exposure). Methods: An online cross-sectional survey was completed by female LEOs. Participants were current U.S. LEOs, aged 18-65, and had at least one pregnancy during their time of service. Survey data included demographics, details about female officers' pregnancies including complications and outcomes, and occupational behaviors. Results: Of the 275 individuals who accessed the survey link, 162 participants

screened into and completed the survey. Fifty (31%) participants indicated their partner was also a LEO. The total sample miscarriage rate was 19.1%. In first pregnancies, 10 (20%) LEO couples experienced miscarriages. Similarly, LEO's with non-law enforcement partners (n = 61) reported 10 miscarriages (16%). Second pregnancies (n = 44) fared better for LEO couples, with 4 (9%) miscarriages. Nine miscarriages (20%) were reported in second pregnancies (n = 45) of officers with non-law enforcement partners. Differences were not significant between groups. The most common occupational exposures were shift work (64% and 62% for first and second pregnancies, respectively) and stress (46% and 50% for first and second pregnancies, respectively). Conclusions: Having a LEO partner did not result in greater miscarriage rates than those who did not, although the overall sample did have a higher miscarriage rate than the general U.S. population (10%). Law enforcement is a highly stressful and potentially dangerous occupation, although having a partner who was a LEO in this sample did not increase miscarriage risk. Allowances that protect the health and well-being of pregnant officers and their unborn children must be encouraged.

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FACTORS ASSOCIATED WITH INCREASED SOCIAL RISK OF EXPECTANT MOTHERS SEEN AT A COMMUNITY HEALTH CENTER

Abbie B. Luzius, Maya Merriweather, Page D. Dobbs, Savannah N. Busch, & Olivia L. James

Purpose: The purpose of this study was to assess the relationship between potential risk factors and social determinants of health (SDoH) among expectant mothers seen at a Community Health Center (CHC). Methods: This retrospective study analyzed patient data of 345 patients who visited a CHC between January 2019 and December 2020. Level of SDoH risk was measured using the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) tool, with risk level ranging from low, moderate, high, and urgent. Chi-square analyses were completed to explore relationship exists between the levels of risk and potential risk factors (i.e., mothers' age, race/ethnicity, educational attainment and preferred language). Next, a multivariate logistic regression examined the association between each risk factor and SDoH (indicated as above low risk). Results: Those who were Hispanic and those who preferred to speak to their healthcare provider in Spanish had 2.35 and 5.39 times the odds, respectively, as English speakers of having a PRAPARE score that measured moderate, high or urgent risk levels of SDoH. Further, when controlling for other risk factors, expectant mothers' who had not completed high school were at increased odds (aOR=7.38) of moderate-urgent-level SDoH. The analysis did not find significance in mothers' age for those with low or greater risk. Conclusions: With the goal of improving health equity and positive health outcomes, CHCs across the country are screening patients to better understand the impact of SDoH. This study found expectant mothers are at an increased risk of having greater social needs if they are Hispanic, prefer to speak Spanish, and did not complete high school. By identifying indicators that increase social risk level, CHCs can connect patients in need to social services that will support the social needs of the mother and ultimately the health of the mother and child.

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PERCEIVED DISEASE RISK AND CESSATION INTERVENTION PREFERENCES BY SEX AMONGST HOMELESS ADULT CONCURRENT TOBACCO PRODUCT USERS AND CONVENTIONAL CIGARETTE-ONLY USERS

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Purpose: Homeless individuals smoke conventional cigarettes and engage in concurrent tobacco product use at very high rates; however, little is known about how use patterns, perceived disease risk, and smoking cessation intervention preferences differ by sex in this group. The current study was meant to redress this gap.

Methods: Participants comprised a convenience sample of 626 adult conventional cigarette smokers (CCS; 32.1% women) experiencing homelessness. Participants were asked about their smoking history, mental health and substance use diagnosis history, other concurrent tobacco product use (CU), disease risk perceptions, and preferences regarding tobacco cessation interventions. Chi-square and t-tests were used to examine differences between concurrent tobacco product users and smokers-only in sex-stratified analyses.

Results: CU rates were 58.1% amongst men and 45.3% amongst women CCS. In both sexes, CUs starting smoking earlier ($ps < .001$) and were more likely to have been diagnosed with a non-nicotine substance use disorder ($ps < .014$) relative to CCS. Among men only, CU were younger, smoked more cigarettes per day, and were more likely to identify as White ($ps < .003$) than CCS. Male CUs reported a greater risk of developing smoking-related diseases if they did not quit for good and were less likely to prefer medications to quit smoking relative to male CCS ($ps < .04$). On the other hand, female CUs reported a greater risk of developing smoking related diseases even if they quit for good ($ps < .05$) and did not differentially prefer any cessation medication over others. Both sexes endorsed “cold turkey” (vs. medications/counseling) as their best option to successfully quit smoking.

Conclusion: Findings confirm high rates of CU among both sexes of adults experiencing homelessness, characterize those who may be more likely to be CUs, and reveal opportunities to educate homeless men and women on the benefits of evidence-based interventions for smoking cessation.

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NEGOTIATING CANCER ALONE: A QUALITATIVE STUDY EXPLORING CANCER CARE DISRUPTIONS AMONG RACIALLY AND ETHNICALLY DIVERSE WOMEN DIAGNOSED WITH BREAST CANCER DURING COVID-19

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Background: The COVID-19 pandemic has disrupted the delivery of cancer care services and contributed to significant reductions in the rates of cancer screenings, diagnoses, and surgeries. The resulting altered care protocols have significantly impacted Black and Hispanic/Latinx women who already suffer more aggressive and advance stage breast cancer tumors due to interacting social and biological determinants. This study qualitatively explored a sample of

diverse women's experiences of undergoing breast cancer care during the COVID-19 pandemic.

Methods: Adopting an exploratory, qualitative design, 15 breast cancer patients (4 Black, 4 Hispanic/Latinx, and 7 White) participated in online semi-structured interviews from March–November 2021. A grounded theory approach guided data analysis of the processes informing women's experiences of receiving treatment for breast cancer during COVID-19.

Results: All women prioritized promptly treating breast cancer, yet feared hospital/provider visits, given their increased COVID-19 vulnerability and exposure. Our core category exemplified the process of “negotiating cancer alone,” uniting women's experiences of their cancer journey as disrupted, defined, and strained by COVID-19 isolation/social distancing measures. These disruptions included: 1) psychological distress – as women negotiated significant markers in their cancer journey (diagnosis, medical appointments, surgery, treatment) unaccompanied, without loved ones' immediate support – despite reporting strong social networks; 2) provider/healthcare system delays in diagnosis and treatment; 3) heightened anxiety about treatment delays causing cancer progression; and 4) supportive care limitations, including the absence of peer support groups and burdensome caregiver COVID-19 precautions, restricting social interactions. Black and Hispanic women described greater delays in care, financial challenges, and insurance limitations relative to non-Hispanic White women.

Conclusions: Women experienced significant effects on their psychological well-being and cancer care trajectory because of the pandemic. This study illustrates pandemic-related psychological, healthcare system and health equity challenges that should be addressed to deliver equitable and patient-centered breast cancer care in a post-acute COVID-19 environment.

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CAN YOU HEAR ME? A CRY FOR (MENTAL) HEALTH

Kombe Kapatamoyo

African migrants represent a vulnerable population within the context of the COVID-19 pandemic. This study explored the impact of the pandemic on educational experiences of African international students in the United States between March, 2020 and May, 2021. In addition, I explored the impact of the pandemic on their mental health and what, if any, measures they took to stabilize their mental health. This qualitative case study was conducted virtually with a sample of 13 participants. Structured interviews lasted, on average, 30 minutes. Following data coding, results showed that social isolation, social distancing protocols, navigating visa policies, and rules of remote learning were prominent themes. I also found that African international students felt ignored and overlooked regarding their mental health during the pandemic. The pandemic undeniably impacted African international students. This study highlights the need for increased focus on the mental health needs of African international students at universities.

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CHARACTERIZING THE #PHYSICALACTIVITY COMMUNITY ON TWITTER BEFORE AND DURING COVID-19

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Introduction: Twitter, a microblogging service allowing users to generate short message content (i.e. Tweets) and use hashtags to link content—creating online communities—enables dissemination of health information. The objective of this study is to examine Twitter's #PhysicalActivity community for content characteristics, including differences in community response before and during the COVID-19 pandemic.

Methods: A thematic analysis of #PhysicalActivity tweets from before (March 2019–February 2020) and during the COVID-19 pandemic (March 2020–February 2021) was conducted using a codebook developed with relevant content from CDC's Clear Communication Index and evidence-based tools. Tweets were double-coded for characteristics of users, community response, tweet elements, and intended audience. T-tests examined differences in NET-response (replies + retweets + likes) between COVID-19 and comparison year(s).

Results: Most tweets (N = 400) were from personal accounts (80%) followed by organizational accounts (15%). Over half (52.2%) were from account handles indicating a professional degree (e.g., PhD, Dr., and Professor). Some tweets gave behavioral recommendations (29.3%) of which (56.8%) provided rationale. Nearly all tweets (95.3%) used at least two tweet components (e.g., text, photo, and links) with text (77.1%) and photos (38.3%) most common. Most often, the general public was the intended audience (50.7%), followed by health professionals (46.8%). Half of tweets (48.8%) were from the pandemic year; 27.7% contained references to COVID-19. NET-response was greater during COVID-19 (M = 139.6, SD = 156.8) than pre-COVID-19 (M = 116.8, SD = 105.1) however not statistically significant (p = 0.091).

Conclusions: The COVID-19 pandemic increased barriers to safe PA. The Twitter platform provided an opportunity for dissemination of PA evidence and ideas while adhering to public health recommendations to #StaySafeStayHome. Our findings help to provide an overview of this online community to support future research of how PA information and evidence can be disseminated.

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IMPLEMENTATION AND OUTCOMES OF A COMPREHENSIVE TOBACCO-FREE WORKPLACE PROGRAM IN OPIOID TREATMENT CENTERS IN TEXAS

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Purpose: Tobacco use is exceedingly high among individuals receiving care for opioid addiction (~84-94%) but not commonly addressed by clinicians in treatment settings. Taking Texas Tobacco Free (TTTF) is a comprehensive tobacco-free workplace program that builds treatment centers' capacity to address tobacco use with evidence-based tobacco cessation policies and practices. Here, we examine the process and outcomes of the TTTF program's implementation within 7 opioid addiction centers serving >100,000 adults annually.

Methods: Pre- and post-implementation data were collected from client-facing and non-client facing employees to assess changes in education, training receipt, knowledge, and intervention behaviors. Centers also reported whether tobacco screenings were conducted and nicotine replacement therapy (NRT) was delivered through 6 months post-implementation.

Results: 64.56% of employees across centers participated in TTTF-delivered tobacco education, with a 54.9% knowledge gain ($p < 0.0001$). Employees had significant increases in exposure to education about tobacco use and its harms among individuals with opioid use disorder ($p = 0.0401$). There were significant gains in clinicians' receipt of training in 9/9 tobacco education areas ($p \leq 0.0118$). From pre- to post-implementation, there were increases in the use of the 5A's (ask, advise, assess, assist, and arrange) and other evidence-based interventions for tobacco cessation, with statistically significant gains seen in NRT provision/referral ($p < 0.0001$). While one center withdrew due to competing COVID-19 concerns, the remainder implemented 100% tobacco-free workplace policies and reported conducting tobacco screenings and dispensing NRT through 6 months post-implementation. Most program goals were achieved or exceeded; however, only 50% of centers participated in specialized clinical trainings (e.g., Motivational Interviewing), falling short of the 100% goal.

Conclusion: Overall, the TTTF program improved participating opioid treatment centers' capacity to address tobacco use and may serve as a model for future tobacco control efforts in similar settings. Such efforts could reduce the disproportionately higher smoking rates among individuals with opioid use disorder.

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SEXUAL HEALTH VULNERABILITY AMONG LATINX ADULTS IN THE UNITED STATES: USING LATENT CLASS ANALYSIS FOR STI PREVENTION

Alice Ma

Purpose: Vulnerability to poor sexual health among Latinx adults in the United States (U.S.) is poorly understood, despite high sexually transmitted infection (STI) rates. The purpose of this study was to examine how vulnerability typologies differ in their STI preventive behaviors.

Methods: Using secondary data from the 2016 National Health Interview Survey, latent class analysis was conducted to test the association between sexual health vulnerability and HIV testing, hepatitis testing or vaccination, and HPV vaccination from a subsample of Latinx adults. Sexual health vulnerability was operationalized using seven indicators across four domains that were grounded in literature, theory (the General Model of Vulnerability), existing evidence from prior work, and social determinants of health: socioeconomic stability (employment status), health care access (health insurance coverage and routine care), psychosocial characteristics (social support, mental health, and alcohol use), and personal characteristics (gender). **Results:** Three latent classes emerged: Under-Employed Females with Health Care Access, Slightly Under-Employed Females with Some Health Care Access, and Employed Males without Health Care Access. Slightly Under-Employed Females with Some Health Care Access were associated with lack of HIV testing, hepatitis B and C testing, and HPV vaccination. Employed Males without Health Care Access were associated with lack of HIV testing and HPV vaccination. **Conclusions:** The Latinx community is often considered and measured as a homogenous group, despite evidence that the health of Latinx subgroups differs by sociodemographic, ethnic, and cultural characteristics. This study presents one tool to uncover and understand the heterogeneity of a population, so that subgroups who may be more highly impacted by poor sexual health outcomes may be identified. Our study found that sexual health

vulnerability among Latinx adults in the U.S. may be associated with certain STI preventive behaviors, which can inform and refine future sexual health promotion programming.

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PREDICTORS OF STEALTH VAPING AMONG COLLEGE STUDENTS ON TOBACCO-FREE CAMPUSES: AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOR

Meng Yang, Alex M. Russell, Adam E. Barry, Ashley L. Merianos, & Hsien-Chang Lin

Purpose: E-cigarettes have gained popularity among college students. Studies have shown some college students “stealth vape” on tobacco-free campuses where e-cigarette use is prohibited. Studies have also revealed that passive vapers are also exposed to the risk of harmful e-cigarette chemicals through second-hand e-cigarette aerosols. Following the Theory of Planned Behavior (TPB), this study aimed to investigate whether the TPB constructs (i.e., attitudes, subjective norm, and perceived behavioral control) were associated with on-campus stealth vaping behaviors among U.S. college students.

Methods: College student participants aged 18-26 were recruited from four American universities with policies prohibiting the use of all forms of tobacco on campus (N=863) in the fall of 2020. On-campus stealth vaping behaviors were captured by past 30-day stealth vaping status and frequency. Adjusted hurdle models along with logistic and negative binomial regressions were conducted to explore the aforementioned associations, controlling for participant sociodemographics and e-cigarette dependency.

Results: Participants with more positive attitudes toward stealth vaping were more likely to practice stealth vaping on campus (OR=1.16, $p<0.01$). Participants who believed more people around them stealth vaped were more likely to stealth vape on campus more frequently (IRR=1.03, $p<0.01$). Perceived behavior control was not significantly associated with past 30-day stealth vaping status and frequency ($ps=0.441$ and 0.475 , respectively).

Conclusions: Attitudes toward and subjective norm of stealth vaping were significantly associated with on-campus stealth vaping behavior. Results highlight the need to intervene on students’ attitude and normative belief about stealth vaping on campus. Efforts should be made to educate college students about the risk of e-cigarette use to both vapers and their bystanders. It is also imperative to enhance enforcement of campus tobacco policies aiming to reduce on-campus stealth vaping.

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STRESSFUL LIFE EVENTS AND POLYSUBSTANCE USE AMONG U.S. LATE MIDDLE-AGED AND OLDER

Tzung-Shiang Ou, Lesa Huber, Jonathan Macy, & Hsien-Chang Lin

Purpose: Concerns have been raised regarding polysubstance use among middle-aged and older adults. Although stressful life events are shown as a risk factor of general substance use, few studies have explored the association between stressful life events and polysubstance use. This study identified polysubstance use clusters and their associations with stressful life events among U.S. late middle-aged and older adults, and how gender moderates the associations.

Methods: Adults aged 50 and older (N=14,738) from the National Epidemiological Survey on Alcohol and Related Conditions Wave 3 were included. Latent class analysis was conducted to

identify the clusters of past-year polysubstance use (examined substances included use of marijuana, excessive alcohol, and cocaine, as well as misuse of prescription painkillers, sedatives/tranquilizers, and stimulants). Weighted generalized structural equation modeling along with multinomial logistic regressions was conducted to investigate the associations between stressful life events and polysubstance use clusters.

Results: Three different polysubstance use clusters (no/low use; marijuana and excessive alcohol use; painkiller, sedative, or/and tranquilizer misuse) were identified. Higher levels of stressful life events were associated with co-use of marijuana and excessive alcohol as well as co-use of prescription painkillers and sedatives/tranquilizers (ORs=1.33, 1.65, respectively; both $p < .001$). Gender moderated the association between stressful life events and co-use of painkillers and sedatives/tranquilizers.

Conclusions: Substance use interventions should incorporate polysubstance use behaviors. Our findings also suggested that stressful life events should be taken into account when identifying at-risk populations of polysubstance use as well as designing gender-specific substance use prevention programs for late middle-aged and older adults.

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HOUSEHOLD TOBACCO USE AND PARENTAL PERCEPTIONS OF SCHOOL SAFETY FOR U.S. CHILDREN

Ashley L. Merianos, Matthew Lee Smith, & E. M. Mahabee-Gittens

Purpose: Tobacco use is one of the largest U.S. population health issues. Research indicates families of lower socioeconomic status live in less safe neighborhoods, which can be associated with other environmental hazards. This study examines the association of household tobacco use and other child characteristics with parents' perceptions of safe school environments among U.S. school-aged children

Methods: Children ages 6-11 years were included in this secondary analysis of 2018-2019 National Survey of Children's Health data (N=17,300). Parents reported whether they believed their child was safe at school using a 4-point scale ranging from "definitely agree" to "definitely disagree." Household tobacco use documented if the child lived with a smoker and, if yes, did they smoke outside or inside the home. Other covariates included the child's age, sex, and race/ethnicity; the parent's education; the family's household structure and federal poverty level. A weighted adjusted ordinal logistic regression model was fitted.

Results: Concerning household tobacco use, 13.2% of children lived with a smoker who smoked outside the home and 1.7% lived with a smoker who smoked inside the home. Compared to children who did not live with a smoker, children who lived with a smoker who smoked outside (AOR=0.77, 95%CI=0.61-0.97) or inside the home (AOR=0.62, 95%CI=0.39-0.99) were less likely to be safe at school. Additionally, children who were younger (AOR=0.95, 95%CI=0.91-0.99), Hispanic (AOR=0.64, 95%CI=0.51-0.80), lived in a single parent household (AOR=0.78, 95%CI=0.64-0.95), and had a poverty level of 200-299% (AOR=0.71, 95%CI=0.57-0.89), and had a poverty level of 300-399% (AOR=0.73, 95%CI=0.58-0.93) were less likely to be safe at school.

Conclusions: Intervention efforts are needed to enhance parental awareness about environmental risks that can influence the health of their children, especially related to home and school environments within less affluent communities.

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STAY-AT-HOME, SAFE AT HOME? A SURVEY OF PARENTAL HOME SAFETY PRACTICES BEFORE AND DURING THE COVID-19 PANDEMIC

Kristin Roberts, Rebecca McAdams, & Lara McKenzie

Purpose: The objective of the study was to describe parental safety perceptions and confidence, safety device purchase and installation, and injury prevention practices and behaviors, in homes with children ≤ 6 years of age, before and during the COVID-19 stay-at-home order.

Methods: A cross-sectional survey with a convenience sample of US participants, ≥ 18 years, was conducted from November 2020 to February 2021. Parents of children (≤ 6 years) were recruited via social media posts on Facebook and Twitter and invited to complete an anonymous, online survey about their home safety practices before and during the COVID-19 stay-at-home order. Upon completion, parents could participate in a drawing to receive a \$100 gift card.

Results: A total of 499 participants completed the survey. Most (47.9%) were 45-54 years of age and reported their time at home increased for them (93.9%) and their children (90.6%) during the stay-at-home period. Parents considered their homes safe (36.9%) but recognized room for improvement and felt confident in their ability to make their homes safe for their children (72.8%). From the time before until the COVID-19 stay-at-home orders were in place, parents increased their home injury prevention practices (42.3%). Parents that had identified unsafe areas in the home before the stay-at-home order were significantly more likely to increase their safety behaviors, take childproofing actions, and purchase or install safety devices during the stay-at-home order ($p < 0.0001$). Parents with younger children were significantly more likely than parents with older children to take childproofing actions ($p < 0.0001$) including purchasing and installing safety devices ($p < 0.0001$).

Conclusions: Spending more time at home during the COVID-19 pandemic may have helped parents, especially those with younger children, identify unsafe areas in their home and encouraged them to modify their behaviors, and purchase and install safety devices to help make their homes safer for their children.

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ASSOCIATION BETWEEN INCLUSION OF E-CIGARETTES IN STATEWIDE COMPREHENSIVE SMOKE-FREE INDOOR AIR LAWS AND VAPING BEHAVIORS: RESULTS FROM A LONGITUDINAL POPULATION STUDY

Meng Yang, Alex Russell, & Hsien-Chang Lin

Purpose: Several states have included e-cigarettes in their comprehensive smoke-free indoor air laws (i.e., aerosol-free policies), prohibiting the use of e-cigarettes—in addition to combustible tobacco products—in workplaces, restaurants, and bars. However, whether these policies contribute to reductions in e-cigarette use remains largely unknown. This study utilized a nationally representative longitudinal sample to examine the association between the implementation of statewide aerosol-free policies and e-cigarette use behaviors.

Methods: This longitudinal retrospective study implemented a quasi-experimental design. Waves 1-4 data (2013-2018) from adult participants (weighted $N=22,838,787$; unweighted $N=8,663$) in the Population Assessment of Tobacco and Health (PATH) study were analyzed.

The generalized difference-in-difference approach along with weighted hurdle and multinomial logistic regressions were conducted to examine the associations between aerosol-free policies and three measures of e-cigarette use (past 30-day e-cigarette use status and number of use days, and use frequency) pre- and post-policy implementation.

Results: Results indicated there were not statistically significant differences in e-cigarette use behaviors between participants living in states with and without the aerosol-free policies (ps ranged from 0.301 to 0.831), considering pre- and post-policy implementation.

Conclusions: Findings indicated that the effectiveness of the aerosol-free policies on e-cigarette use behaviors was not supported by longitudinal national data. States that have implemented aerosol-free policies should make pertinent efforts to enhance the awareness of these policies and to strengthen their enforcement. Future investigation into e-cigarette use in places where it is prohibited and implications with regard to effectiveness of aerosol-free policies is warranted.

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CHARACTERISTICS AND ADOPTION OF JUUL-LIKE DISPOSABLE E-CIGARETTES AMONG COLLEGE STUDENT E-CIGARETTE USERS: A QUALITATIVE STUDY

Su-Wei Wong, Ganghui Suh, & Hsien-Chang Lin

Purpose: JUUL-like disposable e-cigarettes (e.g., Puff Bar, AirBar) which are all-in-one, self-contained e-cigarette devices, have emerged as a popular type of e-cigarette product to young people in recent years. Additionally, these products are currently not subject to the federal flavor restriction. This study investigated the attributes that drive the adoption of JUUL-like disposable e-cigarettes among college student e-cigarette users.

Methods: A total of 30 college-attending e-cigarette users who had used JUUL-like disposable e-cigarettes from a Midwestern (n=15) and two Southern state universities (n=6 and 9) participated in this study. A semi-structured in-depth interview was conducted for each participant. Audio recordings were transcribed and analyzed following a hybrid process of inductive thematic approach. This study adopted the Diffusion of Innovation (DOI) Theory to guide construct selection, theme emergence, and interview instruments; additional themes emerged from collected data.

Result: The primary reasons that college student e-cigarette users adopted JUUL-like disposable e-cigarettes include the wider range of flavor selection, stronger physical sensation (e.g., “hit” or “buzz”, palatability), and better convenience of these products (e.g., no need to recharge battery or refill e-liquid). However, users also experienced inconvenience such as unpredictable lifespan and low quality of these products. Additionally, perceived acceptability and perceived regulation enforcement also contributed to the adoption of disposable e-cigarettes. This study also found word of mouth emerged as the main communication channel in JUUL-like disposable e-cigarette adoption.

Conclusions: We identified themes such as better convenience, heightened physical sensation, increased perceived availability, higher public exposure, and more flavors of JUUL-like disposable e-cigarettes that drove the adoption among college students. DOI constructs were proven applicable for identifying the aforementioned product characteristics. Our findings shed light on a deeper understanding of the e-cigarette product characteristics that may be appealing to young adult users, which may inform future e-cigarette product regulation and surveillance.

Board 119

COMPARING DETERMINANTS OF PHYSICAL ACTIVITY PARTICIPATION BETWEEN NORMAL AND OVERWEIGHT MILITARY SPOUSES

Shannon Speed, Paul Branscum, & Alice Gresla

Purpose: Many factors relate to the etiology of obesity, and physical activity (PA) is among the most important modifiable behaviors. The Department of Defense spends approximately \$2.1 billion annually in medical care for military beneficiaries, and overweight and obesity are among the top concerns. To offset this health issue, there are national guidelines for both aerobic and muscular strengthening PA, but many U.S. adults do not meet these recommendations. Research that highlights the social, cognitive and environmental determinants of physical activity among military spouses is greatly needed. Therefore, the purpose of this study was to evaluate theory-based determinants of aerobic and muscle-strengthening PA among female military spouses, using the Reasoned Action Approach (RAA). Methods: Participants were recruited via social media to complete a self-reported online valid and reliable survey measuring the RAA constructs for aerobic and muscle strengthening PA. Separate regression models were used to predict intentions of both types of physical activity for normal and overweight/obese military spouses. The following served as independent variables for each model: instrumental attitudes, experiential attitudes, injunctive norms, descriptive norms, capacity and autonomy. Results: Overall, the RAA constructs predicted a significant amount of the variance for both aerobic intentions [normal weight (adjusted R-squared=0.449) and obese/overweight (adjusted R-squared=0.464) spouses] and muscular strengthening intentions [normal weight (adjusted R-squared=0.521) and obese/overweight (adjusted R-squared=0.510) spouses]. Discussion: This study contributes to literature by examining theory-based determinants of aerobic and muscle-strengthening PA among normal weight and overweight/obese military spouses using the RAA. Results indicate interventions should differ by normal weight and overweight/obese female military spouses due to differences in predictors of PA. It would be useful to test these findings in experimental studies evaluating the effectiveness of intervention program designs to create PA adherence based on normal weight versus overweight/obese military spouses.

Board 120

EXAMINING THE IMPACT OF CLASS STANDING ON BYSTANDER INTERVENTION INTENTIONS TO PREVENT SEXUAL ASSAULT: APPLICATION OF THE REASONED ACTION APPROACH

Paul Branscum, Sarah Rush Griffin, & Christine L. Hackman

Background: Sexual violence disproportionately impacts first-year college students, with the majority of sexual assaults against women on college campuses committed in the first six to eight weeks of their first year. Bystander Intervention (BI) training is a common approach used on college campuses to promote the prevention of sexual assault, and is often required for first-year students with some training disseminated over the remaining years. A model helpful in understanding predictors of BI engagement is the Reasoned Action Approach (RAA).

Purpose: To examine differences in determinants of BI behavior between undergraduate first-year and upperclass participants using the RAA.

Methods: Undergraduate students (n=291) were recruited from general education courses at two universities in the US, and completed an online survey evaluating intentions, attitudes,

perceived norm, and perceived behavioral control for engaging in BI. Separate regression models were used to evaluate determinants of intentions to engage in BI.

Results: Participants were mostly women (60.1%) and first (45.7%) or second year (34.7%) students. First-year students exhibited significantly higher knowledge ($p=0.016$), intentions ($p=0.002$), perceived norms ($p=0.049$), and perceived behavioral control ($p=0.005$) towards engaging in BI compared with upperclass participants. Both regression models showed RAA constructs predicted a significant amount of variance of intentions to engage in BI [first-year participants (adjusted $R^2=.454$), upperclass participants (adjusted $R^2=.582$)]. Perceived norm was a significant predictor for upperclass participants ($p=0.024$), but not for first-year ($p=0.879$).

Conclusions: Results from this study indicate stronger intentions to engage in BI during the first year of college, with intentions decreasing over time. Findings highlight the need for comprehensive and ongoing training throughout the college years. Further research examining the impact of class standing on BI behavior is essential for developing effective university programming at multiple points in time and levels of intervention.

Board 121

THE RELATIONSHIP BETWEEN NUTRITION AND VACCINE BEHAVIORS IN FIVE WEST AFRICAN COUNTRIES

Alyssa D. McNulty, Brian Colwell, David Washburn, & Jay E. Maddock

Purpose. The goal of this study was to examine the relationship between nutrition among children 6 to 24 months of age and the likelihood of a child receiving vaccines. Methods. The nationally representative, Demographic and Health Surveys (DHS) from five countries in West Africa were used for this analysis. The countries analyzed were Gambia (N=2,336), Guinea (N=2,999), Liberia (N=1,792), Senegal (N=1,980), and Sierra Leone (N= 3,117). Surveys asked if the following foods were consumed in the last 24 hours: plain water, baby food, juice, milk, grain, other fruits, fish, beans, potatoes, yellow vegetables, and leafy greens. A nutrition index was generated based off these items to measure the variety of a child's diet. The vaccine variables were pentavalent 3, polio 3, and measles 1. T-tests were conducted for each vaccine against the nutrition index. Multivariable logistic regression models were also run to examine the relationship between the nutrition index and vaccine uptake for pentavalent 3, polio 3, and measles 1, while controlling for the mother's education level, wealth, and urban or rural status. Results. Across all five countries, a nutrition index significantly predicted measles 1 vaccine behavior. In these countries, the odds ratios for a child receiving a measles 1 vaccine were 1.6, 1.1, 1.3, 1.3, and 1.3 respectively. Polio 3 and pentavalent 3 were less likely to have significant results across the regression models in all five countries. Nutrition index did not predict polio 3 behavior in Guinea and Sierra Leone. Conclusions. This study demonstrates that, despite odds ratios close to one, nutrition behaviors can play a role in predicting vaccine behaviors while controlling for demographics. The variety of diet that a mother can give her child was related to the likelihood of the mother giving her child a vaccine.

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SOCIOECONOMIC DETERMINANTS OF MAMMOGRAPHY UTILIZATION AMONG JORDANIAN WOMEN AGED 40-49

Petronella Ahenda, David Washburn, Brian Colwell, & Jay E. Maddock

Purpose: Breast cancer is the leading cause of cancer-related deaths among Jordanian women, and promotion efforts to expand screening have increased in recent years. National guidelines recommend beginning screening at age 40, however uptake has been slow. This study identified social determinants of mammogram utilization among women aged 40-49 years.

Methods: We utilized the nationally representative Demographic Health Survey collected in 2017 and 2018 in Jordan. 4,706 women aged 40-49 were included in the sample. Bivariate and multivariate logistic regression analyses were conducted to assess the variables associated with mammography uptake. While the dependent variable was mammography use, independent variables included geographic setting, ethnicity, education, marital status, wealth, access and frequency to a media outlet, smoking, and health insurance coverage. **Results:** Overall, 11.8% women reported undertaking a mammogram test in the 12 months before the survey. In bivariate analyses mammogram screening rates increased with advanced education, greater wealth, and higher frequency of access to a radio or television. Factors associated with mammography utilization through multivariable analyses were higher education (OR = 2.51, 95% CI: 1.35 to 4.69) when compared to no education, health insurance coverage (OR = 1.28, 95% CI: 1.04 to 1.59) when compared to those without health insurance, and among the highest wealth quintile (OR = 2.35, 95% CI: 1.69 to 3.28) compared to the lowest wealth index.

Conclusions: Despite the high breast cancer mortality rates exhibited in Jordan, the prevalence of breast cancer screening rates with mammography are low and they vary according to socioeconomic factors including education, wealth, and health insurance coverage. These results highlight the need for improved early breast cancer screening awareness programs in Jordan. The national campaign strategies should aim for strategic measures particularly among those who are most vulnerable.

Board 123

THE ASSOCIATION BETWEEN SUBSTANCE USE AND RISK FOR COVID-19 AND SEVERITY OF ILLNESS

Jazmine Victoria, Lyuda Golets, Velia Nunez, Claudia Toledo-Corral, & Jennifer Unger

Purpose: Environmental stressors can increase risk for maladaptive coping behaviors such as substance use. Increased substance use during the COVID-19 pandemic calls for ongoing research to determine the degree to which these coping behaviors affect individuals' risk for disease and hospitalization. This study helps fill this gap by examining the relationship between the most commonly used substances, alcohol and marijuana, and rates of COVID-19 and severity of illness in an ethnically and socioeconomically diverse population of California adults.

Methods: Data are cross-sectional survey responses (N=1998) of non-college adults (n=1049) and college adults (n=949). Survey questions asked about disease status, COVID-19 hospitalization, and substance use. **Results:** Recent marijuana and alcohol users had significantly higher odds of COVID-19 infection (OR: 1.82, 95% CI: 1.28-2.70 and OR: 1.17, 95% CI: 1.10-1.24) as well as increased odds of hospitalization (OR: 3.30, 95% CI: 1.95-5.57 and OR: 1.26, 95% CI: 1.17, 1.35). College students had significantly lower odds of hospitalization from COVID-19 (OR: 0.20, 95% CI: 0.10-0.39) compared to the non-college

adults. Conclusions: Similar to national surveillance data, substance use can heighten susceptibility to COVID-19 infection and exacerbate severity of illness among younger and older adults. Future prevention efforts will benefit from considering the effect of substance use on disease and hospitalization during COVID-19 and future pandemics.

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ADVERSE CHILDHOOD EXPERIENCES AND ADHERENCE TO COVID-19 HEALTH RECOMMENDATIONS

Larisa Albers, Christopher J. Rogers, Jazmine Victoria, Myriam Forster, & Jennifer B. Unger

Background: Along with COVID-19's threats to physical health, the effects on behavioral health are a growing concern. Adverse childhood experiences (ACE) can increase the sensitivity and magnitude of responses to life stressors in adulthood such as the COVID-19 pandemic. Compared to their peers, adults with a history of ACE experiencing distress are often more likely to engage in risky behaviors, ultimately making behavior change for this population more challenging. This study assessed the role of ACE in adults' adherence to COVID-19 pandemic health recommendations. We hypothesized that those with a history of ACE would have lower odds of adherence to COVID-19 pandemic health recommendations.

Methods: Survey data were collected from California non-college adults in May, 2020 and California university students in October, 2020 (N=1,767). The sample was 62% female, 52% White/Caucasian, 25% Hispanic/Latino, 15% Asian, 6% Black/African American, and 2% "other" ethnicity. Logistic regression models assessed the association between ACE (coded as 0, 1-3, or 4+) and adherence to six COVID-19 pandemic health recommendations (e.g. avoiding restaurants, bars, clubs, family gatherings/social gatherings).

Results: Approximately 55% of the sample reported no ACE, 26% experienced 1-3, and 19% reported 4 or more ACE. Less than half (45%) of respondents were willing to avoid all of the aforementioned activities for 2 months or more. In comparison to adults with 0 ACE, respondents with 4 or more ACE had lower odds of adherence to health recommendations relating to social outings/gatherings (AORs: 0.739-0.744; 95% CIs: 0.558-0.985).

Conclusions: Adults who have experienced multiple traumatic stressors are at elevated risk for engaging in activities that increase their own, and thus their families' and communities', susceptibility for infection. Sensation-seeking, low self-worth, and behavior dysregulation are mechanisms proposed to describe high-risk behaviors in this segment of the adult population. Implications for future research and practice are discussed.

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ASSOCIATION BETWEEN EMPLOYMENT STATUS AND MENTAL DISTRESS AMONG US ADULTS: FINDINGS FROM THE 2020 BRFSS SURVEY

Chimuanya Princess Osuji, Kido Uyamasi, Samia Tasnim, & Lisako Jones McKyer

Purpose: Millions of people in the U.S. lost their jobs due to the economic fallout of the pandemic in 2020. Job loss is one of the key economic stressors affecting mental well being of the individuals. The present study aims to examine the association between short and long term out-of-work status with mental distress among the US population.

Method: We examined a nationally representative survey database, Behavioral Risk Factor Surveillance System (2020; N=188,806). Participants were categorized as having mental distress if they reported having poor mental health > 13 days in the past 30 days. A logistic regression analysis assessed the collective contribution of demographic and socio-behavioral covariates on poor mental health, controlling for age, gender, race/ethnicity, urban-rural differentials, marital status, health insurance coverage, education, income status, smoking habits, and health related quality of life predictors.

Results: The overall prevalence of mental distress was 15.13%. The odds of having mental distress decreased with higher income. Compared to racial/ethnic minorities, Whites were significantly more distressed. Men were less likely to have mental distress than women (OR= 0.62, P<0.001). Individuals aged 18-34 years experienced greater mental distress than older adults (35-49= 0.78, p>0.001; 49-64= 0.54, p<0.001). Individuals with both short and long term out-of-work status were more likely to be distressed than employed ones (OR=1.53, p<0.001; OR=1.44, p<0.001). Exercise and having a partner reduced mental distress while smoking, heavy alcohol consumption, poor physical health and urban residence increased mental distress.

Conclusion: Employment contributes to the prevalence and severity of mental health outcomes particularly among young people. This could be due to variation in the response to financial hardships, income to debt ratio and sleep quality. To combat mental distress in young adults, multiple stressors and indicators should be studied during periods of economic boom and crisis.

Board 126

CONTENT ANALYSIS OF SKIN CANCER SCREENINGS ON PINTEREST

Julie W. Merten, Ashley Dedrick, & Jessica L. King

Background: Nearly half of the 478 million Pinterest users report the platform as a “go-to” resources for health information.

Objective: This study used content analysis to examine how skin cancer screenings were portrayed on Pinterest.

Methods: Using the search terms “skin cancer screening” and “skin cancer exam, researchers sampled every fifth pin to collect 274 relevant pins. Two researchers coded pins and interrater agreement was established at 94%.

Results: Of the sample, twenty-two percent depicted skin cancer screening in a negative way yet 41.5% noted that early detection leads to better outcomes. The pins were geared toward younger, white, women with minimal depiction of people of color. Few pins included comprehensive information about skin cancer risk factors, importance of routine self-screenings, or what to expect with a medical provider. Fifty-eight percent of pins included links to personal blogs.

Limitations: This study is only a snapshot of the skin cancer screening information shared. The study doesn't address attitudes, knowledge, or behaviors.

Conclusion: Social media has become a powerful source of health information yet much of the posted information is incomplete. These findings present public health experts with an opportunity to disseminate more comprehensive skin cancer screening information on social media.

Board 127

REASONS FOR PURCHASING TOBACCO AND E-CIGARETTES ONLINE

Jessica L. King, Anna Bilic, Kayla Rebentisch, & Julie W. Merten

Background: When COVID-19 restrictions were first introduced, consumers shifted to online purchases for many products, including tobacco and e-cigarettes. These shifts have occurred alongside internet tobacco purchasing restrictions being proposed and enacted across the US. To better understand potential impacts of such policies, we conducted an exploratory study to identify reasons for and against purchasing tobacco and e-cigarettes online.

Methods: We conducted a cross-sectional survey of US adults who reported ever purchasing tobacco or e-cigarettes and past 30-day use. Participants who reported purchasing tobacco or e-cigarettes online were asked to describe their reasons for doing so. Those who reported never purchasing online were asked to describe their reasons. Responses were double-coded and categorized.

Results: Of 463 respondents, 330 (71.3%) had purchased tobacco or e-cigarettes online. We identified 17 reasons for purchasing tobacco or e-cigarettes online across four categories: price (cost less online, discounts, bulk purchases, avoid taxes), product characteristics (availability, quality), experience (convenient, saves time, safety, avoid shame, discreet, avoid people, receive guidance), and curiosity. The most common reasons were low prices (28.7% of responses), convenience (27.8%), and availability 24.2%). Safety reasons included COVID-19 concerns, noted by 12%. We identified 13 reasons for not purchasing tobacco or e-cigarette products online across six categories: price, quality, experience (convenience, time, safety, discreet, receive guidance, seeing the product, support local), consumption, unaware, and uninterested.

Conclusion: In this exploratory study to identify reasons for purchases online we identified a variety of reasons people purchase tobacco and e-cigarettes online. Despite the survey being conducted during COVID, only 12% of people noted this as a reason for purchasing tobacco or e-cigarettes online. The most common reasons included lower cost. Regulators may seek to further examine how internet sales may be circumventing local, state, federal restrictions on price and taxes to provide low-cost products to consumers.

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WITHIN-PERSON LONGITUDINAL ASSOCIATIONS BETWEEN ELECTRONIC NICOTINE DELIVERY SYSTEMS USE AND SMOKING CESSATION EFFORTS AMONG U.S. CONTINUING ADULT CIGARETTE SMOKERS

Dae-Hee Han, Shin Hyung Lee, & Dong-Chul Seo

Objectives: Prior studies that examined the role of electronic nicotine delivery systems (ENDS) use in smoking cessation have shown divergent conclusions. This study examined the time-course of ENDS-associated smoking abstinent behaviors among continuing cigarette smokers who were willing but unable to quit smoking. Methods: Data were drawn from the four waves of the Population Assessment of Tobacco and Health Study. Of the 1,684 smokers who tried to quit smoking completely at Wave 1, a total of 1,094 who were continuing smokers until Wave 4 and were not lost to follow-ups comprised the sample. Using generalized linear mixed modeling, we fitted weighted negative binomial regression models to examine within-person associations

of ENDS use with quit attempts and number of days abstinent from smoking. Results: Quit attempt frequency and smoking abstinent days were highest at Wave 1, dropped at Wave 2, and then either increased a little or remained stagnant in later waves. ENDS use to quit smoking was associated with more frequent quit attempts (aIRR=1.67, 95% CI=1.42–1.95) and more abstinent days (aIRR=3.28, 95% CI=2.43–4.44), and the magnitude of such associations became stronger over time. ENDS use was associated with becoming a non-daily smoker among baseline daily smokers. Conclusions: ENDS use among continuing smokers may help increase the number of quit attempts and smoking abstinent days. Given that the study sample is continuing smokers who failed in complete smoking cessation, future research would be desirable that evaluates whether such abstinent behaviors sustain and manifest harm reduction with improved health outcomes.

Board 129

ASSOCIATION OF PREFERRED FLAVORINGS AND DEVICE TYPE WITH BOX/PACK PURCHASE BEHAVIOR OF ELECTRONIC NICOTINE DELIVERY SYSTEMS

Dae-Hee Han, Shin Hyung Lee, & Dong-Chul Seo

Introduction: Box/pack electronic nicotine delivery systems (ENDS) purchase is associated with more frequent use. This study examined the associations of preferred flavorings and device type of ENDS with box/pack purchase behavior using a U.S. nationally representative data. Methods: Data were drawn from the most recent wave (2018-2019) of the Tobacco Use Supplements to the Current Population Survey, a nationally representative cross-sectional data. Current ENDS using adults who purchased their own ENDS were analyzed (N = 2,442). We fitted weighted logistic regression models that assessed the potential correlates of ENDS box/pack purchase. Results: Approximately one-third of the respondents purchased ENDS by box or pack (n = 877). Daily users (adjusted odds ratio [aOR] = 2.20, 95% CI = 1.59 – 3.05), those who used menthol/mint flavor only (aOR = 1.78, 95% CI = 1.15 – 2.77), prefilled replaceable-cartridge pods (aOR = 24.53, 95% CI = 17.59 – 34.22) or disposables (aOR = 5.27, 95% CI = 3.16 – 8.77), and those who purchased ENDS from the Internet (aOR = 2.84, 95% CI = 1.82 – 4.43) were more likely than their counterparts to purchase ENDS by box/pack. Significant interactions were found between device type and flavor (disposables × menthol/mint: aOR = 13.93, 95% CI = 2.64 – 73.41; prefilled replaceable-cartridge pods × menthol/mint, aOR = 3.23, 95% CI = 1.01 – 10.31). This indicates that the magnitude of the association between menthol/mint-flavored ENDS use and box/pack purchase behavior was stronger among disposable device and pod-based device users compared to tank/mods users. Conclusions: Those who primarily use menthol/mint flavors, pod-based device, and disposables appear to be more likely to purchase in boxes/packs. Our findings suggest that there is a policy need to regulate flavors to thwart ENDS box/pack purchase behavior.

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AN EMPIRICAL TEST OF AN EXPANDED VERSION OF THE THEORY OF PLANNED BEHAVIOR IN PREDICTING SINGLE-USE PLASTIC BEHAVIOR ON CAMPUSES

Erin Largo-Wight, Holly Minichiello, Juliette Hill, Heather Barnes Truelove, Amy N.S. Suida, Shannon Gowans, & Jesse Sherry

Background: Increasing consumption of single-use plastics has devastating consequences on the natural environment and human health. The study of environmental health behaviors, such as reducing consumption of single-use plastic, is thus an emergent focus in public health. The

purpose of this study is to examine the determinants of single-use plastic consumption behavioral intention. Method: A census of freshman students from two coastal college campuses in the Southeast U.S. were invited to complete an inclusion survey as part of a larger funded study on single-use plastic behavior. Of the interested participants, 165 students were invited to complete a 110-item survey guided by an expanded version of Theory of Planned Behavior (TPB) during the week of November 8, 2021. TPB constructs (attitude, subjective norm, and perceived behavioral control) as well as moral obligation, self-identity, and descriptive norm related to single-use plastic behavior were measured. Single-use plastic use was quantified by use of snack wrappers, straws, cups, lids, take out containers, bags, utensils, bottles, masks, and hygiene products. Results: 104 students (63% response rate) completed the expanded TPB survey. The TPB regression model explained 24% of the variance in single use plastic intention, $F(3, 100) = 10.630, p < .001$, with attitude toward behavior ($B = .324, p < .001$) and perceived behavioral control ($B = .256, p = .006$) as significant predictors. The expanded TPB regression model explained 60% of the variance in single use plastic intention, with moral norm ($B = .434, p < .001$) and self-identity ($B = .338, p < .001$) as significant predictors, $F(6, 97) = 21.453, p < .001$. Discussion: Using behavior change theory to understand single-use plastic behavior is a prerequisite to evidenced-based plastic reduction interventions. These findings should be used to guide future research and environmental health plastic reduction efforts.

Board 131

THE NEED FOR AFFECT AND COGNITION: INDIVIDUAL DIFFERENCES IN VACCINE INFORMATION SEEKING PREFERENCES AMONG PARENTS IN THE UNITED STATES

Shawn C. Chiang, Philip M. Massey, Matthew D. Kearney, Haley Cowlin, & Jennifer A. Manganello

Purpose: Informed by Elaboration Likelihood Model, the purpose of this study was to assess the relationship between the need for affect/cognition and vaccine information-seeking practices among a sample of US-based parents.

Methods: We used a cross-sectional survey programmed in Qualtrics to collect data from 452 parents of children ages 9 to 14 living in different community types across the United States. Participants came from a survey panel maintained by CloudResearch. Survey questions asked about demographics, political affiliation, social media use, health and vaccine information sources, and attitudes and behaviors regarding the HPV and COVID-19 vaccines.

Results: Our sample of parents ($n=452$) has an average score of 7.33 out 10 for need for cognition and 12.27 out of 14 for need for affect. A higher need for affect was associated with daily use of social media, including Twitter, Instagram, TikTok, and YouTube (all $p < .05$). When accessing vaccine information, parents with a higher need for cognition are more likely to utilize search engines (e.g., Google) or specific websites to look up vaccine information, while parents with a higher need for affect are more likely to utilize social media (e.g., Twitter). Additionally, a higher need for cognition was associated with finding scientific evidence trustworthy ($p < .001$) and considering comments from other parents on social media less trustworthy ($p < .01$).

Conclusions: Our findings suggest when designing a health communication effort, components such as message source, channels, and design should be tailored to an audience's need for cognition and affect. Future research should also consider the incorporation of need for affect and cognition in existing theoretical frameworks.

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**PERCEIVED IMPACT OF COVID-19 ON COMMUNITY-BASED ORGANIZATIONS:
PERSPECTIVES OF AGENCY MEMBERS SERVING VULNERABLE POPULATIONS IN
FLORIDA**

Sofia B. Fernandez, Maria Pinzon-Iregui, Katherine Perez, Michael Anastario, Gladys Ibanez, Hui Huang, & Melissa Howard

Purpose: The Office of Minority Health and Health Equity provides funding to community-based organizations (CBO) through the Closing the Gap grant program (CTG) to reduce racial/ ethnic health disparities across 11 health domains (e.g., HIV, diabetes) in Florida. The purpose of this study was to explore the ways that COVID-19 impacted CBOs who serve medically underserved populations in Florida. **Methods:** During July of 2021, 21 agency members across 11 CBOs who receive CTG funding were recruited to participate in 1-hour, in-depth interviews as a part of a larger evaluation study. Interviews were conducted virtually by trained research staff using a semi-structured protocol designed to explore program success, challenges, community relationships, and internal evaluations. Interviews were audio recorded, transcribed verbatim, and thematically analyzed using a two-step coding process. For this analysis, all data related to COVID-19 was organized under a primary code. Next, researchers identified relevant emerging sub-codes and two analysts met to discuss the major themes through consensus. NVivo 12 software was used to organize data. **Results:** CBO members described that many in-person activities paused/ stopped due to COVID-19. This was particularly relevant to organizations that performed community HIV testing, A1c testing, or blood pressure checks. Other crisis-related changes primarily affected recruitment, outreach, and service provision modalities. Most modifications to recruitment, outreach, and services included the use of technology. **Conclusion:** Identifying modifications to CBO services during the crisis is necessary to proactively anticipate potential consequences. Reduction in outreach and recruitment as well as modifications to services may differentially impact certain groups who are less likely to already be actively engaged in services or who have limited technology and English language skills. This information is critical to meet emerging needs of clients and suggests the need to be wary of potential impacts of COVID-19 on existing local priority health issues.

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**YOUNG ADULTS WITH MAJOR DEPRESSION: TRENDS AND DISPARITIES IN
PERCEIVED REASONS FOR UNMET TREATMENT NEEDS**

Wenhua Lu, Melissa Bessaha, & Miguel Muñoz-Laboy

Purpose: To examine trends and disparities in perceived reasons for unmet treatment needs among young adults (YAs) with major depression.

Methods: Publicly available data for YAs aged 18-29 (N = 370,602) from the National Survey on Drug Use and Health 2011-2019 were analyzed. Chi square tests and multivariable logistic regression analyses were conducted to examine trends and sociodemographic differences in YAs' perceived reasons for unmet treatment needs for depression. All analyses adjusted for complex survey design, and adjusted odds ratios (AOR) were reported.

Results: From 2011 to 2019, between 40.7% and 46.2% of YAs with depression did not receive any mental health treatment (P = 0.99). In 2019, 34.4% of YAs who did not receive treatment for

depression reported that they did not know where to go, 20.6% said they did not have time, 18.8% indicated fear of being committed, and 16.0% did not think treatment would help. Other cited reasons included “insurance did not pay enough” (15.4%), “fear of neighbors’ negative opinion” (14.5%), “concerns about confidentiality” (13.5%), and “did not think treatment was needed” (8.4%). Significant time increases were noted in most of the endorsed reasons, except for perceived “no help” ($P = 0.14$) and “no need” ($P = 0.07$) of treatment. Compared to Whites, Asians (AOR = 2.19; $P < 0.001$) and Hispanics (AOR = 1.47; $P < 0.01$) were more likely to indicate not knowing where to seek help. Females were less likely than males to perceive that treatment would not help (AOR = 0.71; $P < 0.05$) or have concerns about confidentiality (AOR = 0.73; $P < 0.05$). Overall, YAs aged 22-25 (AOR = 2.41; $P < 0.001$) and 26-29 (AOR = 1.91; $P < 0.01$) were more likely to indicate that their insurance did not pay enough but less likely to endorse other reasons than those aged 19-21.

Conclusion: To address sustained unmet treatment needs for depression among YAs, interventions are needed that target their perceptions and concerns about mental health treatment.

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SLEEP QUALITY DIFFERENCES AFTER COVID-19

Suzette A. Moyers, Ashleigh L. Chiaf, Erica K. Crockett, & Julie M. Croff

Background: Lockdown and social distancing measures enacted to slow the spread of COVID-19 in March 2020 had major impacts on patterns of health behaviors. Specifically, previous reports note that self-reported decreases in sleep duration and quality were seen (Gupta et al., 2020), as well as an increase in daytime napping. However, the majority of reported sleep data is cross-sectional and self-reported, and comparisons between groups measuring pre-and post-pandemic sleep are needed.

Method: This study data was collected as part of a larger ongoing RCT that was in mid-recruitment when the pandemic was declared. Female participants between the ages of 18 and 24 were recruited pre- pandemic ($n = 13$) and post-pandemic ($n = 7$). Non-self-reported sleep was measured with the Oura ring, a commercially available wearable biosensor. Sleep characteristics including total sleep, time in bed, sleep efficiency, REM, sleep latency, and restfulness were recorded over 14 days and averaged for each participant. Independent t-tests were performed to compare the groups recruited pre- and post-pandemic on all measured sleep characteristics.

Results: Independent t-tests comparing pre- and post-pandemic sleep variables revealed no significant differences in mean total sleep, time in bed, sleep efficiency, REM, or sleep latency between the groups recruited before and after the pandemic. However, there was a significant difference in restfulness between the pre-and post-pandemic groups ($t(17) = 3.24, p = .005$). This suggests that on average participants recruited after the pandemic had less wake-ups, less excessive movement, and less frequent interruptions to sleep during the night than those recruited before the pandemic.

Conclusion: This data suggests that the group of participants that were recruited before the pandemic had more “restless” sleep compared to the group recruited after the pandemic. Restless sleep is less restorative than uninterrupted sleep, and it is a key source of daytime sleepiness. As such, the sample recruited after the pandemic seemed to show higher levels of uninterrupted sleep, possibly contributing to lower daytime levels of fatigue.

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INCREASED PSYCHOSOCIAL COMORBIDITY FOR FRAIL OLDER ADULTS ADMITTED TO AN EMERGENCY GENERAL SURGERY CLINIC

Christopher B. Robbins & Ashley D. Meagher

Purpose: The purpose of this study was to examine the quality of life (QOL), anxiety, and depression status of frail older adults at baseline and two months following admission to an emergency general surgery (EGS) clinic.

Study Design: A prospective non-randomized study design comparing the psychosocial outcomes of older adults with frailty versus adults without frailty admitted to a Level I trauma center. Primary outcomes were scores on the Patient Health Questionnaire-9 (PHQ-9) for depression, physical component summary scores (PCS) and mental component summary scores (MCS) from the SF-36 QOL measure, and the Generalized Anxiety Disorder Assessment (GAD-7) scale.

Results: Seventy-five (N=75) patients were prospectively enrolled and followed for two months post EGS. Average age was 55 (± 13), 57.3% female, and 43.7% of participants determined to be frail. At baseline, participants that were frail scored significantly higher on the PHQ-9 ($m=11.75$ vs 6.12 , $p<.001$) for depressive symptoms. QOL scores at baseline were worse for the frail adults (PCS, $m=24.7$ vs 35.3 , $p<.001$; MCS, $m=27.1$ vs 43.5 , $p<.001$). Frail patients scored significantly worse at baseline for anxiety (10.8 vs 5.9 , $p=.001$). At two months post injury those with frailty still had lower scores than non-frail adults for depression, anxiety, and QOL. Change in scores showed some improvement for frail adults over time but were still significantly different for PHQ-9 ($p=.009$), and MCS ($p=.042$) with no significant difference between groups for PCS ($p=.168$) and GAD-7 ($p=.074$) scores. There was no significant difference in any outcome measure between surgical or non-surgical patients.

Discussion: Scores for depression, anxiety, and QOL for non-frail subjects remained stable over time however those with frailty had worse scores at baseline and two-month follow-up. There may be an opportunity for an intervention for adults with frailty to improve psychosocial outcomes following a hospitalization.

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FIREARMS RELATED DEATHS AND INJURIES DURING THE COVID-19 PANDEMIC

Christopher B. Robbins & Ashley D. Meagher

Purpose: The purpose of this study was to determine if there was an increased prevalence of unintentional firearms deaths and injuries during the initial stay at home order for the Covid-19 pandemic.

Study Design: A retrospective review using publicly available data from the Gun Violence Archive. The data includes firearms deaths and injuries from March-June for both 2019 and 2020 across the United States. Primary outcome was gunshot wounds resulting in either death or injury with independent variables to include time, age group, gender, and Gifford's Law Center rankings for each state (graded A through F).

Results: There were 118 firearm deaths in 2019 vs 163 in 2020, 205 injuries in 2019 and 307 injuries in 2020 during the stay-at-home period (both $p<.001$). There was no difference in

deaths between years for any age group however there was a decrease in deaths among those over 18 and teens 12-17 but a 9% increase in children 0-11 years old. No difference in deaths between genders and state ranking. There was no difference in injuries between age groups with no age group seeing a > 5% difference between years. No differences in gender and injuries as well as state ranking with only those states with an 'A' and 'C' rating reporting increases. There was an unprecedented surge in background checks related to gun sales during the initial months of the pandemic however there was no significant correlation noted between gun sales and deaths ($p=.157$) or injuries ($p=.200$).

Discussion: With social isolation policies and an unprecedented surge in firearm sales there were some predictions that this could lead to an increase in unintentional injury with firearms. While there was clearly a spike in deaths and injuries there were no changes within demographic factors or a significant relation to overall gun sales.

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EVALUATION OF A MEDIA LITERACY EDUCATION PROGRAM FOR SEXUAL HEALTH PROMOTION IMPLEMENTED IN FOUR SOUTHEASTERN UNIVERSITIES

Sarah B. Maness, Sarah H. Kershner, Tracy P. Gregory, Jennifer T. Pozsik, Mallory Gibson, & Denise Marcano

Purpose: Young adults ages 18-24 have high rates of sexual risk behaviors and poor sexual health outcomes. This study explored the effectiveness of Media Aware, a web-based comprehensive sexual education health program implemented at four southeastern universities between 2019 and 2021.

Methods: Media Aware was implemented on college campuses either in a group setting, one-on-one, or online. Participants included students from four universities in the southeastern United States ($n=457$). Media Aware contains four sections on sexual health promotion including on how media messages influence sexual health. The study design was a one group pre-test post-test design. SPSS Version 26 was used by researchers to conduct all analyses.

Results: Over a third of participants reported engaging in either vaginal intercourse ($n=171$, 37.4%) or oral sex ($n=151$, 33%) in the last 30 days. Less than half of participants reported using a birth control other than condoms at baseline ($n=99$, 43.5%) and just over half reported having seen a healthcare provider for sexual health ($n=266$, 58.2%). There was a significant difference in participants familiar with the IUD between the survey time points (90.790, $p<.0001$). Results also showed a significant increase of participants with intent to visit a healthcare provider for sexual health services ($p<.001$) and intent to use condoms ($p=.004$) after participation in Media Aware.

Conclusions: It should be noted that over a third of participants ($n=178$, 38.94%) started the Media Aware program after March 2020 and completed it during the COVID-19 pandemic. Overall, participants demonstrated positive sexual health effects after participation. There were significant increases for all of the study's main variables, including intention to use birth control, condoms, familiarity with LARCS, and intention to visit a healthcare provider for sexual healthcare. Future research should replicate the implementation of Media Aware, focusing on implementation in different settings.

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SOCIAL AND POLITICAL DETERMINANTS OF HEALTH: EXAMINING PREDICTORS OF COUNTY-LEVEL CHANGES IN OPIOID USE DISORDER MEDICAID CLAIMS

David L. Albright, Justin T. McDaniel, Shanna McIntosh, Ellen Robertson, & Korede Ajogbeje

Background: The Healthy People 2030 initiative provides a model of social determinants of health, inclusive of economic stability, education access, health care access, neighborhood factors, and community context. Given the increasing interconnectedness between political beliefs and health behaviors, we propose adding community-level political environment as a determinant of opioid use disorder (OUD).

Methods: We obtained data from the Alabama Medicaid claims administrative database, the United States Census Bureau, the Federal Communications Commission, the Drug Enforcement Agency, the United States Department of Agriculture, and the Massachusetts Institute of Technology election results database in order estimate a least squares regression model of the social and political determinants of changes in OUD claims at the county level ($n = 67$).

Results: In Alabama counties, claims for OUD increased by an average of 3.75% (SD = 18.01) from the period of October-December 2020 to January-March 2021. The addition of county-level political environment significantly increased the explained variance of our social determinants model ($F = 4.05$, $p = 0.04$). An increase in the percent share of republican voters from 2016-2020 was associated with an increase in the percent change of average OUD claims in the 3 months prior to and following the 2021 presidential inauguration ($\beta = 0.28$, $p = 0.04$).

Conclusion: Models of the social determinants of health should consider community-level political environment, as such a factor may be associated with health behaviors, particularly the misuse of opioids.

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CHILDREN OF MILITARY FAMILIES LESS LIKELY TO BE EXPOSED TO SECONDHAND SMOKE THAN CHILDREN OF CIVILIAN FAMILIES

Justin T. McDaniel, David L. Albright, Merit Sullivan, Ginny Kreckman, & Elijah Lockhart

Aim: Although studies have explored the prevalence of childhood secondhand smoke exposure (CSSE) among the general public and in military families separately, no studies have directly compared these two populations in a single nationally representative study. As such the purpose of the present study was to test the null hypothesis of equal likelihood of CSSE in active duty military families and civilian families. We also explore demographic, socioeconomic, and geographic risk factors for CSSE.

Methods: Data for the present study were obtained from the 2015-2019 waves of the National Health Interview Survey (NHIS). We delimited the dataset to individuals who reported having children aged < 18 years living in their household. Our analytic sample, after a 2:1 nonparametric age matching procedure, included 1,192 civilian families and 596 military families. Using the NHIS survey-design weights, we estimated a design-based F statistic for differences in CSSE by military service status. Additionally, we estimated population-stratified, survey-weighted multivariable logistic regression models in order to determine risk factors for CSSE.

Results: While 6.05% of children in military families experienced CSSE, approximately 13.98% of children in age-matched civilian families experienced CSSE ($F = 24.46$, $p < 0.001$).

Regarding the multivariable models, results showed that both population-stratified models were statistically significant, overall (Civilian $F = 3.25$, $p < 0.001$; Military $F = 6.28$, $p < 0.001$). For civilian families, results showed that significant risk factors for secondhand smoke exposure included older child age, lower parental educational attainment, and residence in a region other than the northeastern United States. For military families, significant risk factors for secondhand smoke exposure included older parent age, lower family income, and residence in the midwestern United States.

Conclusions: Although military affiliation may be a protective factor for CSSE, military families with incomes $< \$35,000$ should be targeted smoking cessation programming.