

Athletes' Substance Abuse and Mental Health

Brandon T. Carreathers
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Abstract

The physical and emotional pressures experienced by competitive athletes are challenging. Research shows that 52% of professional football players have admitted to opioid use (Cottler et al., 2011), while up to 89% of college athletes have reported using alcohol as a response to injuries or feelings of pressure (Anderson et al., 1991). In addition, about 33.2% of National Collegiate Athletic Association (NCAA) athletes reported having experienced episodes of depression (Debonis, 2019). This paper will examine the reasons why so many athletes' careers result in drug abuse and how the mental health of these athletes plays a role in substance abuse within the athletic community.

Where We Go 1 We Go All: A Public Discourse Analysis of QAnon

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Abstract

During the 2016 presidential campaign, candidate Donald Trump amassed a following of extremists. After Trump settled into his presidency, subsets of his original following emerged. One group included a committed following of an individual known by the code name "Q." Q claimed to be a top-clearance military official who would slowly reveal the "truth" about the political "deep state." Q communicated directly to their followers through "leaks," or posts, on the anonymous message boards of 4chan, 8chan, and 8kun. This paper examines the content of these leaks and discusses how the leaks influenced the discourse of QAnon followers. This discourse analysis allows for an in-depth investigation of Q's leaks surrounding the subjects of bolstering anti-elitism, discrediting the establishment, and defining their followers' identity through a sense of threat and group-marginalization.

Effect of Stress on the Health of African American Women in Low-Income Neighborhoods

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Abstract

Health problems such as obesity are more prevalent in populations of African American women than any other population in the United States. Stress has been found to disproportionately affect the health of African American women when compared to European American women. Factors such as neighborhood environment, socioeconomic status, and familial relationships play a significant role in the stress experienced by these women. This project reviews the current literature on the relationship between various stressors and the health of African American women. The purpose of this research is to increase understanding of the unique stressors that African American women face and how health disparities and psychological stress could be the instrumental factors impacting obesity and mortality rates in this community.

Implementation of a Mechanical Vibration Control System and Electric Locking Circuit for Atomic Sensing Research

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Abstract

The long-term goal of this research effort is to use glass cells containing rubidium (Rb) as electric-field sensors via controlled laser probes. Two important steps to develop the experiment include the renovation of a Vibration Control System (VCS) and the completion of a laser frequency locking circuit for the existing External Cavity Diode Laser (ECDL) to provide active frequency stabilization.

Construction of the circuit will continue after the VCS is set up. This circuit will enable the ECDL to provide narrow-band excitation of rubidium atoms from the 5S to the 5P state [1]. Once the locking circuit is implemented and the VCS in place, an existing ECDL setup will be used to probe the quantized atomic states of Rb vapor within a glass cell [2].

An Experimental Investigation of the Material Behavior of FDM PCTG Sockets

Aver Dumas IV

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Abstract

Additive manufacturing, or 3D printing technologies, has been extensively used to develop evidence-based methods to construct lower-limb prosthetic sockets. However, the resulting structural, or 3D-printed materials behavior, is not well understood. With the intent of supporting evidence-based design guidelines to print amputee-specific sockets, the structural behavior of successfully-worn transtibial check sockets made from PCTG and printed from the FDM 3D printing process was benchmarked. Specifically, ASTM D638 type I tensile test specimens were die-cut from sheets of material with the 3D-printed characteristics of the check socket. Test samples were cut parallel and perpendicular to the print direction and tested according to ASTM D638. From the measured load-elongation data, stress-strain curves and the corresponding material properties were derived, including modulus of elasticity E , Poisson's ratio ν , yield strength S_y , and ultimate strength S_u . Based on t-test results, the modulus of elasticity E and ultimate strength S_u were directionally dependent. However, variations associated with Poisson's ratio ν and yield strength S_y were insignificant.

A Review of Late Twentieth-Century Findings on Adolescent Development in Low-Income Single-Parent Households

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Abstract

It is generally understood that healthy adolescent development is influenced by a variety of factors. Current research on the effects of family structure on adolescent development have largely grown from data collected in the late twentieth century showing that when children grew up in a two-parent household they experienced significant advantages. According to Amato (2005), these advantages included experiencing a higher standard of living, more effective parenting, more cooperative co-parenting, and closer emotional relationships with both parents. Those who grew up in two-parent households demonstrated superior academic performance (Amato et al., 2015; Amato 2005), suggesting that children from single-parent environments may have faced comparative disadvantage. Data show that the number of single-parent households increased from 9% in the 1960s to 28% by 2012 (Amato et al., 2015). This paper discusses findings in the late twentieth century on the effects of growing up in a single-parent household on adolescent development and education and the overall impact of family structure on children's lives.

Impacts of Variation in Food Availability on Spatial Habitat Use in Breeding and Non-Breeding Red Crossbills (*Loxia curvirostra*)

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Abstract

Movement patterns, habitat use, and reproductive behavior are among many attributes impacted by the distribution of resources within habitats. Our study used radio telemetry to investigate the relationship between food availability and movement patterns of breeding and non-breeding red crossbills (*Loxia curvirostra*). Crossbills were captured and tracked in different seasons and under conifer seed mast and nonmast conditions. Telemetry data were used to generate statistical models to analyze spatial habitat use. Total linear distance traveled per total area of the home range was used as a comparative measure of activity within home ranges across specimens. We found a significant increase in within-home range activity during mast years. Birds rearing young exhibited greater within-home range activity than non-breeding birds. Total distance traveled was significantly greater in summer than in winter. Our results suggest greater activity under high food conditions.

#SayHerName: Putting the “I” in Intersectionality in Black Female Social Movements

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Abstract

Mediated channels continue to be one of the main methods of dispersing pertinent information to and from Black communities. Black women’s voices have historically been stifled due to patriarchy and racism; thus, Black women have often used forms of media as a primary means to build coalitions with other Black women and to effectively communicate resistance. This research will closely analyze how prominent participants in the #SayHerName movement approach intersectionality in the digital era of the 21st century. Data will be directly extracted from the digital platform Twitter to contribute to the growing conversation surrounding Black women’s impact on Twitter, as well as the need for intersectional social media movements.

The Impact of Social Stigmas on Sexual Health Seeking Behavior: A Review of Literature

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Abstract

Studies show a meaningful association between STI/HIV-related stigmas and low adherence to routine STI testing (Morris et al., 2014; Hull et al., 2017). These studies also show that healthcare workers help to facilitate a culture of stigmas among coworkers and patients. According to a national survey, only 16.6% of women and 6.1% of men who participated in the survey had been tested in the last 12 months (Cuffe et al., 2016). Low rates of STI testing contribute to the spread of chlamydia, gonorrhea, HIV, and syphilis (Big-Ideas-HIV-STIs.pdf, n.d.). The motivation for this literature review is to examine how STI and HIV-related stigmas influence sexual health seeking behaviors and sexual health outcomes for patients aged 18 to 24. This paper also examines how healthcare providers and clinicians perpetuate stigmas among patient populations and what kinds of sex education programming have been effective in improving sexual health behavior.

Art Therapy as an Intervention and Its Effects on Anxiety and Depression

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Abstract

There is a prevalence in the United States, as well as other countries, of individuals of all age ranges suffering from negative mental health issues, including anxiety and depression. Previous studies have shown that using art therapy as an intervention could help improve both anxiety and depression outcomes. This research examines different art therapy techniques, as well as combined interventions, and how different approaches can help improve anxiety and depression scores based on the self-reported Spielberger's State-Trait Anxiety Inventory (STAI), the Beck Depression Inventory (BDI) tests, and a variety of other self-report assessment tests.