



MADONNA UNIVERSITY CENTER FOR RESEARCH PRESENTS

SYMPOSIUM FOR RESEARCH, SCHOLARSHIP AND CREATIVITY

Wednesday, April 18, 2018 • 12–5 p.m.
Franciscan Center Gathering Space

DIRECTOR'S WELCOME MESSAGE



Research is important not just because it's cool, but because it is vital to providing a well-balanced comprehensive education. Madonna University is a really great place to be, because we place emphasis on both research and teaching. The principal goal of research is to advance knowledge, whereas that of teaching is to cultivate and improve abilities. When you do both you end up with students that are intelligent, curious creative, enthusiastic, moral, fair and persistent.

Research plays a critical role in advancing our health, environment security and quality of life by establishing comprehensive, inter-disciplinary solutions to global problems. As both creators and disseminators of knowledge, we aim for our students to be discoverers of knowledge, not passive educational tourists.

As society and higher education experiences challenges in securing funding to support activities like the arts and research, it is important for us to be bold, diverse, adaptive, inventive, and strategic with our research and creative endeavors.

Our theme for the upcoming year is Possibilities Instead of Barriers.

I invite you to explore the faculty, staff and students meaningful endeavors at our 4th annual Symposium for Research, Scholarship and Creativity

A handwritten signature in black ink, consisting of stylized, overlapping loops and curves, representing the name Phillip Olla.

Phillip Olla, Ph.D.
Director, Center for Research
Madonna University

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- 25** Institutional Review Board
Poster Presentation Judges
Symposium Organizing Committee

SCHEDULE OF EVENTS

12 p.m.	Welcome Address	S100 - Franciscan Center
	Musical Performance	Kathryn Linzmaier
	President Address	Dr. Michael Grandillo
	Research at Madonna	Dr. Phillip Olla
	Student Recognition Ceremony Address	Dr. Jim O’Neill
	College of Arts and Humanities	Dr. Kevin Eyster
	School of Business	Dr. Debbie Dunn
	College of Education	Dr. Karen Obsniuk
	College of Natural and Social Sciences	Dr. Karen Ross
	College of Nursing and Health	Dr. Nancy O’Connor
12:55 p.m.	End of Student Recognition Ceremony	Dr. Phillip Olla
1 p.m.	Poster Presentations Open	Franciscan Gathering Space
2–3 p.m.	Madonna Pecha Kucha Talks: See Possibilities Instead of Barriers Moderator: Dr. Stewart Wood	S100 – Franciscan Center
3 p.m.	Refreshments and Networking	Franciscan Gathering Space
3:45 p.m.	Award Ceremony	Franciscan Gathering Space Dr. Phillip Olla and Dr. Jim O’Neill

MADONNA PECHA KUCHA TALKS: SEE POSSIBILITIES INSTEAD OF BARRIERS

Advantages of a Cross-discipline TET and What It Teaches Us About Student Preferences

Cross-discipline Teaching Empowerment Teams (TETs) offer the opportunity for faculty to collaborate and learn from one another to enhance teaching practices. Our particular Political Science and Sociology TET experience in the 2016-2017 academic year allowed us to gain a better understanding of course content and student perceptions of course modalities. Using a cross sectional survey, we asked students enrolled in face-to-face and hybrid classes for their opinions regarding course modality and level of satisfaction.



Elizabeth A. Prough, Ph.D.
Professor and Chair
Political and Social Sciences



Michelle Proctor, MSW, Ph.D.
Professor of Sociology, Social
Work and Humane Studies
Program Director, Sociology

Timebanking - Building a Sustainable Society an Hour at a Time

Time banking is a model of reciprocal service exchange that uses time as a currency. A time bank community practices service exchange in a way that an hour's worth of any person's time is always equivalent, irrespective of the type of service or the skill level. With the current economic climate and the social disconnectedness of society, time banking is ideal for forging stronger intra-community connections to build social capital. Incorporating emerging technology such as mobility and crypto currency will expand the reach of this concept.



Dr. Phillip Olla



Ms. Aston Cole

Madonna University Partnership with the Felician Sisters Mission in Jacmel, Haiti Brings Hope and Help to an Impoverished and Underserved Population in Jacmel Haiti: A Four Year Review (2014-2018)

Madonna University has participated in eleven Mission Trips to the Felician Sisters' Mission in Jacmel, Haiti over the past four years. Bringing hope, joy, and assistance to the surrounding communities in Jacmel, help is given through the Felician Sisters' Mobile Clinic, making home visits, and bringing medical supplies, clothes, food, and other supplies to 4 local orphanages, St. Michel Hospital, and the School of Nursing in Jacmel. Helping Haitians help themselves brings everlasting results.



Sr. Victoria Marie Indyk, RN, PhD

POSTER PRESENTATIONS

Undergraduate

Poster Number: 1

The Core Curriculum: Achieving Academic Excellence

Eric Attard, Mohamed Allie, and Morgan Lorkowski

Advisor: Dr. Betty Jean Hebel

This project contains recommendations applicable to Madonna University based upon research conducted at various institutions who have undergone organizational change. Using the results of the QS4230 Service-Learning Project which surveyed faculty members' attitudes toward the new core curriculum and assessment, a correlation between college affiliation and attitude toward standardization was found among the respondents. In response, this project provides solutions to gain faculty acceptance of a new curriculum assessment at Madonna University.

Poster Number: 2

Peg Solitaire: An Analysis Using Group Theory

Hannah Buttigieg

Advisor: Dr. Susan Toma

Peg Solitaire: An Analysis Using Group Theory

Peg solitaire is a game that has left people scratching their heads for centuries. Looking at peg solitaire through the lens of the study of groups within abstract algebra allows one to unveil the mysteries of the game. There are a multitude of variations of the game, including different board shapes and move sets. Some of the techniques that have emerged to analyze this game include the usage of the Klein 4-group and the balance sheet. By examining the properties of each cell on the board, including noting their symmetry, solutions to peg solitaire can be determined. These methods can also be used to analyze other games played on the peg solitaire board, like solitaire army and fool's solitaire.

Poster Number: 3

The Sensory and Physical Features of Chocolate Chip Cookies with Barley, Rice, and Rye Flour Substitutions

Kathleen Caryl

Advisor: Dr. Karen Schmitz

The study at hand tested the potential of utilizing different flours as ingredients in chocolate chip cookies, in an attempt to increase the amount of soluble fiber, specifically beta-glucan, in the average American diet. The buildup of waxy plaque in the arteries leading to the heart is the leading cause of coronary heart disease. When soluble fiber is mixed with water in the intestine it becomes a sticky gel-like substance which aids in reducing absorption of cholesterol and sugar, thereby lowering serum cholesterol and blood glucose levels. Several clinical studies have been conducted which have shown a negative correlation between soluble fiber (beta-glucan)

and cholesterol/blood glucose levels. The purpose of this particular study was to compare specific sensory and physical qualities of chocolate chip cookies that have had barley, rice, and rye flour substituted at 50% in place of all-purpose flour. Barley flour is highest in beta glucan, brown rice flour is second highest and light rye flour has the lowest amount of beta glucan. There was an increase in cookie height and width for those substituted with 50% rye flour. While the cookies substituted with 50% rice flour exhibited the smallest width. Sensory panelist responses displayed a preference for the cookie made with 50% barley flour over those made with 50% rice or 50% rye flours. An increase in the amount of soluble fibers high in beta-glucan in typical snack foods, such as chocolate chip cookies, could offer a healthier option for American consumers.

Poster Number: 4

Sucrose Hydrolysis in Carbonated Drinks and Health Effects of Sugar

Kayla Dempster

Advisor: Dr. Stanley Ngeyi

Recent discussions about high fructose corn syrup (HFCS) and its possible detrimental health effects have caused the general public to create a stigma around the commonplace sweetener as a worse alternative to sucrose (Rippe 2013). However, sucrose is known to hydrolyze to a 50-50 mixture of glucose and fructose in an acidic environment (Hass 2017). The type of HFCS used in sodas, HFCS-55 contains only 55% fructose, making it not substantially different in make-up than sucrose (Parker 2010). Three different sodas made with sucrose as the sweetener, as well as two sodas made with HFCS, were analyzed for their sugar content through the use of polarimetry, Benedicts and Seliwanoffs tests, pH measurement, and titration. Benedicts and Seliwanoffs tests confirmed that hydrolysis did take place in the sucrose containing sodas. Polarimetry was used in order to measure the hydrolysis of the sucrose that took place. A standard curve of values was constructed in order to compare observed rotation values to. Mist Twist Cranberry showed 84.66% hydrolysis, Soda Stream Lemon Lime had 57.76% hydrolysis, and Ramune Melon had 17.42% hydrolysis. It was also seen that a lower pH environment lead to increased hydrolysis in the sodas. The results of titration showed that the equivalents of acid present in a soda did not seem to have drastic effect on the amount of hydrolysis. However, more research into fructose and its health effects needs to be done in order to definitively decide if fructose has worse health effects than other sugars (Ocha 2014).

Poster Number: 5
The Millennial Impact: Relating a Generation to an Inevitable Future
Bryan Giczewski, Rachel Wiersing, and Nikkole Wyrabkiewicz
Advisor: Dr. Betty Jean Hebel

As Alzheimer's is becoming increasingly prominent, the Millennial generation is witnessing the effects first-hand. In addition, as they approach the average age for developing Alzheimer's, encouraging their understanding of the disease as well as gaining and retaining their support in the fight for a cure, is synonymous to the mission of The Alzheimer's Association of Greater Michigan. In an attempt to bridge the gap between the disease and the generation, assessing what Millennials value and how they allocate their disposable income will complement the Association's current efforts. This project will integrate innovative ideas sparking and maintaining Millennial loyalty toward research dedicated to a world without Alzheimer's.

Poster Number: 6
Validation of a Visual Method of Gunshot Residue Detection through the Use of 460 nm Light and Infrared Light
Malcolm Hreben
Advisor: Michael Kusluski

For nearly 80 years, forensic scientists have understood the value of gunshot residue (GSR) as evidence. Over the years, a number of methods have been developed to detect and visualize GSR on victim's clothing - most notably the modified Griess test, a chromophoric test to detect nitrites. The visualization of gunshot residue using fluorescence has also been researched, but has never been validated. Validation is the extensive testing of a method in many situations to ensure its soundness and measure its limitations. Blue-green fluorescence (460/530 nm) and infrared light (720 nm) were evaluated for their potential to detect GSR on a collection of 270 cloth swatches acquired from the Georgia Tech University Materials Science and Engineering program. It was anticipated that some fabrics might exhibit their own background fluorescence, potentially interfering with the detection of GSR. Sixteen swatches were identified which produced background fluorescence. It was determined that undyed acrylics, polyesters and cottons were significantly more fluorescent than the dyed fabrics. This indicates that optical brightening agents (OBAs) in the textiles might be the source of fluorescence, and that the fluorescence was being quenched by the dyeing process. However, it was also found that for those fabrics with excessive fluorescence, infrared detection had some success. Currently, methylene blue dye is being evaluated as a means to quench background fluorescence. To date, the results have been favorable, but further testing is required.

Poster Number: 7
Core Curriculum Assessment Strategy
Dean Kolstad, Jeremy Otto, and Blake Herrera
Advisor: Dr. Betty Jean Hebel

The following poster presents a marketing and communication plan for the new core curriculum assessment plan at Madonna University. The goal of the plan is to not only inform faculty members about the changes but also increase commitment. A variety of innovative ideas will be utilized including but not limited to educational online modules, events with a guest speaker, and incentive programs. Although the implementation of this new assessment model primarily deals with the faculty, students will also be incorporated to ensure that the process goes as smoothly as possible. Various students reflecting high academic standing will be polled after the fact to gauge whether they feel that they are being assessed fairly under the new model. This among other factors throughout the plan will relay a message that the implementation process is an on-going occurrence. This will leave the door open for reflection on how the overall assessment plan is functioning which will then allow for tweaks to ensure that it is the best it can be over the long term. Outside consulting perspectives will also be taken into consideration to locate areas that internal individuals may miss.

Poster Number: 8
The Authentication of a 1968 Porsche 911 Seat Pad Through the Morphological Analysis of Hair and Fibers
Madison Littmann
Advisor: Michael Kusluski

The Madonna University Forensic Science department received an unknown substance from the seating of a 1968 Porsche 911. The sample was submitted to the school with the intent of analyzing it to identify the origin of the fibers. The group that submitted the sample believed that it originated from a horse or a coconut since these two materials were commonly used in that era. Analysis of the unknown fibers started with morphological analysis. The fibers were viewed under oblique lighting and then under a stereoscope and polarizing light microscope. Cuticle impressions were taken from the unknown fibers and known samples for comparison. Lastly, cross sections were observed and compared with known samples. The results of the analysis were that the fibers were consistent with originating from a plant but there was not sufficient evidence to suggest coconut.

Poster Number: 9
Fat Substitutes as Effective Replacers of Butter in Chocolate Chip Cookies
Megan Martell
Advisor: Laura Kull

This study was designed to test the acceptability of reduced-fat chocolate chip cookies, using fat substitutes as full butter replacement options. The goal was to identify various substitutes that provided similar chemical and physical properties to those of butter. The substitutes used were Mascarpone Cheese, Olive Oil Mayonnaise, and Low-Fat Vanilla Kefir. The Mascarpone substitution reduced the grams of fat per cookie by nearly half in comparison to the fat content of the butter control by reducing the grams of fat by 44%. Even more significant, both the Olive Oil Mayonnaise and the Low-Fat Vanilla Kefir reduced the grams

of fat to zero grams per cookie, a 99.7% and 100% reduction, respectively. The cookies were evaluated on overall preference, appearance, mouthfeel, chewiness, and taste. Even though the control cookie was preferred, with 59% of the votes, the Mascarpone cookie was secondarily preferred, with a preference of 29%. The Mascarpone cookie was also favorable in terms of appearance, mouthfeel, chewiness, and taste. The Olive Oil Mayonnaise cookie was favorable in terms of mouthfeel, chewiness, and taste, with a preference of 12%. The Low-Fat Vanilla Kefir cookie also proved to be favorable in terms of chewiness and taste; however, scored low in appearance. Based on the results in this experiment, it can be concluded that all of the butter substitutes produced cookies that not only lowered the fat content, but also proved to be flavorful and relatively enjoyable, even if their appearance was less than desirable.

Poster Number: 10
Plant Vaccinations: a Health Alternative to the Norm
Kate Mlinarich
Advisor: Maria Kuhn

This paper aims to inform the fellow biological community on the process and advantages of using plants to create vaccinations for human consumption. It also explains the current progress of bringing the vaccinations to market. There are several vaccinations that have been made using plant based vectors and proteins that are on the market for clinical trials currently: these include Hepatitis B, Norwalk Virus, Influenza, E-coli, Rabies, as well as several others. Future research is suggested and information provided.

Poster Number: 11
Regional Incidence of Methicillin Resistant Staphylococcus Aureus in the United States
Patrick O'Dowd
Advisor: Dr. Carly Nowicki

Methicillin resistant Staphylococcus aureus (MRSA) is a bacterial infection that is a growing concern due to the prevalence of antibiotics and the accessibility of affordable healthcare in the United States. While MRSA cases are monitored on a national and state level, geographical discrepancies in the prevalence of MRSA in various regions of the United States has not been examined. In this study, we aimed to (1) determine if MRSA cases are on the rise nationally, (2) determine if MRSA infections are higher in certain geographic areas of the U.S., and (3) examine variables that may influence MRSA acquisition in different regions of the U.S. States were grouped by standard regions (Midwest, Northeast, South, West) and divisions based on U.S. census data. Records of MRSA infection ratios were generated from the Center for Disease Control's Hospital Acquired Infection Progress Report database. The 2014 standardized infection ratio (SIR) for each region was compared to prior regional SIR values and national baselines. Since 2011, all regions of the United States had lowered incidence of MRSA infection; however, the South had significantly higher MRSA infections compared to other regions ($p < 0.004$). More specifically, the South Atlantic division (WV, VA, MD, DE, NC, SC, GA, and FL) had the highest SIR values

of all southern divisions, while the New England division in the Northeast had significantly lower SIR than all other divisions ($p < 0.006$). Variables including income, availability of healthcare, and preventative care were discussed as potential causation of these geographical incidence discrepancies.

Poster Number: 12
The Effectiveness of Fat Replacers on Ice Cream's Physical and Sensory Properties
Kaitlyn Richardson
Advisor: Laura Kull

The purpose of this research was to determine the effects of different fat replacers on the physical and sensory properties of ice cream. The fat replacers that were used were inulin and maltodextrin. Viscosities of the control, maltodextrin, and inulin ice cream mixes were obtained by conducting a line spread test. A sensory analysis was conducted on seven participants testing for the favorability of the texture, appearance, and flavor of all three ice cream samples. The samples were also assessed for smoothness and grittiness. The participants ranked the samples from least preferred to most preferred for overall texture and overall preference. Using the spread test, the experimental mixes were more viscous than the control sample. Overall the texture, appearance, and flavor sensory analysis and overall preference obtained from the sensory evaluations indicated that the inulin and maltodextrin ice creams did not produce favorable sensory qualities and are therefore ineffective in their use as fat replacers in ice cream.

Poster Number: 13
Physical and Sensory Effects of Black Bean, Chickpea and Mung Bean Flour Substitution on Vanilla Cupcakes
Sherie Schjolin
Advisor: Laura Kull

Cupcakes were made with 10% black bean, chickpea and mung bean flours substituted for all-purpose wheat flour. The purpose of this substitution was to increase nutritional value of the cupcakes without affecting overall likability. Legume flours contain a higher level of fiber and protein than wheat flour, which adds nutritional value to baked goods that typically would contain very low levels of these nutrients. This substitution created little to no difference in the viscosity of the cake batter, the volume or weight of the cupcakes. The cupcake with black bean flour had black specks throughout, while the mung bean and chick pea resembled the control. Sensory panels found that the appearance of the black bean flour sample was off-putting, but the flavor was acceptable. The cupcake with mung bean flour substitution was the most preferred overall, and the chick pea cupcake flavor was the least preferred.

Poster Number: 14
The Hertzsprung-Russell Diagram
Nicolette Vultaggio
Advisor: Dr. Asaad Istephan

Astronomers made a successful tool called the Hertzsprung-Russell diagram. This diagram shows the evaluation of stars as they age. All stars are born in a nebula. A star spends most of its life in the main sequence section of the H-R diagram. This means that a star is in the middle of its life. Main sequence stars are very stable, and the Sun happens to currently be a main sequence star. Once a star ages more, it expands in size. Super-giants and giants are the next phases of life for stars, which are also plotted on the H-R diagram. Each star has a certain life to full-fill, and their mass effect their death. If a star is more massive than it will have a very violent death. A massive star will expand extremely large, and then explode which is called a supernova. It could turn either into a black hole or into a neutron star. Average mass stars have a less violent death. Once average stars turn into giants, the gases get released into space. All that is left is a dead core. Astronomers are able to show all this by plotting it on the H-R diagram.

Post Number: 15
Climatic Influences on Amphibian Chytridiomycosis
Paul Wozniak
Advisor: Dr. Asaad Istephan

Global declines in amphibian populations have been noted in the past few decades, with the recently discovered chytridiomycosis infection caused by the fungal pathogen *Batrachochytrium dendrobatidis* (Bd) playing a precipitating role. Like many other infections of exothermic hosts, chytridiomycosis prevalence and intensity have shown to be extremely sensitive to climatic factors such as temperature, precipitation, and climatic variability. In order to obtain an encompassing picture of the influences of climate on chytridiomycosis, the effects of climate on the Bd pathogen, amphibian host, and host-pathogen interactions were investigated. One special focus of inquiry was on the impact of human-induced climate change, as these trends will have to be accounted for if amphibian biodiversity is to be protected into the future. While the pathogen appeared to have a positive correlation with cooler, moist conditions, the effects of climate on amphibian hosts and on host-pathogen interactions were much more complicated, requiring further study. Evidence supported the fact that climate change will likely increase the risk of amphibian extinction with respect to chytridiomycosis, although changes in disease altitude and latitude were more striking than overall increases or declines. The research provided critical information upon which steps can be taken to minimize further amphibian extinctions as much as possible.

Graduate

Poster Number: 16
Student's Perception of Learning in the Classroom
Katherine Ambrose
Advisor: Dr. Anne Morris

The title of my project is Student's Perception of Learning in the Classroom. My research poster will represent a survey of classroom effectiveness for a fifth and sixth grade classroom. I chose to conduct this survey because I heard a teacher comment that they felt they just didn't connect with this class. I asked myself, can students too feel this way but towards the teacher? I decided to ask the students with an anonymous survey. I chose the fifth and sixth grade classes as it is the end of grade school and the beginning of middle school. In our building the transition is not only academic but physical. The students move to their own hallway and mingle with seventh and eighth graders. They also no longer travel in homerooms, each student follows their own personal schedule.

Poster Number: 17
A Quantitative Study of Occupational Stress and Burnout among Registered Nurses
Ini-Abasi Asanga
Advisor: Dr. Matilda Isaac-Mustapha

The aim of this study is to gain an understanding of the factors that cause stress and burnout among registered nurses in the healthcare industry. Hughes (2008) stated that occupational stress has been identified as a major cause of health problems among the nurses since 1950s. Registered nurses are surveyed to obtain data on their response to occupational stress and burnout. Do the nurses have an extremely large amount of work to do? Do registered nurses feel depressed? Can the registered nurses work at their own pace? By asking these questions, the researcher made an attempt to understand the effect of stress on the health and well-being of registered nurses. High job demands, work overload, work engagement, and long working hours were studied in relation to occupational stress and burnout. The findings derived from this study would add to the existing body of knowledge, and propose ways in which nurse managers, coordinators, and administrators can mitigate the effect of stress in the workplace.

Poster Number: 18
Effects of Social Media on Marketing
Jessica Avery
Advisor: Dr. Betty Jean Hebel

The usage of social media has seen some incredible growth over the past decade. The advancements made in the capabilities and platforms that companies can reach is incredible. Many companies have changed their entire marketing strategy based on these advancements. 97% of marketers are currently participating in social media marketing (Husain 2016). This study will explore the trends in social media marketing, the effects on other industries, and the effects on the companies.

Poster Number: 19
Implementation of Brand Personality through Social Media Outlets

Taylor Baker

Advisor: Dr. Betty Jean Hebel

This paper explores the brand identity that companies are trying to implement that reaches far beyond the product they are selling and distributing. The interaction and awareness with consumers is at an all-time high in the developing relationships on social media platforms. Interestingly enough, brand recognition has heightened a sense of loyalty that customers flock towards when purchasing relative products. Businesses aim to develop a brand personality that interacts and sometimes is more influential than the product itself. This paper examines several examples of companies use of Twitter, Instagram, and Facebook among other platforms that influence brand personality, voice, and recognition in correlation with their likeability and sales. Forbes, Wall Street Journal, and other credible financial reviews offer their input on the influential marketing these businesses try to implement.

Poster Number: 20
Inquiry Based Teaching V.S. Traditional based Teaching for Math

Kathleen Belknap

Advisor: Dr. Anne Morris

Going into teaching, it has been my goal to make math more interesting and fun for students, so that they will be able to succeed and understand math concepts. One way I was able to make Science more interesting for students was when I started to use inquiry based teaching instead of reading and taking notes from the book. I feel if I use that same idea, inquiry based teaching, when I teach mathematics to students, then the students will be able to succeed in their math scores. This study will show if using Inquiry based teaching in mathematics will increase the level of achievement for fifth and sixth grade students or not. Traditional teaching of mathematics relies heavily on the textbook that is being used by that school. Students are shown a concept from the textbook and how to do that concept. That concept is explained using examples, then the students work on example problems under the guidance of the teacher. After, the discussion of the concept and example problems are all explained students begin their homework on their own. Using the book for the examples, practice problems, and homework the students are limited on the tools they can use to answer the problems. These limitations can cause students to have trouble understanding concepts. The purpose of this study was to move away from these limitations to help students better understand the concepts being taught.

Poster Number: 21
The Correlation between Employee Satisfaction and Retention

Zeinab Beydoun

Advisor: Dr. Matilda Isaac-Mustapha

Employee satisfaction and retention go hand in hand in the workforce. When an employee is satisfied, employers are confident they can retain them. When an employee is not satisfied they tend to seek other opportunities that meet their needs in the available workforce. However, there is still the factor that satisfied employees may still not remain in a specified role for various explained or unexplained reasons. Literature has shown that employee turnover impacts employers negatively in many regards that can relate to cost and consequences. For example: Philips & Roper (2009) completed a study indicating the real estate employee turnover was 33% and estimated cost of turnover ranged from 30% to 300% of the employee's compensation. This is a fairly large range for employers to be facing and risking lost costs of that high of amounts. For employers to retain their employees, focuses should be on factors that include employee satisfaction and its correlation to employee motivation, attitude and commitment, leadership style and mutual mystification. These five factors have been researched and proven to show both how and why employees leave a workplace and how and why they would choose to stay in a place.

Poster Number: 22
Does Loyalty Program Participation Affect Customer Purchase Habits and Tendency

Jameta Branch

Advisor: Dr. Betty Jean Hebel

At first glance, loyalty programs seem to be a win/win for everyone. As a consumer, you amass points or credit that you may trade in for free or discounted items. As a business, you increase customer loyalty thereby increasing sales and hopefully profit. But, with careful consideration, the consumer may want to take a deeper look and determine if the sale was worth the loyalty point. The answer may be yes, if the purchase was intentional and the sales price was cost effective. But, what if our loyalty programs drive our purchase tendencies with little or no thought to cost or necessity. This paper intends to explore the question: Do loyalty program participation affect customer purchase habits and tendency?

Poster Number: 23
HTN Management in African American Patients

Samuel Carter

Advisor: Tracey Chan

This poster will present finding of a continuous quality improvement project that examined adherence to best practices for the management of hypertension among African American 18 years older with/without history of diabetes. The project setting was a primary care clinic serving the Livonia area. The JNC 8 Hypertension Guideline has recommended that in the general black population, including those with diabetes, initial antihypertensive treatment should include a thiazide-type diuretic or calcium channel blocker (CCB). To measure the effectiveness in implementing these practice standards, a retrospective chart review was conducted.

Poster Number: 24**A Study on Small and Medium Sized Enterprise how to Increase Core Competitive Advantage****Hong Yu Chang****Advisor: Dr. Matilda Isaac-Mustapha**

Research has determined from survey-questionnaire criteria and method variables that technological innovation, enterprise culture, risk management, and teamwork ability relationship have a direct effect on core competitive advantage. Data analysis of one hundred participants will find these variables and whether or not these data have a significant relationship. Small and medium-sized enterprises play an extremely important role in the national economy. The development of small and medium-sized enterprises has attracted world-wide attention. Core competence is the foundation for enterprises to obtain and to support long-term and sustainable competitive advantages. Its essence is to allow consumers to feel satisfied with irreplaceable value, products, services, and culture. These ideals promote the core competitiveness of small and medium-sized enterprises. Cultivating and enhancing the core competitiveness are of great practical significance to the development of small and medium-sized enterprises. The data were analyzed by SPSS software to verify the relevant research hypothesis. From these four variables, it will be discussed the related problems of the small and medium-sized enterprises competitiveness.

Poster Number: 25**Analysis of Retail e-Commerce Strategy****Hong Yu Chang****Advisor: Dr. Betty Jean Hebel**

The rise of new retail is pouring water into the e-commerce market. The popularity of online shopping has brought huge business opportunities, and the brands are turning to online business. With the change of consumption habits, the demand for customers is increasing. When traditional car part retail is no longer able to cope with it, new retail is emerging in the form of e-commerce. E-commerce provides consumers with a new shopping experience and makes new retail integration of the online e-commerce platform and offline entity stores. This also promotes the diversity of e-commerce. Enterprises choose to promote the network, not only for the sale of products, but also for the promotion of the brand and the display of the corporate image. Generally speaking, Internet marketing is only a concept, but the concept of guidance should be a trend for development. Future e-commerce will integrate more functions, and will also adopt a diversified model for the promotion of enterprises. Therefore, online marketing is a trend that will continue to diversify in the future.

Poster Number: 26**Pediatric Autoimmune Neuropsychiatric Disorder Associated with Streptococcal Infections (PANDAS): A Qualitative Study****Mary Crombez and Catherine Crombez****Advisor: Michelle Harmala and Molly McClelland**

Implications for Advanced Practice Nurses When Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections (PANDAS) is Suspected: A Qualitative Study employs a qualitative method using narrative inquiry to understand the experiences of living with suspected/confirmed PANDAS from the perspective of parents and children living with the disorder. Following IRB approval and obtaining signed, informed consents, interviews with 60 families (124 participants) were conducted. Data analysis identified three themes: being afraid, being frustrated and being unheard. For both children and their parents, being afraid was the prominent theme followed by being frustrated (with the medical communities lack of knowledge, resources, compassion, and urgency to provide care), and finally of not being heard relative to changes from the child's baseline. Nurse Practitioners must become aware of the signs and symptoms of PANDAS. Strategies for evaluating cases of PANS and PANDAS were developed by leading experts in the field. Diagnostic criteria include: abrupt, dramatic onset of obsessive-compulsive disorder and or tic disorder, concurrent neuropsychiatric symptoms such as anxiety, emotional lability, irritability, behavioral regression, deterioration in academic performance, sensory and motor abnormalities, sleep disturbances, and urinary frequency; often temporally association with infection and with symptoms that cannot be better explained by a known medical or neurological disorder. Treatment options include: antibiotics for treatment of acute infection, prophylactic antibiotics, tonsillectomy, intravenous immunoglobulin infusion (IVIG), plasmapheresis (plasma exchange), non-steroidal anti-inflammatory medications, and cognitive behavioral therapy. It is imperative that nurses seek to understand how emerging diagnoses affect children socially, emotionally, intellectually, and spiritually.

Poster Number: 27**How do Ethics Apply to Brand Management and Brand Positioning?****Lisa Cuppetilli****Advisor: Dr. Betty Jean Hebel**

Ethics in brand positioning and brand management is an important factor when marketing a product or service. The strategic marketing plan must have realistic expectations and be able to deliver what is promised of the product or service. A marketing expert must understand that you cannot market the same globally. Some markets are built, and some need to be established. When establishing a new category, one must consider and understand the culture, region, behaviors, and norms as well as dietary needs, restrictions, and concerns. A successful marketing campaign starts with learning about the consumer, and understanding how the product or service was constructed to show how it would be a benefit to them to purchase. The next step is to know how to market and position the product or service in the portfolio, and then create and carefully execute a strategic business marketing plan. It is important to build a category, not just a brand. Marketing professionals must understand market behavior and position the products accordingly. Using common language and a clear positioning statement for advertising campaigns is

a must for local countries and local powers. Successful brand positioning requires that you know your target, what the brand does, and for whom. Everything that touches consumers must live up to the brand positioning of the product. It is important to know how to market by strategically finding a niche to convince customers to buy the product or service and to retain them as a loyal customer.

Poster Number: 28
Factors That Arbitrate Workplace Discrimination
Hussein Dabaja
Advisor: Dr. Matilda Isaac-Mustapha

The research intends to connect the workplace discrimination among minority individuals and groups. Discrimination is a national problem that has been present in the workplace in the United States but started to arise lately due to political disagreement after the 2016 presidential election. Workplace discrimination against minority groups and individuals is a serious problem still present among many employers. Based on statistical data from the United States Census report (2012), 72% stated their race as White, 13% as African American, 5% as Asian, and 1% as Native Americans. The research looks over among groups based on race, age, gender, and ethnicity. The research studies the basic factors of discrimination and the dominance of white people in the work field and it examines the possible effects of psychological contract, leadership style, ethical organizational climate, and diversity training of employers. Boone (2017) recommended that employers should take on concern exceptional policies including promoting female managers and encouraging management to treat all employees especially minority individuals equally to decrease the dominance of white men staff. Adams (2016) claimed that employment standards hold basic concepts of the workplace where employers have the right to set work principles, rules, policies, conditions and make hiring and termination decisions; however, employers are prohibited by the laws from discriminating against individuals based on race, age, gender, ethnicity, disability, religion, national origin, political view, sex orientation, marital status, and national origin. The research study will seek to determine if workplace discrimination is positively correlated to psychological contract, leadership style, ethical organizational climate, and diversity training.

Poster Number: 29
Unmet Student Needs of Food, Clothing, Medical, Shelter and Transportation
Michelle Danou and Chris Apostoleris
Advisor: Dr. Sarah Twitchell

The unmet basic needs of college students such as food insecurity, homelessness, transportation costs, and lack of medical benefits, hinder students' success and outcomes in pursuing higher education. To support the academic success of the diverse population of students today, institutions of higher education have recognized and developed programs and services on their campuses. This study examines the Madonna University student population to determine whether unmet basic needs exist. Results

from the data collected from student, faculty, and staff surveys identified a number of areas in which students struggled to meet their basic needs: food, transportation, housing, clothing, and medical insurance. Very few students (2.6%) reported that they struggled with having appropriate clothing for employment or internships, while a higher percentage reported struggling with housing (12.9%), food (5.6%), transportation (9.9%), and medical insurance (4.7%). Based on its findings, this study makes recommendations for future areas of research and potential programs or services.

Poster Number: 30
Utility Customer Satisfaction with Management of Energy Costs
Paula DesJardins
Advisor: Dr. Betty Jean Hebel

Utility customers fall into four energy consumer categories (business gas, business electric, residential gas, and residential electric). Price is a key driver of all utility customer satisfaction scores. The aim of this project is to determine how satisfied customers are with a utility company's effort to manage a customer's energy costs. A second aim is to determine if utility customers are satisfied with management of their own energy costs via customer energy efficiency program offerings. Data will be made available via vendor supported customer satisfaction surveys completed January 2016 to December 2017. Analysis and interpretations are in progress and will be completed by April 03, 2018.

Poster Number: 31
Forecasting Consumer Vehicle Purchases
Ashley Espinoza
Advisor: Dr. Betty Jean Hebel

Operations Management by William J. Stevenson states, "Forecasts are a basic input in the decision processes of operations management because they provide information on future demand." David Pipes CFO of Arby's Restaurant Group "Forecasting is no longer just a supporting analytical tool. Instead, the process has become so central to a company's overall growth plans that the way it's done has become an essential part of business itself." (Hoffelder 2013) This paper will discuss if it is possible to accurately predict consumers' purchasing habits on buying vehicles. Many companies use outside resources and/or internal associates to plan and forecast how many vehicles automotive companies will produce and how many vehicles consumers will purchase each year. "The perception of business forecasting has changed, and so are the process, methodology and technology to support it." (Jain 2007-2008) The question the paper is trying to answer is "Can we predict/forecast how many vehicles will be bought by consumers accurately?"

Poster Number: 32**Closing the Gap: Exploring Mortality Disparity regarding Cardiotoxicity among African-American Women with Breast Cancer Receiving Doxorubicin.****Tiffany Fields****Advisor: Tracey Chan**

This poster will present findings of a continuous quality improvement project that examined adherence to best practices and guidelines for the management of cardiotoxicity in African-American female patients with breast cancer who have received chemotherapy that includes doxorubicin. The project setting was an urban primary care practice serving a population of adult oncological patients. The National Comprehensive Cancer Network (NCCN, 2017) and American Society of Clinical Oncology (ASCO, 2017) have established guidelines for use in primary care practice to monitor cardiotoxicity in cancer patients receiving doxorubicin, which are the basis of current practice standards. To measure the effectiveness of the oncology practice in implementing these standards a retrospective chart review was conducted. The inclusion criteria for this project are: African-American women, diagnosed with either hormone receptor positive or negative breast cancer, ages 18 years and older, who have received doxorubicin. The exclusion criteria includes previous diagnosis of cardiomyopathy or ejection fraction less than 50% prior to initiation of doxorubicin. Thirty charts of patients who met the established criteria were chosen at random. A standard data collection tool was constructed and the following data were collected: age, race, breast cancer diagnosis and stage, date of diagnosis, cardiovascular risk factors, date doxorubicin was initiated, was an echocardiogram completed and documented prior to initiation of doxorubicin, and was an echocardiogram completed one year after doxorubicin therapy was completed and documented per NCCN and ASCO recommendations. Findings will be examined for adherence to national guidelines and implications for practice will be presented.

Poster Number: 33**Factors That Effect Theme Park Attendance Rates****Heather Garavaglia****Advisor: Dr. Matilda Isaac-Mustapha**

Park attendance rates have an impact that reaches far beyond the walls of the parks. The rate of attendance can have an impact not only on the employment rates of the organization of the park itself but can also impact the travel companies in the area, hotels, restaurants, and shops in the surrounding areas that rely on the tourism that these parks bring in. Theme parks are under extreme pressure to produce attendance numbers that will keep profits high for the parks as well as surrounding businesses. To keep the rates of attendance in a profitable range theme parks look at certain factors such as price of attending, location of the theme parks, quality of service, frequency of refurbishments and the ease of navigation of theme park properties. The researcher's analysis and interpretations are currently under way and will be completed by April 30, 2018.

Poster Number: 34**Celebrity Endorsements and Marketing Scandals: Do Organizations feel an Ethical Responsibility to Drop Celebrity Endorsements after a Scandal Breaks?****Heather Garavaglia****Advisor: Dr. Betty Jean Hebel**

The world companies selecting professional athletes, movie stars, or singers to represent their brands is not something new to the marketing industry. In fact companies are now even looking to people with a large amount of follows on social media platforms, like Twitter or Instagram, to endorse their programs. For many people they see their favorites using a product and want to try it as well. But what happens when those celebrities are involved in a scandal, whether it be a doping scandal, DUI, or sexual harassment? The research will be taking a closer look at these cases and a more in depth look at the times when celebrity endorsements were cancelled because the organization felt that they should or society pressured them into canceling deals.

Poster Number: 35**A Bloody Battle?: Examining DNA profiles on 16th century Samurai Armor****Samantha Gertz****Advisor: Dr. Jodi Lynn Barta**

A damaged suit of 16th century Samurai armor was brought to the United States from the Far East by returning US servicemen. This armor is now in the collection of the Sullivan Museum and History Center at Norwich University and has been accessed by researchers in a collaborative project with Madonna University. Patterns of damage and reddish-brown material present on parts of the armor raised questions about the origin of the stains and subsequent tests determined that the stains were presumptively blood. DNA extractions were performed at Madonna University from direct swabs obtained from the stained areas, including inner areas and exterior portions. There have been multiple challenges faced while obtaining sequence data from analysis of this aged material and research is ongoing. Preliminary results of DNA amplification and analysis indicate that there is a minimum of three different DNA profiles from the stains and those on the inner area do not match those found in extracts from exterior sections. This suggests that this armor was worn in battle and that the stains represent blood from both the wearer and other individuals that may have been involved in the combat.

Poster Number: 36**Inside Threats: The Hidden Plans Within Your Retirement Savings Plan****Torrie Harris****Advisor: Dr. Matilda Isaac-Mustapha**

Retirement savings plans were designed to support income during retirement years. The plans allow employers and employees (participants) to contribute payroll funds, before taxes, to invest

in the stock market by either using a Third-Party Administrator company, a trust company, or custodian company to gain access to the market. These companies have a fiduciary duty to act in the best interest of participants. However, these companies tend to disregard its duty in providing informational disclosures to participants, take advantage of participant's funds by charging excessive fees (while some charges are hidden), misuse participant's funds, and cause participants psychology concerns. However, literature has indicated that participants are not provided with all the necessary disclosures on retirement savings plans and the financial entities are charging excessive fees and charging fees that are not disclosed. Furthermore, it is suggested that there is misconduct of retirement savings funds by financial entities and its employees and the effects of the misconduct cost participants emotional distress. Based on preceding literature findings indicated that participants lack knowledge relating to their retirement plan and are unable to detect misappropriation of funds; however, data analysis will follow.

Poster Number: 37
Virtual Reality: How is VR Expanding Marketing Strategies?
Torrie Harris
Advisor: Dr. Betty Jean Hebel

The industry of marketing is changing rapidly due to technology. With the use of digital technology, it has become the new way for marketing. In finding a solution that is keeping up with digital marketing, virtual reality found a position with marketers as a marketing strategy. More consumers are looking for quick, interesting, and simple ways of finding awareness in a product or service; therefore, virtual reality has become the answer. Earlier literature has discussed that digital technology is becoming the new method for advertising to keep up with millennials and their attention span. The use of virtual reality is functional for many purposes. It is used for learning, marketing, and branding. Furthermore, the simulated environment offered by virtual reality helps keep the attention of consumers, provide knowledge of the product, and deliver a real-life experience. As a marketing strategy, marketers are creating realistic images in a virtual world to introduce brand and market products and services. Based on this research, findings suggest that it is essential for marketing strategies to include the use of the virtual reality to teach, market, brand, service and network when marketing to consumers. As digital technology is changing the way consumers are seeking understanding and buying needs so marketers must embrace using virtual reality to advertise its products and services.

Poster Number: 38
The Moderating Effect of Audio Visual Technology on the Relationship between the Public and Police Officers
Stacy Hayne
Advisor: Dr. Matilda Isaac-Mustapha

The deterioration in the relationship between police officers and the communities which they serve has been a problem for years, with media fueling the fire by reporting only on stories that portray police officers in a negative aspect. Recent use of force incidents

such as the shooting of Michael Brown by a Ferguson, MO police officer and the fatal injuries that Freddie Gray sustained from an encounter with police officers in Baltimore, MD has highlighted a need for accountability. There is a gap in knowledge between police and the public's perception of them. A study was completed in Rialto, CA to discover whether audio visual technology, particularly body-worn cameras, has an impact on the way police officers conduct themselves and if wearing these cameras decreased the incidents involving use of force, while improving public perception. According to Pelfrey Jr. and Keener (2016), that study on the implementation of body-worn cameras in Rialto, CA Police Department and their impact illustrate this by the reduction of citizen complaints as well as a reduction of use of force incidents. Included in this study are the concerns and positive feedback from the officers that took part in this as well as issues where further research is needed.

Poster Number: 39
The Impact of Social Media on Marketing Strategies
Stacy Hayne
Advisor: Dr. Betty Jean Hebel

This paper will exam the impacts of social media on marketing strategies and will focus on many of the latest and most popular forms of social media including Facebook, YouTube, Instagram and others to show how they are used by companies and advertisement agencies to attract the attention of the target audience. Digital and content marketing are two areas in marketing which social media platforms revolve around. Social media platforms are able to deliver advertising through many different means, and these means are especially important when it comes understanding the target audience. The dangers of social media and how it can adversely affect the advertising of products and the brands we are all familiar with will also be discussed as well as new ways advertising agencies are making sure the potential customers are being exposed to the right amount of content. The goal is for the reader to have a good understanding of how social media and marketing interact and how it is going to continue to influence how consumers of the world are communicated to.

Poster Number: 40
Issues in Sports Marketing
Brandon Hess
Advisor: Dr. Betty Jean Hebel

I will be exploring the marketing issues within the sports market. Two major concerns that sports are facing are viewership and attendance at sporting events. I plan on using marketing strategies to research the positive and negatives of the sports market and expose some of the potential opportunities that may exist in the market. The advancement of technology had played a heavy role in the decline of viewership and attendance.

Poster Number: 41
A Study of Occupational Stress Level and Satisfaction Level Among Nurses
Marijana Janceski
Advisor: Dr. Matilda Isaac-Mustapha

The intent of this study was to recognize what factors cause and contribute to the high occupational stress level among registered nurses (RNs). The previous studies suggested that there are many factors that contribute to increased occupational stress among the RNs. However, the main focus of this study was to look at other factors, such as the long working hours and the shift(days vs, night) the nurse is assigned to perform his/her duties. Furthermore, the poor relationship that the nurses have with the patients. Besides that, tremendous stress factor can be the negative working relationship between the registered nurses and physicians. When the nurses are more stress they might further contribute and cause nurses burnout. The increased occupational stress, causes the healthcare organizations to have high rate of turnovers. The turnovers can be expensive and are more likely to perform poorly and be dissatisfied with their job and duties. Those factors long process. To gather exceptional data, the researcher for this study will perform researcher are causing occupational stress among the RNs, and if it implies on the occupational satisfaction level mixes method of research. The data will demonstrate if the stress related factors provided by the.

Poster Number: 42
Determining the Effectiveness of a Fall Prevention Program
Katherine Kempf
Advisor: Dr. Matilda Isaac Mustapha

Trauma Centers are required to conduct injury prevention activities in the community, based on the mechanism of injury for patients they treat. They frequently conduct fall prevention activities, since falls is a common mechanism of injury among elderly patients. The key to reducing falls is to conduct effective interventions. However, evidence of effectiveness is often lacking. A literature review uncovers that interventions which concentrate on promoting exercise and changes in behavior are effective. In addition, programs designed with clear objectives, sufficient resources, and the correct leadership also plays a role. While these elements can be found in many healthcare settings, Trauma Centers rarely produce such substantial proof. The research question is: Do Trauma Centers measure the effectiveness of fall prevention programs? The researcher will investigate key variables in program design: establishing clear program objectives, having sufficient resources, choosing the right intervention for the setting, and having leadership that is capable of successfully executing interventions. Further research analysis and interpretations will be in progress and completed by April 30, 2018. The researcher has concluded from this quantitative study that effective fall prevention programs conducted by Trauma Centers can reduce falls among the elderly.

Poster Number: 43
Glycemic Control and Kidney Disease: Are Patients being Monitored according to National Guideline Recommendations?
Dena Kenney
Advisor: Tracey Chan

This poster will present findings of a continuous quality improvement project that examined adherence to best practices for the management of type 2 diabetes mellitus (T2DM) among adult patients. The project setting was a skilled nursing facility, serving a population of long-term adult resident patients. The American Diabetes Association (ADA) has recommended use of the 2017 Standards of Medical Care in Diabetes. This guideline suggests that the hemoglobin A1C (HbA1c) test should be performed quarterly in patients whose therapy has changed or who are not meeting glycemic goals and to monitor for elevated urinary albumin excretion (albuminuria) and low estimated glomerular filtration rate (eGFR) at least yearly in order to evaluate for progression or worsening of diabetic kidney disease. To measure the effectiveness in implementing these practice standards, a retrospective chart review was conducted. The inclusion criteria for this project were: 1) established long-term residents with a diagnosis of T2DM, 2) males and females 3) non-pregnant, and 4) ages 18-89. Twenty charts of adult type 2 diabetic patients were chosen at random. A standard data collection tool recorded the following information: 1) age, 2) gender, 3) length of T2DM diagnosis, 4) HbA1c level Q3 months uncontrolled, 5) HbA1c level Q6 months controlled, 7) annual GFR level, 8) annual urinary microalbumin level, and 9) HbA1c Q3 months order on chart. Data will be analyzed using descriptive statistics. Findings will be examined for adherence to national guidelines and implications for practice will be presented.

Poster Number: 44
Diabetes Self-Management Education and its Impact on Glycated Hemoglobin
Kristina Kosta
Advisor: Dr. Patricia Hanson

This poster will present findings of a continuous quality improvement project that examined adherence to best practice guidelines for individuals with above normal glycated hemoglobin (HbA1c) in patients with already established diabetes. The project setting was a primary care practice serving a population of the southeastern Michigan area patients. The American Diabetic Association (ADA) (2018) and American Association of Clinical Endocrinologist (AACE) (2017) have established guidelines for use in primary care practice to reduce HbA1c to decrease risk of complications in diabetic patients. This study will be referring primarily to the ADA guidelines that stipulate and cover ten hours of medical nutrition therapy within the first 12 months of diagnosis by a certified diabetes instructor or registered dietician. Medicare and other third party payers cover two hours of diabetes education annually after that initial 12 months. To measure the effectiveness of the practice in implementing these practice standards a

retrospective chart review was conducted. The inclusion criteria for this project were: 1) established patients in the practice 2) males and females, 3) ages 60-85, and 4) established diagnosis of diabetes for at least one year, 5) HbA1c greater than seven percent. Thirty charts of patients were chosen at random. A standard data collection tool was constructed and the following data were collected: 1) age, 2) gender, 3) diagnostic HbA1c, 4) was patient referred to MNT, 5) did patient fulfill consult to MNT, 6) was metformin initiated, 7) reason as to why metformin was not started if applicable, 8) following HbA1c and date. Data will be analyzed using descriptive statistics. Findings will be examined for adherence to national ADA guidelines and implications for practice will be presented.

Poster Number: 45
Role of Vitamin D Supplementation on Falls in a Long Term Care Facility
Anne Kuzma
Advisor: Tracey Chan

This poster will present findings of a continuous quality improvement project that examined adherence to best practice guidelines in a long term care facility for residents at risk for falls. The project setting is an urban nursing home serving a population of adult patients. The American Geriatric Society (AGS) in partnership with the British Geriatric Society (BGS) have established guidelines for use in long term care facilities which state that in addition to a multifactorial risk assessment, Vitamin D supplements of at least 800 IU per day should be provided to older persons residing in long-term care settings with proven or suspected vitamin D insufficiency as well as to those who have abnormal gait or balance or who are otherwise at increased risk for falls. A retrospective chart review of resident's medical records for age, gender, risk assessment documentation, 25(OH) Vitamin D lab drawn, supplementation of at least 800 IU Vitamin D, use of antipsychotics, and falls in previous 90 days will determine if the facility is following best practice guidelines to help reduce falls.

Poster Number: 46
Future of Individual Communications and Online Marketing
John Lauro
Advisor: Dr. Betty Jean Hebel

This research draws upon the growing phenomenon of interpersonal marketing in online and social platforms, and overall purpose and direction that online marketing is aiming for. It appears as though the technological environment that surrounds today's society has desensitized consumers from online and social media marketing techniques that are encountered on a daily basis. Online marketing strategies have become increasingly more individualistic over the past decade, and are on track to become even more individualized in years to come through a plethora of methods that utilize engaging marketing tactics. This research will highlight not only the importance of a more individualized approach to online marketing, but the overall direction that online and social media marketing is heading in.

Poster Number: 47
The Effects of Integrating Chromebooks and Activity Centers on Student Achievement in Mathematics
Emily Marshall
Advisor: Dr. Joy Oslund

The study "The Effects of Integrating Chromebook and Activity Centers on Student Achievement in Mathematics" integrated student-centered mathematics, which included a combination of guided math, technology, games, and independent work in a second-grade classroom of twenty-five students. After analyzing pre- and post-test scores, 96% of second-grade students improved their test scores on at least one objective between the pre-test and post-test. Two groups of students were given the program Front Row on Chromebooks for two objectives: place value and operations and algebraic thinking. The usage of technology for place value did not show to increase scores any more than non-technology activities, and students practicing operations and algebraic thinking using technology had greater changes in scores than students practicing base ten using technology. Students were given a survey, and a majority of the student's favorite activity center was group work with the teacher. The least favorite center was independent work without technology. Suggestions for improving math instruction, including how to involve parents in mathematics, are discussed.

Poster Number: 48
Effects of Media Content on Consumer Reactions within the Market
Paige McNamara
Advisor: Dr. Betty Jean Hebel

In today's world, consumers are consistently influenced by advertising of all types and from all forms of media. There are advertisements that organizations intend to use to persuade customers to purchase products or services or to disprove other organizations efforts, but there are also subconscious or unintended advertisements shaping the minds and beliefs of consumers in informal manners. This study aims to find examples and positive or negative effects of unintentional media content on consumer reactions within the market and to find the financial implications upon the organizations involved. Organizations cannot possibly control all media and therefore are subject to informal advertising efforts and the impacts of these impressions on consumers and ultimately the financial implications for the organization.

Poster Number: 49
Factors That Predict Millennial Aversion to Investments
Ashley Moore
Advisor: Dr. Matilda Isaac-Mustapha

Millennials represent more than one quarter of the nation's population, yet there is an aversion to investments (U.S. Department of Commerce, 2015). Literature shows millennials makeup the majority of the workforce. However, there is still an aversion to investments. The number of millennials has surpassed that of baby boomers that are now approaching retirement (Fry,

2016). Due to risk aversion, tax legislation, pension reform, debt obligations and mentorship, millennials are not able to investment in their future. A study will be completed to discover the factors that predict millennials aversion to financial investments. Literature shows the three main factors that caused millennials to be unable to invest included: wages, living expenditures and debt (Kelly & Datta, 2014). The inclusion of new moderating variables will allow for this study to further extend previous research on generational lack of investment fundamentals as well as the philosophy surrounding the disinclination. Research findings will be determined by a survey and will be developed at a later date using the quantitative research method. Each independent variable is expected to show a significant correlation to the dependent variable (millennial investment aversion) and the five dependent variables.

Poster Number: 50

Community Service Providers Perceived Self-Efficacy in Identifying and Servicing Individuals on the Autism Spectrum

Amy Mullins and Chelsea Marshall

Advisor: Dr. Jill Robinson

The problem of this study is to determine the perceived self-efficacy of community service providers regarding their perception of identifying and serving individuals on the autism spectrum disorder (ASD). This disorder is characterized by deficits in social skills, communication, and behavior regulation. There is a paucity of research internationally on community service providers regarding their perceptions and ability to service this population. To date, autism is the fastest growing developmental disability. Currently, ASD affects one in sixty-eight school-aged children (CDC, 2016). Approximately 70 million world-wide are affected with this disorder, with 3.5 million in the USA (Magro, 2015). This steady increase in prevalence poses significant implications for the community and its service providers. This study is limited to local public safety and medical service providers. The first phase of this study consists of a review of the research related to the problem of this study. Based on the findings, a questionnaire will be developed to ascertain community service provider's perceptions of identifying and serving individuals with ASD. Both researchers will obtain written approving from the organizations involved in this study to administer the questionnaire. The data collected will be presented at the 2018 Research Symposium at Madonna University. The researchers anticipate an opportunity to lead a forum on the findings of this study, and its implications with the Madonna University Nursing, and Criminal Justice programs.

Poster Number: 51

Numb to Treatment? Your Provider May be as Well. Proper Screening and Treatment for Diabetic Peripheral Neuropathy

Michael Norwick

Advisor: Dr. Mallory Fox

A retrospective chart review was conducted to measure the number of Type II diabetic patients screened for diabetic peripheral neuropathy (DPN) and administered pharmaceutical treatment according to the guidelines established by The American Diabetic

Association (ADA), in a primary care setting, serving a population of about 700 patients in an urban community. The ADA recommends a first line treatment for DPN of Pregabalin and Duloxetine along with secondary treatments using Vitamin B12, anti-convulsants, TCA's, narcotic, and non-narcotic pain relievers. The inclusion criteria were: 1) Established patient's in the practice; 2) Male and female; 3) Ages 18 to 80; 4) Diagnosis of Type II DM; and 5) Diagnosis of DPN. Twenty charts of patients who were diagnosed with depression and who met the previous criterion were chosen at random. A standard data collection tool was constructed and the following data were collected: 1) Age; 2) Gender; 3) Screening for DPN; 4) Diagnosis of DPN; and 5) Treatment with SSRI/SMRI, Pregabalin, Vitamin B12, Gabapentin, TCA, and other pain medications. Data will be analyzed using descriptive statistics and the findings will be examined for adherence to the ADA guidelines and implications for practice will be presented.

Poster Number: 52

The Relationship Between Store Image and Consumer Preferences Towards Store Brand

Shivani Patel

Advisor: Dr. Betty Jean Hebel

Store image and consumer preference are two concepts which makes marketing effective in the contemporary world. For many organizations, store image and consumer preferences have become imperative now than ever due to competition. Personal experience can have effect on the way one describes store image and consumer preferences. The follow paper will define store image and consumer preferences along with their dimensions that help organizations stand apart from other organization. Another key point of this paper is to evaluate how store image and consumer preferences are related to store brands. The following research paper will describe the different methods organizations have implemented to differentiate from one another. Store brands tend to have lower cost of good then national brands. Some previous research has shown that store image and consumer preferences have a strong relationship with store brand.

Poster Number: 53

What Are the Effects of Repealing the Net Neutrality Rule on Consumers and Businesses?

Sengmany Phantharangsy

Advisor: Dr. Betty Jean Hebel

Over the past decades, the internet has revolutionized the way people interact and learn about the world around them. With the internet becoming the most preferred method of communication, there have been concerns about its regulation. In 2010, the Federal Communications Commission (FCC) ruled in favor of net neutrality, requiring internet service providers to offer equal access to all web content. They were prohibited from prioritizing, blocking, or charging extra fees for certain internet traffic. However, the FCC voted late last year to repeal the net neutrality rules. The telecom industry supported the move, while the tech industry and consumer-advocacy groups protested. Proponents of the repeal argued that the regulations stifled innovation. On the

other hand, opponents argued that the internet service providers will start selling the internet in bundles with a higher cost for premium packages. Small businesses also feared that giant corporations will be able to pay more to gain a better edge on an uneven playing field. Either way, the repeal of the net neutrality rules will change the internet landscape.

Poster Number: 54
Appropriate Use of Opioids in Males and Females
>= 18 – 65 Years of Age with Chronic Pain
Courtney Preston
Advisor: Tracey Chan

This poster will present findings of a continuous quality improvement project that examined adherence to best practice guidelines for appropriate use of opioids in patients with chronic pain. The project setting was a interventional pain clinic serving a population of male and female patients aged 18-65 years of age. The Centers for Disease Control have established guidelines for use in primary care practice to improve communication between providers and patients about the risks and benefits of opioid therapy for chronic pain, improve the safety and effectiveness of pain treatment, and reduce the risks associated with long-term opioid therapy, including opioid use disorder and overdose. To measure the effectiveness of the practice in implementing these practice standards a retrospective chart review was conducted. The inclusion criteria for this project were: 1) Urine drug testing to identify prescribed substances and undisclosed use. 2) Prescription drug monitoring programs to check for high dosages and prescriptions from other providers, 3) males and females, 5) ages 18-65, and 4) established diagnosis of chronic non-cancer pain. 30 charts of patients on long term use opiates were chosen at random. A standard data collection tool was constructed and the following data were collected: 1) age, 2) gender, 3) urine drug tested completed 4) prescription drug monitoring program assessed using MAPS, 5) type of insurance 6) pain assessment 7) chronic non-cancer pain only. Data will be analyzed using descriptive statistics. Findings will be examined for adherence to national guidelines and implications for practice will be presented.

Poster Number: 55
Achievement through School Improvement: Bridging the Learning Gap
Taylor Richey
Advisor: Dr. Anne Morris

The idea that I chose for the symposium presentation involves my internship project taking place at Troy High School. I decided to address a problem in our school and community. The problem is the learning gap is continuing to increase between high level learners and low-level learners in the all-academic areas. I joined the school improvement team, wrote school improvement goals, created professional development opportunities, and collected data to determine the success of the goals. My poster will display results, research, and components that I have found throughout my year on the school improvement team. I will also have artifacts related to my results.

Poster Number: 56
Experience, Education, Best Practices, and Organizational Environment: Impact on Attrition of Registered Nurses
Elizabeth Robertson
Advisor: Dr. Matilda Isaac-Mustapha

Attrition of registered nurses is a significant issue in the healthcare industry (Johnson & Cowin, 2013). Attrition of registered nurses is costly and decreases the quality of care patients receive (Friedman, Delaney, Schmidt, Quinn, & Macyk, 2013). A review of the literature shows that experience, education, best practices, and organizational environment impact the attrition rate of registered nurses. However, there is little information regarding relationships among these factors that impact attrition rates. Nurse leaders need to understand how these factors affect the attrition rates of their nursing staff in order to implement effective strategies to retain nurses.

Poster Number: 57
Ethical Challenges and Opportunities in the Marketing of Healthcare Organizations
Adam Savine
Advisor: Dr. Betty Jean Hebel

In the increasingly crowded space of healthcare provision, there is a need for healthcare organizations such as hospitals to differentiate themselves from competitors. To this end, marketing strategies are increasingly being employed to create a competitive advantage. However, the deliverable of healthcare organizations is necessarily overlapping with the provision of health for a population. Because of this, the ethicality of marketing practices in healthcare has been an open question. The current discourse sought to examine the ethical challenges in healthcare marketing, and determine the best ways in which healthcare organizations may overcome these challenges. Leveraging stakeholder theory as well as aligning corporate social responsibility approaches to engage all internal (hospital) and external (patient and community) stakeholders in the marketing effort in each of the domains of place, price, product, and promotion. In this way, organizations may mitigate ethical risk and differentiate themselves and their offerings from others in the crowded United States Healthcare marketplace.

Poster Number: 58
1,2,3 the number matters when choosing the type of therapy in diabetes treatment
Jess Scaria
Advisor: Dr. Mallory Fox

A Closer Look at Mono, Dual, or Triple therapy Treatment per ADA Guidelines. A retrospective quality improvement chart review was conducted to measure provider adherence to ADA guideline based management for non-pregnant type 2 diabetes mellitus patients in a primary care practice, serving a population of about 700 patients. The ADA has established guidelines for use in primary care practice to manage the treatment and reduce diabetes related complications to diabetic patients. The ADA guidelines recommend a target HbA1c level of <7% with mono,

dual or triple therapy treatment regimen based on the HbA1c levels. The inclusion criteria for this project were; diagnosis of diabetes type 2, male and female genders, any races/ethnicity and ages 18-80 yrs. Twenty charts of diabetes type 2 patients were chosen at random. A standardized data collection tool was constructed for this project with the following inclusion criteria; age, sex, race, diagnosis of DM type 2, HbA1c at beginning, initial treatment, HbA1c at 3 months, treatment at 3months, HbA1c at 6 months, treatment at 6 months, HbA1c at 12 months. Data will be analyzed using descriptive statistics. Findings will be examined for adherence to national guidelines and implications for practice will be presented. The objectives include: describe the ADA guideline based management of non-pregnant type 2 DM patients, verbalize the ADA guideline based mono, dual or triple therapy treatment options based on HbA1c levels, and apply the ADA guideline based treatment options in the management of type 2 DM patients in the practice setting.

Poster Number: 59
Evaluating the Quality Improvement and Patient Safety Curriculum Provided to First Year Residents.

Katie Schwalm

Advisor: Dr. Matilda Isaac-Mustapha

Residents are some of the key stakeholders that should be leveraged and engaged as part of improvement in health care. They are often at the front line in the hospital and the first to identify opportunities for improvement in the quality of care and the safety of the patient. With this in mind, in their first year of residency, residents represent a critical group to be educated on the topics of quality improvement and patient safety. The need exists to develop appropriate curriculums that set the foundational knowledge in quality improvement and patient safety. This type of curriculum starts in the first year of residency and builds, progressively, through the rest of the residency and into clinical careers. Research has demonstrated that the success and effectiveness of quality improvement and patient safety resident curriculums are realized by the curriculum delivery mode, the defined content and objectives of the curriculum, and the learner's perception of impact through the transfer of knowledge. Preliminary findings indicate that these three factors play a big role in the effectiveness of such quality improvement and patient safety curriculum's.

Poster Number: 60
Productivity Driven by Job Satisfaction, Physical Work Environment, Management Support and Job Autonomy

Kyle Shobe

Advisor: Dr. Matilda Isaac-Mustapha

Business is driven by the necessity of building profits and adding to the value stream of the global economy. Every business across the globe looks to be highly productive and extremely lean and efficient. High productivity has many driving factors and those factors will be dissected and thoroughly examined to determine their effectiveness in altering productivity in the workplace. The research conducted shows the importance of being able to balance job satisfaction, ergonomics of the physical workplace,

management support, and autonomy of the workforce to build a productive work environment. The research showed that job satisfaction correlates heavily with job performance and work output of staff. The physical work environment and how it affects productivity was researched and gave strong signs the two are related in many ways. Also, management support, as well as autonomy of the workforce proved to be leading factors in determining the level of productivity in the workplace. Through research and literature review, dissatisfied employees, poor working conditions, unsupportive management and alienation among team members drives poor performance and low productivity. In conclusion of the research on this topic, there will be a study done to help in supporting the literature findings. There was a survey conducted with one hundred office employees of a manufacturing plant which gives evidence and insight as to what variables really drive high productivity in the workplace.

Poster Number: 61
Cass Community Social Services: A Strengths-Based Approach
Shannon Smith, Nicole Bialowicz, Carmensita Buentello, Stephanie Driver, Jessica Linville, and Tina McKellery
Advisor: Dr. Sarah Twitchell

This research study seeks to appraise the value of using a strengths-based asset approach for residents of a local housing program who were formerly homeless. The purpose of the study is to identify the strengths and assets of residents living in Permanent Supportive Housing (PSH) at Cass Community Social Services (CCSS) and to understand how those strengths and assets might be able to be used to improve their community. The tool developed for the study was modeled after an instrument created by John P. Kretzmann and John L. McKnight's work on Asset-Based Community Development (ABCD) and addressed professional, personal, communal, and interpersonal skill sets. The 34 residents who participated identified 1,252 skills in total, an average of 37 strengths per resident. About three quarters of the residents indicated their families are the strongest source of support but following that, 65% listed CCSS staff as their strongest support. Family was also the most frequent response to who they rely upon the most. Additionally, 41% of CCSS residents feel as though their relationship with their families could be improved. The findings from the research provide opportunities for CCSS to incorporate a number of inclusive, community-oriented programming based on residents' skills sets and interests.

Poster Number: 62
CDC Guidelines for Reducing Transmission of Infectious Disease Among Chronic Hemodialysis Patients
Toyia Straughter
Advisor: Tracey Chan

This poster will present findings of a continuous quality improvement project which examined adherence to best practice guidelines for Hepatitis B and Hepatitis C screening, intervention and monitoring in patients with hemodialysis patients. The project setting was a chronic dialysis facility serving a population of end stage renal disease patients currently receiving hemodialysis. The

Centers for Disease (2017) have established guidelines for use in chronic hemodialysis clinics to screen and monitor Hepatitis b and Hepatitis C status in patients, in attempt to reduce transmission of infectious disease. These guidelines include when to screen patients, any interventions that are necessary, how often to monitor patients and which laboratory test should be performed. To measure the effectiveness of the practice in implementing these practice standards a retrospective chart review was conducted. The inclusion criteria for this project were established patients in the chronic hemodialysis facility, males and females. Forty charts of hemodialysis patients were chosen via hepatitis b and hepatitis c audit tool. A standard data collection tool was constructed and the following data were collected: HBsAb, HBsAg, HBcAb, and HCV. Data will be analyzed using descriptive statistics. Findings will be examined for adherence to national guidelines and implications for practice will be presented. The objectives include: identify guidelines for screening chronic hemodialysis patients receiving treatment in-center, discuss the importance of monitoring hepatitis b virus in chronic in-center hemodialysis patients, summarize the tests utilized in the screening of hepatitis b virus, and identify hemodialysis patients who may be susceptible to the hepatitis b virus.

Poster Number: 63
High Organizational Performance is Predicated upon Effective Leadership
Zainab Suleiman
Advisor: Dr. Matilda Isaac-Mustapha

Leadership that fails to respond toward insignificant satisfaction reports lack organizational performances. The purpose of this study is to research different strategies of leadership in a private health care setting towards improving organizational performance. This study incorporates approaches that health care leaders may apply towards improving employee and patient satisfaction. One health care leader operating in Livonia, Michigan in a private practice was selected for this study. Mix methods will be used when collecting data. The researcher gathered data from 150 participants for this survey that was implemented in this study. The participants included 75 random selected patients in a private health care setting aside from the 75 random selected employees. In this study themes were identified after member checking the transcribed face-to-face interview questions. Four themes included towards identifying the outcome of this study are decision-making strategies of high performance, total quality management and best practices, employee satisfaction, and competitive benchmarks. These themes emphasized the importance of high organizational performance, coordination of care, employee accountability and quality improvement. Health care centers apply these finding when improving patient and organizational performances.

Poster Number: 64
Using Social Media to Mitigate the Effects of Loneliness on Senior Citizens Living Independently
Ellen Swies
Advisor: Dr. Matilda Isaac-Mustapha

This research seeks to find a causal relationship between the use of social media technologies by elder senior citizens and their increased sense of inclusion and decreased loneliness. The elder senior citizen is defined as those individuals who are over 65 years of age and are no longer employed in the workforce. Further, the elder senior citizen that this study seeks to include is in good health, has no diagnosis of dementia or memory impairments beyond normal expected age-related memory lapses. Loneliness and isolation experienced by a senior citizen may be exacerbated because the social network of seniors is more likely to diminish or disappear due to the elders' loss of mobility, loss of family members due to geographic movement, death, or other circumstances beyond his or her control. The research will seek to determine if the use of social media can mitigate the effects of loneliness and isolation experienced by the senior citizen. In addition, the research will determine if a social media platform, which includes specifically designed programs for elders, will be viably employed by senior citizens in order to maintain social and familial contacts. The findings of the research will seek to reveal if there is, or is not, a causal relationship between social media interactions and loneliness in senior citizens.

Poster Number: 65
Down in the Dumps? A Look at Depression Screening and Treatment in a Primary Care Setting
Ukamaka Udegbonam
Advisor: Dr. Mallory Fox

A retrospective quality improvement chart review was conducted to measure provider adherence to screening and DSM-V guideline management for major depressive disorder in a primary care setting, serving a population of about 700 patients. The PHQ-9 is recommended as a screening tool for depression per guidelines and the DSM-V guideline recommends SSRIs or SNRIs as the first choice of treatment for depression. This guideline recommends three phases of treatment: 1) acute phase (6-12 weeks), 2) continuation (4-9 months) 3) maintenance (years) based on patient's response to the treatment. The inclusion criteria for this project were 1) male and female, 2) ages 18-80, 3) established black/white patients in the practice and 4) patients presented in the clinic for annual visit within the past 12 months. Twenty charts of patients who were diagnosed with depression and who met the previous criterion were chosen at random. A standard data collection tool was constructed and the following data were collected: age, gender, race, insurance, PHQ-9 documented including score and treatment currently prescribed. Data will be analyzed using descriptive statistics. Findings will be examined for adherence to guidelines and implications for practice will be presented.

Poster Number: 66
Student Satisfaction with Brother Rice High School's Computer Applications Course
Jennifer Wagner
Advisor: Dr. Anne Morris

The purpose of this study, "Assessing Student Satisfaction of Brother Rice High School's Computer Applications Course," was to measure student satisfaction of the Computer Applications curriculum at Brother Rice High School. Junior and senior students, who had taken the mandatory course their sophomore year, were surveyed on their perceived level of preparation and the necessity to use the skills learned in the course for their other high school classes. Students were asked if they wished they would have learned any additional skills in the course. Results of the survey were aggregated by grade level and by proposed college major, and conclusions were drawn as to the relevancy and usefulness of the course curriculum.

Poster Number: 67
The Misrepresentation of Cosmetic Enhancements and its Detriments to Society
Nicole Warra
Advisor: Dr. Matilda Isaac-Mustapha

The misrepresentation of cosmetic enhancements has left a detriment on its users yet the use and idolization still continues. Consumers admire unrealistic body images and try to attain them through cosmetic enhancements, procedures, and through the purchase of cosmetic products. Viewers need to understand that the models used in advertisements are filtered to appear as though they are beautiful, thin, and have no imperfections. Literature shows the more a human idolizes these unnatural body images the more this will affect aspects of their lives. False advertising has made this unrealistic body image even more relevant and desired by many. Harm occurs through expectation, addiction, cognitive dissonance and the risks and costs of beauty enhancements. The researcher has determined from this quantitative study that these problems could be reduced significantly if the person watching the advertisement understood the difference between reality and this unnatural body appearance. False advertisements harm individuals that view them and leave a lasting impact on their lives.

Poster Number: 68
The Influence that Televisions Advertisements have on Marketing Campaigns and Customers Purchase Decisions
Nicole Warra
Advisor: Dr. Betty Jean Hebel

Advertising is a tremendous tool many corporations have used over the years to promote, distinguish, and expand their enterprises. Television has always been an exceptional source of advertising that can guarantee to help get the word out about any company's products or services. Companies have learned to be creative and use such things as humor, catch phrases, and jingles to attract the potential consumer. Even though television advertising has

had much success in the past, times are changing and much criticism has surfaced regarding ads and the content in which companies chose to promote and endorse their products. The negative backlash has begun due to the effects these advertisements have envisioned on the viewer. Children's obesity has become a major uprising and a cause for concern in our children's health. Unhealthy food choices made by children have been linked back to the specific type of television advertisements aired during popular children's programming. This triggers a huge cause for concern for doctors and parents alike. Due to the disturbance of non-commercialized television options and the expansion of the internet viewers are no longer designated to the susceptible commercials that interfere with their programs. This has caused a loss in audience volume and has been an impairment to countless industries. The overall impact from television advertisements will continue to play a detrimental role in today's present and future societal decision making.

Poster Number: 69
An Evaluation of Appropriate Identification and Treatment of Influenza in Hospitalized Adults
Candace Westfall and Andrew Palmer
Advisor: Dr. Gail Lis

The Center for Disease Control and Prevention (CDC) identifies influenza as a priority community health concern. A reported 25 million influenza illnesses occurred in the 2015-16 season, resulting in 310,000 influenza related hospitalizations and 12,000 influenza related deaths (CDC, 2016). Related medical care costs the United States billions of dollars each year. For patients who present to the ER or urgent care symptoms consistent with the flu such as the abrupt onset of fever, sore throat, myalgia, cough, and headache; rapid identification and treatment is indicated (CDC, 2016). According to the Infectious Disease Society of America appropriate use of diagnostic testing and timely administration of antiviral medications can improve clinical outcomes for those with influenza infections (2009). This can lead to decreased duration of required medical care and reduce inappropriate use of antibacterial agents. The ultimate goal is to improve patients' health, reduce their length of stay, and reduce mortality. This quality improvement project will evaluate compliance with the Infectious Disease Society of America's guidelines for prompt identification and treatment of hospitalized adults identified as having influenza. A retrospective chart review of forty patients admitted with the diagnosis of influenza will be completed. Process indicators will include documentation that the advance practice nurse ordered the appropriate influenza screening and that an order was placed for the initiation of oseltamivir. The data will be analyzed using descriptive statistics. The impact and role of the advanced practice nurse will be discussed for the development of interview and history taking skills. Concerns were noted regarding excessive time commitment and technology issues.

Poster Number: 70
Interrogation Techniques to Help Prevent False Confessions in Law Enforcement
Billie Williams
Advisor: Dr. Matilda Isaac-Mustapha

Most people find it unimaginable to confess to a crime that they did not commit. The reality is that false confessions are elicited more often than most realize. Certain factors can contribute to coerced confessions. Excessively long interrogatives have been found to result in false confessions. Vulnerable groups are more susceptible to being coerced into making false confessions during interrogations. The corruption of scientific evidence could also lead to false convictions. An assumption of guilt can also lead to false confession when an investigator displays investigator bias. Investigators who rely heavily on their ability to detect deception during interrogation can result in eliciting false confessions. Other interrogative techniques can also lead to false confessions. 28% of exonerated inmates were imprisoned due to false confessions and 10% of those had mental health issues. The objective of the research consists of examining and reevaluating procedures that law enforcement officials use to interrogate suspects of a crime. The fact that people are convicted of crimes that they have not committed is a miscarriage of justice and must be resolved. The analysis and interpretation of this study is still in process and will be completed by the end of the semester.

Poster Number: 71
The Effect of Growth Mindset Instruction on Students Persisting and Taking Responsible Risks
Tracy Williams and Tracie Stidham
Advisor: Dr. Joy Oslund

Having a fixed mindset can cause students to give up, rather than persist in the face of obstacles and hard work. It can also cause students to take the easy way out, rather than take responsible risks in the face of challenges. Therefore, we propose that direct growth mindset instruction in the classroom will lead students to take more responsible risks in their learning and persist through challenges. In this paper, we describe our attempt to provide 27 fifth grade students direct instruction about mindset and related concepts over a two week period, in an effort to increase student participation and responsible risk taking in the classroom. The lessons were aimed at defining and differentiating between growth and fixed mindsets, exploring the effect learning has on neurons in the brain, encouraging new growth minded vocabulary, as well as identifying challenges and making plans to overcome them. Multiple choice quizzes and mindset surveys were given prior to growth mindset instruction, as well as post-instruction. Analysis of those assessments, as well as classroom observations, seem to indicate that student thinking began to reflect a growth mindset, although changes in classroom behaviors were minimal during the study period. While we were disappointed to find less evidence of change in student mindset than expected, we feel a longer study could yield more consistent change. We also realized that part of our data collection was flawed in that the quantity of student participation does not necessarily correlate to quality of participation.

Poster Number: 72
Depression Screening in Pregnancy and Postpartum
Danielle Wilson
Advisor: Dr. Matilda Isaac-Mustapha

The importance of early identification and treatment of depression in pregnancy and postpartum has led to recommendations of screening three times, first prenatal visit, third trimester, and postpartum at a major hospital in Southeastern Michigan's Department of Obstetrics and Gynecology. Our preliminary literature review findings state that depression screening is imperative because if left untreated it will have devastating effects on the mother such as; increased hospital admissions, preeclampsia, poor nutrition, substance abuse, and possible suicide ideation. It can lead to neonatal outcomes such as low birth weight, preterm birth, and can affect childhood development. Our findings also state that validated screening tools such as the Edinburgh Postnatal Depression Screening (EPDS) can be used to detect depression. There are many debates on the use of antidepressants such as selective serotonin re-uptake inhibitors (SSRIs) during pregnancy, the risks and benefits should be examined closely and carefully with the patient. Together these findings suggest that depression screening can lead to adverse neonatal outcomes, data analysis will follow.

Poster Number: 73
The Influence of E-commerce on the Marketers and Consumers
Mo Yang
Advisor: Dr. Matilda Isaac-Mustapha

E-commerce has become very common in the modern society. Consumers can find different kinds of products from the less expensive to highly expensive. It has not only made consumers lives more convenient, but also has brought many benefits to marketers as well. This study is undertaken to assess the influence of E-commerce on marketers and consumers. Five influences are suggested in this study, which comprises of resource capability, security breach, shopping experience, addiction and shopping mode. Literature shows three main influences of E-commerce: security breach, shopping experience and addiction. Some new variables are explored in this study to extend previous research. In order to better understand these influences, a quantitative research methodology is utilized. This study hopes to show a significant correlation between the E-commerce on the marketers and consumers and resource capability, security breach, shopping experience, addiction and shopping mode. The final results of this empirical study will be published on a later date.

Poster Number: 74
Early Literacy: Team Approach "Three Part RTI Program"
Lori Zoulek
Advisor: Dr. Anne Morris

My research project utilized a team approach to early reading RTI (response to intervention) in order to increase the literacy of "at risk" students. The "at risk" students are those first grade

students that scored below the program parameters on a DOLCH word assessment in the fall for that grade or knew less than 75% of their sight words for first grade. An additional assessment was administered only for those students scoring “at risk” to assess their phonological awareness. The targeted interventions are the following components: 1) Incremental Rehearsal (IR) done in class with one to one instruction by teacher or paraprofessional; 2) Phonological games done in class small group with teacher or paraprofessional; and 3) At Home Wordbook, a DOLCH wordbook to be used at home with parents using program instructions. Reassessed “at risk” students in January for DOLCH word assessment to collect data and make adjustments to the interventions. Fifty-six percent (56%) of the first grade students were assessed “at risk” in September of 2017. The January 2018 assessment of “at risk” group indicated all students made progress and 44% of the “at risk” students tested above the program parameters and discontinued the IR and At Home Wordbook.

Exhibition Poster Presentations

Poster Number: 75

Conceptual Framework for Designing the Next Generation of Time Banking Solutions

Emily Biddix

Advisor: Dr. Phillip Olla

Time Banks are effective systems that allow communities to use time rather than money as currency. When one person needs a task to be completed, they can hire someone and then pay him or her with an hour they earned by helping someone else. By exchanging an hour for an hour, Time Banks help decrease the effects of poverty while increasing equality. However, Time Banks pose a variety of issues. Many people are concerned with issues such as safety, qualifications, quality, and availability. On the Contrary, with the advancement of technology such as cryptocurrency, the ubiquity of mobile phones, and recommendation systems, Time Banks are becoming increasingly accessible. This research investigates the current situation of Time Banks and how innovations affect the application within the community. These emerging technologies will help create a conceptual framework for designing new solutions for the next generation of Time Banking.

Poster Number: 76

Make Your Time Count

Kezia Georgy, Ashton Coles and Audrey Pohl

Advisor: Dr. Phillip Olla

The danger of social isolation in communities is becoming increasingly prominent in society today. Social connectedness has several benefits, such as improving physical health and psychological welfare. One study describes that social separation is a stronger harm to health than other common health problems, such as obesity and smoking, for example. In addition, a strong social connection between individuals leads to a 50% increased

chance of longevity. Social connectedness is the extent to which a societal member is participating and interacting with a social circle. To combat social isolation, and increase social connectedness, an upcoming concept that is being introduced in several communities is Time Banking. Time banking is a type of currency that allows individuals to trade time and skills. Time banking occurs when a network or a circle of members agree to giving and receiving the currency (credits) that other members can provide. This circle of members encourages collaboration, performance, and a sense of belonging. Members who join are agreeing to spend an hour or more performing an activity that would deem beneficial to other members. In return, they would receive one or more credits. These credits could then be used for assistance or services that they may need. The numerous payoffs, comes with a plethora of challenges that must be addressed. For example, the trustworthiness of members, the engagement between the network itself, time saving organization, as well as the overall sustainability of the system itself. Our research project aims to identify solutions to address these challenges.

Poster Number: 77

Adaptive Clinical Recommendations for the Usage of Medical Cannabis

Vickee Le, Brianna Mozariwskyj, Emma Rimatzki, Jamie Mocerri, Brittany Horton, Sarah Janaan, and Travis Wardell

Advisor: Dr. Phillip Olla

Today there is a bunch of controversy about medical cannabis. The root cause is that many people are misinformed and have a preconceived image that all drugs are harmful. Our goal is to research the healing benefits of medical cannabis. Cannabis contains two major chemical compounds consisting of THC, the psychoactive component and CBD, the non-psychoactive component. Both work together in harmonization to relieve a number of symptoms and help the onset of diseases. Cannabis high in THC content can be used to treat and help relieve symptoms of ALS, Alzheimer’s, anxiety, and chemotherapy side effects. Cannabis high in CBD content can be used to treat and help relieve symptoms of anxiety, depression, chronic pain, and inflammation. By researching the benefits of medical cannabis, we can further distinguish which strains are fit for the patient to relieve the maximum amount of discomfort. Additionally, the development of a mobile application will be produced so that patients have access to the right strain of cannabis, where to safely get it, proper dosages and correct administration of the plant. The patient will be able to manually input their own symptoms or have the option to speak to an on-call medical cannabis physician to determine the appropriate strain. The mobile app will also be able to list locations of dispensaries around the area that carry the prescribed strain to help patients easily access their medication. Also, the app will recommend several methods of administration and a dosage that will ensure

beneficence. Medical cannabis is an exceptional drug that has been misconstrued. With extensive research and app development, we will be able to accurately educate the misinformed and further assist patients with care.

Faculty Presentations

Poster Number: 78

Virtual vs. Live Simulation: Students' Perspective

Tracey Chan

The purpose of this presentation is to share the findings of a study comparing different forms of simulated learning. Research has shown that Nurse Practitioner (NP) students struggle with the transition into practice. Simulation has been found to be a safe way to assist NP students in this transition. It is believed that with simulation students can demonstrate their clinical reasoning skills through life-like interactions. Simulation can be completed through a virtual computer based experience and live face-to-face simulation. An initial study was completed evaluating the NP students' perception of the effect of virtual simulation on clinical readiness. Students utilized a virtual simulation program during their health assessment and clinical courses. NP students were surveyed at the end of health assessment and then during their clinical courses on the impact they perceived the virtual simulation program had on their clinical readiness. Results of the study were not as favorable toward virtual simulation as anticipated. Therefore, a decision was made to evaluate the NP students' perception of live simulation modalities in order to compare their perceptions. The students were surveyed after taking part in a live simulation activity in order to determine their perception of the effect it had on their clinical abilities. The survey tool for both studies was composed of questions on a visual analog scale as well as open-ended questions. Comparative results are currently being analyzed. Preliminary findings suggest that generally students prefer face-to-face simulation over virtual simulation. However, students did identify that each modality brought unique advantages.

Poster Number: 79

Virtual Chronic Disease Allergy Indicator

Madonna University Partnership with the Felician Sisters Mission in Jacmel, Haiti Improves Healthcare and Provides Basic Needs for an Impoverished and Underserved Population in Jacmel, Haiti: A Four Year Review

Sr. Victoria Indyk

Jacmel, Haiti is an impoverished and underserved state that is affected by past natural disasters, disease and generations of systemic poverty. This rocky, mountainous area lacks running water, basic sanitation, and the people have little money and minimal job opportunities to pay for the basics of health, food, shelter, and education. The purpose of this study is to show how Madonna University's Partnership with the Felician Sisters' Mission in Jacmel, Haiti has helped the Haitian people with their needs for healthcare, food, and education over the past four years. Utilizing the Leininger's Sunrise Enabler Model, this study focused on assessing the needs of Jacmel, Haiti and showed how the

partnership between Madonna University and the Felician Sisters' Mission is assisting the Haitian people. Madonna University has participated in eleven Mission Trips to Jacmel, Haiti over the past four years (2014-2018) and has provided direct healthcare and health promotion education to adults, teens, and children. The Madonna University Mission Teams have assisted to improve health care through their work in the Mobile Clinic which provides healthcare to 28 mountain sites, distribution of over 150 water filter buckets, as well as donations of medical supplies, medications, nursing equipment, eye glasses, and other supplies to help improve the health care, social needs, and education needs of the Jacmel region.

Poster Number: 80

Electronic Medical Records: Confronting Interfacing and Paperless Challenges in a Nephrology Practice Setting

Janice Marchildon

The US Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 calls on hospital systems to adopt electronic medical records (EMR) to improve efficiency and safety of patients (Jonietz, 2003). Through EMRs medication errors decrease and overall flow of care improves. The Electronic Medical Record Adoption Model (EMRAM) categorizes healthcare organizations stages zero through seven with regard to how well the EMRs are integrated into the care setting with stage seven being the highest designation (Wolfe, 2016). Stage seven hospital systems use sophisticated clinical decision support systems and medication administration tools with complete interfacing of data sharing with outpatient and emergency services (Mastrain & McGonigle, 2017). Therefore, it is not enough to use EMR, electronic health records (EHR) must be inclusive of all patient care data and have the ability to interface with care services beyond the hospital infrastructure. When EHR lack the ability to communicate with other agencies this leads to poor communication and continuity of care. In addition, the lack of interfacement interferes with the ability for care settings to be paperless. The Institute of Medicine in 2002 called on the US government and healthcare organizations to commit to a national paperless health-information infrastructure to improve integration of care and reduce cost (Jonietz, 2003). This project will discuss strategies to enhance improved healthcare organization communication and reduce paper burden following the Fit between Individuals, Tasks and Technology (FITT) quality improvement model within a patient care practice setting (Mastrain & McGonigle, 2017).

Interactive Displays

Educational Three-Dimensional (3D) Printing Workshop

Joseph Semak and Nicholas Atwood

Advisor: Dr. Phillip Olla

The purpose of our presentation is to create an interactive display of three-dimensional (3D) printing concepts, as well as provide an educational background of the field, and its scholarly applications for Madonna University Students. 3D printing is revolutionizing the way that students at our University progress, and grow in the field of emerging technologies. 3D printing is the action of creating a three-dimensional figure, or object, using a digital model, which is achieved thin layer, by thin layer successively, eventually building up to the desired design. The implications of the 3D printing process are valuable in fields specific to Madonna University Students. We plan to demonstrate 3D printing concepts, by printing a 3D object in real time at the symposium, as well as displaying other 3D printed materials produced by the Madonna 3D Printing Lab. With our University focused on business, art, healthcare, forensics, and education, we plan to show and answer questions about how 3D printing can impact these fields, and how our students can get involved in the world of emerging technologies.

Assisting Preschool Children in Learning Various Coping and Self-Regulating Skills to Implement when Facing Toxic Stress Situations

Stacie Sniezek-Hocker

Advisor: Dr. Anne Morris

Collaboratively work with Dr. Lori Desautels, Ph.D., Butler University, SMCC Staff, families and students using Applied Educational Neuroscience to develop, articulate, and implement a shared vision of social and emotional learning. Collect data to identify the school's goals regarding toxic stress with in social and emotional development and help to create and implement a plan to further these goals. Respond to community interest and needs by building and sustaining positive school relationships with families and caregivers by sharing children's of Applied Educational Neuroscience children's book created using children's documentation, teacher reflections and research. Sustain a school culture and instructional program conducive to student learning through collaboration, trust and personalized learning environment with high expectations of students within the context of this study. Create and evaluate a comprehensive, rigorous, and coherent social emotional curriculum using a Reggio Emilia Philosophy. Utilize effective and appropriate technologies to support teaching and learning in Applied Educational Neuroscience. Advocate for school students, families and caregivers regarding equity, social/emotional development, policy and procedures. Act to influence local, district, state, and national decisions affecting student learning in a school environment to equity, social/emotional development, policy and procedures, and Applied Educational Neuroscience. Anticipate and assess emerging trends and initiatives to adapt school-based leadership strategies in regard to Applied Educational Neuroscience, toxic stress and social/emotional development.

SYMPOSIUM FOR RESEARCH, SCHOLARSHIP AND CREATIVITY AWARDS

College of Arts and Humanities

Film Awards

for creating Madonna University's full-length film,
"People Like Me"

Davis Clenney – Director of Photography
Hannah Csircsu - Art Director
Kara Kwiecinski- Director
Jordan Cumbo- First Assistant Director
Derrick Martinez- Head Writer
Joshua Walker- Head Editor
Shayne Cahill- Audio Technician
Patrick Morrow- Audio Technician
Levi Peters- Gaffer

Music Award

Kathryn Linzmaier - Recipient of the Livonia Civic Chorus
Award, Soloist in We Are Narzedzia Boga recording - Livonia
Felician Ministries

School of Business

Michael F. McManus Jr. Award for Leadership and Scholarship

Ini-Abasi Asanga
Hussein Dabaja

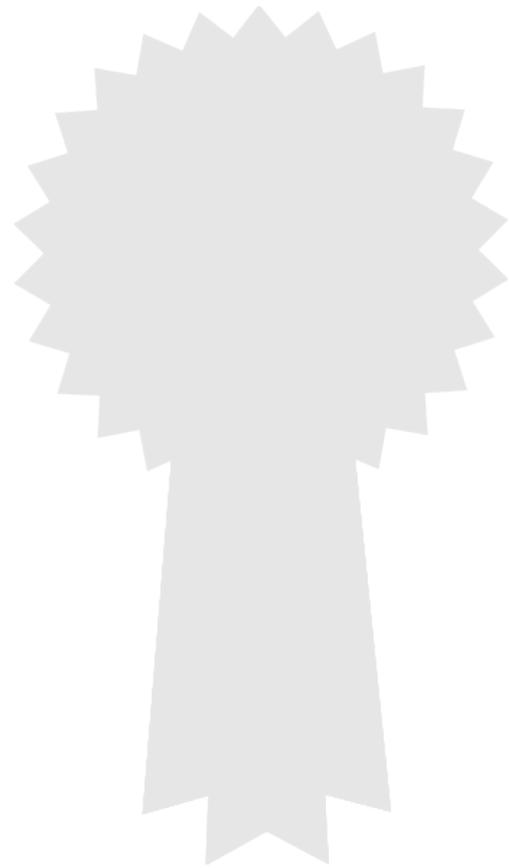
Business Community Engagement Award

Bryan Giczewski
Rachel Wiersing
Nikkole Wyrabkiewicz

College of Education

Learning Outcome Assessment Plan (LOAP) Award

Randa Abdallah
Randa Bazzi
Stephanie Bixby
Diane Dobritt
Annaliece Hanlon



College of Natural and Social Sciences

CNSS Academic Excellence Award

Jasmine Lauch
McKenzie Weyh

College of Nursing and Health

Franciscan Values Award for Graduate Nursing

Emily Bogart
Nicole Kalmbach

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Sciences

Monica Miller, Ph.D.
College of Arts and Humanities

Steven Schwartz, J.D.
College of Education

Thank you to our poster presentation judges

Jodi Barta

Tara Kane

Sue Ann Sharma

Deborah Dunn

Michael Kusluski

Kenneth Thiel

Rebecca Gibbs

Michelle Moy

Sharon Urso

Michele Harmala

Karen Obsniuk

Carol Vandenberg

Betty Jean Hebel

Joy Oslund

Stewart Wood

Matilda Isaac-Mustapha

Michelle Proctor

Jessica Zarate

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Michael Kusluski

Karen Shellie

Donna Bryden

Rachel Mahas

Jason Siko

John Critchett

Carly Nowicki

Sue Anne Sweeney

Marisa Ferrari

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Kenneth Thiel

Samantha Hallman

Joy Oslund

Sarah Twitchell

William Kasperski

Kelly Rhoades

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Laura Kull

Sue Ann Sharma

Jessica Zarate

Thank you to our Symposium photographers

Kathleen Thompson

Stewart Wood

NOTES



NOTES



NOTES



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Thursday through Friday, 8 a.m. - 8 p.m.

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<+> HACKING HEALTH WINDSOR + DETROIT IV

ST. CLAIR COLLEGE - WINDSOR, ON
APRIL 13 + 14 2018

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Hacking Health Windsor + Detroit breaks down barriers to healthcare innovation by bringing together **Designers, Developers, Makers, Business & Healthcare** professionals and students across the US-Canada border to collaborate, dream up & design solutions for patient-centric care.

This year we welcome two incredible industry partners – and champions of innovation – **Aphria & Green Shield Canada**, as the sponsors of our inaugural Design Challenges, with prizes valued at **OVER \$35,000** to be awarded!

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< WAYS TO PARTICIPATE >

1. Form your own team, post your project at hhwindet2018.sparkboard.com and pitch your idea on Friday night.
2. Listen to the pitches on Friday night and then join an existing team that is looking for help on their project.
3. There's no pressure to pitch, join a team or create your own. You can simply attend as an observer, enjoy some delicious food and make some great new connections!

REGISTER TODAY!

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