Abstract Title

Oxytocin decreased heroin seeking in male and female rats

Author Names

Format as follows (the presenting author's name should be in bold):

Acosta, Melina\textsuperscript{1}; Reichel, Carmela\textsuperscript{1}

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Abstract Text (250 word maximum)

**Background:** Heroin use has increased dramatically in the United States, with more than 1,000 deaths due to heroin overdose occurring each year. Currently available treatments for heroin addiction are marked by high relapse rates and therefore it is essential that alternative treatment options are investigated. Previous research has indicated that the neuropeptide oxytocin may be beneficial to treat substance use disorders. Oxytocin has been shown to attenuate tolerance and decrease seeking of drugs of abuse.

**Objectives:** The present study examined sex differences in the effects of systemic oxytocin administration on drug seeking following heroin IV self-administration.

**Methods:** Male and female rats self-administered heroin (3 h/day, 6 days/week) for 2 weeks. Following the two-week acquisition phase of heroin self-administration, animals underwent daily extinction sessions for at least 12 days. Subsequent heroin-seeking was assessed under a cue-induced reinstatement procedure in which reinstatement of heroin seeking was measured in the presence of response-contingent presentation of a light-tone stimulus complex. Oxytocin (1 mg/kg, IP) or saline was injected intraperitoneal in rats 30 minutes prior to cue-induced reinstatement testing in order to examine reinstatement of heroin seeking. The effects of oxytocin on reinstatement were evaluated by measuring the mean number of active lever presses during testing. Estrous cycle was monitored in females to determine whether the phase of the estrous cycle effected heroin seeking.

**Results:** Females took in significantly more heroin compared to males during the acquisition phase of heroin self-administration according to mg/kg body weight. Oxytocin treatment attenuated heroin seeking in both male and female rats during cue-induced reinstatement compared to saline treatment. The phase of the estrous cycle did not differentially effect heroin seeking in female rats.

**Conclusions:** The results suggest that oxytocin may have therapeutic potential in heroin addiction in both sexes.
Abstract Title

The functional role of microRNA-204 in lactation outcomes

Author Names

Burton Clare¹, Nogueira, Lourdes¹; Walden Jerrica², Turner, David¹; Findlay, Victoria¹.

¹ Department of Pathology & Laboratory Medicine, Medical University of South Carolina
² Department of Biology, University of South Carolina

Abstract Text (250 word maximum)

Background: The inability to sufficiently lactate (or lactation insufficiency) is a real and growing problem in the United States. Current estimates are 1-5% of mothers experience primary lactation failure. This represents between 40,000 and 200,000 women per year in the US alone. We have previously shown in our unique dox-inducible miR-204 transgenic mouse model that overexpression of miR-204 specifically in the ductal epithelium of the mammary gland results in a lactation defect, culminating in an inability to sufficiently nurse her pups.

Objectives: To determine if miR-204 is a biomarker of lactation insufficiency.

Methods: We collected milk from miR-204 transgenic and control mice at different stages of lactation and extracted microRNAs for qPCR analysis. We collected milk from women with known sufficient (≥500 ml/day) and insufficient (≤300 ml/day) milk supplies and extracted miRNA for qPCR analysis.

Results: miR-204 is temporally expressed in the mammary gland during the phase of lactation. It is present in the milk of mice and is more highly expressed in mice with a lactation defect, through overexpression of miR-204. Women express miRNAs in their milk and we are able to detect miR-204 more highly expressed in women with low milk volumes.

Conclusions: Our data suggests that miR-204 may be a useful biomarker in milk to detect an insufficient milk supply in women. Once detected, we can intervene in a timely fashion, with approved medications guided by the outcomes of our study, to maximize a successful lactation outcome in all women.
Abstract Title: Reproductive Health Histories: An Interdisciplinary Methodological Approach to Understanding Women's Reproductive Health

Author Names

Delay, Cara; Sundstrom, Beth; Meier, Stephanie; Brig, Kristin

1 Department of History, College of Charleston
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Abstract Text (250 word maximum)

Background: Reproduction lies at the nexus of the biological, social, cultural, and political. This research project illuminates and preserves South Carolina women’s experiences of reproductive health, including how women themselves, today and historically, experience, interpret, and communicate about reproductive health.

Objectives: This study involved collecting, recording, organizing, cataloging, storing, and analyzing women’s reproductive health oral histories in South Carolina. Researchers employed an interdisciplinary qualitative methodological approach to provide women with a platform to narrate their reproductive health experiences, which historically have been neglected.

Methods: This study utilized oral history and qualitative methodologies to explore women’s meaning-making of reproductive health. Researchers conducted 69 in-depth interviews with women 18 years of age and older from the South Carolina lowcountry and Midlands. This project considered race, ethnicity, class, and region as central factors of analysis, asking how South Carolina women’s experiences were marked by commonality and difference.

Results: This research project illuminated and preserved South Carolina women’s experiences of reproductive health, including communicating about reproduction, the African-American and Latina experiences, pregnancy and childbirth experiences, beliefs and rituals, attitudes toward parturition, menstruation, HPV and cervical cancer, and the material culture of birth, among other topics.

Conclusions: Researchers successfully employed an interdisciplinary qualitative methodological approach, revealing social scientific and historical intersections, particularly regarding disease, medicine, and public health. This study offered women a means of vocalizing their roles in and insight into South Carolina’s medical history. This interdisciplinary research approach provides multiple tools to privilege women’s narratives in order to understand and improve society.
Abstract Title  Parenting stress among substance-using parents involved in treatment: Results from qualitative interviews

Author Names

Format as follows (the presenting author’s name should be in bold):
Last name, First name1; Last name, First Name2; etc.
1 delMas, Sara, Department of Psychiatry, Medical University of South Carolina
2 Moreland, Ph.D., Angela, Department of Psychiatry, Medical University of South Carolina

Abstract Text (250 word maximum)

Background: Long-standing evidence indicates that stress plays a critical role in drug use. Less literature has examined the role of stress caused by parenting – which is surprising given that 50-79% of individuals in substance-use treatment are parents, and the cumulative negative effect of seemingly minor stressors, such as those related to parenting.

Objectives: To address the gap between stressors experienced by substance using parents and services offered by substance-use treatment programs.

Methods: Individual, semi-structured interviews were conducted with 32 parents actively involved in substance use treatment. Parents were recruited from two substance use treatment programs via presentations at the sites. Interviews were audio recorded and professionally transcribed. A qualitative content analysis informed by grounded theory was conducted.

Parents were 81% female, with a mean age of 33.72; ethnicity was 75% Caucasian and 25% African American. Parents had 1-4 children and 76% had at least one child living at home with them. Mean age of children was 4.57.

Results: Two overarching themes emerged. The first theme, stressors prior to entry into treatment, included parent-specific (behavior problems, DSS involvement, separation from children, shared parenting responsibilities), substance use-specific (kids not understanding substance use or recovery, being under the influence impacting functioning, lack of adult emotional support, risk for relapse, legal problems), and other stressors (transportation, financial, childcare, domestic violence). The second theme, parent-related stressors during and following treatment, included parent-specific (behavior problems, DSS involvement, separation from children, no parenting resources, unable to control environment outside of treatment, overwhelmed), substance-specific (kids not understanding treatment, comorbid mental health concerns, withdrawal symptoms, risk for relapse, time commitment required for treatment), and other stressors (transportation, financial, childcare, relationships with other people in treatment).

Conclusions: Qualitative results indicated that parents report a range of stressors prior to, during, and following substance use treatment. Results inform development of programs to address parent-related stressors for substance using parents.
### Abstract Title

**MicroRNA 204 Contributes to Breast Cancer Disparity by Direct Negative Regulation of IGF2R**

### Author Names

Nogueira, Lourdes M¹; Burton, Clare¹; Black, Laurel¹; Fox, Jasmine D⁴; Helke, Kristi L¹; Garrett-Mayer, Elizabeth³; Watson, Dennis K¹,²; Turner, David P¹ and **Findlay, Victoria J¹**

¹ Department of Pathology & Laboratory Medicine, Medical University of South Carolina  
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### Abstract Text (250 word maximum)

**Background:**
In the US, African American (AA) women have a significantly higher rate of mortality due to BC compared to Caucasian American (CA) women. Our published studies identified miR-204 as a novel oncomir and we recently identified IGF2R as a direct target. Reduced IGF2R expression correlates with poor patient prognosis in BC patients and a recent study showed that decreased IGF2R expression may contribute to BC disparity.

**Objectives:** To determine the mechanism of miR-204 mediated negative regulation of IGF2R that contributes to aggressive tumor growth.

**Methods:** We performed western blots to assess activation of IGFR signaling pathways. Proliferation was assessed by trypan blue exclusion. Chemokinetic migration and invasion were assessed using transwell assays. Quantitative real time PCR (qPCR) was performed to assess miR-204 levels both *in vitro* and *in vivo*.

**Results:** We found elevated levels of miR-204 in AA compared to CA women with breast cancer. miR-204 overexpression results in the activation of the IGF1R/IRS-1/ERK pathway together with an increase in proliferation, migration and invasion. When miR-204 and IGF1R are both exogenously expressed no additional increase in migration was observed over expression of either alone, suggesting that miR-204 mediated increase in migration is through activation of the IGF1R pathway. miR-204 expression *in vivo* results in more aggressive tumor growth.

**Conclusions:** Our studies have identified a race specific mechanistic link between miR-204 and the IGF2R, and that miR-204 mediated activation of IGF1R signaling pathway could be a potential biological mechanism driving aggressive tumor growth.
Effects of IL-6 on Estradiol Production in Dermal Fibroblasts

Author Names

Format as follows (the presenting author’s name should be in bold):
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Abstract Text (250 word maximum)

Background: Systemic Sclerosis (SSc), characterized by increased synthesis of extracellular matrix (ECM) components in the skin, results in morbidity. In SSc, there is increased IL-6 in circulation and dermal fibroblast milieu. SSc also has a female predominance that increases during childbearing years, during high estrogen levels. Post-menopausal SSc patients have higher circulating estradiol levels compared to age matched controls. Estradiol has pro-fibrotic activity in skin, and aromatase, an enzyme in skin, converts androgens into estrogens. In activated fibroblasts, IL-6 activates STAT3, with binding sites upstream of aromatase.

Objectives: We will determine estradiol production in SSc dermal fibroblasts in response to IL-6.

Methods: Primary adult dermal fibroblasts from healthy controls and SSc patients were stimulated with IL-6 and its soluble receptor, sIL6R, for 48 hours. Transcript levels of aromatase were measured using reverse transcriptase PCR. Estradiol was measured using an ELISA-based testosterone conversion assay. Statistical significance was determined using non-parametric analysis.

Results: Healthy dermal fibroblasts stimulated with IL-6 and sIL6R had increased aromatase mRNA compared to SSc dermal fibroblasts. Aromatase mRNA levels in SSc dermal fibroblasts were less in response to IL-6 stimulation. However, SSc dermal fibroblasts had increased estradiol production after stimulation with IL-6 and sIL6R compared to healthy controls.

Conclusions: Healthy dermal fibroblasts produce higher levels of aromatase in response to IL-6 and receptor stimulation, but SSc fibroblasts have higher estradiol production, likely due to chronic exposure to high levels of IL-6 produced in an autocrine manner, implicating increased estradiol production SSc via conversion of testosterone into pro-fibrotic estradiol.
Abstract Title Which Girls Bring Weapons to School? Gender Differences in Threat of Victimization Correlates of School Weapon Carrying

Author Names

Halliday-Boykins, Colleen A. ¹; Andrews, Arthur A. ²; Tolbert, Christina ¹; Cunningham, Philippe B. ¹

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Abstract Text (250 word maximum)

Background: Carrying weapons to school is a serious adolescent problem that is poorly understood, especially for girls. Bullying victimization has been one of the most consistent predictors of school weapon carrying. Girls and women fear victimization more than their male counterparts do. Thus, individual and contextual factors that increase the salience of the threat of victimization might be more strongly related to school weapon carrying for girls than for boys.

Objectives: The purpose of the current investigation was to examine gender differences correlates on school weapon carrying.

Methods: 1274 middle school students (52.6% girls) provided anonymous self-reports on bullying victimization, violent behavior, school weapon carrying, gun ownership of friends and household members, perceptions of school safety, and covariates. Participants were 70.5% African American, 18.9% European American, and 10.7% Other.

Results: Binary logistic regression analysis was used. Household member gun ownership for protection, perceptions of school safety, and bullying victimization were more strongly related school weapons carrying among girls than among boys. Violent behavior, friend gun ownership for any reason, and household member gun ownership for reasons other than protection were related to school weapons carrying, but these effects did not vary by gender.

Conclusions: Individual and contextual factors that increase the salience of the threat of victimization appear to be especially relevant to girls’ school weapon carrying. Addressing safety concerns might be helpful in reducing school weapons carrying among girls. Future research is needed on motivations for weapons carrying that are particularly relevant for girls.
**Abstract Title**

Baseline Nutritional Status of Women at High Risk of Suicide: Participants Enrolled in the Better Resiliency Among Veterans & Non-Veterans with Omega-3’s (BRAVO) Study

**Author Names**

Johnson, Kristen B, PhD, RDN ;1 Newman, Jill C, MS1; Marriott, Bernadette P, PhD1 and the BRAVO Group*

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Abstract Text (250 word maximum)

**Background:**
In the United States, depression is more prevalent and associated with higher suicide incidence among females than males (1). Inadequate nutrient intake, particularly low magnesium (Mg), has been associated with depression and a recent position statement issued by an international psychiatric consortium has urged focus on nutritional status for persons with mental disorders (2, 3).

**Objectives:**
The objective was to evaluate the baseline nutritional status of women participants in the BRAVO study.

**Methods:**
In the United States, depression is more prevalent and associated with higher suicide incidence among females than males (1). Inadequate nutrient intake, particularly low magnesium (Mg), has been associated with depression and a recent position statement issued by an international psychiatric consortium has urged focus on nutritional status for persons with mental disorders (2, 3).

**Results:**
Less than 50% of participants met recommendations for magnesium and calcium with less than 5% meeting vitamin D recommendations. The percentage of participants who did not meet recommendations for iron and folate was highest respectively, among women 31-50 years of age and without a college education. No significant relationships were found with specific nutrient intake and depression.

**Conclusions:**
While no statistical association was found with inadequate specific nutrient intake and depression, these data underscore the overall poor diet quality among women with documented depression who were at high risk for suicide. This study provides further support for the international psychiatric consortium recommendation for practitioners to assess patient diets and support dietary modifications to improve treatment outcomes for persons with mental disorders.
Abstract Title: Constructing the life-space: Utilization of self-identity in understanding contraceptive choice

Author Names

Format as follows (the presenting author’s name should be in bold):

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Abstract Text (250 word maximum)

**Background**: Social psychologists argue that in order to affect behavior change, one must first construct the life space of his or her audience. Self-identity is one critical component of this life space. Women aged 19-24 years experience the highest rate of unintended pregnancies, despite over 50% of college-aged women utilizing the combined oral contraceptive pill (COC). Furthermore, long-acting reversible contraceptive (LARC) methods (e.g., IUD and Implant), recommended as first-line contraceptive choice for women of all ages, remain underutilized by this age group, with usage rates around 12%.

**Objectives**: The current study aims to assess the relationship between self-identity and contraceptive choice through utilizing an extended Theory of Planned Behavior (TPB) framework. We assess intention to initiate LARC methods by current COC users who hold knowledge of LARC methods.

**Methods**: Data were collected utilizing an online survey (N=482) distributed to female undergraduate students attending a mid-sized liberal arts university during November and December 2016. Women meeting study criteria (N=182) (i.e., current COC user aware of the IUD and/or Implant) were included in analyses. Data were collected on the TPB constructs, self-identity, and sexual and reproductive health history.

**Results**: Preliminary analyses reveal statistically significant (p<0.001) negative correlations between self-identity and three TPB constructs: attitude towards LARC methods, subjective norm concerning LARC methods, and intention—both to seek out information about LARC methods and to initiate LARC methods.

**Conclusions**: Self-identity is a critical component of the life space, which should be considered when creating promotional campaigns for LARC use. Future research should explore self-identity in relation to other health behaviors.
Gender Differences in Undertriage following Severe Traumatic Injury

Nunez, Johanna¹; Wilson, Dulaney²; Ferguson, Pamela³; Johnson, Emily⁴; Fakhry, Samir⁵

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Abstract Text (250 word maximum)

Background: Recent national and international trauma studies have suggested that women are routinely undertriaged following a trauma.

Objective: Assess whether gender differences play a role in being undertriaged following injury, leading women to be sent to a hospital with inadequate resources for care.

Methods: We combined results from two original studies at MUSC with a literature review to assess whether a consistent association of gender and undertriage in trauma patients existed. We defined severe trauma as an Injury Severity Score >15 and severe traumatic brain injury (TBI) was defined per the Barell Matrix. Undertriage occurred when someone with severe trauma received care at a level III or undesignated trauma center. Deidentified data from the 2012 National Emergency Department Sample dataset were analyzed using multivariable logistic regression.

Results: After adjustment for demographic and clinical characteristics, women had higher odds of being undertriaged than their male counterparts with an odds ratio (OR) of 1.14 (95% CI=1.07-1.22); in the TBI subgroup women were more likely to be undertriaged with an OR of 1.13 (95% CI=1.04-1.22). Multiple studies from the US, Canada, and Australia also showed that women with severe injury were significantly less likely than men to be transported to an appropriate level of trauma center.

Conclusions: These findings suggest that there is widespread undertriage of women with injury and support the need for additional investigation into how patients, in particular women, with severe trauma are triaged. Such efforts would establish better care and afford all patients the best chance of recovery.
Title: Subjective and Objective Sleep and Verbal Learning in Pregnant Women Compared to Controls

Authors: Paquet, C., Wilkerson, A. K., Taylor, D. J., Dietch J., Francetich, J., Estevez, R., & Parsons, T.

Institutions: Medical University of South Carolina, University of North Texas

Background/Objective: Women experience a significant increase in sleep disturbance from pregnancy through early postpartum and often complain of impaired cognitive functioning during this time. Sleep disturbance has been linked to impaired cognitive performance in several populations (e.g., airline pilots, medical residents), though this relationship has been understudied in peripartum women. If sleep disruption is driving peripartum cognitive impairment, it would have significant implications for education, prevention, and intervention among this population as well as informing public policy.

Methods: Participants were 54 young adult women (21 pregnant, 33 non-pregnant). All pregnant women were 35-40 weeks pregnant. Women wore an activwatch for 4-7 days, after which they completed the Insomnia Severity Index (ISI), the General Sleep Disturbance Scale (GSDS), and were administered the California Verbal Learning Test (CVLT).

Results: CVLT performance variables were regressed on subjective (ISI, GSDS) and objective (actigraphy) sleep variables. ISI/GSDS were not predictive of performance on any subscale of the CVLT (all $p > .05$) in either group. There were significant relationships between actigraphy and CVLT in the pregnant group only. Specifically, previous night’s sleep onset latency (SOL) predicted short- and long-term recall ($p = .021, p = .015$) and previous night’s wake after sleep onset (WASO) predicted the number of errors in performance ($p = .039$)

Conclusion: Subjective sleep was not predictive of verbal learning or memory in pregnant or non-pregnant women. In the pregnant group only, objective SOL was predictive of recall and WASO was predictive of cognitive errors. Implications, limitations, and future direction are discussed.

Keywords: Pregnancy, sleep, cognitive performance
## Abstract Title

## Author Names
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## Abstract Text

**Background:** Fibromyalgia (FM) is a chronic pain disorder characterized by uncertainty in etiology, symptomatology, diagnosis, treatment, and outcome. Multiple qualitative studies have shown the uncertain nature of FM impairs quality of life and contributes to communication difficulties experienced between women with FM and their healthcare providers (HCPs). Yet, there is lack of empirical evidence of distinct relationships among patient-HCP communication, uncertainty, and emotional outcomes within this population.

**Objectives:** The purpose of this study was to examine the relationships among patient-HCP communication, uncertainty, helplessness, and subjective well-being (SWB) in women with FM.

**Methods:** The study design was cross-sectional. A total of 138 women with FM completed health surveys on patient-HCP communication, uncertainty, helplessness, and SWB. Multiple regression analyses were conducted to examine two predictive models.

**Results:** In model 1, helplessness fully mediated the relationship between illness uncertainty and SWB. In model 2, there was lack of evidence of patient-HCP communication as a moderator of the relationships between illness uncertainty and helplessness; and between helplessness and SWB.

**Conclusions:** Helplessness is a specific illness cognition that helps explain the relationship between the uncertainty and the mental anguish experienced in women with FM. Clinical practice interventions focused on empowering women with strategies to manage FM may facilitate positive coping skills, decrease sense of helplessness, and improve women’s SWB. There is a need to continue research efforts on patient-HCP communication to develop a strong evidence base for clinical practice.
**Abstract Title**
Increased Age-related Macular Degeneration Diagnosis among Medicare Beneficiaries with Rheumatoid Arthritis

**Author Names**
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**Abstract Text (250 word maximum)**

**Background:**
Age-related macular degeneration (AMD) is the leading cause of blindness in the US. The role of a secondary inflammatory disease on AMD progression is still largely unknown.

**Objectives:**
This study investigates the association between AMD and rheumatoid arthritis (RA), two diseases more common in women, using MarketScan® data for patients aged ≥65 years on Medicare.

**Methods:**
Baseline data were extracted for subjects with at least 2 ICD-9 diagnosis codes of RA and control subjects with no RA, and were matched at baseline by propensity score. Matched cohort data were extracted for post-baseline time and examined up to 4.5 years of follow-up for ICD-9 diagnosis code AMD records. Multivariable logistic regression was used to compare Odds of an AMD diagnosis post-baseline for RA subjects and matched controls. Survival analysis was used to examine days until first AMD diagnosis between RA patients and controls.

**Results:**
Risk of a new AMD diagnosis was found elevated in RA patients (OR of 2.08 [95% CI 1.98-2.18]). This risk was slightly elevated in female patients with an odds ratio of 1.11 (1.05-1.17) when compared to the male population. The time to first AMD diagnosis was significantly shorter for RA subjects than observed controls (p<.0001).

**Conclusions:**
Our analysis provides further support of an association between RA diagnosis and an increased AMD diagnosis. These data might support the hypothesis that synergistic effects of systemic inflammation exist such as those generated by RA and local inflammation in the eye, which together will increase the risk for AMD development.
**Abstract Title**
Sleep Disturbance Among Substance Use Disorder in Females

**Author Names**

Smith, Korey A.1; Wilkerson, Allison K.1; Sahlem, Gregory L.1; Bentzley, Brandon S.2; Smith, Joshua P.1; Uhde, Thomas W.1; Book, Sarah W.1  
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**Abstract Text** (250 word maximum)

**Background**: Individuals with alcohol use disorder (AUD) or substance use disorders (SUDs) suffer from sleep disturbances during early abstinence, potentially hindering continued abstinence. Little research exists on how this varies by gender.

**Objectives**: The objective of the current study was to examine gender differences across multiple sleep variables in a sample of adults seeking treatment for AUD and SUDs.

**Methods**: Participants (N = 110, 44 women) were adults (Mean age = 36.2, SD 12.8) beginning intensive outpatient treatment at the Center for Drug and Alcohol Programs at MUSC. Prior to treatment, patients completed an intake interview, the Pittsburgh Sleep Quality Index (PSQI) and the Insomnia Severity Scale (ISI).

**Results**: Average PSQI scores indicated clinically significant sleep disturbance (>5) in men and women. An independent samples t-test revealed women’s total PSQI scores were marginally higher than men (p = .08). Further exploration of subscales found no difference in quantitative sleep parameters (sleep latency, sleep duration, and sleep efficiency), use of sleep medication, sleep quality, or daytime dysfunction associated with sleep (all p > .05). However, women reported significantly more sleep disturbances (e.g., waking up unexpectedly, feeling too hot, getting up to use the restroom, difficulty breathing, having bad dreams) throughout the night (p = 002).

**Conclusions**: Results confirm that both genders suffer from poor subjective-sleep quality which supports previous research. Particularly, nocturnal sleep disturbances were found to be highly associated with females with substance use disorders. Men and women behaved similarly in other sleep variables including sleep efficiency.
### Abstract Title
The effects of statin therapy on cognitive function in women

### Author Names

*Format as follows (the presenting author’s name should be in bold):*

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1 Department of Neurology, Medical University of South Carolina
2 Department of Radiology, Medical University of South Carolina

### Abstract Text (250 word maximum)

**Background:** Though the FDA identified memory loss as a side effect of statin therapies in 2012, research has not examined the basis for memory complaints. Myelin – a component of brain microstructure – depends on cholesterol for maintenance and statins reduce cholesterol levels. We hypothesized that memory decline demonstrated during statin treatment might co-occur with declines in cognitive processes most dependent on myelin integrity, i.e., processing speed (PS) and executive function (EF). This might represent a potential mechanism for perceived memory change.

**Objectives:** As women generally experience more side effects from statins than men and have been under-represented in research, this work aims to examine statin effects on cognitive function, specifically in women.

**Methods:** In this pilot investigation, 7 women ages 45-63 completed cognitive testing before and 3 months after beginning statin treatment. Reliable change was judged as a greater than one standard deviation difference from baseline.

**Results:** Objective memory performance (recall of novel information) improved for 5/7 women. One participant did not reliably change; one declined. The participant with diminished memory scores also declined on measures of PS and EF. Three additional women demonstrated diminished performance on at least one measure of PS/EF, without memory decline.

**Conclusions:** While memory per se was diminished for only 1/7 women engaged in statin treatment, it co-occurred with PS/EF declines as predicted. PS/EF declined in 4/7 women overall. Subjective memory complaints may reflect change in component processes of PS/EF related to myelin integrity. Further research and larger sample size are needed to support this observation.
Sex is Not a Significant Predictor of Quantitative Urine Cannabinoid Level in Treatment-Seeking Marijuana Users

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Abstract Text (250 word maximum)

Background: Alcohol research has benefitted from establishing “standard drinks”, a metric for determining how much alcohol someone has consumed. Definitions of heavy drinking (standard drinks per week) have been defined separately for males and females. With increasing legalization of MJ, research is necessary to create similar standards for MJ and criteria for high-risk use.

Objectives: Our goal was to determine whether sex and estimation of grams of MJ per administration improves prediction of urine cannabinoid levels in treatment-seeking MJ users.

Methods: Adults with cannabis use disorder were recruited for a National Drug Abuse Treatment Clinical Trials Network (NIDA CTN) 12-week clinical trial. Participants (N=302) attended weekly visits through the duration of treatment, providing urine drug tests at each visit and reporting on daily MJ use. Days of MJ use, average joints/blunts used per day, and average grams per joint/blunt were computed for the 30 days prior to each urine drug screen.

Results: Results from multilevel models suggest that grams per joint/blunt were positively associated with urine cannabinoid level, but that sex was not a significant predictor of urine cannabinoid level.

Conclusions: Detailed gram quantification may be useful when estimating biological/health effects of MJ use or detecting change in quantity of use. Male and female treatment-seekers present with similar urine cannabinoid levels, after controlling for level of use. Quantity of MJ use should be considered when defining and screening for high-risk use for both males and females.
# Abstract Title

Prevalence and Attitudes Regarding Withdrawal Use for Pregnancy and HIV Prevention in HIV-Positive Youth

## Author Names

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## Abstract Text (250 word maximum)

**Background:** Withdrawal use is undervalued as a means of preventing pregnancy and sexually transmitted infections. Up to 48% of high-risk sexually active youths may be using withdrawal, which has not been well investigated as a method for HIV transmission prevention.

**Objectives:** To determine differences between female and males as well as withdrawal users and non-users in a cohort of sexually active 18-25 year old HIV-infected individuals.

**Methods:** This is a survey-based study of sexually active 18-25 year old HIV-infected individuals. Inclusion criteria was self-selection for survey participation. Statistical analysis was performed using SAS 9.4 (Cary, NC). Continuous variables were compared with Student’s t-test and Wilcoxon Rank Sum Tests. Categorical variables were compared using χ² test and Fisher’s exact test. Multi-logistic regression was performed to investigate variables associated with withdrawal for HIV prevention.

**Results:** 36 males and 34 females had complete survey responses. Females and males were similar in age, race and ethnicity. Females were more likely to report taking HIV medication (p=0.01), and never using condoms (p=0.05). They were less likely to use withdrawal for HIV prevention compared to male respondents (p=0.003) and to ask about their sexual partner’s HIV serostatus (p=0.035). In multivariable logistic regression, withdrawal use for HIV prevention was predicted by ever use of withdrawal as contraception after adjusting for additional factors.

**Conclusions:** Better risk reduction counseling can be targeted to at-risk youths once more information is available about the prevalence of withdrawal use and its application towards pregnancy and HIV prevention.
Abstract Title

Gender Disparities in Patient-Reported Post-Stroke Disability

Author Names

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4 College of Nursing, Medical University of South Carolina

Abstract Text

**Background:** Recent studies have shown that stroke has a differential impact in women compared to men. Women are more likely to survive strokes, they are more likely to experience more severe strokes resulting in greater post-stroke disability. However, few studies have characterized sex differences in functional ability after stroke.

**Objectives:** This study examined long-term stroke disability between men and women stroke survivors.

**Methods:** This was a retrospective analysis of the 2015 National Health Interview Survey. Respondents were asked to rate their ability to perform 11 functional tasks. Univariate comparisons were completed to evaluate gender differences in performance and multinomial logistic regression was used to determine the odds of reporting functional limitations.

**Results:** 514 men and 641 women stroke survivors completed the survey (mean age: 70 years). 75% reported having hypertension, 61% high cholesterol, 33% diabetes, 24% heart disease, 21% heart attack, and 16% COPD. In the predictive model, men were less likely to report “very difficult/can’t do at all” in walking ¼ mile (OR .68, 95% CI .51-.90), climbing 10 steps (OR .65, 95% CI .49-.85), standing 2 hours (OR .66, 95% CI .50-.87), stooping (OR .51, 95% CI .39-.68), reaching overhead (OR=.69, 95% CI .49-.97), carrying 10 pounds (OR=.45, 95% CI .34-.59), and pushing large objects (OR .37, 95% CI .28-.5) when compared to women.

**Conclusions:** The functional capacity of men stroke survivors was greater than women. Greater long-term post-stroke disability exists among women stroke survivors who are also likely to live longer lives after experiencing a stroke.
Abstract Title

Gender differences in the rodent model of prospective memory

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Abstract Text (250 word maximum)

Background:
Prospective Memory refers to the ability to form a planned future action, inactivate this memory while completing other intervening tasks, but then reactive and complete this plan in the future. A decrease in prospective memory accuracy co-occurs with 1) age-related, 2) drug-induced, and 3) HIV-related, cognitive decline; further, the type of accuracy decline appears gender-specific. A rodent model of prospective memory has recently been developed.

Objectives:
We sought to determine whether male and female rodents would perform differently when tested on the rodent model of prospective memory;

Methods:
Rodents were trained to complete an on-going task by depressing response manipulanda after a light was presented on either the left or right side of an operant chamber to earn a sucrose pellet. A secondary, prospective task resulted in the delivery of a larger cache amount of sucrose pellets, however this task could only be executed after a 55 minutes time-limit had elapsed and a “warning signal” tone had been played for 5 minutes.

Results:
Females, relative to males, showed both anticipatory responding and decreased on-going task accuracy prior to the warning signal. Males, in contrast, only showed anticipation and accuracy decline when the warning signal was played – suggesting males only used event cues to complete this task, whereas females used a combination of time and event-based cues.

Conclusions:
The results suggest that separate neuronal mechanisms are engaged by male and female subject when completing the rodent prospective memory model, thus warranting further study to elucidate the underpinnings of these differences.