



Framingham
State University

Thursday, May 3, 12-6PM

Friday, May 4, 10-4PM

McCarthy Center, Forum

7TH ANNUAL

STUDENT POSTER & PRESENTATION DAY



This event is sponsored by the Center for Excellence in Learning, Teaching, Scholarship, and Service, the Office of Academic Affairs, and the Fashion Design and Retailing Department.

CELTSS

Center for Excellence in Learning,
Teaching, Scholarship, and Service

For more information, please contact CELTSS at celtss@framingham.edu.

Welcome to Framingham State University's Seventh Annual Student Poster and Presentation Day!



Today marks our seventh great celebration of student scholarly work and faculty support. As students, you have taken special initiative to understand something deeply, and you have worked by the side of your faculty who have spent their time sharing with you their academic fields and expertise. They have done so because they care about you and your success, and they are optimistic about the future they see in you. Today, the steps you have taken to understand your chosen field and how it makes progress will open many doors for you as you move into your professions and careers. Your work and

future work, also, will improve life for others in multiple ways—improving healthcare; enlivening the arts; creating new strategies for people to understand their own behavior and that of others; enabling businesses to thrive; teaching people of all ages; caring for the planet; and making discoveries in the sciences that matter. Keep learning. Keep working. Thank your professors, and continue to expect a lot of yourselves. This is a significant moment. **We are proud of you. Congratulations!**

To Jon Huibregtse, Imranul Islam, Phoebe Lin, Suzanne Meunier, Erika Schneider, Amanda Simons, and our faculty who serve the university through the Center for Excellence in Learning, Teaching, Scholarship and Service, thank you for your hard work and success in making this event happen. Great work! To our faculty who have mentored these students who are here today, what a community you have created! Clearly, it is something to celebrate. Thank you.

Linda Vaden-Goad, Ph.D.

Provost and Vice President for Academic Affairs

Framingham State University Student Poster and Presentation Day

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Forum

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Fashion Design and Retailing Portfolio Day

Friday May 4, 2018

10:00 – 12:00pm

McCarthy College Center Forum

Design Students presenting final senior design portfolio

FASH 487 Apparel Design Portfolio (Capstone course)

A capstone experience to organize and present design work created in the Fashion Design and Retailing program and to produce a portfolio required to obtain a professional position in the apparel industry. Students develop a portfolio to demonstrate knowledge and skills in: a variety of garment categories; hand and computer illustration; flat sketching techniques; and original full scale garments. Ideas are assembled in an aesthetic and professional format by integrating the components of design, fabric, and end use. A portfolio presentation is required.

Student Design Portfolio Presentations <i>Sponsor: Seunghye Cho</i>		
#	Designer's Name	Designer's Statement
1	Jessica Goncalves	As a designer, I look to create elegant pieces that show off the female body, and more importantly, make the consumer feel beautiful and powerful. From personal experience, I know that a well fitted piece, that accentuates one's body, can boost one's confidence, and that is why I look to do it for others. My ultimate goal is to create evening wear for all women, of all ages and sizes, which accentuates their beauty and brings out that confidence, elegance, and power. Simplicity, attention to detail, and fit are all factors that draw attention to my designs.
2	Jesireh Adu	Making great use of every feature of the female body is an ultimate goal in my design process. "Feeling good and beautiful in her body" gives me such an inspiration to meet my customer's satisfaction in my work of art. With inspiration from my rich African cultural background, and other world cultures from the 80s, this collection is hence, strongly characterized by a spectacular blend of African wax print along with delicate dark brown crystal organza.

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3	Samantha Durrance	As a designer, a major consideration in my design collection is comfort. This collection is to bring comfort unique to the person. From I have researched and experienced, there are many different ways to express comfort. From changing the fabric or seam lines to create a unique comfortable look.
4	Alaina Mishley	As a designer, I am inspired by ethereal, light, and airy fabrics. I enjoy creating garments with a lot of motion and volume to them, as can be seen in this collection. The target market for this collection is successful, confident women who appreciate intricate details and couture construction. I aspire to design one-of-a-kind looks that are both feminine and structured.
5	Brendan Moran	A dream held by every soccer player in their youth is to be the next big star which takes time, practice and an insurmountable amount of passion. As a soccer player who also aspires to be a fashion designer, the opportunity to create soccer inspired apparel is that dream coming to fruition. School House F.C melds together the joy of learning and perfecting the “beautiful game” with vibrant colors and timeless designs.
6	Amanda Loffredo	My Design Aesthetic resembles a street style that is classy and comfortable. They are infused with powerful political messages to evoke emotional responses.
7	Caroline De Souza	As a designer I translate what I see with uniqueness and innovation to my creations. Concrete Garden is an active streetwear collection that is inspired by the beauty of nature's finest colors, and the functionality of large urban cities. The unique designed print with the functional details enhances the best of both worlds. The collection is directed for the everyday wear that gives my costumers an active life with unique style.

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8	Jeneba Mansaray	As a designer, I intend to infuse culture into society by utilizing afrocentric details in a modern, avant garde way to encourage the expression and individuality of my clients. I create for chic, upcoming young men and women in an urban, upbeat city; not afraid of a pop of color. They are confident, and unapologetically themselves. They have a purpose, and with the right ensemble, they are confident that they can fulfill it. Personal Image is important to them, especially when representing who they are and what they stand for. I go by the ideology of Nina Simone: "It's an artist's duty to reflect the times," and that's how I intend to connect to people all over the world; through fashion.
9	Rachel Mullins	My collection was heavily inspired by my love of Hollywood glamour. Garments worn in the 1950s are timeless and classic; ranging from sweet to sultry. Silhouettes, colors, fabrics, and details in this collection illuminate a few of my favorite design elements from this era. Overall, my approach to designing is intensely hands-on with exploring fabrics through textures and draping techniques, hand sewn details, and a focus on construction. My ideology behind designing is to provoke different emotions in people through what they wear.
10	Nicole Pazzanese	As a designer, I strive to help every woman feel confident and comfortable in their own skin. My design concept is simple and classy, but has unique, subtle elements that make my design different from what people typically purchase. Simplicity in design represents universal elegance for different body types and different target markets. I want anyone I design for to feel like they can take on the world. "Simplicity is the keynote of all true elegance" -Coco Chanel
11	Kelley Hansen	As a designer I strive to captivate the feeling of serenity. Sweet and simple is my personal preference and I believe it is tasteful to many different kinds of consumers. With simplicity being one of my main goals, I aim for quality craftsmanship in my designs and execution.

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12	Colleen Quinton	As a designer I use pastels with a stand out color to bring the attention to the consumer. Apparel that makes you noticed without trying to be. My design style is soft, elegant, and fun. My line Adore makes even the undefined found. My designs will be for young women to wear on and off the stage. Adore is ready to wear dance wear coming Summer 2018
13	Kathryn Ambers	I design for size inclusive, confident, sophisticated women working to immerse themselves into various environments. Inspiration From emotion, texture and details are used to creatively portray my design aesthetic. Mouse of bold fabrics and patterns create a look that is feminine, sassy and flirty for the entrepreneur women.

Merchandising Students presenting business and buying plans

FASH 464 Fashion Merchandising: Planning, Policies, and Implementation

(Capstone course)

An analysis of industry standards in a business plan for a model retail business. Concepts included are financial planning, store location, organizational structure, merchandise assortment, and financial structure of the apparel and home furnishings industries. The role of the buyers and managers in policy making is analyzed. Open-to-buy and pricing are calculated and evaluated. Procedures and techniques practiced in assortment, movement of goods, customer service, security, and store policies are reviewed.

Student Business Plan Analyses by Groups <i>Sponsor: Virginia Noon</i>		
#	Group Members	Store Name and Description
1	Alessandra Gallo Caroline Lutz Kerin McCarthy Rachel Noel	Forza Forza located in the Natick Mall is committed to selling sustainably produced athleisure wear to young professional women in order to support the lifestyle of a women on the go.

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2	Bianca Aires Gabby Grady Felicia Iannello	MAVIN MAVIN is a high end handbag and accessories store that sells designer vegan products as well as consigned luxury designer brands to women ages twenty eight to forty five located in the Back Bay area of Boston Massachusetts. MAVIN is an environmentally conscious brand that delivers sustainability into high end fashion for women who desire luxury pieces but are concerned with their carbon footprint.
3	Jordan D'elia Brianna Taylor Jamie Thibault Nicole Valerio	Milestones Milestones is an activewear company striving to help young women, students, and adults overcome any milestone that may face them. Our customers will feel comfortable and confident wearing our on trend clothes fit for their daily activities. Besides offering affordable options for young people on-the-go, we take pride in being a sustainably conscious company.
4	Olivia Joubert Anne Malloy Alicia Miller Rita Shnorhokian	REN At REN the clothes prove to be on-trend and are made of completely recycled fabrics to help with the growing issue of fashion pollution.
5	Raquel Crowell-Morse Emily Dunton Christina Fazio Cristal Polanco	From the Sole From the Sole's main objective is to source not only fashionable but sustainable footwear for women. Our mission is to promote sustainability not only by an environmental approach, but also socially.
6	Corrine Maxwell Alexa Rodriguez Ashley Zeboski	Storow Storow is a high-end/luxury womenswear boutique located on Newbury Street in Boston that will host clients with refinement, trend knowledge, and customized styling with each encounter. Storow will allure the curious with novelty, exclusivity and will harvest client relationships with a tailor made experience.

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7	Allison Bochman Rebecca Horan Mary McCarthy Jordan Rowe	American Threads American Threads is a sustainable and locally made clothing brand for both men and women located in Newport, Rhode Island. American Threads strives to change the way consumers buy to help reduce the impact on the environment, while staying ahead of fashion trends and making it individualized for the consumer.
8	Tonya Polanco Melanie Smith Rachel Smith Aryla Soares	Little Big Minds The mission for Little Big Minds is to create a store environment that allows all parents and their children to feel comfortable, happy and excited to shop. The mission is to help parents get shopping done while the children engage in the selection of their own clothes, feeling independent, but also being a kid and having fun throughout this process.
9	Lillian Cruz Molly Fennessey Angela Hyslip Madison West	HUMANITY HUMANITY provides sustainable clothing to the working woman who wants to leave the world better than she found it. Our mission is to build a reputation of being a reliable brand, both online and in store; as well as having a positive impact on the environment and providing knowledge of social responsibility.

Undergraduate Oral Presentations
Alumni Room
Friday May 4, 2018

11:30 – 1:30pm		
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4	Patricia Cooney <i>Sponsor: Jon Huibregtse</i>	Boston Busing Crisis: Desegregating or segregating schools in the 1970s	27
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7	Jennifer Eystad <i>Sponsor: Joseph Adelman</i>	"Fresh evidence has been accumulated to prove that America was discovered by the Northmen about the year 1000, and the fact seems to be pretty well established.": Why Some Scholars Argued that Vikings Came to America Before Columbus, 1886-1893	46
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15	Kevin Marshall <i>Sponsor: Joseph Adelman</i>	Propaganda in the American Revolution: The Founder's Secrets and Hidden Agenda	91
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UNDERGRADUATE ABSTRACTS

1. Dale Adams

Sponsor: Joseph Adelman

America's Sacred Pastime has Reached a Crisis: The 1919 World Series, Hugh Fullerton, and the Progressive Movement

Progressivism was the social and civil reform movement that ran from the late 19th to the early 20th century; during which, leading intellectuals and social reformers set out to expose the economic, political, and cultural issues that had risen amidst the Industrial Revolution and growth of American capitalism. This project will argue that, although he was never before considered a progressive journalist, Hugh Fullerton –the Chicago-based sports reporter who unveiled the 1919 Black Sox Scandal – embodied Progressive ideology in publicizing the corrupt culture within America's sacred pastime that forever etched the 1919 World Series into baseball's history books.

2. Dale Adams

Sponsor: Jon Huibregtse

Robinson, Thompson, and Doby: Catalysts for America's Racial Desegregation Movement

From avid baseball fans to civil rights activists: everyone knows Jackie Robinson to some degree. What most do not know, however, is how he rose from the Negro Leagues to the all-white Major Leagues. This paper argues that the process by which Jackie Robinson, Hank Thompson, and Larry Doby were respectively signed by the Brooklyn Dodgers, St. Louis Browns, and Cleveland Indians, was catalytic to a more universal American racial desegregation movement of the 1950's. In the early 20th century, baseball was on the rise and had well established itself as America's pastime, drawing young, old, black, white, rich and poor fans from across the country. In the 1947 season, Jackie Robinson – alongside Hank Thompson and Larry Doby – racially integrated Major League Baseball, bringing fans of all demographics to fill the seats of Major League ballparks from St. Louis to Boston and ultimately setting a symbolic precedent for the country to see on a most grandeur stage: that color barriers could be broken.

3. Angella Ambroise

Sponsor: Amy Knapp

Effects of Physiological Concentration of Caffeine and Theobromine on The Recovery of Mouse Extensor Digitorum Longus Muscle

Previous studies demonstrate that caffeine, a trimethylated xanthine, elicits the mobilization of Ca^{2+} from the sarcoplasmic reticulum (SR) by binding to ryanodine receptor (RyR1) and opening the intracellular Ca^{2+} channels on the SR. Being a dimethyl xanthine and a metabolite of caffeine, Theobromine is believed to have similar effects. To investigate the effects of physiological levels of caffeine and theobromine on the recovery of mouse EDL muscle, muscles were isolated and immersed in Krebs-Henseleit bicarbonate solution and gassed with 95% O_2 and 5% CO_2 . Using an in-vitro test system with a force transducer, the muscles underwent a series of 70Hz tetanic contractions until they fatigued to 20% of their initial starting contraction. Immediately after the fatigue period, the muscles were allowed to recover to 80% of their initial contraction before fatigue in baths containing ringer solution (control), 70 μM caffeine, or 70 μM theobromine. For this study we wanted to know which condition caused the EDL to recover faster after fatigued. Since physiological levels of caffeine and theobromine were used, we don't expect any significant effects on muscle recovery time.

4. Rachel Andrade, Hannah Dubin, Erin O'Connell

Sponsor: Jerusha Nelson-Peterman

Vegan Egg Replacers in Oatmeal Butterscotch Cookies

Purpose: To create a vegan oatmeal butterscotch cookie using chia gel or soy flour as an egg replacer. **Methods:** A control and two variations were prepared. Chia gel or soy flour replaced eggs. Semi-trained panelists (n=7) rated external and internal appearance, aroma, flavor, and texture (1-5, 5 being "optimal"). An overall product score was calculated for each variation. Height and diameter were measured. ANOVA with LSD post-hoc adjustments assessed differences between variations. Total kilocalories were determined using ESHA Food Processor software. **Results:** The chia variation rated lowest in sensory analysis. **Significant differences:** overall product score was higher for control (4.3+0.4) than for chia (2.8+0.2) and the control had a higher tenderness score (4.4+0.5), mouthfeel score (4.4+0.5), and flavor score (4.1+0.7) than chia (2.9+0.7, 2.3+0.5, and 3.0+0.6, respectively). Soy cookies were the tallest (18.9+2.7mm); control (11.8+2.0) and chia (11.0+1.3) were shorter. Control width (88.4+4.2) was greater than chia (80.3+3.3) and soy (68.3+3.8). There was no difference in calories; all variations were 160kcal/cookie. **Discussion:** Previously, soy flour cookies have been found to provide taller products due to increased protein content. Chia seed and soy flour products typically rate higher in sensory analysis than control cookies due to flavor and texture, but this was not consistent with this experiment's results. The chia cookie was least acceptable. The soy cookies resulted in a product with high sensory characteristic scores, demonstrating a suitable alternative to eggs in cookies.

5. Nevi Avila, Hollie Brown

Sponsor: Bridgett Galvin

Theoretical Approaches to Understanding Racial Humor

In today's society, racism and comedy would not likely be paired together in the same sentence. However, racist jokes defined as dark humor, are prevalent in numerous formats today. Humor has become a growing research interest relative to what we find makes people laugh and why it does. The literature review addresses the use of racial humor and attempts to address why it is found to be funny. Incongruity theory, superiority theory and benign violation theory are examined as a basis to look further into ways racial humor has become prevalent in today's society. The lack of awareness toward cultural problems, and masquerading biases in humor have helped maintained the racial humor as a normality. This review is used as an introduction to a poster presentation including examples of dark humor.

6. Eleanor Barnham

Sponsor: Jon Huibregtse

What lessons can black activism throughout the nineteenth and twentieth centuries offer the Black Lives Matter movement today?

This research poster examines black activism of the nineteenth and twentieth centuries in comparison with the Black Lives Matter movement of the twenty-first century. The activism of these groups of people were essential in the struggles of African-Americans gaining equality. Focusing heavily on the violent and nonviolent aspects of the Civil Rights movement this poster will attempt to illuminate what the Black Lives Matter movement can take away from previous groups of people of colour exercising their agency in order to gain equality. The literature that has been discussed suggests that both violent and nonviolent efforts were pertinent in changing the legislation in the twentieth century that allowed segregation. The Black Lives Matter movement emerged in 2013 as a response to the racism and police brutality that African-Americans faced and feared every day. The violence and systemic racism that is aimed against people of colour has been happening for hundreds of years, which means that there has always been people fighting for change and equality, therefore, the black activism of previous centuries can offer

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lessons to the Black Lives Matter movement. Is it possible for the Black Lives Matter movement to create changes to mass incarceration, police brutality and other forms of systemic racism, that other black activism from the past could not change?

7. Julia Barrone

Sponsor: Rebecca Shearman

How Life History Influences the Response of *Bufo americanus*, when Exposed to Leachates from the Invasive Shrub *Lonicera maackii*

Invasive plants have the ability to act as ecosystem engineers, disrupting growth and habitat availability of both native plants and animals by rapid growth and outcompeting native species for resources. One of the mechanisms that invasive plants use to compete with other species is allelopathic chemical inhibition. Allelopathic chemicals are released by the plant that prevent or hinder the growth of neighboring plants. It has been well documented that amphibian populations have been declining world-wide and recent research has shown that certain amphibian larvae respond negatively to allelopathic chemicals, such as phenols and tannins. To increase our understanding of the causes of amphibian declines, we must better recognize the complex and cryptic impacts that invasives have on amphibians. The goal of my honor's thesis is to write a grant proposal to study Amur Honeysuckle (*Lonicera maackii*) and how larvae of the American Toad (*Bufo americanus*) may be affected by the shrub leachates. Specifically, I would like to determine if there is a stage in tadpole development that is most susceptible to the tannins. I will also determine if the morphology of tadpole gill structures is affected by exposure to the tannins. Finally, I will investigate if there are any effects on subsequent generations if the parental tadpoles are chronically exposed to the tannins, and the offspring are not. Knowledge gained from these studies will help deepen our understanding of the relationship between invasives and amphibians and could aid in conservation efforts to protect vulnerable amphibian populations.

8. Joseph Bawab

Sponsor: Dwayne Bell

Manganese Catalyzed Oxidation

A procedure has been developed to precipitate manganese oxide salts inside the cells of white oak wood. The treated wood was added to an aqueous sodium percarbonate solution and a reaction was observed. Microscopic analysis of the reaction indicated gas evolution occurred inside the wood as well as on its surface. To determine if the reaction caused damage to the cell wall of the wood, samples of wood were sectioned, stained with phloroglucinol, and analyzed under the microscope. Our observation indicated a possible thinning of the cell wall as a result of the reaction. HPLC analysis was then used to determine if chemical composition of the white oak changed as a result of the observed reaction.

9. Nicole Beauregard, Lauren Lightbody

Sponsor: Bridgett Galvin

Gender Differences & Application of Humor Theory in Stand-Up Comedy

The presented literature review examines the differences between male and female stand-up comedians through the investigation of their persona and their humor styles. It also provides a theoretical framework for addressing the humor in stand-up routines. The differences in these male and female comedians are addressed by considering their persona presented in a show, as well as the topics they discuss. This review suggests that the major difference between male and female comedians is in their humor styles displayed during their show, with males presenting a more aggressive humor style, and women presenting a more self-deprecating one. In addition, the theoretical framework of the superiority theory

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may best address the success of stand-up comedy in producing humor. This theoretical framework will be applied to the work of Amy Schumer, Sarah Silverman, Louis CK, and Chris D'Elia.

10. Patricia Bianco

Sponsor: Elaine Beilin

Portia and Jessica: Self-Determining Figures in Shakespeare's The Merchant of Venice

In The Merchant of Venice, Portia and Jessica are characters that have self-determination through their choices about their marriage. Portia also exhibits her power in running her estate, and Jessica exhibits her power by gaining freedom from her father, who seeks to control her life. The contrast between them is significant, because Portia the heiress is free to use her power to her advantage, whereas Jessica, the merchant's daughter, remains with a lack of opportunity.

11. Bridget Blake, Lovely Paul

Sponsor: Ruth Remington

Benefits of Aromatherapy on Agitated Dementia Patients

Abstract Introduction Aromatherapy may help with agitation in patients with dementia. The focuses of the studies were to test the effectiveness of aromatherapy on patients suffering with dementia and their behavior. **Methods** Narrative review search engine used were CINAHL and EBSCOhost. Word Search includes: Dementia or Alzheimer's and Elderly or Older Adult or Geriatric and Agitation and aromatherapy and Nursing home. **Results:** Use aromatherapy before antipsychotics decrease or eliminate the use of antipsychotics **Conclusion** These articles use evidence-based practice to evaluate whether or not non-pharmacological treatments interventions are the best options for patients who have dementia and are agitated.

12. Allison Bochman

Sponsor: Virginia Noon

Observation of Clothing Worn by Chinese Children and the Motivations of Purchasing Choices by Parents and Grandparents

The purpose of this study is to observe clothing worn by Chinese children and to gain an understanding of motivations of purchasing choices by parents and grandparents of children's clothing. This study used a combination of qualitative and quantitative methods. For this study three hypothesis were developed and tested, H1: Chinese children are well dressed, H2: Chinese children wear a broad range of traditional Chinese, European and ultra-modern on trend clothing. H3: Parents pay relatively high prices for children's clothing. A sample of 13 Chinese parents and grandparents were asked to complete a survey consisting of multiple choice and three open-ended questions providing the data for the quantitative part of this study. The second part of the research using qualitative methods included direct observation and documentation of children's clothing worn and available for sale in three major cities in China; Beijing, Shanghai and Guangzhou. The results showed that the purchasers in both the parent's and grandparent's market are willing to pay relatively high prices for children's clothing as long as the brand is well known and made of good quality and that Chinese children wear a broad range of styling including traditional Chinese clothing, European styles and also ultra-modern on trend clothing. Parents and Grandparents expect a high level of customer service both online and in traditional brick and mortar format including knowledgeable sales associates. This study provides valuable insight on the Children's Clothing Market in China. The limitations of the study include the small sample size and time constraints in Beijing and Shanghai. Photographs and observation in Beijing and Shanghai were conducted over a 3-day period in each city during the January 2018 Fashion Industries Study Tour and in Guangzhou over a one-week period at the conclusion of a six-week Fashion Merchandising Internship in Southern China.

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13. Ivy Bokor, Annemarie Fortini, Elizabeth Stanley

Sponsor: Ruth Remington

Rooming-in vs. Nursing Care and the Influence on Breastfeeding

Many hospitals are now adopting the ten steps to promote, protect and establish breastfeeding. The United Nations Informational Children's Education Fund (UNICEF), World Health Organization (WHO) and Baby Friendly Hospital Initiative (BFHI) identify rooming-in to be an effective way to help with successful breastfeeding. The purpose of this poster is to identify the advantages and disadvantages of rooming-in vs. nursery care. This was a comprehensive narrative review, using CINAHL and EBSCO. The search words used were: rooming-in, nursery care, infants, newborns, mothers, and breastfeeding. Six articles were selected for this topic. Rooming-in is beneficial to successful breastfeeding and bonding with mother and baby. Healthcare institutes identify that there is benefits to both rooming-in and nursery care. They continue to educate and support the mother's choice.

14. Emmy Brennan

Sponsor: Elaine Beilin

Twelfth Night and the Political Conversation about Power

15. Katie Brewer

Sponsor: Elaine Beilin

Empowered Women in Shakespeare's Titus Andronicus

Lavinia and Tamora both take on a strong, powerful role by holding their own unique powers. While Lavinia holds social and physical power, Tamora holds political, legal, and psychological power. Both of these women hold some of their power through their sexuality. Tamora's sexuality is based on her embodiment of lust and sexual attraction while Lavinia's sexuality is introduced at the beginning of the play through her chastity. After her rape it was shown through her defilement. Although the authority that they hold through their sexuality differs, they still have similarities in how they maintain their power. Lavinia and Tamora both bring their personal vengeance into the political world. Tamora becomes Empress of Rome and vows to get revenge on the Andronicus family. Lavinia comes upon Tamora with her lover, watches the murder of the Emperor's brother who is also her husband, and knows who raped her. While each of these women maintain different types of power, they maintain it primarily through their sexuality.

16. Alexandra Brower

Sponsor: Evelyn Perry

The Influence of the Bank Street School's Writer's Lab on the Development of the Children's Literature Genre

My thesis focuses on The Bank Street School's Writer's Lab, founded by Lucy Sprague Mitchell, and how the authors who have emerged from this program have played a key role in creating and developing the genre of children's literature. In this paper I analyze the history of children's literature, compare and contrast early members of the Writer's Lab to current members and how they influenced the genre, and conclude with a comparative analysis of how the tensions between didacticism, pleasure, and profit in children's literature support a child-centered approach in the American educational system.

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17. Markiyah Bullard, Quron Wright *Sponsor: Bridgett Galvin*

A Comparison of Humor in American and Chinese Culture

America and China differ in languages, values, traditions, and customs but what about in perceptions of humor? Research suggests that humor is expressed and appreciated differently across cultures. In Western cultures such as the United States, Americans may be more explicit about their appreciation for humor, and they can joke about vulgar topics such as racism and sexism. Whereas, in eastern, collective cultures such as Chinese, they may implicitly appreciate humor and but mainly express it in cosmetic dramas and folk tales. Four different humor styles including self-defeating, aggressive, self-enhancing, and affiliative are present in both cultures. The purpose of this study is to compare how humor is perceived in American and Chinese culture.

18. Lauren Butterworth

Sponsor: Sarah Pilkenton

Evaluating the phenolic content, profile, and alpha-glucosidase inhibitory activity of Black Tea and its Waste Byproducts

The way in which different types of teas are manufactured, especially their fermentation process, is responsible for the differences in their phenolic phytochemical makeup. These phenolic phytochemicals have been shown to inhibit carbohydrate hydrolyzing enzymes that break polysaccharides and disaccharides into glucose, raising blood sugar levels. In this study, the total phenolic content of black tea and the byproducts from brewing tea will be determined. High performance liquid chromatography (HPLC) will be used to identify the phenolic profiles. This information will then be used to understand the mechanism of the tea and its byproducts and their phenolic constituents relevant to the inhibition of the carbohydrate hydrolyzing enzyme, alpha-glucosidase.

19. Meg Callahan, Lacey Waskiewicz

Sponsor: Bridgett Galvin

Women in Sketch Comedy

The topic of women in sketch comedy is extremely controversial because it is typically considered to be a male dominated field. Sketch comedy and the role that women play in sketch comedy is becoming more and more popular as time goes on. The question addressed by this literature review is: What makes sketch comedy so successful, and how has sketch comedy changed for women since the 1970's? In an attempt to address this question, this review offers an historical overview of this type of comedy as well. Finally, this review provides insight into which theoretical paradigm(s) for understanding sketch comedy produces humorous outcomes as exemplified in an episode of Saturday Night Live.

20. Alyssa Campbell

Sponsor: Lori Bihler

Challenging a Singular Historical Narrative: Teaching Japanese American Internment through Multiple Perspectives and Historical Empathy with Primary Sources

The internment of Japanese Americans during World War II has previously been taught at the secondary level through teacher centered lecture, directly from textbooks, or glossed over entirely. This project looks at how sources from three different fields, art, literature, and legal documents, can be incorporated into the classroom in order to demonstrate to students that history is not just a single presented narrative, instead it is the culmination of multiple perspectives from one event in the past. In order to accurately provide students with a narrative of the internment process, teachers must do so through multiple

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perspectives, focused on historical empathy. This can be achieved through the use of primary and secondary sources from different fields found in both digital and archival resources in order to create an inquiry-based curriculum for students to strengthen their critical thinking skills.

21. Caprielle Carboni

Sponsor: Amy Knapp

As an alternative to medication, does music therapy aid in the reduction of agitated behavior in dementia patients?

In elderly patients with dementia, the connections between neurons are interrupted by amyloid plaques. Because these connections no longer work properly, memory loss, lack of judgement, and agitated behaviors are common. Many physicians resort to medications, such as antipsychotics, to inhibit this behavior by allowing the decreasing amount of dopamine to stay present for longer periods of time. A theoretical alternative to medication that is predicted to reduce agitated behaviors and increase the overall quality of life would be music therapy. In order to determine whether music reduces agitation among dementia patients I observed a group of 24 women living in a long-term care facility. For six weeks, these patients participated in normal daily activities and I recorded common daily times of agitated behavior. For another six weeks, I exposed these patients to relatable music thirty minutes before their expected agitation time. It is expected that after the six weeks containing music therapy that there will be a reduction in agitated behavior and an overall increase in their quality of life.

22. Jackie Carlson

Sponsor: Evelyn Perry

Learning Fantastically: C.S. Lewis, Magic, and Education

Out of all the categories of literature, the two types that do not receive the respect they deserve are children's and fantasy literature. This project explores the impact of prizing certain bodies and genres of literature over others, especially in the context of today's English classroom. Using C.S. Lewis's *The Lion, the Witch, and the Wardrobe* as a base text, this project drives at the essential question: how do we reach our own truth and make sense of the world around us? When the Pevensie children return from their journey in Narnia, they learn that truth, reality, and actuality, although seemingly synonymous, are all quite separate concepts. This message can be applied to the many questions of today's English classroom--how do we prepare children for the "real world," how do we create lifelong readers, how do we help students to find their own truth?

23. Tyler Cashin

Sponsor: Joseph Adelman

Draft Riots in Boston and the hijacking of a narrative

The American Civil War was the most deadly war in American history, even today 153 years later we still find it to be a delicate subject to talk about. For the Union and its larger population, it was able to support its armies under volunteer forces, but After the battle of Gettysburg showed that the Confederacy could be pushed back there was a call for one million men to serve in the army in order to end the war. The Draft Act of 1863 would lead to riots in both New York and Boston, both of which started out as a working class riot against the draft, but both were hijacked by Confederate sympathizers and anarchists across both cities. In the case of Boston, the riots were started by the Irish immigrant community over their disproportionately high number of men who were being called to serve. The riot that they caused would then be hijacked by Pro-Confederate sympathizers and anarchists and hijack the original narrative about the draft, and make it one of chaos.

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24. Kalyan Cochran

Sponsor: Mary Grassetti

The Power of Mistakes - The Mathematical Mindset

For many people, math can cause feelings of anxiety and anger. In Jo Boaler's book "Mathematical Mindset", she suggests that these emotions coupled with mistakes can lead individuals to mistrust their mathematical skills and believe they are bad at math. This literature review examines the importance of making mistakes, not just in math but in life, and how mistakes can change the way people think. In the United States, mistakes are typically seen as an indication that something was done incorrectly. Views on the impacts of mistakes in math and everyday life are presented. Included in the review is a discussion of the impact mistakes in math can have on students and the benefits of turning mistakes into learning opportunities. Having a growth mindset as it relates to math is examined. This review offers a comprehensive look at the power of mistakes in both an academic setting and everyday life.

25. Melissa Conserva, Alena Piatrouskaya

Sponsor: Ruth Remington

Reducing Medication Errors in Nursing Homes

An estimated 1.9 million medication errors occur in nursing homes each year. For our methods we conducted a narrative review and used CINAHL and PubMed databases. We discovered that education, supervision, and use of electronic records contribute to the improvement of medication safety in nursing homes. Future projects focusing on medication administration and nursing education can benefit from this knowledge.

26. Patricia Cooney

Sponsor: Joseph Adelman

"News like Thunderclap": News coverage of 1960s Assassinations

This essay analyzes the differences between newspapers and television news within the concept of reporting three assassinations during the 1960s. The assassinations that are discussed include President Kennedy who was shot in 1963 in Dallas, TX, Dr. Martin Luther King Jr. who was shot in 1968 in Memphis, TN, and New York Senator Robert Kennedy who was shot in 1968 in Los Angeles, CA. This essay argues that newspapers were more focused on being detailed when compared with TV news coverage. This allowed people to have access to all of the known information regarding the assassinations, as opposed to TV coverage that informed viewers of updates in the moment with a minimal amount of information.

27. Patricia Cooney

Sponsor: Jon Huibregtse

Boston Busing Crisis: Desegregating or segregating schools in the 1970s

The Boston Busing Crisis during the 1974-1977 was a time when school aged children who lived in the inner city and other lower class neighborhoods in Boston were getting bused into middle and upper class suburbs in order to have an equal opportunity for their education. This was the cause of desegregation in schools. The busing crisis had received lots of backlash and caused many people to argue on how this was not the way to desegregate schools. Schools were not accounting for what the students were going through. This project argues that the press did not cover the student's perspectives or how many family members from both anti-busing and pro-busing considering the busing crisis that was spiraling out of control.

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28. Katie Costello, Julia Sullivan *Sponsor: Bridgett Galvin*

Mockumentaries: Reality or Humor?

The purpose of this research was to understand the history and origins of the genre of humor known as mockumentaries. This review presents an historical overview of mockumentaries, their initial use related to comedy and entertainment, and their place in modern-day comedy. Research suggests that in the early days of mockumentaries, the goal was to mimic the style and look of documentaries and to incorporate old footage with new footage, ideas, and stories. However, mockumentaries have evolved to serve as a comment on society and culture, and usually, to varying degrees, poke fun and make digs at society in order to get a message across. Defining mockumentaries has proven difficult with prevailing differences between the definitions. The audience's interpretation of mockumentaries plays a large role in the success of the genre, as films and shows challenges the audience to interpret the false reality they create. The humor found in mockumentaries may be best explained by the incongruity theory, superiority theory, and sometimes with the incorporation of elements of cringe humor and embarrassment humor. An application of the different theories applied in mockumentaries, is presented in episodes of *The Office*, *Parks and Recreation*, and *Borat*.

29. Stephanie Da Silva, Vanessa Vega *Sponsor: Ruth Remington*

Effects of Music on Elderly Patients with Dementia

The purpose of this poster board is to explore how music can assist in managing the behaviors that patients with Dementia exhibit. The method we used was a narrative review of literature by searching CINAHL and EBSCO HOST, were used together to gather information regarding the topic. The search terms included Dementia AND music, Elderly AND Agitation, interactive music intervention, anxiety AND older person, nurses. Based on our literature review, music during interactions with elderly patients demonstrated less aggressive behaviors and promoted positive emotions. Providing music during care also encouraged a better rapport between the caregiver and the individual. It was demonstrated that music assisted in recalling special memories and increased relaxing energy in patients with Dementia. Another intervention is that music requires minimal training and is easy to implement. The overall results concluded that while caring for patients with Dementia, playing music improved care outcome and decreased behaviors.

30. Sarah Daugherty *Sponsor: Erika Schneider*

Widening the Circle: Inclusivity in Contemporary Art History

"Because monetary value has been traditionally seen in established white-male artists, investors and collectors prize their work, which results in ever-higher prices. And because women artists and artists of color have generally had difficulty getting a foothold in the art market, their work continues to languish....Women artists, artists of color, and LGBTQ artists bump up against a "glass ceiling" in terms of monographs, solo shows, and museum acquisitions, and that depresses the perceived value of their work." Jeff Ignatius, "'Being Angry Is a Great Place to Start:' The Guerrilla Girls, January 18 at Augustana College," *River Cities' Reader*. January 5, 2017. <http://www.rcreader.com/art/guerrilla-girls-being-angry-is-a-great-place-to-start> Using this quote as a starting point, each student in ARTH 383: Contemporary Art History chose an artist to research and present to the class. Artists included work in a variety of media from painting and sculpture to installation and performance and represent different races, gender, and sexual orientation. This assignment seeks to correct inequalities in the contemporary art history

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survey class by allowing students to have a voice about whom they study and increase inclusivity in the discipline and the classroom.

31. Ezequiel De Leon

Sponsor: Steven Cok

The effects of palm fruit extract on the expression of SREBP-1c as it relates to adipogenesis and the progression of prediabetes to type II diabetes in the obese state using a *C. elegans* and GFP reporter fusion protein model

Type II Diabetes Mellitus is a metabolic disease characterized by insulin resistance and hyperglycemia. Hypertrophic obesity has been strongly associated with a reduced capacity to store lipids in adipose tissue compared to hyperplastic obesity. It is believed that reduced lipid storage capacity effectively results in ectopic lipid accumulation, a major contributor to insulin resistance through the mechanisms of lipotoxicity and lipid induced insulin resistance. Increased lipid storage capacity through increased adipogenesis is thus an area of interest in the prevention of type II diabetes. Adipogenesis is under regulation by a host of transcriptional regulators including PPAR- γ and C/EBP- α and SREBP-1c. This study aims to determine if the phytochemical rich palm fruit extract affects the expression of SREBP-1c using a *C. elegans* and GFP reporter fusion protein model.

32. Kerri DeFino, Shaye Gilligan

Sponsor: Bridgett Galvin

Analysis of Humor in Family Situational Comedies

The popularity of sitcoms has existed for decades and much of their success is due to the realistic portrayal of the characters and scenarios that happen to almost everyone in society. The overall theme investigated in this literature review is the role of the father in family situational comedies and how it has evolved over time. In addition, changes in gender roles are investigated as they have evolved to a place where men and women are more equal than in decades past. The superiority theory is presented as one model which may offer explanations as to why sitcoms and humor such as that in *The Simpsons* have been so successful in producing humor throughout the decades. Finally, this literature review serves as the context for analyzing the success of *The Simpsons* as presented in poster format.

33. Chris Delaney

Sponsor: Erika Schneider

Widening the Circle: Inclusivity in Contemporary Art History

"Because monetary value has been traditionally seen in established white-male artists, investors and collectors prize their work, which results in ever-higher prices. And because women artists and artists of color have generally had difficulty getting a foothold in the art market, their work continues to languish....Women artists, artists of color, and LGBTQ artists bump up against a "glass ceiling" in terms of monographs, solo shows, and museum acquisitions, and that depresses the perceived value of their work." Jeff Ignatius, "'Being Angry Is a Great Place to Start:' The Guerrilla Girls, January 18 at Augustana College," *River Cities' Reader*. January 5, 2017. <http://www.rcreader.com/art/guerrilla-girls-being-angry-is-a-great-place-to-start> Using this quote as a starting point, each student in ARTH 383: Contemporary Art History chose an artist to research and present to the class. Artists included work in a variety of media from painting and sculpture to installation and performance and represent different races, gender, and sexual orientation. This assignment seeks to correct inequalities in the contemporary art history survey class by allowing students to have a voice about whom they study and increase inclusivity in the discipline and the classroom.

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34. Kenneth DeLorey

Sponsor: Jon Huibregtse

Deconstructing Racism in American Schools

Curriculum in American Schools is ever changing with one exception: history continues to be taught in a Eurocentric fashion. In the Eurocentric paradigm, African-American history is often lost because the lens in which is taught traditionally focuses on Europeans and how enslaved peoples fit into the European colonial world. This project demonstrates that the much broader issue of racism in America is being reinforced in the classroom throughout a child's life.

35. Andrea DeLucia

Sponsor: Bridgett Galvin

The Effects of PBIS and Restorative Practice on Behavior

For decades, grade school teachers have looked for ways to decrease undesirable behaviors. Both restorative practice and Positive Behavioral Interventions and Supports (PBIS) are programs used to decrease undesirable behaviors and increase desirable behaviors. In a review of programs, restorative practice was found to be most effective in large samples, while PBIS was most effective in small samples and when the teachers made efforts to change student behavior. The benefits of Restorative practice outweighed PBIS's. The literature suggests PBIS is more demanding than restorative practice when used in similar settings and did not result in a greater impact on behavior change. This poster presentation presents information at a local school in the Middlesex county which utilizes some of these practices.

36. Maria DiMatteo

Sponsor: Bridgett Galvin

Play Styles: How a Child's Interactions with Peers Predict Attentiveness and Co-Operation in the Classroom

Mini Miracles Early Education and Childcare Center is a learning and daycare center for children ages 0 to 4. I completed an internship here as a teacher's assistant, where I was tasked with supervising the children, assisting with activities, and much more. Mini Miracles aims to provide a safe and nurturing environment in which children can learn and mature alongside their peers. In this study, we will explore the interaction between play and social involvement on a child's potential to learn.

37. Monique Dini

Sponsor: Stephen Dinkelacker

Modeling the potential impacts of a commercial harvest on Slider Turtles (*Trachemys scripta*)

In North America, the Red Eared Slider (*Trachemys scripta elegans*) is one of the most common freshwater turtles (Ernest et al., 1994). Sliders have been harvested for centuries for a variety of reasons that include medicinal uses, food, and pet trade (Moll and Moll, 2004). This begs the question whether or not slider populations can sustain a commercial harvest and if so, what are the implications to this species. I gathered population data, fecundity, survivorship and stage duration data from the primary literature and constructed a stage-structured population model to determine the impact of harvest this species. In addition, I tested whether additional compensatory actions, such as head starting, could reduce the impacts of an adult harvest. The implications of this study can be used to direct management actions in states where harvest is still being considered.

38. Gina DiStasio

Sponsor: Jon Huibregtse

The Evolution of African American Stereotypes in Today's Media

This research examines African American stereotypes, where they came from, and how they affect African American men and women. The evidence shows that many of the stereotypes are still present in today's culture in advertisements and other sources of media may contribute to the persistence of these stereotypes. African American stereotypes have changed and evolved continuously, though most of them share common roots. Many of these common stereotypes that we continue to hear and see everywhere from TV shows, to magazine advertisements, to brochures, and numerous other sources, have roots that date back to the Atlantic Slave trade in the 16th century. They evolved since then, but it is common to see these stereotypes multiple times a day, whether one realizes it or not.

39. Irene Dompree

Sponsor: Bryan Connolly

Antioxidant Concentration in Winter Radishes

Increasing Antioxidant Concentration in Winter Radishes. The goal of this study is to increase the antioxidant concentration in winter radishes. Some winter radishes include the China rose, round black Spanish, watermelon radish, white daikon radish, the long black Spanish, green meat radish, and more. Radishes are known to have medicinal and culinary uses. They contain high levels of fiber and vitamin C. Furthermore, they contain detoxifying agents called indoles along with powerful flavonoids, zeaxanthin, lutein, and beta carotene. These detoxifying agents, fiber, and vitamin C are some examples of how radishes can be essential to a healthy lifestyle. The white daikon radish, the watermelon radish, and the green meat radish are the three winter radishes of focus. In order to increase the antioxidant concentration of the winter radishes, cross pollination was performed in the lab. Seed set from both cross pollinations have been planted and will be observed for an increase in antioxidant concentration.

40. Molly Driscoll

Sponsor: Bridgett Galvin

The Impact of School Psychologists and Mainstreaming for Elementary Students with Disabilities

The purpose of this project was to examine the roles and responsibilities of school psychologists and to review the evidence on the benefits of mainstreaming. Information was obtained from empirical research and through direct observations. School psychologists are becoming a vital part of elementary schools. Every student can utilize them whether it is for behavior, academic, or social disability. In elementary schools, mainstreaming has become a popular classroom program to allow students with disabilities to learn alongside non-disabled students. The literature suggests that mainstreaming for students with disabilities allows them to learn from their peers. The school psychologist's role during mainstreaming is evaluating and creating interventions for each specific child. In the Middlesex County, an internship placement at an elementary school was used for observations of the school psychologist and K-5 student classrooms. Observations were used to gain knowledge about the role school psychologists play in general and what benefits and consequences mainstreaming has on students. Interns at this site make observations in the classroom, work beside the school psychologist, and help to establish intervention programs. At this site, the school psychologist evaluates students, creates interventions, assists teachers with programs, meets for IEP's, and assumes leadership roles. With today's society, it is important to create an environment during childhood that allows every student to be as successful as they can.

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41. Briana Ducharme

Sponsor: Jon Huibregtse

Massive Reistance: School Desegregation in Little Rock, Arkansas and Prince Edward County, Virginia

When the US Supreme Court ruled in *Brown v. Topeka Board of Education* ruled that segregation in public schools was unconstitutional, southern leaders and citizens devised different tactics to defy the decision. This massive resistance took the form of mob intimidation and violence as seen in the attempt to desegregate Little Rock Central High School in 1957. Other districts like Prince Edward County, VA, closed their public schools for a long period of time to avoid desegregation. Eventually, southern collective response to desegregation was token integration. This project argues the power of the white moderates and the agency exhibited by African Americans in each region influenced the longevity of massive resistance and the transition to token intergration.

42. Ryan Duncan

Sponsor: Sarah Pilkenton

A Study of Flavor Compounds in Wine and Beer

The fermentation process in the production of wine and beer results in the formation of a variety of volatile and aroma compounds. This study concentrates on determining the presence of dicarbonyl compounds produced from the fermentation process. These compounds include glyoxal, methylglyoxal, and 2,3-butanedione. These compounds have a very low odor threshold and are thought to add complexity to wine. However, when 2,3-butanedione concentrations rises above 5 mg/L, the resulting palette is an undesirable butter-like flavor. Also, it is believed glyoxal is a precursor in a mechanism that affects color stability of white wines. The goal of this study is to separate and quantify the three previously mentioned dicarbonyl compounds in a variety of beers and wines by synthesis of 1,2-diaminobenzene derivatives followed by GC-MS analysis.

43. Kate Dunn, Kathryn Troiano

Sponsor: Bridgett Galvin

Humor Across Cultures: A Comparison of Chinese and American Humor

The use of humor is universal in our attempts to relate and connect with others. Societal and cultural influences shape how we use and respond to humor. This research seeks to examine the cultural differences between American and Chinese appreciation, styles, and uses of humor. Previous research suggests Chinese culture places less value on humor both in social contexts and as a personality trait. Conversely, American culture views humor as an important aspect of social engagement. Humor has been shown to increase morale in the workplace. As the American workforce grows more diverse, understanding of these differences becomes critical to maintaining cohesion and increasing productivity.

44. Emily Dunton

Sponsor: Imran Islam

Determining the Fastness of Colored Textiles to the Affects of Stimulated Saliva

BACKGROUND: In the textile and apparel industry, color fastness is a term that is used in dyeing textiles that characterizes it color resistance to fading or running. There are many stimulants that can affect the color fastness of a textile, including saliva. OBJECTIVES: (1) Identifying how long it takes (hours) for saliva to change the color of a fabric. (2) Identifying the color difference before and after the textile has been stimulated with saliva. METHOD: A mixed method of research employed in this study: qualitative method (e.g., observations) for identify color changes and quantitative method (e.g. measureable data) to

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analyze how long it takes for the colored textiles to change color. **EXPECTED FINDINGS:** The fastness of the colored textile will change after 72 hours of coming in constant contact with saliva. **CONCLUSIONS AND IMPLICATIONS:** This study will determine the amount of time it takes for saliva to change the fastness of colored textiles. Also, this study will help the industry to find better color dyeing solutions that will not change color over time. Finally, this study will help designers, and manufacturers choose a better dyeing solution for children's wear.

45. Elaina Evans

Sponsor: Amy Knapp

Establishment of a fatigue protocol in mouse soleus muscle

The purpose of my project was to establish a method for fatiguing the mouse soleus muscle that could then be used in future experiments. The soleus muscle is a slow twitch muscle that is fatigue resistant. By using an in-vitro muscle test system, two different methods were tested to fatigue the soleus past 40% of its original force and to achieve a recovery protocol that lasted longer than five minutes before full recovery was achieved. To do this, soleus muscles were dissected from mice and attached to a force transducer. The muscle was then stimulated and its force of each contraction was recorded. Once the muscle had been stimulated at 1 Hz for 60 minutes, a recovery sequence of stimulations every 30 seconds for ten minutes was used to measure the time the muscle took to recover. Results from this study will be used for future experiments in this laboratory.

46. Jennifer Eystad

Sponsor: Joseph Adelman

“Fresh evidence has been accumulated to prove that America was discovered by the Northmen about the year 1000, and the fact seems to be pretty well established.”: Why Some Scholars Argued that Vikings Came to America Before Columbus, 1886-1893

In the late nineteenth century there were some scholarly men and women who believe that Vikings had discovered America long before Columbus's voyage in 1492. Basing their theories on Icelandic and Scandinavian sagas and other legends, their motivations for presenting these beliefs may have been influenced by their views towards the influx of non-Protestant immigrants coming to America at the time. This essay will set out to discover why some claimed that there was physical and literary evidence of the Vikings discovery by exploring how their claims related to immigration in America and how their claims were covered by the news media.

47. Alyssa Figueiredo

Sponsor: Bridgett Galvin

Adjustment Counselors' Treatment and Impact for Students Performance in Elementary Schools

Adjustment counselors in elementary schools play a vital role in helping students to regulate their emotions as well as experience success in academics and in personal matters. Often students seek help in matters such as individual counseling, group counseling and in formulating individual behavior plans that address a variety of presenting problems such as social skill development, trauma, anger management, and anxiety. An elementary school in the Worcester County of Central Massachusetts was used for an observational study and internship placement to learn about and observe the role of an adjustment counselor in everyday duties and responsibilities. Research was reviewed regarding different presenting problems and treatments an adjustment counselor deals within elementary schools. Internship duties included facilitating social skill lunch groups weekly, teaching social-emotional lessons to classes of students, assisting teachers with behavioral students, attending meetings when allowed, assisting with counseling and any other duty assigned by the supervisor. Most students in this elementary school

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received group counseling and individual behavior plans with the positive behavioral intervention and support model. The adjustment counselor implemented treatments based on the students' needs. In addition, the counselor worked with students to help them learn to regulate their own emotions and behaviors. Today, adjustment counselors have become very important in helping students experience success both in and outside of the classroom that will prepare them for a brighter future.

48. Jordan Filteau

Sponsor: Andrew Jung

Real-Time Streaming Application for IoT Using RaspberryPi and Handheld Device

Internet of Things (IOT) is in the spotlight because its applications positively impact everyday quality of life. This study aims to develop a cost-effective solution to real time video streaming by using a low-cost ARM (Advanced RISC Machines)-based computer, i.e. Raspberry Pi. We developed a simple streaming server written in Java that runs efficiently on the Raspberry Pi, and showed that the Raspberry Pi can support streaming to multiple devices at once. We also developed a light-weight android application that the server can stream to. The client and server communicate via JSON (JavaScript Object Notation). We divided high quality video into image files with the jpg format, into packets and then transmitted them to multiple hand-held devices simultaneously without any interruption or interference. We tested this system with five different Android smart phones, and found that the developed system can stably support real-time video play without interrupt for each Android smart phone. We conclude that our system anchored in a low-cost ARM-based computer can retain quality of service (QOS) regarding video streaming to multiple hand-held devices

49. Danielle Fischer

Sponsor: Paul Gavin

Religion and Acceptance

Religious people and non-religious people may be expected to live very different lives, but this is not always the case. This study explores non-religious peoples' view on religious peoples' levels of acceptance of others' lifestyles. Approximately one hundred participants from Framingham State University's undergraduate program will be questioned for this study. Each participant will read a scenario than complete a question packet including how the scenario character will react or behave. Half the participants will read about a religious person, while the other half read about a non-religious person. Participants will also share personal information, including what religion or belief they identify with. The expected results are that non-religious people will see religious people as being less accepting than non-religious people. This study will show if there is a difference between how people are viewed on acceptance of others' lifestyles based on being religious or not.

50. Kimberly Foley

Sponsor: Bridgett Galvin

The Benefits of Specific Learning Styles: Treatment Programs to Improve Quality of Life for Children With Autism Spectrum Disorder

The purpose of this literature review was to address the question regarding the benefits of specific types of learning and treatment programs in order to improve the quality of life for children with autism spectrum disorder. Research regarding the affects of certain learning strategies is presented. Evidence suggests that visual aid while learning is essential in supporting individuals with special needs and learning complications. This literature review provides context for the information based on the internship site at the ACCEPT Educational Collaborative.

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51. Brinsley Fonseca, Alessandra Gallo *Sponsor: Imran Islam*

Determining the Performance of Liquid Downy Fabric Softeners vs. Dryer Sheets: Which Method will Result in a Softer Touch?

BACKGROUND: Fabric softener is a liquid that is used to soften clothes during a wash cycle. While, dryer sheets are specially treated cloth squares that soften clothes during a dry cycle. Fabric softeners are designed to relax the fibers and make the garment feel softer. Using too much fabric softener can result in a greasy will coat the outer layer of a garment. Which method will result in a softer touch without damaging the garment? OBJECTIVES: (1) Identify all of the factors that will go into this test. For example; what fibers will the garment be made out of, the temperature the wash will be set at, how many times the garment will be washed and what method of softener was used. (2) Develop a timeframe for the test and what garment will be used as the model. (3) Asses at the end of the test which form of softener worked best leaving a clean and soft touch. METHOD: Two 100% white cotton t-shirts will be washed in warm water simultaneously while one uses fabric softener and one does not. The t-shirts will then be dried and the one that did not received the liquid version will be placed in the machine with a dryer sheet. This process will take place three times over a period of three weeks. EXPECTED FINDINGS: The t-shirt washed with fabric softener will maintain a softer and cleaner touch. CONCLUSIONS AND IMPLICATIONS: This study will demonstrate the best way to soften garments without damaging them or leaving them with an unpleasant residue.

52. Julie Foran *Sponsor: Erika Schneider*

Widening the Circle: Inclusivity in Contemporary Art History

"Because monetary value has been traditionally seen in established white-male artists, investors and collectors prize their work, which results in ever-higher prices. And because women artists and artists of color have generally had difficulty getting a foothold in the art market, their work continues to languish....Women artists, artists of color, and LGBTQ artists bump up against a "glass ceiling" in terms of monographs, solo shows, and museum acquisitions, and that depresses the perceived value of their work." Jeff Ignatius, "'Being Angry Is a Great Place to Start:' The Guerrilla Girls, January 18 at Augustana College," River Cities' Reader. January 5, 2017. <http://www.rcreader.com/art/guerrilla-girls-being-angry-is-a-great-place-to-start> Using this quote as a starting point, each student in ARTH 383: Contemporary Art History chose an artist to research and present to the class. Artists included work in a variety of media from painting and sculpture to installation and performance and represent different races, gender, and sexual orientation. This assignment seeks to correct inequalities in the contemporary art history survey class by allowing students to have a voice about whom they study and increase inclusivity in the discipline and the classroom.

53. Katharine Francendese, Michael La France *Sponsor: Bridgett Galvin*

Dark Humor

This literature review addresses the use of dark humor as a means to cope. It also serves as an introduction to understanding a specific instance of dark humor presented in poster format. In addition, it presents the theoretical frameworks of Incongruity and Superiority theory for understanding the dark humor. These theories suggest the humor aids in the ability to normalize people's aggression and tragic events across the globe through making light of the situations. Gender, job profession, and comprehension of dark humor jokes are areas discussed as factors that influence the consequences of its use. Individual use of specific types of jokes they use in order to defuse a situation is investigated. The

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findings presented in the existing literature show support for greater specific examination on understanding gender and professions exposure to dark humor.

54. Caitlin Frias, Rachel Smith

Sponsor: Imran Islam

Determining the Effectiveness of Detergents on Stained Cotton Fabric

BACKGROUND: Cotton is a main staple fiber in the fashion industry that paves the basis for the use of other natural and synthetic fibers. Because cotton is one of the most popular fibers for clothing production, its ability to resist wear and tear and staining is crucial for its success. **OBJECTIVES:** (1) Identify which detergent reacts best with staining on cotton. (2) Analyze the formula of each detergent and predict why that formula reacts best with stain removal. (3) Assess the cotton fibers to determine why detergent reacts well with it. **METHOD:** A quantitative method of research will be employed in this study. Tests will be performed on each piece of cotton and then results will be recorded based upon our findings. This study also requires the obtainment of three different detergents in order to have accurate results. **EXPECTED FINDINGS:** The detergent whose formula has the least amount of water will be the least successful with stain removal. **CONCLUSIONS AND IMPLICATIONS:** This study will determine the effectiveness that each particular laundry detergent brand has on the piece of cotton so that consumers can make an informed decision on which brand is best for stain removal. Also, by reviewing the results, each detergent brand can make modifications or adjustments to improve their results compared to other brands. Finally this study will help businesses that use detergents in their everyday work such as dry cleaners and secondhand clothing stores to find the detergent that meets their needs.

55. Erin Galvin

Sponsor: Elaine Beilin

Secular Authority, Religious Freedom, and the Refusal of Marriage in Shakespeare's Measure for Measure

Isabella takes on a very strong role in Vienna, but it is one that is not as prominent as other female characters in Shakespeare's plays such as Portia from *The Merchant of Venice* and Olivia from *Twelfth Night*. Olivia and Portia both have head of the house titles, where they have the obvious authoritative responsibilities that come with money and rule. Isabella is about to enter the order of Saint Clare, a place of power that does not entail money or secular rule, but a place that allows a woman to gain knowledge through education as well as hold sexual freedom. By considering power dynamics in Vienna, I will argue that Isabella uses her sexual freedom, strong literary education and personal values, as well as the guidance from authoritative men, to find a place in Vienna outside of what was considered a normal woman's role. By situating herself in this position, Isabella will be able to refuse a marriage proposal from the Duke, entirely resisting all patriarchal restraints.

56. Lauren Gambon

Sponsor: Jon Huibregtse

Play Like a Girl: Anti-Female Bias in Sports

The initial perceptions of women and the strict gender roles that were forced upon them influenced the restrictions still present in the world of sports. Social and economic inequalities in female athlete's careers can be traced back to the anti-female bias that American society was built on. The discrimination in sports is clear when one examines the statistical aspects of wage gaps, the media coverage women's sports, as well as gender inequalities in society itself. From the evident wage gap between male and female athletes to the over-sexualisation of females covered in sports media, women have been discriminated against and have been given an unfair advantage. Women have a disadvantage as athletes because of their sex,

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not because of their skill, but society has long regarded them as the weaker sex. Examining women's experience in sport during recent US history is one way to document women's continued subordination in society as well as illustrates their continuous discrimination in sports.

57. Devon Garufi

Sponsor: Michael Wong- Russell

The Argument of Historical Coexistence in Andalusia, Spain: Christianity, Islam, and Judaism's Effect on Andalusia's Linguistics and Art

While living in Andalusia, Spain, it became clear the culture, language and perspective of the area was unique from the rest of the country. It is assumed that this uniqueness is due to the strong Islamic culture coinciding and coexisting with Christianity and Judaism. I will argue that a true coexisting could not be possible not only based on religious conflict, but based on evidence provided through the differing artistic and linguistic styles of the Moors and Christians. I will propose a correlation between the Moors' Arabic linguistics (or "phonetics") and art coinciding with Christianity's, and how this correlation has affected the Andalusian culture today.

58. Emily Giantonio

Sponsor: Shelli Waetzig

A New Look at the Bargellini Reaction: Using Milder Conditions to Improve a Century-Old Reaction

In this project, the conditions of the Bargellini reaction were modified to be milder than current methods. Previous literature precedent uses harsh hydroxides, which have been substituted with carbonates. Conditions were altered in attempt to optimize product yields. A series of reactions were run to determine if the Bargellini reaction will proceed as successfully under less basic conditions.

59. Hallie Giebner

Sponsor: Erika Schneider

Widening the Circle: Inclusivity in Contemporary Art History

"Because monetary value has been traditionally seen in established white-male artists, investors and collectors prize their work, which results in ever-higher prices. And because women artists and artists of color have generally had difficulty getting a foothold in the art market, their work continues to languish....Women artists, artists of color, and LGBTQ artists bump up against a "glass ceiling" in terms of monographs, solo shows, and museum acquisitions, and that depresses the perceived value of their work." Jeff Ignatius, "'Being Angry Is a Great Place to Start:' The Guerrilla Girls, January 18 at Augustana College," River Cities' Reader. January 5, 2017. <http://www.rcreader.com/art/guerrilla-girls-being-angry-is-a-great-place-to-start> Using this quote as a starting point, each student in ARTH 383: Contemporary Art History chose an artist to research and present to the class. Artists included work in a variety of media from painting and sculpture to installation and performance and represent different races, gender, and sexual orientation. This assignment seeks to correct inequalities in the contemporary art history survey class by allowing students to have a voice about whom they study and increase inclusivity in the discipline and the classroom.

60. Jamie Gobiel

Sponsor: James Cressey

The Success of Life Skills Classes

For my honors thesis I studied the success of life skills classes in teaching students with Down Syndrome to live independently. For my project I focused on a qualitative analysis of peer reviewed journals and life

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skills curriculums. In my studies I hope to discover whether or not Life Skills Classes are successful in teaching students' to live independently, and if they are not I hope to develop the best way to improve these classes.

61. Ana Goncalves, Nava Hosseinneshad *Sponsor: Bryan Connolly*

Production and Performance of Three Micro Dwarf Tomatoes

Tomatoes are superfoods that contain vitamins, minerals, antioxidants and other nutrients that are beneficial to human health. Their nutritional content combined with their short production period makes tomatoes a good candidate crop to grow in space. One tomato variety 'Microtina' has been suggested as the best tomato for space because of its ultra compact or micro dwarf growth form, but other extremely small tomato varieties do exist. The purpose of this study is to compare three tomato varieties: 'Microtina', 'Aztek', and 'Yellow Balcony'. These three types are being grown under uniform conditions in the FSU greenhouse. The development of the three tomatoes types will be compared based on the height of the plant, the number of leaves, number of flowers, number of buds, and date of fruit set. These traits will be analyzed using an Analysis of Variance (ANOVA) to test the difference between the means and determine the best tomato variety to grow in space.

62. Libby Goodreau *Sponsor: Erika Schneider*

Widening the Circle: Inclusivity in Contemporary Art History

"Because monetary value has been traditionally seen in established white-male artists, investors and collectors prize their work, which results in ever-higher prices. And because women artists and artists of color have generally had difficulty getting a foothold in the art market, their work continues to languish....Women artists, artists of color, and LGBTQ artists bump up against a "glass ceiling" in terms of monographs, solo shows, and museum acquisitions, and that depresses the perceived value of their work." Jeff Ignatius, "'Being Angry Is a Great Place to Start:' The Guerrilla Girls, January 18 at Augustana College," *River Cities' Reader*. January 5, 2017. <http://www.rcreader.com/art/guerrilla-girls-being-angry-is-a-great-place-to-start> Using this quote as a starting point, each student in ARTH 383: Contemporary Art History chose an artist to research and present to the class. Artists included work in a variety of media from painting and sculpture to installation and performance and represent different races, gender, and sexual orientation. This assignment seeks to correct inequalities in the contemporary art history survey class by allowing students to have a voice about whom they study and increase inclusivity in the discipline and the classroom.

63. Justine Greenwood *Sponsor: Erika Schneider*

Widening the Circle: Inclusivity in Contemporary Art History

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media from painting and sculpture to installation and performance and represent different races, gender, and sexual orientation. This assignment seeks to correct inequalities in the contemporary art history survey class by allowing students to have a voice about whom they study and increase inclusivity in the discipline and the classroom.

64. Cameron Grieves

Sponsor: Elaine Beilin

Gender-Swapping and Gender Roles in Shakespeare's Twelfth Night and As You Like It

Both Twelfth Night and As You Like It feature cross-dressing female characters, who must conceal their identity to enter a certain social circle. Viola and Rosalind both disguise themselves as handsome young men, Cesario and Ganymede. I focus on the constructs of gender as presented by these two plays: what are Viola and Rosalind able to accomplish that they wouldn't have been able to as women? What exactly are gender roles and how are they defined? Twelfth Night and As You Like It subvert the gender binary and both broaden an audience's understanding of how these identities shape women's public self-presentation and hinder female freedom at the expense of male entitlement. I examine how an audience from Shakespeare's time may have responded to these representations of gender and the fluid or static nature of these gender roles as compared to a modern audience. Primarily, I look at the language Shakespeare employs in presenting these gender-swapped characters and how he blurs the lines between what is considered acceptably male language and acceptably female language by queering the relationships and situations within which these lines are delivered.

65. Kellie Guittarr

Sponsor: Joseph Adelman

From Goddard to McAuliffe and Beyond: Public Reaction to Rocket Development and NASA Tragedies

Due to the great unknowns of space and our capabilities in its exploration, public opinion has varied from the beginnings of rocket development with Dr. Robert Goddard through present day. Goddard's work and its vast uncertainty left many apprehensive for its continued pursuit, feeling that exploring space should be left in science fiction. From the establishment of NASA in 1958, such sentiments were not felt as extensively, especially in light of the three NASA tragedies: the Apollo I fire in 1967, the Challenger explosion in 1986, and the Columbia disaster in 2003. Public reaction largely reflected that the deaths and failures of the missions were an unfortunate reality in a program that hungers for knowledge of the great unknown and those who died were pioneers of such program.

66. Kellie Guittarr

Sponsor: Jon Huibregtse

Dressing for Whom?: Expectations in Women's Dress from Flappers to Miss America

As the historiography of women's history reveals, flappers and the Miss America Pageants are rarely discussed together. The flapper's impact on society reflects something much different than the Miss America Pageant. Flappers and pageant contestants both emphasized beauty and sexuality, however while flappers revolutionized their dress to break free from societal restrictions, the pageants, through varying influences such as the Cold War, reverted back to placing women in a category of restriction, where girls are to grow up wanting to be the next Miss America and boys are to grow up wanting to be President. Through use of newspaper sources as well as documents from the Women's Liberation Movement, this transition is examined.

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67. Kris Gusmini, Susan Volpe

Sponsor: Ruth Remington

Non-pharmacological interventions to reduce stress in school age children

School nurses see many somatic complaints due to stress in school children. According to the NIH 31.9% of school age children suffer from anxiety disorder. We question which nonpharmacological interventions are effective in reducing stress in school-age children. A narrative review was conducted searching CINAHL, Medline, and PubMed searching the terms yoga, mindfulness, stress, anxiety, depression, youth, children, adolescents, and school. We found effective strategies include mindfulness practice, yoga, CBT, and EFT techniques. While the effectiveness of these interventions is promising more research is needed.

68. Kaela Henderson

Sponsor: Erika Schneider

Widening the Circle: Inclusivity in Contemporary Art History

"Because monetary value has been traditionally seen in established white-male artists, investors and collectors prize their work, which results in ever-higher prices. And because women artists and artists of color have generally had difficulty getting a foothold in the art market, their work continues to languish....Women artists, artists of color, and LGBTQ artists bump up against a "glass ceiling" in terms of monographs, solo shows, and museum acquisitions, and that depresses the perceived value of their work." Jeff Ignatius, "'Being Angry Is a Great Place to Start:' The Guerrilla Girls, January 18 at Augustana College," River Cities' Reader. January 5, 2017. <http://www.rcreader.com/art/guerrilla-girls-being-angry-is-a-great-place-to-start> Using this quote as a starting point, each student in ARTH 383: Contemporary Art History chose an artist to research and present to the class. Artists included work in a variety of media from painting and sculpture to installation and performance and represent different races, gender, and sexual orientation. This assignment seeks to correct inequalities in the contemporary art history survey class by allowing students to have a voice about whom they study and increase inclusivity in the discipline and the classroom.

69. Valerie Higgins

Sponsor: Jon Huibregtse

African American Women on the Homefront, 1941-1946

The experiences of African American women during World War II have long been neglected. Their stories were often found as quick asides within larger studies of either African American men or of white women. This poster examines the experiences of African American women on the homefront during World War II. Through employment trends, propaganda, or lack thereof, and personal interviews, the "triple burden" of being a woman, a mother, and an African American during this period is evident. By centering an argument solely on African American women, this poster contributes to a limited body of scholarship; one that, while receiving more attention as time progresses, remains inadequate.

70. Alexander Hiller

Sponsor: Jesse Marcum

Photodecomposition of Tetrachloroaurate in the Presence of Alcohol Cosolvents

The photoreactivity of the compound tetrachloroaurate (AuCl_4^-) is well documented and several studies have been performed to determine its rate of decomposition when exposed to UV light in a multitude of substances. Previous studies have generally focused on specific, single cosolvents in aqueous solution (e.g. methanol and ethylene glycol) and have indicated that increasing the concentration of the cosolvent

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increases the rate of AuCl₄⁻ photodecomposition. Our study uses UV-Vis spectroscopic analysis to determine how factors such as the concentration and identity of the alcohol cosolvent affect the rate of AuCl₄⁻ photodecomposition. Preliminary trends from our analysis indicates that photodecomposition rates are largely influenced solution viscosity and is not strongly dependent upon the specific alcohol cosolvent used.

71. Deron Hines

Sponsor: Vincent Ferraro

Gun Support: What's Racism Got to Do With It?

Research has shown a correlation between race and guns, however attitudes towards guns due to racial prejudices seem to be less studied. This research highlights the effect of racialization in society as a cause for whites' support for guns. Critical Race Theory (C.R.T) is used to expose implicit biases within individuals. The perpetuation of racial stereotypes along with the killings of minorities has contributed to the continuation of this issue. In the midst of these social injustices, Donald Trump has been reaffirming a white normative society.

This research uses the PEW Research Center's August 2016 Political Survey. These data are cross-sectional and provide a nationally representative sample of 2,010 adults, age 18 or older. The data set contains variables that identify race, political association, the perceptions of guns, as well as the perceptions of minorities. The hypotheses seek to find if C.R.T is supported when bivariate and multivariate analysis is conducted.

It is expected that respondents with more discriminative ideologies will believe guns are more for their protection. It is also expected that respondents with discriminative ideologies will believe that the government should not infringe upon their second amendment rights. This will draw out both "white fear" and C.R.T.

If findings show that attitudes towards guns are affected by racialization this will reveal "white fear" as an underlying theme in gun policies passed. This will show that in order to make proper decisions in terms of safety we must first eradicate these biases.

72. Megan Hollick

Sponsor: Bridgett Galvin

High School Guidance Counseling: Functions, Concerns, and Support

Guidance counselors contribute to an essential support system within a school system. The trust and assistance that these individuals share with students is the key to helping them grow into mature and successful adults. This literature review focuses on the overall functions of the guidance counseling department, the main concerns and issues faced by students, and the possible solutions and support given back to students to succeed. Guidance counseling is associated with academic, personal, and career goals and expectations. Bullying, peer pressure, and academic challenges are all supported by guidance counselors. This information is designed to set the context for presentation of information regarding the internship site experiences at a local high school.

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73. Angela Hyslip

Sponsor: Seunghye Cho

Deconstructed Denim: Up-Cycling Unwanted Denim to Create Sustainable and Functional Fashion

The fashion industry is one of the least sustainable industries in the world. Every year the fashion industry uses more water and energy, and creates more waste, than almost any other industry. To help solve this problem of wastefulness, this project aims to create new clothing out of old unwanted denim. Over the course of four months, denim jeans of various sizes, colors, and styles were collected and deconstructed to create new garments. A jacket that converts from a long evening jacket to a short motto-style jacket, an asymmetrical shirt, and cropped culotte style pants were all created using fabric and zippers from the recycled denim. As a result of this project it is clear that old clothing does not become useless just because it is out of style or does not fit; there are many ways to reuse and reinvent old garments.

74. Thomas Jerard

Sponsor: Jon Huibregtse

The Path To Full Integration: An Examination of LGBTQ Culture and The U.S. Military

Over the past three decades one of the biggest hot button issues facing the United States has been how to integrate members of the LGBT community into the military. This poster examines how greater acceptance of the idea of full integration reflected the civilian world's growing acceptance of the LGBTQ+ community. Further, it examines the roots of the Don't Ask Don't Tell examining how public opinion swayed President Bill Clinton's decision from fighting for full integration to compromising on legislation that banned individuals who were openly gay. Overall from looking back over the past century we see that full integration of the LGBTQ+ community into the military was a reflection of the public's changing opinions of the community at large and the idea of how they fit into the larger American community.

75. Manu Kazadi, Brenna Roche

Sponsor: Bryan Connolly

Breeding Late Blight Resistant Heirloom Type Tomatoes

The goal of this study is to create late blight resistant heirloom tomatoes. *Phytophthora infestans* (late blight) is an oomycete microorganism that causes extensive potato and tomato disease. Late blight is known for causing the Irish Potato Famine in the late 1840's. The infestation of late blight killed approximately one million people. Similarly to the 1840's pandemic, another massive outbreak of late blight took place in 2009 in the northeastern region of the USA. The outbreak caused major economic losses. Many farmers lost their entire tomato crop. To prevent an outbreak in the future we would like to increase the number of blight resistant varieties and also to improve the marketability of these blight-resistant types. We are breeding them to have a heirloom like appearance. Our eventual aim is to produce homozygous double resistant tomato plants for the late blight gene *ph-2* and *ph-3*. Tomatoes from previous 2017 research, that were hybrids of heirlooms and resistant varieties, were used as a starting point. These lines were likely heterozygous for the late blight genes. These heterozygous plants were crossed with the variety "Iron Lady," which is homozygous resistant to both late blight genes. Cross-pollination was achieved by emasculated flowers and then pollinating them with "Iron Lady" pollen. Fruit set is being tracked. In the future seeds will be extracted and progeny of these crosses will be genetically tested for resistance to the late blight.

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76. Caroline Keenan

Sponsor: Elaine Beilin

“She’s the Man”: Female Power through Cross-Dressing in Shakespeare’s Twelfth Night and The Merchant of Venice

The way women are characterized in Shakespeare’s plays raises questions about his representation of gender. Shakespeare places some women in the leadership and power position over some men. In this case, the word “power” can be defined as a woman’s ability to influence and regulate specific men through posing as the opposite gender. Although Shakespeare did follow many traditional gender norms (as seen in Romeo and Juliet where Lord Capulet rules and the women figures are shown in the house holding lesser value than the men), a few women in Shakespeare’s plays exert more power than the men. In Twelfth Night and The Merchant of Venice, Viola and Portia show their power by cross-dressing, which allows both women to develop into dominant figures. Shakespeare is commonly recognized for his ability to challenge patriarchal norms during a time period when life was very male-dominated. As I will argue, both Viola and Portia illustrate how even in a predominantly patriarchal society, they ultimately control their relationship with the men in their life.

77. John Kelleher, Michelle Nardi

Sponsor: Bridgett Galvin

Cringe Comedy

This paper explores the world of cringe comedy. What makes Cringe comedy so funny? The paper addresses what factors contribute to the humor of cringe comedy. Benign Violation Theory is presented as one theory that most easily explains the humor produced by Cringe comedy. It also examines the type of humor in Cringe comedy and who is most likely to laugh when exposed to Cringe comedy; men or women, older or younger adults. A common example of the use of Cringe comedy is a television show called Impractical Jokers for which this literature review provides context. This television show is the basis of an analysis of Cringe comedy and connects some concepts of Cringe comedy to real situations.

78. Sam Klobucher

Sponsor: Joseph Adelman

Frank Sinatra: Italian-American Icon or Mafia Puppet?

Frank Sinatra was a deeply complicated and flawed figure. Sinatra’s career as an entertainer and relations with the mafia were interconnected. His fans, the entertainment industry, colleagues, and his family did not care about his mafia ties. However, those outside his circle were interested such as the FBI and state authorities. Sinatra through the media had a few negative backlashes from columnists on his ties with the mafia, although this did little to affect his career. As an Italian-American, Sinatra improved the stigma put on this ethnic group throughout American society. Although Frank Sinatra had many allegations linking him to the mafia, he was never prosecuted and his fame through the entertainment industry and popularity as an Italian-American has carried on even years after his death.

79. Marharyta Kochyieva

Sponsor: Bridgett Galvin

Attention Deficit Hyperactivity Disorder in Children and Neuropsychological Testing

Attention Deficit Hyperactivity disorder impacts the performance of many school aged children. This literature review focuses on which neuropsychological tests are used to assess ADHD, which are most reliable, as well as what are typical behaviors of children with ADHD. It serves as a context for the presentation of information regarding the internship experience at Brighton Marine Health Center with a

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Neuropsychologist. The research that is used, states that children with ADHD tend to struggle with academics and school performance, and have an increased rates of expulsion and detention. Some signs of ADHD are inattention and hyperactivity. As a result of numerous questionnaires, tests, and information given from the child, parents, and teachers, a diagnosis may be made. Some tests that are used in the research are, WISC, Trail Making A and B, Colour-Word Stroop, Trails test, Tower test, as well as many others. ADHD has become a common disorder that can now be diagnosed and improved with education, behavioral therapy, and medication.

80. Jaimie Leahy

Sponsor: Jon Huibregste

God Save the Queens

Many historians discuss how drag queens and homosexuals were tolerated during the first part of the twentieth century, but that changed during the interwar period, causing many cross dressers and homosexuals to hide their true sexual identity. Homosexuals were further repressed during the Lavender Scare fueled by McCarthyism during the Cold War which heightened hysteria surrounding homosexuality. The Lavender was the systematic removal of homosexuals from the State Department. This fear of homosexuals became a nation wide epidemic that forced them deeper into the "closet," invisible to the general public. This poster demonstrates how the Lavender Scare affected drag queens and their inability to be visible in the public sphere during the 1950s.

81. Elizabeth Lewis

Sponsor: Bryan Connolly

Prunus Hybridization

Prunus pumila or sand cherry is a species in the Rose family or Rosaceae that has large range occurring throughout most of North America. It is a deciduous shrub that grows anywhere from 10-40 centimeters tall. *Prunus pumila* is very tolerant to areas with low water and low moisture. This species is used in horticulture as an ornamental and also as a minor fruit crop, it is considered an environmentally friendly species to grow because of its low water use. The nursery industry has expressed a need for cultivated varieties of this species with different shapes and forms to be used in landscaping. Fortunately, this species has three varieties, var. *susquehanae*, var. *pumila*, and var. *besseyi* each with unique forms that can be combined. Previous work has already created a hybrid of var. *susquehanae* and var. *pumila*. The goal of this project is to build on this work by crossing the hybrid of *Prunus pumila* var. *depressa* x var. *susquehanae* back to *Prunus pumila* var. *depressa*. Additionally, the hybrid will also be cross to var. *besseyi* attempting to combine the traits of all three varieties, in the future seeds of these crosses will be grown and seedlings with superior form will be selected as new varieties for horticulture.

82. Carisa Lozoraitis

Sponsor: Nancy Bittner

Exploring ways to better serve frequent users of the emergency department

Frequent users of the Emergency Department (ED) are a relatively small group of vulnerable patients that account for a disproportionately high number of ED visits. To have an effective impact on the ED frequent user, each hospital needs to understand the characteristics of patients who overuse ED services. Only then can an effective program be developed to alleviate their patient's dependency on the ED for healthcare. The purpose of the review was to describe the findings of a systematic review of studies that examine the characteristics of adult frequent users of the ED, the acuity of illness, the patterns of healthcare utilization and cost, and the interventions to improve the care of the frequent user of the ED. All the studies were published between 2006 through present and were selected from the

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comprehensive search of 7 computerized databases, manual searchers, and gray literature. A total of 1246 studies were identified and 14 studies were included and screened. The findings of this review suggest that frequent users of the ED have unmet mental health issues and medical needs that lead to their chronic frequent use of the ED. Case management is an effective means of reducing ED usage, reducing ED costs, and improving social and clinical outcomes amongst frequent users of the ED. Further research is needed to better characterize and understand chronic frequent users in order to implement treatment options. Keywords: frequent users, emergency department, emergency medical services

83. Caroline Lutz, Nicole Valerio *Sponsor: Imran Islam*

Determining the Absorbency of Wine Stains on Different Fabrics After a Complete Wash and Dry Cycle

BACKGROUND: Wine has been known to ruin clothes and couches, but that doesn't stop people from drinking it. Since wine is never going out of style, researching what fabric is best for you to wear while drinking a delicious red wine is best. OBJECTIVES: (1) Identifying which fabric wine stains more than another, (2) Identifying what fabric has the least and most absorbency of red wine. METHOD: An experiment is required to obtain the solution to this study. Washing and drying the swatches is necessary to have a suitable solution. EXPECTED OUTCOME: The wool swatch will have the least amount of absorbency and stain after washing while the cotton swatch will hold on to the wine the most. CONCLUSIONS AND IMPLICATIONS: This experiment will allow us to obtain information on what type of fabric and what fibers will be the most and least absorbent with wine stains. This experiment is going to be conducted so that consumers and manufacturers will know how to remove stains if the garment does not absorb the wine and when their garment is no longer in good condition if the stain is absorbed fully into the fabric.

84. Connor Lydon, Issifu Mumuni *Sponsor: Ruth Remington*

Reducing Falls In Adults Over 65

Purpose: To evaluate fall prevention strategies in the older adult population, and apply these findings to clinical practice. Introduction: Falling is a common cause of injury and reduced quality of life. The older adult population is at higher risk for falls due to issues such as mobility issues, memory issues, and reduced bone density. Methods: A narrative review was performed using the EBSCO host and CINAHL database. The keywords searched included "falls," "prevention," and "elderly." Results were narrowed to 2013-2018. We gathered 5 resources from different authors regarding fall prevention program strategies in adults 65 or older, residing in either community or hospital setting. Results: Compared with control groups, adults with enhanced fall strategies showed significantly reduction in overall falls reductions (9% and 8%, respectively) in fall injuries from baseline. It appears that both data-driven and literature-based approaches are better at estimating fall risk than commonly used fall risk indicators. Most falls occurred while walking (63.3%), outside (61.7%) and in familiar environments (88.9%). Importantly, 11.5% of falls resulted in severe injuries, approximately half of which were fractures. Conclusions: Overall, the study conclusions suggest that fall prevention strategies can be effective when implemented in the community setting. Health care professionals, including nurses need to be informed of the latest research to help prevent falls in the clinical setting.

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85. Nathanais Madera

Sponsor: Vincent Ferraro

Which Program come out on top?: A study of the Effectiveness of Sex Education Programs

The purpose of this research is to develop an understanding of which form of sex education program, abstinence-only or comprehensive sex education, is most effective in preparing students for sexual activity and potential outcomes of sex. By applying social learning theory, it can be argued that behavior modeled in class varies between the two forms of sex education, which will influence a student's behavior. Data gathered from the Henry J Kaiser Family Foundation in the 1999 Sex Education in America codebook allows insight into the experiences of students that are in grades seven through twelve from both abstinence-only and comprehensive sex education classrooms. By conducting statistical univariate and bivariate analyses of the students responses of this survey, it is expected to be found that comprehensive sex education will be more effective than abstinence-only education in preparing students for sexual encounters, use of contraceptives, and developing an understanding of potential outcomes from sexual activity, such as STDs and pregnancy. These findings would suggest that it is more beneficial to students to be informed on topics regarding sexual activity rather than being left uneducated on the subject. These findings would allow school systems to be more informed about which form of sex education is more effective and, therefor receive funding. Schools would also be able to reconstruct their sex education programs to be more informative and beneficial to students.

86. Colton Madore, Erika Viens

Sponsor: Imran Islam

Investigating Fabric Strength when Exposed to Commonly Used Dyes for Select Periods of Time

BACKGROUND: Dying garments, such as tie-dying or adding dye for an ombre effect, is very popular today. This trend can be seen in stores as well as worn by celebrities. To avoid high costs of buying these garments in stores, many have taken to dying their own garments at home, using dyes that can be bought at local crafts, convenience or even grocery stores. These dyes may seem harmless, but could potentially weaken the strength of the garment. **OBJECTIVES:** (1) Identifying the most commonly used dyes for garments found in stores, (2) Developing a model to assess the reaction between the dye and the fabrics, (3) Identifying three different fabrics and their reaction to the dye. **METHOD:** A mixed method of research is employed in this study: observation (e.g., store visits to find commonly used dyes and secondary data source) and implementing strength test among fabrics after being dyed for a certain period of time. **EXPECTED FINDINGS:** Some fabrics will react poorly compared to others. Manipulating time for each fabrics exposure in the dye will worsen the outcome. **CONCLUSIONS AND IMPLICATIONS:** This study will determine the outcome of which fabric withstands a better reaction to dye and how long it was exposed to the dye. The model for the experiment could show little to no impact on fabrics. Finally, this study will help consumers to better understand which dyes, fabrics and what time exposure to dye will benefit them when dying their own garments.

87. Ethan Maguire

Sponsor: Stephen Dinkelacker

Alligator Snapping Turtle Management

Alligator snapping turtles are the largest freshwater turtle in North America and were once a highly sought-after food in the southern regions of the United States. The high demand for alligator snapping turtle meat led to overharvesting, and subsequently a severe decrease in their population. We investigated whether it could be possible to harvest alligator snapping turtles without severely decreasing their population. Through the use of modeling software, RAMAS, with data from published literature we were able to establish generic population parameters for modeling. These models could aid management

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efforts by showing how difficult it is to harvest alligator snapping turtles without causing a massive decrease in their population.

88. JohnRobert Mahoney, Nathan B. McGowan-Gehan, Ezekiel Mercer-McDowall, Amanda J. Mula
Sponsor: Vincent Ferraro

Reading Books to Smoking Dope: Academic Strain and Substance Abuse, Use, and Delinquency

Previous research indicates widespread issues of substance use, abuse and their possible links to delinquency. Current research on Agnew's General Strain Theory connects academic strain and its influence on delinquency, substance abuse and use. In the American education system, students are expected to strive for academic success because it is a culturally-defined goal. Students who do not meet this academic success for reasons such as lack of resources, and poor funding, experience strain. A cross-sectional analysis of the 2006 Monitoring the Future survey utilizes data from students in grade 12. The total sample size of this study is 14,814. Bivariate and multivariate analyses are used to test six sets of hypotheses that focus on General Strain Theory with each examining the relationship of the student's perception of their school ability and perception of their average grade with alcohol use and abuse, drug use and abuse and delinquency. Over time, academic strain builds up from receiving poor grades, which leads to students experiencing copious amounts of stress. Students are likely to turn to illicit drugs or alcohol to reduce or take the focus off the individual's academic strain. These results would pose strong findings that are relevant to today's youth regarding academic strain possibly leading to substance abuse, use, and delinquency. With better understanding in this field, researchers can help the youth recognize and become more aware of the possible correlations between substance abuse, use, and delinquency.

89. Andrew Maldonado *Sponsor: Jon Huibregtse*

Disability Rights

The research examines the accommodations that are made and provided to those who have needed them in the recent past. The research breaks up the different categories of disabilities that have been recognized and received treatments based on the nature of the disability. For example, the difference in the types of services provided to military veterans as opposed to someone who became disabled by "their own carelessness" and even the differences in the services provided to those born with terminal illnesses. Another area of interest under the umbrella of Disabilities Rights that is touched on, are the stigmas behind mental health issues and treatments, which are also regarded differently for military veterans and citizens with no history of service to the state.

90. Brigitte Manseau *Sponsor: Bridgett Galvin*

Effectiveness of Court-Mandated Batterer Intervention Programs

This literature review examined the effectiveness of court-mandated batterer intervention programs and provides the context for the poster presentation of the internship site located at the Framingham/Natick District Court. This particular court site often orders offenders to complete batterer intervention programs. The literature suggests that batterers who participate in effective programs are less likely to re-offend. Most offenders at this courthouse participate in the Prevention of Abuse and Violence program offered through the Education program at Spectrum Health Systems. These programs are utilized as they are close to the metropolitan areas that are serviced by this court system.

91. Kevin Marshall

Sponsor: Joseph Adelman

Propaganda in the American Revolution: The Founder's Secrets and Hidden Agenda

The importance of the American Revolution is known to all, but the war could have had a drastically different outcome without the use of propaganda. In some instances, the Founders were behind the provocation of the war, and others the Founders used propaganda to gain support for revolutionary cause, and to win over the hearts and minds of the colonists. By using newspapers, correspondence, multimedia, and the Declaration of Independence, the Founders were able to use propaganda as part of the revolutionary war machine. It is evident that the origins of the Revolution stem from the Founders' secrets and hidden agenda to gain support for revolutionary thought and independence.

92. Nicole Palermo

Sponsor: Lawrence McKenna

Influenza Infection Rates Are Predictable via Specific Humidity

This study demonstrates the feasibility of skillful forecasts of changes in influenza incidences using specific humidity as a short-term predictive tool. Shaman and Kohn (PNAS 2010, 106(9), 3243-3248.), showed that low specific humidity (wt. water vapor/wt. dry air, hereafter SH) allows water droplets with influenza virus to saturate more readily into the air, shrink in size, and stay suspended in the air for long periods of time. In turn, this increases the likelihood of infections via airborne transmission of the virus. Unlike previous research, which used data from uncommon influenza mortality, we obtained weekly counts from 2010-2017 of positive laboratory influenza tests from seven counties within the contiguous United States. We calculated SH from NOAA weather stations within each of the seven counties. We modeled the relationship of SH and infection rates for each county as a pair of Poisson processes, one for low SH conditions and one for high SH conditions, each with their own mean. We exhaustively searched for the SH value which minimizes the summed negative log-likelihoods of the paired processes. We defined this as the breakpoint in SH. Influenza infection rates changed by a factor of 2 to 73 across the breakpoints. This work potentially allows public health professionals the ability to anticipate and prepare for a potential factor of 2 to 73 influx of patients with flu or flu like symptoms, based on forecasted SH. This may lead to a lessening the burden imposed on hospitals and healthcare facilities during flu season.

93. Mayara Moreira

Sponsor: Bridgett Galvin

Effective Treatment Options for Autism Spectrum Disorder

The purpose of this research was to gain a deeper understanding of the Applied Behavior Analysis field along with understanding the true causes of behavioral issues in children and to further shine a light on the most effective treatment options to apply to children with varying levels of autism or other signs of behavioral issues. During my time at Kindle Behavioral Center, I was able to directly observe children being treated with techniques from Applied Behavioral Therapy. I was also able to directly partake in individual tasks created by the therapists as support to the therapist performing the treatment and I was able to create tasks that would be directly involved in the session. Along with reading peer-reviewed journal articles about Applied Behavioral Analysis as a form of treatment for children with autism, and learning about other forms of treatment for ASD, I had the opportunity to directly interview the owner of Kindle Behavior Center as well as a few of the therapists for their opinion on the effectiveness of Applied Behavioral Analysis Therapy of the development and improvement of their own individual clients. I will be presenting how different treatment options for ASD and how ABA can be the most effective decision when treating a child with ASD.

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94. Kelsey Morgan

Sponsor: Jon Huibregtse

“New York was Sexy. San Francisco was really sexy. But Boston was smarter”: An Analysis of Massachusetts in Comparison to the United States’ LGBTQ Policies

Following World War II, McCarthyism swept the country by creating mass hysteria that led to people reporting their neighbors for suspicious activity pertaining to communism. When Undersecretary of State, John Peurifoy denied that there were communists in the federal government, he added that 91 homosexuals resigned. Then, in 1953, President Dwight D. Eisenhower signed Executive Order 10450 which set security standards for federal employment while barring homosexuals from working in the federal government. Historian David K. Johnson deemed this time period as the “Lavender Scare”. Following this executive order, committees such as the Johns Committee in Florida and the Save Our Children (SOC) organization aimed to flush members of the LGBTQ+ from public spaces such as schools and local government in order to preserve traditional marriages and lifestyles. The aim of this project is to trace Massachusetts laws pertaining to the LGBTQ+ community, in order to understand how and why Massachusetts was able to become the first state to legalize gay marriage in 2004.

95. Kelsey Morgan

Sponsor: Jon Huibregtse

Crossing the Line: Women, African American, and Mexican-American Involvement in Vietnam

When discussing the Vietnam War, most historians discuss minority involvement separately without analyzing how groups were similar to one another and how they differed. This project, through the use of the Library of Congress’s “Veteran’s History Project,” compares and contrasts the reasons why African American and Mexican-American men as well as women, joined the Vietnam War, what they experienced during the war, and what changed for them once they went back home. This poster concludes that each group saw the Vietnam war as an opportunity to perform citizenship to prove that they are equal in America. However, they found that the military reinforced both racial and gender roles.

96. Christina Morrissey

Sponsor: Bridgett Galvin

Adult Day Health Programs: Their Impact on Older-Adults’ Well-being

This review gathers information from studies focused on Adult Day Health (ADH) programs impact on older adult’s health and well-being, as well as how ADH programs have evolved in the ways they provide support to older adults. It also provides context for the internship experience presented in this poster. Factors impacting the older adult’s health such as stress, Alzheimer’s disease, cognitive functioning, speech, and physical impairment are taken into consideration when trying to determine how ADH programs benefit the individual participant. Environment, employees in the program, recreation, and therapeutic activity can positively impact outcomes for participants attending ADH. The participants’ caregiver’s health and well-being impacts the participant attending an ADH program. Observations of impacts were based on perspectives of recreation staff, family members of the client, nurses, social workers, and in the words of participants themselves. Participants in ADH programs feel less social isolation, less anxiety, improved mental health, gained better relationships with their caretaker, and report an improvement in their quality of life. This information is shared in light of the internship site description on this poster.

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97. Rachel Mullins

Sponsor: Seunghye Cho

The Velour Plan: A Design Student's Perspective On Rebuilding Juicy Couture

By the early 2000s, Juicy Couture hit the contemporary fashion market with an explosion of candy-colored tracksuits and affordable luxury. Pamela Skaist-Levy and Gela Nash-Taylor, two best friends who have a love for all things fashion, established the brand in 1997 (Moore, Nash-Taylor, & Skaist-Levy, 2014). By 2003, Juicy Couture had become both a fashion empire and an infamous emblem of luxurious West Coast style for Millennials and celebrities. Unfortunately, the 2008 recession was significantly detrimental to Juicy Couture's profits and somehow the brand was never able to recover (Moore et al., 2014). However, based on current trends, the once-popular affordable luxury brand, Juicy Couture, could successfully make a come back as a fashion empire. The purpose of this study is to apply problem solving skills to a real-life fashion company in turmoil. Problem solving is a useful skill used in day to day business activities, and this paper will execute that skill with a combination of research, previous knowledge, and creative ideas, and apply these to Juicy Couture.

98. Nicholas Murphy

Sponsor: Elaine Beilin

An Excessive Absence of Moderation: The Ruler Figure in Shakespeare's Measure for Measure

In Shakespeare's Measure for Measure, the role of the leader is a juggling act, a performance in which the public role often clashes with the needs of the private person. More specifically, while rulers have an obligation to their people, they are still susceptible to personal desire and internal conflict. While the Duke calls attention to the importance of moderation, that is to say a balance between mercy and rule-abiding principles, both he and his chosen replacement, Angelo, fail to live up to this ideal. However, their opposite ruling styles highlight the need for a tempered and moderate rule and through this opposition, they help us construct a model for the ideal ruler amidst flawed ones.

99. Alexa Napoli

Sponsor: Bridgett Galvin

Autism Spectrum Disorder: The Effects of Social Influence and Therapeutic Interventions

Autism Spectrum disorder is a diagnosis that refers to a wide range of symptoms, including social skills, repetitive behaviors, speech and nonverbal communication, and strengths and weaknesses cognitively and physically. "Spectrum" refers to the wide range of strengths and weaknesses in each and every case. I completed a literature review to investigate the relationship between social influences and therapeutic influences on children with Autism (ASD). This review provides context for the experiences I am reporting on in this poster. Social influences can positively impact children with Autism in regard to therapy, but at the same time it may increase anxiety as well. Different types of therapy such as music and technology, have played a significant role in the positive growth of development in children with Autism. This poster presents an overview of my experiences at a center which addresses these issues with children exhibiting Autism.

100. Samael O'Brien

Sponsor: Bryan Connolly

A Plethora of Clethraceae

Clethraceae is a family of deciduous flowering plants of which only one species is endemic to Massachusetts; Sweet Pepperbush. This plant, scientific name Clethra alnifolia, is recognized as only one species by the United States Government with a variant Clethra alnifolia tomentosa. However, the Flora

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of North America, and other botanists, consider this supposed variant its own species, *Clethra tomentosa*, based on several morphological dissimilarities and differential flowering times. The aim of this experiment is to use DNA barcoding to determine if *C. tomentosa* is genetically distinct from *C. alnifolia*. The gene under evaluation is *matK*, a chloroplast gene, which has been used to delineate between taxon of plants. In addition to this, *C. alnifolia* and *C. tomentosa* will be grown together in preparation for a future hybridization experiment.

101. Erin O'Connell

Sponsor: Michael Crosier

Anthocyanins as Protective Agents Against Cardiovascular Disease

The purpose of this literature review is to discuss the knowledge and current understanding of anthocyanins and their effect on cardiovascular diseases. For this review, original research and review articles were obtained using PubMed, Science Direct, and Google Scholar using the keywords: flavonoid, polyphenols, anthocyanin, vegetables, fruits, berries, heart disease, inflammation, and atherosclerosis. Articles were limited to publications from 2007-2017. Fruits and vegetables that contain anthocyanins such as eggplant, blueberries, and cranberries have been proposed to decrease the risk for cardiovascular disease. Proposed mechanisms include prevention of high blood pressure by increasing vasodilation. Anthocyanins have also been shown to decrease measures of inflammation, such as C-reactive protein and monocyte chemotactic protein 1. Anthocyanins can modulate enzymatic activity leading to a decreased release of these inflammatory proteins. Anthocyanins also have antioxidant properties that can reduce cellular oxidative stress. The effects of anthocyanins on blood pressure, inflammation, and oxidative stress may be protective against the development of atherosclerosis. Therefore, a diet rich in colorful fruits and vegetables is recommended to ensure adequate consumption of anthocyanins to optimize cardiovascular health.

102. Clare O'Connor

Sponsor: Joseph Adelman

"A Hill of Beans": FDR's Disability in the Press and Public

In the Summer of 1921, Franklin Roosevelt fell extremely ill while vacationing in New Brunswick, Canada, and was eventually diagnosed with poliomyelitis, an infectious virus commonly referred to as polio. A successful man with great ambitions, he felt compelled to frame the resulting paralysis in a way that was favorable to his political career, a process in which the press was heavily involved. This project argues that the news coverage given to FDR's disability was multifarious and evolving. Additionally, FDR's own portrayal of his disability and the accompanying charity work he undertook had more of an influence in public opinion regarding his paralysis than any publication could have achieved.

103. Clare O'Connor

Sponsor: Jon Huibregtse

"This is the Enemy:" Anti-Japanese Discrimination and Internment

In the aftermath of Pearl Harbor, the civil rights of approximately 100,000 Japanese-Americans, 70,000 of whom were American born citizens, were gravely violated. The decision to force these citizens into internment camps on American soil was framed as a necessity due to national security concerns, as Japan was now an American enemy. However, discrimination against Japanese immigrants and their families was well established prior to the attack at Pearl Harbor, and this poster will argue that it was that discrimination, propaganda, and anti-Japanese rhetoric that allowed for internment to be enacted. Additionally, the impact of internment was long lasting in the Japanese-American, and larger Asian-American, community.

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104. Patrick O'Connor

Sponsor: Shelli Waetzig

Reaction Development of Palladium Catalyzed N-alkylation of Aromatic Imidates from Allylic Carbonates

Reaction development for the one-pot Pd-catalyzed N-substitution of aromatic imidates was investigated using allylic carbonates. The goal of the project is to optimize the reaction to allow for a wide range of nucleophiles to be used to alkylate the nitrogen of aromatic imidates.

105. Eunice Owusu

Sponsor: Jon Huibregtse

The Black Panther Party and the Revolutionary Black Woman

This poster brings awareness that the Black Panther Party was more than black men with guns fighting police brutality. The fight against police brutality is not the only thing they stood for. They stood for the black community to be protected and successful in America. In challenging racism and political bias, they gave women the chance to seek black liberation through the Party. Women of the Black Panther Party played a huge role in its operation especially when it came to community involvement and providing resources. They had the urge to fight for gender equity while unanimously fighting for justice and revolutionary change for all African-Americans. They made sure that the focus of the party applied to the black community as a whole rather than upholding misogyny. Often times women do not receive the credit they need for their efforts in our history. Without women, the Black Panther Party would not have had as much of an impact as it did in the black community. This poster contributes to the conversation of how much the women of the Black Panther Party impacted communities as well as the nation far more than what we realize.

106. Hannah Pagano

Sponsor: Bridgett Galvin

The Impact of Suicide Hotlines and Volunteers' Motivations

This research investigated the functions of suicide hotlines as well as the impact that they can make on the people who utilize them and the volunteers who staff them. In addition, this information serves to provide context for the internship site presentation in this poster. Evidence suggests that suicide or crisis hotlines function to serve as a confidential service that is available to the general public to help with a variety of issues. Research suggests utilizing crisis hotlines significantly reduces suicidality and improves the mental state. The callers report a positive impact during the call as well as days after the initial call was made. Volunteer motivations to staff the hotlines may include personal experience, the desire to make a difference, volunteer existentialism, and personal fulfillment.

107. Valerie Paradise

Sponsor: Elaine Beilin

Morality, Politics, and Autonomy in Shakespeare's Julius Caesar

What were Shakespeare's political beliefs? Does Shakespeare remain politically neutral since he is able to provide many sides of the political sphere by portraying different characters? Shakespeare presents both sides of the argument dealing with whether or not morality should be used in politics through specific characters' language and actions. One interpretation of the characters places Brutus as a moral compass and Cassius as the opposing force to morality. It is unlikely that any author or any person is able to remain truly neutral, so I argue that Shakespeare places naivety with morality in politics, since Brutus, when he believes he is being moral, is easily manipulated and ultimately unsuccessful. It is often the

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amoral tactics that are deemed successful, so Shakespeare appears to present morality in politics as mainly useless, and many times, hindering.

108. Lindsey Parent

Sponsor: Bridgett Galvin

Understanding the Legal Perspective of Involuntary Civil Commitment

Involuntary civil commitment is a legal process through which an individual who is deemed by a qualified agent to have symptoms of severe mental disorder is court ordered to treatment, usually in a psychiatric hospital. The current research examines a number of questions relating to the process of involuntary civil commitment such as the types of situations that normally prompt referral, how the process has evolved over time, and if it should be considered legally sound. These questions are answered through a legal perspective as identified in the literature and from observations from a courthouse internship. Results suggest that despite backlash from some legal representatives about human rights, the commitment process has been effective in reducing crime rates.

109. Matthew Pearless, Aafreen Syed

Sponsor: Amanda Simons

Long-Term, Low Dose Effects of Resveratrol on CML cells

The polyphenol resveratrol may possess cancer chemo-preventative and cancer-treating properties. It is found in physiologically significant amounts in red grapes and other foods. It is also present in red wine. The majority of literature published on cancer-focused research with resveratrol observe its effects on cells at a higher dosage than the physiologically possible concentration in vivo. This study measures the effects of long-term, low-dosage resveratrol (RSV) on Chronic Myeloid Leukemia (K562) cells when paired with the established drug currently used for treatment of CML, imatinib (trade name: Gleevec). After 6 weeks of dosing CML cells with RSV or vehicle control, DMSO, imatinib, was administered in order to compare rates of autophagy and apoptosis in treated cells. The goal of this experiment is to determine whether DMSO/RSV cells grow differently after drug exposure due to the RSV, possibly enhancing the cancer-chemotherapeutic effects of imatinib.

110. Devavrata Rangachari

Sponsor: Elaine Beilin

Why Did They Get Married?: Maria and Sir Toby Belch in Shakespeare's Twelfth Night

Audiences often wonder why Sir Toby Belch marries Maria at the end of Shakespeare's Twelfth Night. By isolating these two characters and analyzing their language and the dynamic between them throughout the play, audiences can better understand the significance of their relationship. Understanding how each individual works in the pairing will show the importance of class, status, and social mobility in the play.

111. Craig Reynolds

Sponsor: Bridgette Sheridan

Secular Deification: George Washington, Simón Bolívar, and the Use of Historical Memory

Both George Washington and Simón Bolívar were notable figures in the Age of the Atlantic Revolutions, both of whom in many ways came to overshadow many of their contemporaries due to both their impressive military and political accomplishments. As both died and moved into the collective memory, there have since been many comparisons made between the two. In his research essay, Craig Reynolds argues the reasons for why both Washington and Bolívar have come to be more remembered and associated with their respective revolutions than their contemporaries. As well as analyzing how the

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images of Washington and Bolívar have come to be appropriated for various political ends and what this says about how societies choose to memorialize the past.

112. Stephanie Rodriguez, Michelle Mair *Sponsor: Imran Islam*

An Investigation on Fire-Resistant Fibers

BACKGROUND: Within numerous categories of fibers, fire resistant fibers hold a small percentage. Most fibers are flammable due to its organic reaction against heat or flame. The fashion industry does not promote the element of fire resistant as an essential part of the production of garments. When thinking of fire resistant fibers, the thought of fire fighter suits and police officer uniform comes to mind as those are two fields that require this element in their garment to perform their job duties. There is a need to study flame retardant textile apparel/ State official uniforms and manage a way to incorporate this need into daily usage. **OBJECTIVES:** (1) Determine all known fire resistant fibers (2) Select temperatures to test the resistance of each fiber while timing these events (3) Collect results from the fiber with most resistance in the longest amount of time recorded. **METHODS:** A qualitative method (content analysis) will be used for objectives one and two and a flammability test (ASTM D 1230) will be conducted to determine which fiber is most resistant to heat/flame. **EXPECTED FINDINGS:** This study should result in some fibers resisting from burning at a quicker time than others. Other expectations are for some fibers to burn completely into ashes and some fibers will change its natural form but will maintain structure/body. **CONCLUSIONS AND IMPLICATIONS:** This study will bring awareness to the demand for more flame retardant apparel and the textile industry.

113. Robert Rovito *Sponsor: Joseph Adelman*

Creating the Boston Busing Crisis: The Media and Boston Busing and Desegregation

This poster argues that the local and national media played a crucial role in the way the Boston busing and desegregation crisis unfolded and in the way the nation viewed what was happening in Boston during this time. When looking at the causes of why desegregation went so poorly in Boston, most historians look at factors like race, ethnicity, neighborhood rivalries, and the way the local leaders of the city and school systems handled the situation, but this paper looks at the media as a key cause to what unfolded in Boston and the role the national media had on the American public's perception of busing and desegregation through their reporting of Boston.

114. Robert Rovito *Sponsor: Jon Huibregtse*

Racism and the Red Sox: Do Boston Sports Deserve its Racist Reputation?

The city of Boston is largely considered around the country as the most racist sports city in America. This poster argues that although Boston had issues with racism throughout its history, which is evident in its sports teams, particularly the Red Sox, it is unfair to say that Boston has more of a race issue than the rest of the country because there are an extensive number of examples of institutional racism in sports throughout the nation. Although Boston is the most noted city in regards to racism, there is evidence through interviews, news stories, and statistics of racism in a large number of other sports cities and also throughout the institution of sports as whole, yet Boston is the city with the reputation.

115. John Saad

Sponsor: Amy Knapp

Effects of Caffeine and Theobromine on the Recovery Time of Mouse EDL

Caffeine is one of the popular supplements that is used to enhance athletic performance. Another metabolite of caffeine is theobromine and is also thought to have similar ergogenic effects, leading to better athletic results. Previous studies have shown that each substance binds to the Ryanodine (Ryr) receptors on the sarcoplasmic reticulum of the muscle cells, opening the Ca^{2+} channels and, subsequently, releasing Ca^{2+} into the cells. This induces muscle contraction. The enhanced release of calcium from the SR suggests that caffeine and theobromine may help the recovery process of a muscle by facilitating contractions. Therefore, we asked whether caffeine and theobromine would lead to decreased recovery time after a bout of fatiguing contractions in the mouse EDL, a fast-twitch muscle. To test this, we used an in vitro muscle test system. Muscles were bathed in oxygenated Ringer's solution, under controlled pH. Tetanic contractions of 70 Hz force were induced and their train frequency increased progressively to fatigue the muscle. In control conditions, the fatigued muscle was timed during recovery until it reached 80% of the initial maximal contraction force. Additionally, another EDL was used in either 2 mM caffeine, or 2 mM theobromine solution. The caffeine or theobromine was added to the Ringer's solution bath after the muscle was fatigued, in order to time the muscle's recovery until 80% of the initial maximal contraction force. Comparison of the results might confirm the mechanism by which caffeine and theobromine help the muscles to recover after fatigue.

116. Jackie Salvas

Sponsor: Joseph Adelman

Newspapers View of the Freedom Rides

In this paper I look at the Freedom rides in the civil rights movement and how newspapers viewed the event. With the bias or non-bias views of the African American integration and how Baltimore Afro-American news papers and the New York times articles are different in content, attitude and overall support of the event. Also I look at the governmental point of view by looking at the FBI files from the 1961. The Freedom rides were a necessary part for the desegregation process of boarders in the south along with the growth of the nation for tolerance. Through this paper I look to prove that the freedom rides were a necessary point in the civil rights movement and that Newspapers were more about communicating with the public then entertainment with its content.

117. Jackie Salvas

Sponsor: Jon Huibregtse

The Desegregation of Little Rock

The federal government's involvement in the Little Rock desegregation case ensured the rights of the Little Rock Nine. The racial climate of the city was generally temperate, so Governor Faubus's last minute call to halt desegregation shocked everyone. The problem was compounded by the negative image the crisis created of the US across the globe. This is significant because as other nation had already abolished the segregation of education the United States was experience violent developments in making an equality-based environment for their citizens for public education.

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118. Christie Santoro

Sponsor: Amanda Simons

The Effects of Long-Term, Low Dose Resveratrol on Activation of the AMP Kinase in K562 Chronic Myeloid Leukemia Cells

Many cancer cells have an altered glucose metabolism where they generate their energy through anaerobic conditions, which is dependent on the amount of available glucose. AMP kinase plays a role in glucose uptake in cells through the activation of the GLUT-4 glucose transporter. AMPK is activated when the cell senses high levels of AMP, which indicate low stores of ATP. AMPK has also been previously shown to mediate autophagy. Autophagy is the degradation of cellular components by the lysosome during various conditions, such as cellular starvation. Resveratrol, a phytoalexin found in fruits activate enzymes that respond to conditions of starvation such as Sirtuin 1 and AMPK. However, in most previously conducted studies, resveratrol has been used in high concentrations that cannot be attained in vivo. In this study, we instead use long-term exposure of low, physiologically relevant, concentrations of resveratrol. Activation of the AMPK pathway with physiologically relevant conditions of resveratrol has the potential to induce autophagy of cancer cells when available glucose is limited.

119. Siobhan Senior

Sponsor: Niall Stephens

Negative Portrayal of Elderly in Advertising-It's Getting Old!

My research aims to discover how elderly people are depicted in television commercials. My hypothesis is that they are depicted as weak, clueless to new technology, and wanting to be young again. Each of these hypothesized representational patterns are understood as "negative" and "ageist." I will use Youtube to find at least 10 English-language television commercials in which elderly people play main roles. I will systematically analyze the commercials, keeping track of basic data (product advertised, number of characters in ad, presence of younger people, etc.). Additionally, I will conduct an in-depth qualitative analysis of each advertisement, identifying and describing details through which characters are represented in either "positive" (non-ageist) or "negative" (ageist) ways. I will attempt to rank the way elderly people are rated in each commercial in the sample on four difference scales of "ageism" – one scale for weakness/strength; one for technological proficiency; one for aspirations to be young; and one overall scale of "ageist representation." On the basis of this method I will determine whether or not my hypothesis is supported by my data. I will present my findings in a poster board presentation.

120. Rita Shnorhokian

Sponsor: Haewon Ju

Off to Europe Trend Report

The purpose of this project was to put together a Spring/Summer 2019 look book based on trend analysis and forecasting as a fashion guide. First, target market for the style suggestion was determined to understand the needs and taste of the target market. Next, by researching trends for women's fashion for Spring/Summer 2019 through analyzing runway collections, social media, trend reports, and market trends, I analyzed color, print, details, fabrication and styles. Then, I created looks for style suggestion for whom may travel three different travel destinations: Italy, Greece, and Paris. Summer accessories including bathing suits, shoes, and accessories were also analyzed and included in the style suggestions.

121. Hope Singas

Sponsor: Elaine Beilin

Gender Fluidity and Subversion in Shakespeare's Twelfth Night

I argue that cross-dressing by the character of Viola/Cesario introduces a layering of identities into the play that represent alternative gender identities and sexualities. In turn, these representations of alternative gender identity and sexuality, specifically in the form of gender non-conforming dress, language, and lesbian desire, subvert heteronormative classifications of sex and gender by presenting a non-binary identity that is neither male nor female. Nonetheless, even though the body of the play depicts this subversion, the play's close, specifically the pairing of male-female couples as well as Viola and Olivia's lack of response to their new husbands, demonstrates a restoration of heteronormative ideals, or specifically the recuperation of Viola and Olivia by Count Orsino, the chief representative of Illyria's patriarchal and heterosexual society. Orsino both opens and closes the play (aside from Feste's song) and this tying of ends serves as a symbol of Orsino's control over sex and gender in Illyrian society.

122. Sarah Sousa

Sponsor: Elaine Beilin

Maria's Genius and Malvolio's Misinterpretation: Wit and Revenge in Shakespeare's Twelfth Night

Shakespeare's use of wit, irony, and wordplay in Twelfth Night exposes the evolving definitions of power, revenge, and justice, while also critiquing the class system and importance of gender roles. Maria's intelligence and ability to use words control the lives in Olivia's household. As the revenger against Malvolio, she manipulates many other characters, and Shakespeare gives her the liberty of determining the course of the play. Maria's motivations to trick and make a fool of Malvolio stem from Malvolio's self-righteous attitude and his distaste for Maria, Sir Toby, and Feste. The humorous nature of the text foreshadows the result of Malvolio's fate. His imprisonment highlights the rigid class distinction between the ruling class and the "other."

123. Erica Suazo

Sponsor: Rebecca Shearman

Effectiveness of Information Pamphlets in Reducing No-Show Rates: The Importance of Patient Education

A major challenge that healthcare providers face today is maintaining a good management of patient care. This management involves various interactions with a patient regarding examination, diagnosis, and treatments. One reason for this is that many patients do not show up to their appointments (no-shows). In the optometry field, the patient no-show rate has been a concern especially with patients who have serious diseases or conditions, specifically glaucoma. The goal of this study was to test the hypothesis that educating patients more on glaucoma would decrease no-show rates. First, the no-show rate of scheduled visual field appointments were tracked for patients who have glaucoma or are at high risk for developing glaucoma from the years 2015-2017. Data was collected from the practice's medical records database. It was observed that the average no-show rate between the months of January through March was over 60% for each year. To test the hypothesis, an information pamphlet was provided to patients who were advised to come back for visual field/glaucoma testing. Pamphlets were distributed to patients between January 2018 and March 2018. After the 3-month treatment period, it was observed that the no-show rate decreased to 44% compared to the 60% that was observed in 2017. These results suggest that patients are more likely to keep up with their appointments when they have a better understanding on their condition and how it can progress if it is not treated accordingly. In order to improve patient compliance, healthcare providers must continuously emphasize the importance of showing up to scheduled appointments to their patients.

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124. Cameron Sughrue

Sponsor: Elaine Beilin

“I Do Fear the People”: The Plebeians in Shakespeare’s Julius Caesar

The problem of the plebeians in Shakespeare’s Julius Caesar lies in the two opposing factions of Roman society: the conspirators and Caesar. The conspirators’ concerns lie with themselves and the potential loss of power under Caesar, so they act to preserve their freedom. To the conspirators, the “people” of Rome are the patricians and they view the commoners as simple plebeians who must adhere to proscribed societal and economic roles. Caesar’s rousing of the plebeians, however, worries the ruling class as they see insubordination begin to rise because of the masses’ strong support of the demagogue, Caesar. The plebeians also want some modicum of power in a society where they are marginalized. Caesar makes these people feel important, and they seem to have a voice in this society that tries to keep them silent. Therefore, the plebeians are not simply going “whichever way the wind blows” with whom they support, but follow those who can relate to the masses on a rhetorical and personal level, and who offer promises (however empty these may be) to them, in a search for representation.

125. Geneva Sweeney

Sponsor: Bridgett Galvin

Fostering Youth: The Importance of Residential Treatment and Co-Placement of Siblings in Foster Care

The Department of Children and Families and the Department of Youth Services both work to promote the well-being and safety of children. The current research examines the importance of these departments, why residential treatment programs are important and beneficial for youth. Residential treatment programs offer specialized treatment and support and help promote health and positive relationship. Research also examines the effects on youth that are separated from their siblings in foster care. Siblings who are placed together experience fewer placements and have a greater likelihood of being returned home. Keywords: department of children and families, department of youth services, siblings in foster care

126. Samantha Sweeney

Sponsor: Bridgett Galvin

Early Intervention’s Effect on Children and Families

Early Intervention services are meant to aid children with developmental delays in keeping up with their peers. However, the effect of these services are not only measurable within the children, but their families as well. In children, early intervention has a positive effect on their social development through classroom interactions, learning through specialized reading and writing activities, sensory play, and more. For parents, this intervention can help them develop positive coaching skills, and can give them the resources they need to allow their children to thrive in the classroom and at home. It is vital in early intervention to investigate and accommodate all types of families across race and class. This information provides the context for the information presented in this poster about the internship site, Criterion Early Intervention.

127. Brianna Taylor, Jamie Thibault

Sponsor: Imran Islam

Determining if the temperature of water affects the dyeing of fabric

Background: The temperature of water can alter fabric in different ways based on its fiber content and how it was produced. Some garments have specific washing and drying instructions to reduce shrinkage, minimize pilling, or maintain luster and color. Objectives: To investigate the differences of how dyeing

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occurs in cotton fabric, in different temperatures of water from (1) boiling-100 degrees Celsius, (2) warm, (3) room temperature-20 degrees Celsius, (4) cold, and (5) freezing-0 degrees Celsius. Method: A mixed method of research will be used in this study: qualitative method (e.g., academic articles) to understand the chemical process and different methods of producing dyed cotton fabric and quantitative method (e.g., conducting an experiment and recording the results) to test how dyed cotton fabric reacts to different water temperatures. Expected Findings: The hotter the water, the faster the molecules of dye will move throughout the fabric, and the more dye will be able to transfer into the material. The cooler the water, the less consistent the coloring will be, likely causing a faded color. Conclusions and Implications: This study will determine the impact of different water temperatures on dyed cotton fabric. Both manufacturers and consumers will benefit from these findings by being able to better understand how resilient different dyeing methods on cotton are when exposed to water in various environments.

128. Mike Thomas

Sponsor: Joseph Adelman

Generations of Resistance: Understanding the Roles of Family in Southern Slave Culture During the Late Antebellum Period

The author's research and presentation seeks to explore the importance of familial ties within the Southern Antebellum enslaved community prior to the outbreak of the American Civil War, the ways in which this bond was strengthened, and the way these bonds were able to encourage and produce acts of slave resistance. Even though slave trading was an ever present threat during the Antebellum period that would invariably disrupt the lives of enslaved families all across the South, the role and larger purpose of the enslaved family unit has historically been diminished and regularly overlooked. There were a variety of methods in which enslaved laborers were able to participate in cohabitation and participate in long-standing monogamous relationships that resulted in children. The children, in turn, were taught valuable skills that helped them navigate the bonds of their enslavement. The author will cite oral history narratives compiled by the WPA (Works Progress Administration) during the 1930s as evidence that enslaved children/young adults coming of age during the late Antebellum period (1840-1860) were well aware of their familial circumstances and were not "socially dead" as some contemporary scholars of American slavery choose to argue. The skills taught to them by their parents, siblings, and elders allowed the enslaved to survive unforgiving plantation life, the Civil War, and life after emancipation.

129. Casie Thurber

Sponsor: Stephen Dinkelacker

The Influences of Roadways on Blanding's Turtles Survivorship and Population Dynamics

Blanding's turtles (*Emydoidea blandingii*) are state-endangered and a species of concern in several states. Many factors affect the survival and reproductive success of this species, with predation and human influences having some of the largest influences. Roadways in particular have the potential to alter population densities and structure of this species. A stage-structured population model was used to assess how populations are structured and change over time as well as to determine how roadways may alter structures and persistence. The implications of this study can be used to plan conservation strategies, such as modifications of urban planning and land use, to promote the continued survival of Blanding's turtles.

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130. Rebecca Tosti

Sponsor: Jon Huibregtse

Women in the Civil Rights Movement

The Civil Rights Movement of the 1950s and 1960s focused on gaining civil rights for African Americans. This poster questions whether the civil rights movement was gendered or not, considering that the women involved in the movement were not recognized in formal leadership positions. However, women were still an integral part of the movement, and this poster explores the degrees of awareness that women expressed about gender separation within the movement. An analysis of the effects of gender discrimination on the civil rights movement is included, and this project assesses the degree to which this affected the roles that were available to women.

131. Kate Vahey

Sponsor: Bridgett Galvin

An Intern's Experience in a Residential Care Facility

This paper explores numerous published articles that examine the effects of childhood maltreatment and childhood trauma (CT) on an individual's short-term and long-term development. Childhood trauma, also known as childhood maltreatment can take many different shapes and forms. All the articles examined sought to study an aspect of CT which included physical abuse, sexual abuse, emotional abuse, and/or neglect. The various articles also focused on different, but specific consequences of CT. Alvarez-Alonso et al. (2016) and Huang et al. (2011) investigated CT's association with substance abuse, while Hebert, Langevin and Oussaid (2018) looked at CT and behavioral problems in adolescents. Baudin et al. (2017) and Schalinski et al. (2017) researched the relationship between CT and psychosis, while Lum, Powell and Snow (2018) studied CT's impact on children's language and social skills. Lastly, Johnson (2017) and Dube et al. (2001) focused on suicide and the influence of CT.

132. Zae Valera

Sponsor: Bridgett Galvin

Center of Inclusive Excellence: The Overall Impact

This literature review serves as a context for presenting information on A Center of Inclusive Excellence in a higher education setting. Research suggests that Inclusive Centers have evolved over time, colleges benefit from having Inclusive Centers, and problems persist in Inclusive Centers. The site I participated in as an intern supports many of the findings presented in the research. Numerous individuals in the university report that the Center may be underutilized and may they may not truly understand the essence of the center. Through my experience in the Center of Inclusive Excellence I have found that it provides a meeting space for faculty and affinity groups, but also, numerous individuals come to the Center for comfort, believing the center is a safe space where they can be themselves. Within my experience, I found that the Director of the Center's role is very diverse. The Director at this center also engages in counseling with students because it appears that students feel at ease without outside pressures. This center mirrors what the literature suggests is the current state of affairs for Centers for Inclusive Excellence.

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133. Ali Waithe

Sponsor: Jon Huibregtse

"What about the Children": Media Representations and Legislative Impacts on Mixed Women from the 1920's to the Present

The most common question posed when black and white interracial couples discuss having kids is: "What about the children?" This question has been so normalized when it comes to mixed individuals but what are the historical elements have led to the normality of this statement? By evaluating several pieces of legislation and case law alongside the representation in media of mixed women in film and literature, it would appear that the messaging helped to develop a certain reputation and social perception of mixed woman in America. These representations depicted mixed individuals as emotionally tortured, violently confused about their personal identities, and constantly struggling to figure out to live with a mixed ethnicity. These image became the common idea for the viewing public and also effected the choices for mixed women who were able to pass as white. The goal of this poster is to establish the legal background and media stereotypes that created the strict identity narrative for mixed women going forward.

134. Kathy Wilmarth

Sponsor: Erika Schneider

Widening the Circle: Inclusivity in Contemporary Art History

"Because monetary value has been traditionally seen in established white-male artists, investors and collectors prize their work, which results in ever-higher prices. And because women artists and artists of color have generally had difficulty getting a foothold in the art market, their work continues to languish....Women artists, artists of color, and LGBTQ artists bump up against a "glass ceiling" in terms of monographs, solo shows, and museum acquisitions, and that depresses the perceived value of their work." Jeff Ignatius, "'Being Angry Is a Great Place to Start:' The Guerrilla Girls, January 18 at Augustana College," River Cities' Reader. January 5, 2017. <http://www.rcreader.com/art/guerrilla-girls-being-angry-is-a-great-place-to-start> Using this quote as a starting point, each student in ARTH 383: Contemporary Art History chose an artist to research and present to the class. Artists included work in a variety of media from painting and sculpture to installation and performance and represent different races, gender, and sexual orientation. This assignment seeks to correct inequalities in the contemporary art history survey class by allowing students to have a voice about whom they study and increase inclusivity in the discipline and the classroom.

135. Meron Woldemariam

Sponsor: Stephen Dinkelacker

Population Dynamics of Chicken Turtles (*Deirochelys reticularia*): Consequences of a Fall and Spring Breeding Season

Abstract The Chicken Turtle, *Deirochelys reticularia*, is a freshwater species found in many parts of the southern United States. This species is commonly found in small populations and are in decline in some areas. In contrast to other species, Chicken Turtles have two different breeding seasons (spring and fall). Although there is not much research into the evolution and benefits of this phenomena, it brings up the question as to how this affects population stability given that a fall breeding season could extend the vulnerable egg and hatchling stages of life. In this simulation study, vital rate data was gathered from the primary literature. I then constructed a stage-structured model and examined how an additional breeding season and the consequences of this season affected population stability and structure. Results from this analysis can be used to further develop conservation and management programs for the species.

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136. Suzanne Wright

Sponsor: Joseph Adelman

From Immigrant Aid Society to Republican Organization: The Hibernian Society's Evolution from 1790 to 1798

The Hibernian Society for the Relief of Emigrants from Ireland was an organization that performed important work for Philadelphia's Irish immigrant population during the late eighteenth century. This project examines how the Hibernian Society evolved from 1790 to 1798 as a result of Irish immigration, Mathew Carey's influence, partisan politics, and the public perception of Irishmen. Through an analysis of immigrants' petitions to the society, newspaper records, and relevant work by other historians on these topics, this project argues that the organization became increasingly Republican and concerned with the character and citizenship potential of the people receiving its assistance over time.

137. Suzanne Wright

Sponsor: Jon Huibregtse

"Coming Out" for Civil Rights: Stonewall and 1960s Public Protests

Over the course of several days after the June 28, 1969 raid on the Stonewall Inn, members of the Greenwich Village LGBTQ+ community engaged in protests for "gay power" and freedom. This project examines how the Stonewall riots occurred within the context of other civil rights movements during the mid-to-late 1960s. Because various groups of the LGBTQ+ community protested for gay rights previous to the Stonewall riots in 1969, it was not the beginning of the gay rights movement. Instead, through an analysis of newspaper coverage of the event and a comparison to other civil rights protests at the time, this project argues that Stonewall was significant for being the first large protest for gay rights to catch national attention, which allowed existing activism efforts to grow and spread more broadly across the county.

138. Kylie Zonghetti

Sponsor: Joseph Adelman

Secrets, Secrets Are No Fun Unless You Share With Everyone: The Pentagon Papers and Public Opinion about Vietnam

The Vietnam War faced a backlash from the American people due to television networks broadcasting and following the events occurring in the Vietnam War; allowing people back home to see the gruesome realities of war. As the war continued with no progression for America; Americans started to become outraged. Americans started to voice their disapproval of the war because of the lives lost and the cost of the war. However, the government tried to conceal information from the public, which Daniel Ellsberg discovered and leaked to the New York Times, which became known as the Pentagon Papers. Thus, this project argues that the Pentagon Papers changed public opinion because people were upset that the government was withholding information, but the public was also upset with the New York Times for abusing the First Amendment.

139. Kylie Zonghetti

Sponsor: Jon Huibregtse

Between Two Worlds: The Difficulties Japanese-American Children Faced In and Out Of Internment Camps

The purpose of this project is to demonstrate how internment camps furthered impacted the development of Japanese-American children, along with the racism, prejudice, and discrimination from fellow Americans after the Pearl Harbor attack. The scholarly conversation consists of Japanese-Americans

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treatments in internment camps, the role the military played, and the role the President played. The conversation also includes the topic of gender and the different experiences they faced. However, the scholarly discussion lacks how the internment camps and the mistreatments from fellow Americans, impacted the growing of Japanese-American children. Thus, this project argues that Japanese-American children struggled with their identities because of the mistreatments they faced in and out of the internment camps. Meaning, the different discrimination and prejudice Japanese-American children faced by their Japanese communities and their American communities, and how this shaped Japanese-American children's perspectives while growing up.

177. Iyla Driggs

Sponsor: Niall Stephens

Effects of the Racial Hate Crimes on student's College Experiences

After six incidents of racially offensive graffiti found on doors of dorms of African American students at Framingham State University, no one has been held accountable. This study aims to explore how this situation has affected the experience of students of color on campus, and to assess differences between how the situation is perceived by these students on the one hand, and by their white peers on the other. I am interested in how this situation has affected African American students and their perceptions of (1) their own safety, (2) sense of belonging and identification with the wider campus community, and (3) the faculty and administration of the University. I will also compare the attitudes and concerns of African American students with the attitudes of white students. I will use structured interviews and survey questionnaires to ask both groups of students about their perceptions and experiences in connection with the hate crimes. These instruments will allow me to compare the two groups, and possibly to identify opportunities to improve the climate on campus. Interviews and surveys will be complemented with ethnographic observation of African American student life at Framingham State. My poster will describe the situation affected by African American students, present my findings, and contextualize my findings with information about the demographics of the student body and history of the University.

GRADUATE ABSTRACTS

140. Susan Allen, Kathy Johnson *Sponsor: Lisa Thomas*

Barriers Nurse Educators Encounter in Writing Quality Test Items

Abstract Aim: To determine what barriers nurse educators encounter in the formulation of quality multiple-choice test questions. **Background:** Multiple choice questions are a common method of evaluation in nursing education. Despite the availability of evidence-based practice guidelines, significant item writing flaws prevail on both test bank and educator developed test items. **Method:** An integrative review was conducted utilizing the Whittemore and Knafl framework, resulting in 12 articles which were evaluated for quality and themes. **Results:** Lack of educator knowledge, resources, mentoring and support, and evidence-based practice standards emerged as four areas where barriers are occurring. **Conclusion:** Nurse educators have the power to impact student success through the use of high-quality test items. Results support educator self-evaluation of learning needs in item writing and formal mentorship program for new educators. School policies for item formation should include alignment with course outcomes and item analysis.

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141. Patricia Ballard

Sponsor: Nancy Bittner

The role of the pivot nurse in the emergency department to improve throughput

Abstract The purpose of this integrative review is to examine the role of the pivot nurse and the effect on throughput in the emergency department. Throughput is a metric that is evaluated by the Centers for Medicare and Medicaid Services (CMS) and impacts reimbursement, patient satisfaction, and patient outcomes. There were limited studies related to the role of the pivot nurse in the emergency department however, there was research involving the role of oncology nursing who use a pivot nurse style when treating patients. The search range went from 2007 to 2017 and then expanded to 2002 due to lack of relevant information. After inclusion and exclusion criteria were met, 17 studies were found but only 7 articles met the quality criteria using the Payne-Hawker tool. The limited amount of data on this topic forced the inclusion of other countries. The majority of research studies were based on the experience and education of the triage nurse. Competencies and training were important in this role. It was found that the pivot nurse was useful in improved throughput, patient satisfaction, and patient outcomes. The results, which were found in the studies, revealed that the pivot nurse was useful in eliminating patients who left without being seen (LWBS) and improved the times of door-to-doctor throughput times. **Keywords:** throughput and metric, patient flow, emergency department, triage, and pivot nurse.

142. Bridgid Bartkiewicz

Sponsor: Nancy Bittner

Integrative Review: Safe Interunit Handoff

Inadequate handoff communication is a problem that has the potential to bring harm to patients. The Joint Commission identified high-quality handoff communication as a standard in 2010 (The Joint Commission, 2017). The study design is an integrative review regarding patient handoff between clinicians in different hospital units and includes eleven studies. The studies selected for inclusion address interunit unit handoff across disciplines, including emergency room to inpatient transitions of care. Three concepts of handoffs were identified: factors that impact; assessment of; and interventions to improve. Studies identified that standardized handoff procedures are not practiced at many institutions and education in conducting effective handoff is generally lacking. Many clinicians also identified near misses due to inadequate handoff. Studies recognized that while more is being done to assess handoff processes and competencies of clinicians, there is room for improvement. Implementation of standardized handoffs has led to a decrease in near misses and adverse events, and clinicians report greater satisfaction with standardized communication tools. Adequate handoff communication is critical to a culture of safety at hospitals. Hospitals should learn from other hospitals who have changed handoff practices which result in safe and high-quality patient care. Nursing leaders need to look to their nurses for input into best interunit handoff practices that meet the specialized needs of their institutions. Further research is needed in nursing specific interunit handoff. **Keywords:** interunit, handoff, transition of care, nursing

143. Theresa Beauregard

Sponsor: Nancy Bittner

Effective Interventions to Avoid the Use of Restraints and Seclusion in the Psychiatric Inpatient Setting: An Integrative Review

This integrative review synthesized articles which examined the most effective ways to avoid restraint and seclusion in the inpatient psychiatric setting. Empirical research has shown that the use of restraint and seclusion not only re-traumatizes patients but has been and continues to be related to over 1,000 deaths in the United States annually. It is therefore, essential to find and utilize evidence-based interventions to decrease and possibly eliminate their use in the psychiatric setting. The literature search involved

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research articles on restraint and seclusion reduction published between 2007 and 2017, that were conducted on inpatient psychiatric units. The databases used were: Cumulative Index of Nursing and Allied Health Literature (CINHAL), Psych Info, Credo, Medline, and Google Scholar. The factors that influence restraint and seclusion reduction were divided into six areas of analysis: empathetic staff interaction/culture of safety, sensory interventions, regulatory protocols, assessment tools, cognitive behavior therapy, and the Six Core Strategies© (6CS). There is clear evidence that restraint and seclusion use can be reduced significantly by implementing the Six Core Strategies© based on trauma informed care internationally. The success of this model is contingent on a comprehensive commitment by staff at all levels of an organization. Nurse leaders and educators may serve as catalyst for this change by supporting staff with clear direction through ongoing education, policies based on evidence-based care, and a dedication to empathetic communication with patients. Keywords: restraint and seclusion, reduction, nursing, empathy

144. Shanzah Chaudhry

Sponsor: Amanda Simons

The Combined Effects of Low Concentration and long-term Exposure to Resveratrol and Etoposides on K562 Cells, in vitro

Resveratrol is a chemical compound found in grapes. Resveratrol is under investigation as a possible cancer drug due to its properties as an antioxidant and due to its ability to induce apoptosis. Previously, most studies using resveratrol with cancer cells have used high doses of resveratrol for a short period of time. However, resveratrol is quickly metabolized in vivo and cannot exceed a certain concentration within the bloodstream. Therefore, in this study, K562 cells (chronic myeloid leukemia cells), are grown in a low concentration resveratrol for a long-term period of time. Cells exposed to resveratrol were then treated with varying concentrations of etoposide, a traditional chemotherapy drug, to investigate whether resveratrol could sensitize cancer cells to chemotherapy.

145. Allison Conlon, Kathryn Machado

Sponsor: Lisa Thomas

Relationship Between Job Satisfaction and Retention in Nurse Residency Programs

Objective: This integrative review aims to explore the relationship between job satisfaction and retention of new graduate nurses in nurse residency programs. Background: New graduate nurses often leave their job because they feel overwhelmed. Nurse residencies retain these nurses by providing support and mentorship. Methodology: An integrative review was conducted using CINAHL, Medline, and ERIC. The inclusion criteria were studies about post-baccalaureate nurse residency programs, written in English, and published in a peer-reviewed nursing research journal. 10 studies met these criteria and were selected for full review. Findings: Nurses report common reasons for staying in their place of employment including support from mentors in the nurse residency and increased confidence. Many of the residency programs reported high retention and job satisfaction. Conclusion: High job satisfaction is related to high retention rates amongst new graduate nurses in nurse residency programs. Hospitals should implement nurse residency programs because they are effective.

146. Kendra Connolly, Joanna Krawiecki

Sponsor: Lisa Thomas

Enhancing Student Learning Through the Dedicated Education Unit Clinical Learning Model

Background: The Dedicated Education Unit (DEU) is an academic-practice partnership model that has emerged as a collaborative approach to clinical teaching and learning in nursing education. The DEU model serves to bridge the gap between theory and practice as well as address various concerns

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including nursing faculty shortages, lack of clinical sites, and the quality of nursing students' experiences. Objective: The purpose of this integrative review was to determine how the DEU model enhanced the clinical learning experiences of undergraduate nursing students. Methods: Six electronic databases were searched for articles published between 2007 and 2017. Hand searches of nursing journals and ancestry searches of articles' reference lists were also conducted. Search terms included Dedicated Education Unit, DEU, clinical competence, clinical learning environment, and enhancing clinical learning. The updated integrative review framework by Whittemore and Knafl was utilized to conduct this review. Each article was assessed using the Hawker, Payne, Kerr, Hardey, and Powell critical appraisal tool. Results: The search resulted in 10 articles that met criteria for inclusion. The findings showed that the DEU model provided students with quality clinical experiences. Based upon patterns found during data synthesis, four overarching themes of enhanced student learning emerged: inclusion and acceptance, personalization of experience, climate for student success, and role development. Conclusions: This review offers information on how the implementation of the DEU model can enhance the quality of students' learning experiences. The analysis of the findings and related recommendations would be beneficial to nursing institutions and faculty planning to adopt the DEU concept. However, more objective, comparative, and longitudinal research is needed to further evaluate the efficiency of this innovative model of clinical education.

147. Jane Crone

Sponsor: Nancy Bittner

Promoting Person Centered Care for Patients with Dementia

Over 7 million new cases of dementia are diagnosed each year, with the projection of 68 million people by 2030. The purpose of this review is to identify strategies leaders may implement to promote person-centered care in patients with dementia in an acute-care setting. Caring for aggressive patients can be emotionally and physically exhausting for staff. Person-centered care is a concept proven to improve patient outcomes. 15 English language, peer reviewed articles focused on motivating staff, patient-centered care, dementia, or a combination of those, were thoroughly analyzed and synthesized using the Hawker tool. Sample sizes ranged from 24-289, with exclusion criteria being home care settings or family as caregivers. Several instruments of measurements were used, with multiple studies implementing the same tools. Two major categories of motivating staff to provide person-centered care emerged: Staff education and staff attitudes. Leadership, training, and models of care, are components of education that became evident. Findings suggest that providing person-centered decreases agitation, decreases the use of restraints, and decreases the amount of prescribed antipsychotics. In conclusion, person-centered care in patients with dementia increases better patient outcomes and is essential for providing quality care.

148. Dianne Croteau

Sponsor: Lisa Thomas

Teaching Nursing Students Empathetic Communication Through Simulation: An Integrative Review

Empathy serves as the core of exceptional nursing care as well as the foundation for positive nurse-patient relationships. The development of empathetic communication skills are critical for nursing students as these skills directly contribute to patient satisfaction and improved health outcomes. Nurse educators are challenged with attempting to foster the establishment of empathy within students. Simulation experiences that focus on empathetic communication hold promise for bridging gaps in the preparation of nursing students. The purpose of this integrative review is to examine the best evidence leading to successful outcomes when teaching empathetic communication to nursing students through virtual simulation experiences. Electronic databases were searched for peer-reviewed publications between 2010-2017. Search terms included undergraduate nursing students, empathy, empathetic

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communication, teaching empathy, simulation, caring, and nursing education. Each article was evaluated for inclusion criteria. Remaining studies were subsequently appraised with the Johns Hopkins Nursing Evidence-Based Practice Appendix E: Research Evidence Appraisal Tool to analyze the quality and rigor of the research. The search resulted in the inclusion of nine articles. The literature predominantly linked an increase in empathetic displays/behaviors of students after exposure to a virtual-simulated training experience. The results were grouped into three themes: students' perception of virtual empathy training, faculty perception of empathy training through simulation, and the effectiveness of empathy training through simulation. Implications for nurse educators conclude that computer-based social simulation is less resource intensive and provides simultaneous training for larger groups of students while eliminating excessive equipment costs, need for space, and extensive faculty training hours. This review provides information relevant to the significance of implementing virtual simulation experiences in nursing education programs in order to enhance the development of empathy among undergraduate nursing students.

149. Brian Cyr

Sponsor: Nancy Bittner

Strategies and Interventions for Nurse Leaders to Address Moral Distress

The purpose of this integrative review was to critically review research about what strategies or interventions are effective for nurse leaders to address moral distress among nurses. Systematic review and critical appraisal of 24 research articles obtained from the Cumulative Index of Nursing and Allied Health Literature (CINAHL) and PubMed databases between September and November, 2017 was performed. The evaluated studies were conducted in a variety of care settings and primarily involved exclusively nurses, though seven studies included other health care professions. The Moral Distress Scale (MDS) and MDS-Revised (MDS-R) were the most commonly used tools to measure the effect of interventions on moral distress, but due to the length of these tools were frequently modified without testing of reliability or validity. Strategies to address moral distress require multi-faceted approaches at all levels of nursing leadership, but especially at the unit level. Interventions that include education of individual nurses at all levels of practice, formal structures for support and debriefing, and organizational approaches to promote strong and healthy ethical climates by leveraging the role of nurse leaders all demonstrate promise in eliminating or at least mitigating some of the negative effects of moral distress for nurses. However, more rigorous quantitative research is needed to evaluate the effectiveness of specific interventions to address moral distress. Development of simpler and shorter tools to measure moral distress would facilitate progress in this endeavor. Keywords: moral distress, nursing, intervention, systematic review

150. Janene Devlin

Sponsor: Nancy Bittner

A Review of the Perceived Facilitators Supporting Frail Elders Remaining in Their Homes

A Review of the Perceived Facilitators Supporting Frail Elders Remaining in Their Homes Re-hospitalizations and nursing home placement were found to be costly and not in line with most chronically ill, frail elders' goals for care. Episodic emergent care does not provide the care transitions needed by the frail elder population resulting in re-hospitalization and nursing home placement. The purpose of this review was to identify and review perceived facilitators that allow frail elders with chronic disease to remain in their homes and avoid re-hospitalization or nursing home placement. The review was conducted through an integrative review of nine studies. The studies examined three community care models, The After-Discharge Management of Low Income Frail Elderly (AD-LIFE), The Promoting Effective Advance Care for Elders (PEACE), and The Program of All-Inclusive Care for the Elderly (PACE). In this review, three themes were revealed. The first theme identified was the effectiveness of

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interdisciplinary care teams in the management of patients who are frail with multiple chronic illnesses, the second was the effects of program design and team make-up, and the third was the effects of team performance. A need for future studies was evident. This information will be important to consider when designing future studies, health care policies and staff education for future community-based programs caring for the chronically ill, frail elder population.

151. Cinthia DosSantos Mesquita, Kathleen Hart *Sponsor: Lisa Thomas*

Ensuring Academic Success for Culturally and Linguistically Diverse Students

Aim: The purpose of this integrative review was to identify the most beneficial teaching strategies to ensure academic success for culturally and linguistically diverse (CALD) students. **Background:** Diversity amongst nursing students has been steadily increasing in the last few years and nursing faculty are challenged to meet the unique needs and challenges of the CALD students in order to promote successful recruitment and retention. **Method:** Using the Whittemore and Knalf (2005) integrative review framework, a search of eight databases was conducted which yielded 16 studies for analysis. **Results:** A thematic synthesis approach was undertaken to identify key findings in the literature. Three themes emerged: creating an inclusive environment, a need for structured cultural competent training for nursing faculty, and student attitudes towards learning. **Conclusion:** The implications for practice include the application of multi-modal strategies to support CALD nursing students' success to bridge the gap in an underrepresented diverse workforce.

152. Rachael Duffy *Sponsor: Steven Cok*

Quantifying the effect of phytochemicals on Sirtuin-1 gene expression in *C. elegans* using a Green Fluorescent Protein (GFP) reporter gene

Type II Diabetes Mellitus is a metabolic disorder characterized by the inability to regulate blood sugar, resulting in high blood glucose. This disease has become an epidemic over recent years, and factors affecting the onset of diabetes are not fully understood. Studies indicate that phytochemicals isolated from plants may play a role in preventing the advancement of prediabetes to the diabetic state. Sirtuin-1 is a gene whose expression is linked to increased inflammation, control of energy homeostasis, and other effects on the cell cycle. It is known that there is a characteristic inflammation associated with the onset of diabetes, and that the Sirtuin-1 gene could potentially be regulated in a way that prevents this inflammatory response. One potential mechanism whereby phytochemicals prevent progression of diabetes is through regulation of Sirtuin-1 expression. In order to test this theory, strains of *C. elegans* containing the promoter of the Sirtuin-1 gene fused to GFP were treated with increasing concentrations of phytochemical extracts from palm fruit juice and measured for changes in fluorescence. Changes in the level of fluorescence are indicative of changes in the expression of the Sirtuin-1 gene.

153. Caroline Ferzoco, Lisa Gillis *Sponsor: Jean Thomas*

Student's Perceptions of Concept Mapping in Nursing Education

Purpose: The aim of this integrative review is to explore nursing student's perceptions on the use of concept mapping to enhance their nursing knowledge. **Design:** Integrative review. **Data Sources:** Cumulative Index to Nursing and Allied Health (CINHAL), ProQuest and Science Direct were searched for publications between 2005-2018. Search terms included concept mapping, mind mapping, nursing education, student perspective, nursing student and critical thinking. **Methodology:** Publications were evaluated for use in the integrative review using the following inclusion criteria: (a) concept mapping in

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nursing education, (b) enhancing student's nursing knowledge, (c) published between 2005-2018, (d) peer-reviewed nursing journal articles, (e) published in English. Each chosen article was critiqued using the critical appraisal tool developed by Hawker, Payne, Kerr, Hardey and Powell (2002). Findings: The search resulted in the inclusion of nine articles. Several positive effects on the student's learning were found such as fostering a holistic perspective in nursing, enhancing student reflection, and increasing student's capability to link theory to practice. Students preferred early introduction of concept mapping into the curriculum and requested that more concrete instruction and feedback be provided on the assignment. Conclusions: Student's identified that concept mapping was often burdensome in adding to a heavy workload but that it was a worthwhile tool in assisting them with enhancing their nursing knowledge.

154. Kay-Lourde Gelin

Sponsor: Lisa Thomas

Improving Critical Thinking Skills in ESL Nursing Students

Nurse educators have for goal to enhance the critical thinking skills of their students. However, numerous studies have found that minority nursing students have the highest attrition rate. There is a link between critical thinking skills of nursing students speaking English as a Second Language (ESL) and their ability to succeed in their NCLEX exam. The purpose of this integrative review is to identify the best teaching strategies to improve critical thinking skills in ESL nursing students. The Whittemore and Knaf's framework was used to enhance the rigor of the review, and Hawker, Payne, Kerr, Hardey and Powell tools were utilized to appraising the quality of the research. The review found that strategies to improve critical thinking skills in ESL nursing students were to increase faculty cultural competence, the presence of ESL minority, peer and faculty support, to address the learning preference of the ESL nursing students, and to discourage the dominant teaching style of the educators. Recommendations include conducting critical thinking research with ESL nursing students, employing ESL nurse educators and enrolling a sufficient number of ESL students in the nursing programs, mandating continuing education of nurse educators in cultural competence and teaching cultural competence in graduate nursing programs.

155. Jennifer Gregoire

Sponsor: Nancy Bittner

Nurse Manager Burnout

The objective of this integrative review is to thoroughly review and analyze empirical research regarding nurse manager burnout. Synthesis of the results was conducted with the goal of a greater understanding of nurse manager burnout. The background and guiding research includes empirical research illustrating data that the nurse manager role is critical to organizational success, patient outcomes, and subordinate job satisfaction. This data highlights the need for a greater understanding of burnout experienced by nurses inhabiting this role. Methods of research utilized were; an integrative literature search to retrieve articles and studies related to nurse manager burnout, intended turnover of current nurse managers, and the importance of the role. CINAHL and Google Scholar were the utilized databases. Retrieved articles were published from January 2004 to December of 2017. The results section highlights factors contributing to nurse manager burnout these factors were divided into three major themes; organizational factors, role factors, and individual factors. Organizational factors range from a culture of safety to flexible scheduling alternatives. Role factors include number of staff supervised and workload. Lastly individual factors consist of responses to stress and individual coping strategies. In conclusion, identified concerns related to orientation to the nurse manager role, span of control, organizational support, and individual responses to the stressors associated with this role illuminate the need for nursing leadership to examine changes surrounding the role and responsibilities of the nurse manager. Key words: burnout, organizational factors, role factors, individual factors, coping strategies, span of control, and support.

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156. Nicole Howley

Sponsor: Nancy Bittner

Workload and Burnout in the Emergency Room: A Review of Literature

Aim: To critically review research on the subject of nurses' burnout, or burnout phenomena in nurses, including causative factors, and prevention strategies. **Background:** Burnout is a significant problem in the emergency department (ED) with nurses' workload being a contributing factor. Leaders that foster an empowering environment, encourage communication, and allow for contributions from staff have decreased burnout and improved patient outcomes. **Evaluation:** An integrative literature search identified sixteen articles related to burnout and workload within the emergency room published in the years 2010–2017 in the databases of the Cumulative Index for Nursing and Allied Health Literature (CINAHL) and PubMed. **Key Issues:** The emerging concepts were workload, communication, and empowerment. Workload was a factor impacting the prevalence of burnout in nurses. Leaders that promoted discussion and fostered an environment where staff contributed, despite higher workloads, had less burnout. Nurses who felt empowered, joined committees, voiced concerns, and made improvements; they also had less burnout despite a heavy workload. **Conclusions:** Burnout is a risk in emergency nurses that arises from its chaotic and stressful environment. Nurse leaders who fostered feelings of empowerment, who had an open style of communication, and who led nurses who contributed to the workplace were less likely to experience burnout. **Implications for nurse leaders:** Nursing leadership is pivotal in promoting therapeutic communication and encouraging nurses to feel that they are contributing to the workplace. Nurses who feel empowered and who make decisions that lead to change are less likely to burn out. **Keywords:** burnout, workload, emergency room, staffing

157. Joseph Karbowski

Sponsor: Nancy Bittner

Factors Influencing Nurse Leadership in the Educational Setting

The role of the school nurse has expanded since its inception to meet the needs of changing populations, as well as modern school health challenges. Limited resources in schools to fulfill the educational mission, require all levels of administration to demonstrate their value. The primary objective of this review is to explore the factors influencing the integration of school nurses into educational leadership teams. This integrative review explores both formal and informal aspects of leadership in nursing within the school setting. Through September and October of 2017, the investigator searched the Cumulative Index to Nursing and Allied Health Literature and The Educational Resources Information Center databases with the date limits of 2004 – present. The references of articles were also reviewed. Furthermore, the Johns Hopkins nursing evidence-based practice appraisal tool was utilized in assessing study quality. Articles reporting qualitative, quantitative, or observational data relating to aspects of nursing leadership in school settings were included. Nine articles met the inclusion criteria of being peer-reviewed English language research papers that reported on aspects of nurse leadership within educational settings. Germane findings of this study show that the organizational structure of school systems impedes the nurse's success of easily integrating themselves into the educational leadership structure. However, by applying their skill sets and knowledge related to cultural competencies, school nurses can work towards attaining leadership positions by connecting themselves to the larger educational mission. **Keywords:** school health nurse, leadership, nurse leadership

158. Nancy Kelly

Sponsor: Lisa Thomas

Methods of Evaluating Simulation for Testing in Nursing Education

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Background: A multitude of factors, including increasing numbers of applicants and shortages of clinical placement sites, suggest a need for a shift in nursing education. Simulation offers a way to alleviate these challenges if a standardized method of evaluation is integrated into practice. Method: An integrative review design was used to examine current methods nursing faculty are using to evaluate and test students during simulation. Results: Previously developed evaluation tool suggest the ability to reliability evaluate students during simulation. Conclusions: Simulation as an evaluation method has the potential to revolutionize nursing education. While further research is needed, there are valid and reliable tools that can be adapted into current practice.

159. Kathryn Kirkland

Sponsor: Lisa Thomas

Effective Teaching Strategies for End of Life Care Education

Background: Nurses face the difficult task of providing care to patients near and at their deaths in a growing capacity. In order to be prepared to provide competent care pre-licensure students require sufficient education. The topic of end of life care (EoLC) is a critical component of pre-licensure nursing education that is often neglected in curriculum despite being essential to ensure improved patient outcomes. Objective: This integrative review examined various teaching strategies utilized to teach EoLC to pre-licensure nursing students in order to determine the most effective teaching approach. Methods: 12 scholarly articles were critically appraised using a scoring tool to assess the quality and strength of the research. Selected articles were then reviewed and assessed for themes based on teaching strategies in relation to EoLC education. An analysis of teaching strategies used in the selected studies was completed to assess effectiveness. Findings: Two identified teaching strategies, simulation and didactic teaching both were found to improve students' attitudes regarding EoLC and effective in the facilitation learning new skills and knowledge. Further research is necessary to determine which teaching strategies are most effective due to the limited comparison of individual teaching strategies.

160. Rose LaPlante

Sponsor: Nancy Bittner

Magnet® Justification in the Research

Receiving the designation of Magnet® is seen as the epitome of nursing excellence and care. This integrative review of the literature aims to determine if attaining Magnet® designation impacts patient outcomes at these institutions. Journals and databases used include Google Scholar and the Cochrane Database. The focus was on articles that directly correlated Magnet® acquisition to improved patient outcomes and improved nursing care. Using different search terms the selection was narrowed to twelve articles, from within the past five years. Three major themes arose when reviewing articles relating Magnet® to patient outcomes: patients, nurses, and hospitals. All three of these themes reflect back on patient outcomes. Overall, it is evident that Magnet® positively affects patient care and outcomes as well as nursing care provided. Nurse education levels were improved in Magnet® hospitals, and hospital standing was improved in national rankings like US News. Magnet® designation is a positive accreditation for patients, nurses, and hospitals. Magnet® provides improved patient outcomes, improved nurse staffing levels and retention, and better ratings for hospitals. Research shows that many small variables, from infection rates, to pressure score rates, to nursing education, to US News status, are positively affected by Magnet® designation. Magnet® is clearly something that major hospitals should strive for and consider with this positive data. Search terms: Magnet®, patient outcomes, patient satisfaction, hospital efficiency and safety

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161. Caroline Laverty

Sponsor: Lisa Thomas

Faculty Interventions to Reduce Nursing Student Stress

Stress is described as a phenomenon that is multifaceted affecting physiological, psychological, sociobehavioral, and spiritual well-being. Extreme stress can increase burnout and negatively affect health and well-being, learning, and performance. The stress that nursing students undergo impedes learning and functioning and carries over into practice as newly graduated nurses, affecting patient care. This integrative review, conducted between September and December of 2017, analyzes the available literature on the subject in order to synthesize the common findings that discuss effective faculty interventions to reduce nursing student stress to better prepare nursing faculty with the background necessary to help reduce student stress. Search terms included nurs* student*, undergrad*, stress, and reduc*. After application of all inclusion and exclusion criteria, eight studies have been included. The findings that delineate interventions effective at reducing nursing student stress include various forms of structured programming, self-directed activities, and alternative therapies. It would be beneficial for nursing programs to have a policy in place that discusses guidelines for the implementation of interventions aimed at lowering student stress embedded in the curriculum so that faculty can have a clear and decisive way to tackle the issue of student stress.

162. Pamela Lee

Sponsor: Nancy Bittner

Healthy Work Environment

Healthy work environment (HWE) has received heightened attention over the last decade. It has been related to greater patient safety, increased nursing retention, and higher patient and nursing satisfaction. Despite ongoing efforts to improve HWE, there is little known about the significance of interventions to advance HWE. The aim of this study was to systematically review the literature on leadership interventions to create and sustain a healthy work environment. An online inquiry of databases including CINAHL, Ovid, and Google Scholar was conducted. Peer-reviewed journal articles, quantitative and qualitative studies, and years encompassing 2007-2017 were required for inclusion. Interventions that did not support creating and supporting a healthy work environment were not included. The studies were assessed for strength using the Hawker & Payne nine-point quality appraisal tool. The outcomes of the studies including HWE interventions were examined. Over 400 titles and abstracts were screened. A total of fourteen quantitative and one qualitative study met inclusion criteria. In total, two major themes of authentic leadership and structural empowerment were reported in the included studies. The studies also identified eight sub-themes related to communication, collaboration, engagement, retention, empowerment, shared governance, and professional practice environment. The most effective intervention at improving HWE appears to be authentic leadership. A combination of authentic leadership style and American Association of Critical Care Nurse (AACN) standards were found to contribute to the creation of a healthy work environment. This review provides a framework for future direction of research towards authentic leadership cultivation and development. Keywords: nursing, leadership, healthy work environment

163. Molly Lyttle

Sponsor: Nancy Bittner

Effective Leadership Strategies to Promote Nursing Specialty Certification

Nursing specialty certification has been demonstrated through research to benefit patients, nurses, and health care organizations. Despite its proven value, the number of certified nurses remains low. The purpose of this integrative review is to examine what nurses value about certification, and what they

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perceive as barriers to achieving certification. This valuable information will shed light on how nursing leadership can better support nurses to pursue credentialing within their specialty. Eleven research articles extracted through a rigorous database search, and evaluated with an appraisal tool, were used in this integrative review. Information was extrapolated to formulate strategies for nursing leadership to better understand what drives nurses towards, and away from, specialty certification. Results were categorized by: intrinsic values, extrinsic values, and barriers. Prevailing values to pursuing certification include: increased sense of pride and accomplishment, increased knowledge and skill, increased marketability, and recognition from peers. Frequently identified barriers identified by nurses include: cost, fear of failure, and lack of time and resources to prepare. Identification of the values and barriers that nurses perceive in relation to specialty certification provides nursing leadership with important tools to effectively support nurses in this important endeavor. Nursing leadership may better support nurses in the process of certification by advocating for reimbursement, establishing formal recognition practices for nurses who earn certification, promoting the value of certification for patients, peers, and healthcare organizations, and providing opportunities to prepare for the exam. The many benefits to certification can then be realized by the nursing staff, organization, and most importantly, the patient.

164. Brian MacDonald

Sponsor: Nancy Bittner

Strategies to Improve Clinical Alarm Safety in Acute Care Settings

Improving clinical alarm safety has been a Joint Commission National Patient Safety Goal (NPSG) for over 5 years. The current NPSG requires healthcare leaders to identify clinical alarm problems, implement clinical alarm solutions, and educate staff on clinical alarm safety. Nurses are integral in the management of clinical alarms and the promotion of patient safety. For this reason, an integrative review was conducted to analyze published research to identify which strategies nurse leaders should consider to improve clinical alarm safety. A comprehensive search of Ovid, Cochrane's Library, and the Cumulative Index to Nursing and Allied Health Literature was conducted. The search was limited to English text with a publication date between November 1, 2007 and October 1, 2017. Search results were recorded according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines. Seventeen research studies from 147 records were included for synthesis. The findings support the use of a cross-functional team to manage clinical alarms. Furthermore, the research supports diligent preventative maintenance practices, bundled alarm customization, and educational initiatives to reduce the number of false or clinically insignificant alarms to improve clinical alarm safety. More quantitative research is necessary to determine which specific interventions actually reduce false or clinically insignificant alarms, the effect altered alarm parameters have on patient outcomes, and the effect new technological solutions will have on clinical alarm specificity and sensitivity. Key words: alarms, alarm fatigue, alarm management, clinical alarms, medical devices, alarm safety, nuisance alarms, leadership, change, patient safety, and hospital

165. Wendy Moan

Sponsor: Nancy Bittner

Nurses' Perceptions of Their Professional Practice Related to Magnet® Designation: An Integrative Review

Magnet® designation, from the American Nurses Credentialing Center, is a sought-after honor of healthcare institutions world-wide to demonstrate nursing excellence. This integrative review reports on the current state of nursing literature on what the perceptions of nurses are of their professional practice in Magnet® designated institutions compared to non-Magnet® institutions. Studies included were from peer-reviewed journals published before 2000, in the English language, full-text, and published nationally. Excluded literature included unpublished studies, grey literature, tapes and electronic media. The total

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number of included studies in this integrative review is 18. The participants in the included studies were nurses working in acute care settings. The sample sizes ranged from 115 - 272,783 nurses in the quantitative studies, and the qualitative studies had 15, 63, and 58 subjects (this includes the mixed-method design study). The results of the review show that nurses employed at Magnet® designated institutions perceive a healthy work environment or a very healthy work environment, collaborate with other members of the healthcare team, perceive autonomy in their practice, and recognize their leadership as transformational more often than non-Magnet® facilities. The conclusion that can be drawn from the review is that nurses perceive a more positive working environment in these aspects of their professional practice when compared to their non-Magnet® designated counterparts. The implications for nursing practice that can be drawn from the study are crucial to nursing leaders when determining what interventions would be beneficial to their staff when considering applying for Magnet® designation.

Keywords: nurse, Magnet®, perception(s), practice, opinion, view, attitude

166. Susan Murphy, Laureen Wagner

Sponsor: Lisa Thomas

Remediation interventions to improve NCLEX-RN pass rates

Objective: The purpose of this integrative review was to determine which remediation strategies are most effective in improving National Council Licensure Examination for Registered Nurses (NCLEX-RN) first-time pass rates. NCLEX-RN pass rates are a primary indicator of the quality of a nursing program. Design: Integrative review. Data Sources: A search of literature identified journal articles from 2007 to 2017. Electronic databases used were Cumulative Index to Nursing and Allied Health Literature (CINAHL), EBSCOhost, Medline, Nursing and Allied Health Collection, and Elsevier. Review methods: Literature was evaluated for use in the integrative review using the following inclusion criteria: ADN programs, first-time NCLEX-RN pass scores, peer-reviewed articles published after 2007 and articles written in English. The search yielded 10 articles to be synthesized. Results: The three emerging themes identified were timing of remediation, mandatory vs. nonmandatory, and strategies. Early remediation produced an increase in NCLEX-RN pass rates, as well as those schools that required mandatory remediation. Remediation strategies focused on student-driven activity, and faculty-driven strategies. Conclusion: Nursing programs that implement a policy requiring students to remediate low test scores ensure NCLEX-RN success. The analysis of results indicates that it would be beneficial for nursing programs to implement policies regarding ongoing remediation and that it should be mandatory for student success. In addition, the findings indicate a need for continued research in which remediation strategies are most effective remediation strategy. Keywords: Remediation, NCLEX-RN, Pass rates, Success

167. Michelle Pinto

Sponsor: Lisa Thomas

Benefits of Preclinical Simulation

Abstract Background: Nursing education occurs in the classroom and clinical setting. Students report anxiety prior to the first clinical experience. Anxiety is a barrier to learning. Method: An integrative literature review was conducted to identify the benefits of using high-fidelity simulation as preclinical orientation for undergraduate nursing students. Searches were conducted in the Cumulative Index to Nursing and Allied Health (CINAHL), OVID, and PubMed online databases for peer-reviewed publications in the United States between the years 2007-2017. Results: Research revealed that the use of high-fidelity simulation prior to initial clinical experience resulted in decreased anxiety and increased confidence in undergraduate nursing students. Conclusions: The findings of this integrative review support the use of high-fidelity simulation as preclinical orientation to decrease anxiety and increase confidence in undergraduate nursing students.

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168. Adriana Ranalli

Sponsor: Nancy Bittner

The Barriers to Implementing Bedside Report in Hospital Settings

The transfer of essential information during patient handoff is an integral component of communication in healthcare. Effective communication is critical in ensuring patient quality of care and safety. According to The Joint Commission, breakdown in communication was identified as a root cause in more than 65% of 3,000 sentinel events. Bedside report can reduce sentinel events by observing the patient sooner and increasing patient participation. Although this practice comes with many benefits, hospital settings continue to practice traditional report despite the evidence. The purpose of this integrative review is to identify the factors affecting the barrier to implementing bedside report in hospital settings. Cumulative Index to Nursing and Allied Health Literature (CINAHL) Plus with Full Text database and Google Scholar were used to identify studies published between 2007 and present. The 17 articles reviewed revealed various factors that either inhibit or facilitate the implementation of bedside report. Although majority of the studies produced positive findings, there were barriers to successful handoff identified. Bedside report implementation requires a change in practice as well as a change in culture. Leadership efforts were proven crucial in being successful. This integrative review is useful for both nursing leadership and staff nurses to better understand the implementation of bedside report. The findings imply suggestions to better address concerns and impede challenges faced in the implementation process in hospital settings. Keywords: bedside report, patient handoff, managing change

169. Peter Russo

Sponsor: Nancy Bittner

Effective Communication

The purpose of this review is to identify how nursing leaders can effectively support nursing handoffs in the acute care setting. Handoff communication between nurses in this setting is crucial to safe effective patient care. The amount of sentinel events caused by inconsistent information sharing from one caregiver to the next is greater than 70%, becoming a worldwide problem. A review of current research was conducted using CINAHL, Cochrane Database of Systematic Reviews, ERIC, and Pub Med between 2007-2017. The original search yielded 126 articles, of which 20 fell into the inclusion criteria. These qualitative research articles were based on interviews, observations, recordings, and questionnaires. The Hawker-Payne critical appraisal tool was used to determine the strength and validity of each of these research articles. The subjects in this review were nurses and physicians exclusively working in large academic medical centers. The largest outcome that became apparent in this research was the success of pre and post activity improvement studies. The results yielded increased participation, increase nurse satisfaction, and increased information transfer. The three themes that became apparent in this review were; assessment of the handoff, tools and interventions, and barriers to handoffs. A subcategory that emerged from the research was the use of electronic tools during handoffs. Although this review provides a more in-depth understanding of handoffs, there is more research needed on this topic for clinical providers in the acute care setting.

170. Julianne Ryll

Sponsor: Nancy Bittner

Nursing leadership strategies to successfully foster employee engagement

The purpose of this research was to identify specific strategies for leadership to use in engaging staff members. Various types of leadership models and behaviors have been identified and discussed in the literature, however there is a lack of specific actions to be undertaken in achieving this goal. The literature shows that leadership, especially frontline nurse managers, can have a significant impact on the level of

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discretionary effort exercised by the staff of an organization. Additionally, the organization is responsible for preparing management and leadership for success in this regard. Positive practice environments are necessary for successful engagement of staff and are shown to be an important factor in achieving positive patient and organizational outcomes. Authentic and transformational leadership styles are identified as being most effective in engaging staff, however innumerable variables make the specific actions to be used with any team an individual leadership decision. Prepared leaders and managers can synthesize their unique knowledge of their team with their role preparation to ultimately engage their teams. Keywords: leadership, engagement, nursing engagement, leadership strategies, leadership styles, nurse manager engagement, and measurement of engagement.

171. Denise Schwerzler

Sponsor: Nancy Bittner

Nurse Leader Strategies for Promoting Nurse Connectivity and Disrupting Disengagement in the Workplace: An Integrative Review

This integrative review explored current research identifying successful strategies nurse leaders might employ to promote connections and mitigate disengagement in the workplace. In 2013, it was estimated that 70% of the total U.S. workforce was disengaged leading to a loss of productivity approaching \$550 billion. In nursing, only 32.8% of nurses are engaged, which directly impacts patient safety and clinical outcomes. Strategies that nurse managers might incorporate toward reducing staff disengagement were examined. A search was conducted to identify research studies focused on promoting employee connections and mitigating disengagement in the workplace. CINAHL, Google Scholar, Ovid, and Sage databases were searched for publications written in English between 2007 and 2017. A total of 524 articles were screened for eligibility, 12 qualitative studies were found to meet inclusion criteria. The predominate factors mitigating disengagement and intention to leave the job were found to be support, collaboration, and locus of control. Engagement programs collectively created through teamwork guided by a shared vision were effective tools toward increasing work engagement. Nurse leaders are best positioned to identify factors and support interventional programs in their organizations allowing for employee involvement, collaboration, and connection. It is evident that nurse leader efforts to promote connections and mitigate disengagement will strengthen trust, increase patient safety, and retain the nursing workforce. Studies that further identify successful collaborative interdisciplinary team processes and intervention programs proven successful through longitudinal review processes are important to future nursing research efforts. Keywords: disengagement, successful strategies, collaboration, support, nurse leader, patient safety

172. Angela Sesin

Sponsor: Lisa Thomas

Precepting Newly-Licensed Nurses

There is a surge of newly-licensed nurses entering the workforce; however, about 57% of them will leave their first job within 2 years. Effective precepting is key to increase their retention rates. This integrative review is comprised of 12 studies which identified the most effective precepting strategies amongst nurse residency programs. Preceptor education, ongoing preceptor support, and mentorship programs were the key findings. Healthcare organizations need effective precepting programs to retain and develop staff.

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173. Christina Squeri

Sponsor: Nancy Bittner

Staff Accountability in Fall Prevention

Hospitals continue to experience patient falls despite their best efforts at implementing fall prevention programs. It is important to understand what steps nursing leaders can take to increase staff accountability in fall prevention and to sustain these interventions. The study design is an integrative review utilizing database searches from the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Google Scholar, Ovid, and Medline. After inclusion and exclusion criteria were applied and usage of a PRISMA flow diagram, a total of 13 articles were appraised. Results reveal four factors that consistently relate to staff accountability surrounding fall prevention. Ensuring staff, patient, and family engagement was found to be a key component in fall prevention. Consistently communicating fall risk was shown as an effective strategy to increase staff awareness. Adhering to a fall prevention program was found to promote engagement by staff and minimize risk of fall. Adequate leadership support and involvement in the fall prevention program was found to be a key factor in the consistent and continued success of the program. By identifying specific modifiable fall risk factors, nurses can implement strategies for fall prevention. Future research should be conducted to further identify additional methods to promote sustainability of fall prevention programs. Keywords: fall risk, patient safety, fall prevention, communication of fall risk, patient falls, staff accountability, patient fall risk, just culture

174. Kathleen Tobin

Sponsor: Nancy Bittner

Factors that Influence Retention of Newly Licensed Nurses

Recruitment and retention of newly licensed nurses is an international concern. Voluntary nurse turnover is influenced by a multitude of inter-related factors. An integrative review was conducted to analyze factors that influence the retention of newly licensed nurses. A comprehensive search of CINAHL, MEDLINE, Science Direct, Ovid, JStor, and Psycinfo was conducted. The search was restricted to English language articles published between 2007-2017. The articles focused on newly licensed nurses within three years of graduating. Initially, 146 studies were identified, of which 16 met the inclusion criteria and were reviewed. The included studies were analyzed, categorized and synthesized. Three categories were identified: transition to practice, influences on retention and intent to leave. The evidence suggests there are both organizational and personal factors that impact newly licensed nurse retention. Emotional support, collegiality, civility, and feedback were all positive influences. Strong leadership and the availability of preceptors were also positive factors. Bullying, burnout, stress and high work-demands were all related to turnover and turnover intent. Future research should feature longitudinal studies to explore nurses' careers given their intention to leave the profession and factors supporting job retention in nursing. Studies should include both qualitative and quantitative approaches to identify priorities in the career decision-making process, challenges and behaviors, and variables that influence job enjoyment and job satisfaction. Key Words: new grad nurses, new graduate nurses, personnel retention, bullying, transition to practice, intent to quit, novice nurse, NGN, and turnover

175. Lee Waingortin

Sponsor: Lisa Thomas

Preceptor Role Preparation Utilizing Online Modules

Nurses practicing in community healthcare settings who precept undergraduate students often lack formal preceptor role training and orientation. A well-prepared preceptor promotes student learning by connecting classroom education with professional practice. The aim of this study was to analyze the literature related to use of online training modules for preparing professional nurses who precept

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undergraduate nursing students, and the applicability to community-based preceptors. The method was an integrative review based on ten studies (N=10). Pertinent findings included increased levels of role knowledge and self-efficacy following online trainings, ease of use and accessibility, and inclusion of teaching and learning content in module topics. Understanding the potential barriers involved with didactic workshop type trainings, customized versions of online trainings and modules have been found to be preferable to maximize effectiveness. Online modules provide preceptors with the tools they need to promote positive student learning outcomes.

176. Nancy Zesch

Sponsor: Lisa Thomas

A Comparison of the Effectiveness of Unit-Based vs. Hospital-Based Competency Training: An Integrative Review

Objective: The aim of this integrative review is to compare the effectiveness of unit-based and hospital-based competency training. Design: Integrative review Data Sources: Cumulative Index to Nursing and Allied Health (CINHAL), OVID Nursing, Google Scholar, Science Direct, EBSCO Host, Elsevier, ERIC, and PubMed. Methodology: The nine research articles which met inclusion criteria written in the English language, peer-reviewed, and research studies published between 2002 and 2017. Findings: The primary findings were evidence-based practice, teamwork, and patient-centered care. Conclusions: No greater benefit was found to using unit-based or hospital-wide training. Both are needed. Nurse educators must appraise their audience and use what is necessary at the time using both unit-based and hospital-based training. Further research is needed and should focus on supporting the nurse in their specific need for education. Keywords: Nursing Education, competency training, peer-to-peer, core competencies, hospital-based, unit-based.