

EIGHTH ANNUAL MALONE UNIVERSITY

STUDENT

# RESEARCH SYMPOSIUM

SATURDAY **2016** **APRIL 23**

**10 A.M. - 12 NOON**

**East Campus Multipurpose Room**

*Malone University campus*



**MALONE UNIVERSITY**  
CHRIST'S KINGDOM FIRST

[www.malone.edu/research-symposium](http://www.malone.edu/research-symposium)

## SCHEDULED **PERFORMANCES**

**10:45 – 11:15 a.m.**

**Levi Muriuki**

1. *Prelude and Fugue in C minor BWV 847*
2. *Rachmaninoff piano transcription of Bach's violin partita no. 3 (BWV 1006) 1st movement-Prelude*

### **MALONE OPERA THEATRE**

Scenes from *The Magic Flute* by Mozart  
performed in German with English Dialogue

# PROJECT **ABSTRACTS**

**1. Jonnetta Hill, Allen Ayers**

**Faculty Mentor: Stephanie Burgess**

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*BSN Prepared Nurses' Knowledge of Delirium*

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Properly diagnosing delirium in elderly patients, especially those in an inpatient setting is extremely difficult and often goes unrecognized. As many as 70%-87% of patients in an intensive care unit setting experience delirium, potentially dampening better outcomes. This unrecognized diagnosis costs the healthcare system \$100 billion annually and results in lower quality of life. The purpose of this study was to evaluate Bachelor of Science (BSN) prepared registered nurses' knowledge of delirium and associated risk factors in Northeast and Central Ohio. The researchers focused on surveying 4 counties (Summit, Stark, Licking, and Franklin) that were identified as medically dense, with many nursing schools and major health care systems, therefore allowing better generalization. The researchers have explored the knowledge BSN prepared Registered Nurses possessed of delirium. The researchers have also assessed what knowledge of deliriums' risk factors BSN prepared registered nurses possessed.

**2. Carmen Barkman, Sarah Smith**

**Faculty Mentors: Susan Wechter and Debra Lee**

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*Registered Nurses in the Intensive Care Settings: Bullying and Burnout*

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Workplace bullying, harassment, and horizontal violence (BHHV) takes place every day in healthcare settings, and unfortunately nursing staff are at the forefront of this unsolicited behavior (Vessey, DeMarco, & DiFazio, 2011). The purpose of this study is to explore the relationship between bullying, harassment, and horizontal violence and nursing burnout in registered nurses in intensive care settings. BHHV hinders a nurse's health, job satisfaction, and self-worth with possible outcomes of nursing burnout. A quantitative correlational study design was utilized to survey intensive care registered nurses. Results supported the hypothesis with the first analysis comparing emotional exhaustion to pressure and was significant ( $r=.568, p < 0.01$ ). The second analysis compared depersonalization to pressure and was significant ( $r=.349, p < 0.05$ ). Given the ongoing prevalence of BHHV and burnout in nursing, it is imperative that further exploration of this relationship continue and proactive measures are explored to enhance care of the caregiver.

**3. William J. Conway, Jeffrey Powers**  
**Faculty Mentor: Stephanie Burgess**

*Nursing Perception of Intensive Care Unit Delirium*

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ICU delirium is a common and often undetected consequence of illness and hospitalization leading to increased lengths of stay, decreases in functional ability, and increase in mortality, yet it is often not assessed or treated. A cross-sectional study was performed using a survey of 125 nurses in three critical care areas at a northeast Ohio community hospital to evaluate nursing perception of delirium and barriers to performance of screening and treatment of delirium. Forty-three nurses responded indicating they perceived themselves as knowledgeable regarding delirium, not confident in performing delirium screening, and not valuing delirium screening. They also perceived physicians lack value in their assessment data. Nurses perceived barriers to assessment and treatment of delirium including lack of support from leadership staff, lack of team follow-through, and lack of feedback on assessments. Quality improvement could be implemented to increase education to improve nursing perception and remove barriers to delirium assessment and treatment.

**4. Angela Hissner**  
**Faculty Mentor: Lora Wyss**

*“How Do Hospitalized Patients in Isolation Perceive  
Their Experience during Their Stay?”*

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Research has shown that patients in isolation precautions are experiencing negative emotions (Ward, 2000; Barratt et al., 2010; Goldsack et al., 2014; Wassenberg, et al., 2010; Laliotis, 2003; Davies & Rees, 2000; Davies et al., 2000; Cavdar et al., 2012; Gammon, 1998). These findings have led to the current study: How do hospitalized patients in isolation perceive their experience during their stay? The research study was a qualitative study that was conducted at a local midwestern hospital. Nine patients in isolation precautions were interviewed about their perception of their experience during their stay. The researcher sought to explore common themes that existed among these patients. Four common themes were identified as a result of this study: Protection: Concern for Others; Perceptions of Isolation: Negative Stigma; Perceptions of Isolation: Positive Emotions; Interactions. From these themes, the researcher was able to develop nursing implications for practice.

## **5. Sandy Smith**

**Faculty Mentor: Lora Wyss**

### *The Effects of Exercise on Diet and Smoking Behavior in Teens*

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Several behaviors in adolescents including a lack of physical activity, poor food choices, and smoking behavior of both traditional cigarettes and vapor products have become a major health concern for this age group in the U.S. A quantitative study was completed using a convenience sample of students in a local high school utilizing a modified version of the CDC's Youth Risk Behavior Survey in a pretest/posttest design. The researcher provided the students with a brief teaching intervention regarding healthy lifestyle choices in addition to an exercise intervention using the Transtheoretical Model as the theoretical framework. Results from each data collection were analyzed and compared to determine the effects of exercise on food choices and smoking behavior in adolescents. However, no significant difference in stage of readiness for behavior change was found for any of the measured health behaviors of physical activity, food choices, or smoking cessation.

## **6. Holly Mazanec, McKenzie Mowery**

**Faculty Mentor: Kathleen Flaherty**

### *Nurse Practitioner Job Satisfaction*

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The purpose of this study is to describe the current level of job satisfaction of nurse practitioners in a primary care setting in Ohio. A descriptive correlational design, nonprobability convenience sample was used and participants were recruited from the OAAPN (n=33). The instrument used was the Misener Nurse Practitioner Job Satisfaction Scale (MNPJSS), which is a 44 item self-administered questionnaire measured on a 6-point Likert scale, administered via Survey Monkey. Possible responses range from 1 (very dissatisfied) to 6 (very satisfied). The MNPJSS has six subscales: (1) intrapractice partnership and collegiality, (2) challenge and autonomy, (3) professional, social and community interaction, (4) professional growth, (5) time, and (6) benefits. We are currently analyzing data to answer the following research questions: (1) What is the overall level of job satisfaction among NPs who work in primary care? (2) What is the relationship between intrinsic and extrinsic factors and job satisfaction? (3) What is the relationship between autonomy and overall job satisfaction?

## **7. Kelley Casto**

**Faculty Mentor: Kathleen Flaherty**

*What are the Coping Strategies and Perceived Incidence and Severity of Lateral and/or Vertical Violence in Nurses Working in a Pediatric Healthcare System?*

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This research study seeks to identify the coping strategies and perceived incidence and severity of lateral and/or vertical violence identified by nurses working in a pediatric hospital. Nurses are more likely to suffer nonfatal injuries while on the job than any other professional, and assault rates in hospitals show increasing violence in society. There is a sufficient amount of evidence exhibiting the impact of lateral and/or vertical violence on nurses nationwide; however, there is a gap in the literature on lateral and/or vertical violence in the pediatric nursing population. This study will utilize survey methodology to collect 1) demographic data; 2) opinions regarding the frequency, severity, and contributing factors of vertical and lateral violence; and 3) coping methods for violence. The research design to be used in this study will be a non-experimental, descriptive cross-sectional design with survey methodology used for data collection.

## **8. Kristina Fey**

**Faculty Mentor: Kathleen Flaherty**

*Exploring the Use of a Functional Pain Scale*

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The purpose of this study was to examine correlations between a functional pain scale (Mankoski's Pain Scale) in comparison to the standard numeric pain scale (Numeric Rating Scale). This study was designed to explore the correlation between pain scores obtained using these two different pain scales in patients 13-17 years of age with sickle cell disease (SCD) admitted with acute pain. The primary research question was whether these patients could enhance the accuracy of describing their pain by using a functional pain scale as compared to the standard numeric scale. After obtaining consent/assent, both scales were reviewed with the patient, and then a second set of scores was obtained. The setting was the inpatient medical surgical unit and the outpatient hematology oncology clinic at a major NE Ohio children's hospital. The analysis will be performed using SAS (version 9.4; SAS Institute Inc., Cary, NC, USA). Categorical data will be presented as counts and percentages. Data collection is ongoing at this time with analysis to follow.

## **9. Kristen Keyser, Kelli Baker**

**Faculty Mentor: Debra Lee**

### *Chronic Pain and the Perceived Quality of Life*

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Chronic pain (CP) is a growing national health care concern. Effective management of CP is often elusive; there is concern that this population also experiences a diminished quality of life (QOL). This quantitative study examined satisfaction with pain management and QOL among a convenience sample of 31 patients (19 female, 12 male) from a local pain management clinic. The average participant was 57.5 years old and diagnosed with CP for 15 years. Participants completed Ferrans and Powers' Quality of Life Index (QLI). 83.9% of participants were moderately or extremely dissatisfied with their pain management although 76.7% were satisfied with their care at the clinic. The most satisfactory treatment was medication (27 of 30). The median QLI was 16 (range 11-21) of a possible 30, suggesting diminished perceived QOL. If we are to facilitate satisfactory QOL in patients with CP, further research is needed to identify effective treatment modalities.

## **10. David Stearns, Valerie Reynolds**

**Faculty Mentor: Debra Lee**

### *Compassion Fatigue: Prevalence and Prevention in Hospital Nurses*

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Compassion fatigue (CF) can result from a nurse's repeated caregiving efforts or a single traumatic situation. Nurses with CF may prematurely leave their current employer or even nursing. This study explored factors associated with CF in registered nurses (RNs) in an acute care setting and their perception of behaviors that lessen CF or increase compassion satisfaction (CS). A mixed methods survey of 107 RNs employed at a northeastern Ohio hospital using the ProQOL-5 plus three open-ended questions. Correlational statistics were used to identify relationships between CF, CS, burnout, and sample characteristics. There was a statistically significant relationship between burnout and type of care setting. Written responses identified common triggers and coping strategies. Understanding factors associated with CF can help identify successful interventions to avoid or minimize it and enhance CS. This may contribute to higher retention rates for nurses and promotion of their emotional and physical well-being.

## **11. Olivia Justice**

**Faculty Mentor: Kathleen Flaherty**

### *Effects of Music on Depressed Older Adults*

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Depression is considered a common psychiatric disorder in older adults. The intervention of music is one method that may reduce depression levels in older adults. A randomized controlled trial was performed. This study was conducted from October 2015 to November 2015 at an independent living facility in Summit County, Ohio. In total, 6 older adult participants completed the study after recruitment. Participants listened to 15 minutes of music per day for four weeks. Depression scores were collected once a week for four weeks. Results of this study revealed depression levels decreased weekly in the music group. However, a statistically significant reduction in depression levels was not found over time in the music group compared to the control group. Listening to music may help older adults reduce their depression levels.

## **12. Stacey Spicer, Ryan Wallace**

**Faculty Mentors: Beth McVan and Kathleen Flaherty**

### *Self-Perception of Practice Readiness among New Graduate RNs*

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According to the United States Bureau of Labor Statistics, there is an anticipated need of more than 526,800 new RN positions to be filled between 2012 and 2022. In part, this need is because of the growth in the elderly population. New RNs will need practice readiness to maintain these positions. The authors hypothesized that new graduates seeking jobs in critical care areas would have a higher perception of job readiness than their peers would in non-critical arenas. A survey (Nurse Practice Readiness Tool) was administered to bachelor prepared, new RNs (n=32) from a Northeast Ohio university. Data were analyzed using a paired t-test and no statistical significance between the groups was found, suggesting that new graduate nurses who work in either critical or non-critical arenas were equally confident in their skills as RNs. In summary, the authors concluded that the newly educated RNs perceived they were prepared and confident in their ability to care for patients. However, this study had a small sample size, and a replication study with a larger sample is suggested.



### **13. Jennifer Smyth, Erin Rodriguez**

**Faculty Mentor: Kathleen Flaherty**

*Knowledge and Attitudes of Long Term Care Staff  
Caring for People with Dementia*

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Palliative care has shown to benefit people at end-of-life with chronic conditions; however, people with dementia may not gain access to palliative or supportive care. According to recent research, one reason people are not transitioned to palliative care is due to long-term care (LTC) staff having a lack of knowledge and limited competence in working with persons with dementia. The purpose of this study was to identify LTC staff palliative care knowledge and attitudes related to caring for people with dementia using the framework of comfort care theory as a guide. A non-experimental, cross sectional, descriptive survey design was used. The researchers collected data using the Questionnaire on Palliative Care for Advanced Dementia (qPAD), measuring LTC staff knowledge, beliefs, perceptions, and attitudes about palliative and end-of-life care for persons with dementia. Twelve LTC staff including STNAs, LPNs, and RNs from a LTC facility located in Canton, Ohio, completed the survey. Data analysis is currently being completed.

### **14. Tiffany Osborne, Melissa Melnick, Evan Walder,**

**Logan Johnson, Daika Moegerle**

**Faculty Mentor: Stephanie Burgess**

*Adolescent Awareness of Weight Issues Relating to  
Body Mass Index Measurement*

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The purpose of this project is to examine adolescents of high school age (14-18 years) from a middle-class, northeastern Ohio school and their awareness of overweight, underweight, or normal weight status for their height and age using the guidelines defined by the Body Mass Index (BMI) measurement. Do teenagers know their own weight status (overweight, underweight, or normal weight)? If they are not of normal weight for their height and age, what actions are they taking in order to correct it? This study will look at the differences between genders in addressing these questions. The researchers believe that adolescents are not aware when they are not of normal weight and, therefore, are not trying to correct the problem. It is also thought that females are more aware of a weight problem than males.

**15. Jakki Conti, Sam Tonelli, T. J. Malsky,  
Hannah Boss, Corri Ruffener  
Faculty Mentor: Stephanie Burgess and Janice London**

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*Adolescent Caffeine Intake and Sleep*

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Research has shown that adolescents who consume large amounts of caffeine get less sleep. It is important to get an appropriate amount of sleep at night because it plays an important role in physical health. Research about the relationship of caffeine from energy drinks and hours of sleep was performed at a local northeast Ohio high school. Surveys were handed out at the high school during their lunch period with over 300 surveys collected and 250 were completed completely and appropriately. We analyzed the responses to the questions “how many hours of sleep do you get on a typical school night?” and “during the past seven days, how many energy drinks did you drink?” Our hypothesis is that there is a relationship between consumption of energy drinks and hours of sleep that students get a night.

**16. Amber Cutforth, Paige Showalter, Grace Hall,  
Dillon Frank, Ashley Meiter  
Faculty Mentors: Stephanie Burgess and Janice London**

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*Fruit and Vegetable Consumption and BMI*

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Maintaining a healthy body weight is important for adolescents as it carries both present and future implications for one’s overall health. Food is often thought of as one of the primary factors in the maintenance of body weight. Research was conducted to explore the behaviors of adolescents in regards to food consumption patterns, their calculated body mass index (BMI), and their perception of their weight. This study used a sample from a local northeast Ohio high school. Surveys were passed out to 300 students during their lunch period, maintaining participants’ rights and anonymity. Our study proposed to answer the following research questions: Is there a correlation between the consumption of fruits and vegetable among adolescents and weight measured in BMI? and is there a correlation between the consumption of fruits and vegetables among adolescents and their weight perception?

**17. Hannah Anderson, Holly Brumfield, Shelby Holbrooks,  
Margeau Hawk, Maryah Addie  
Faculty Mentors: Stephanie Burgess and Janice London**

*Fast Food Consumption and Body Mass Index in High School Students*

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Elevated Body Mass Index (BMI) is a growing problem among high school students today. The increased availability of fast food has been suggested as a contributor to this problem. Fast food lacks nutritional value and is believed to be related to an increase in BMI. This research project investigated the relationship between BMI and fast food consumption among high school students. 300 surveys were distributed at a local high school where students completed the questions independently. 251 surveys were completed appropriately and used in data analysis. BMI was calculated according to reported height and weight, and fast food consumption was determined by a continuum, ranging from zero to four or more times per day. Correlations were determined using Excel. The data did not support our hypothesis that there will be a correlation between fast food consumption and BMI.

**18. Ashley Fleming, Emily Isla, Leah Arnold, Natalie Rostedt  
Faculty Mentors: Stephanie Burgess and Janice London**

*Screen Time and the Effects on BMI*

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The obesity epidemic has increased within the past decade and is continuing to be a contributing factor in the development of critical health problems. If this epidemic can be controlled early in adolescent years, then future health complications may be able to be prevented. The aim of our research was to collect data on screen time use, body mass index, and gender. Screen time use was defined as time spent watching TV, playing video games, using a computer, smartphone, and/or tablet, and using social media and the internet. The objective was to find if there was a correlation between hours of screen time and BMI. The research study was conducted at a local northeast Ohio high school during the students' lunch time; three-hundred surveys were handed out and 251 were included in our study. Our research hypothesis was that there would be a positive correlation between hours of screen time use and BMI.

**19. Allison Retherford, Leah Webb, Taylor Slatten, Melanie Skaggs**  
**Faculty Mentor: Stephanie Burgess**

*Effects of Breakfast Consumption in Adolescents*

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The researchers believe breakfast is the most important meal of the day. According to recent studies, skipping breakfast can have a negative effect on adolescent lives. Some examples of this include attention, behavior, weight perception, and eating habits. The purpose of the research study is to view breakfast consumption and weight perception in adolescents. The researchers calculated Body Mass Indices for the sample of adolescents and surveyed how the adolescents feel about their weight and what they are doing about their weight. Do adolescents want to lose weight, gain weight, or stay the same weight? The researchers hoped to find a connection between breakfast consumption and weight perception. A poster presentation at the high school will provide the sample students with information about survey findings and the importance of eating breakfast.

**20. Sara Walthour, Natalie Maibach, Stephen Meredith,  
Maci Miller, Kari Spear**  
**Faculty Mentor: Stephanie Burgess**

*Physical Exercise among Adolescents in Association to Gender and Age*

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The purpose of this descriptive quantitative study is to look at age and gender differences with physical exercise in the adolescent population. The clinical relevance of this study is to view the exercise patterns of the adolescent population to determine if healthy life habits may be formed, and potential health benefits. Knowing preferences and exercise patterns for this age group will develop accommodations to make it more desirable and more sustainable to continue through life. The data was collected from a local Ohio high school using a Health Behavior Survey adapted from the CDC 2013 National Youth Health Behavior Survey using a random sample of 253 participants. The hypothesis is that students over 16 years old will exercise more, and girls will exercise more times a week than boys. Addressing barriers and offering suitable solutions to exercising may evoke a lasting impact.

## **21. Holly Kreis**

**Faculty Mentor: Debra Lee**

### *Exploring Caffeine Consumption Factors for College Students*

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Caffeine consumption among college students is widespread, but factors involving their consumption habits are largely unknown. This quantitative study examined consumption habits, expectations, social settings and influences, and effects of awareness of caffeine in undergraduate students at Malone University. Most students consumed two or more caffeinated beverages either daily or less-than-daily. Positive effects of caffeine were the most anticipated, especially that caffeine would decrease sleepiness and increase energy and alertness. Times of sleep deficit were the most common caffeine consumption situation, and the strongest social influences on caffeine involved pricing and brand loyalty. Awareness of caffeine's health effects was modest, and the most recognized effects were heart rate alterations and insomnia. Health practitioners should continue to learn and educate others about caffeine consumption influences, and further research efforts should examine consumption habits related to expectations and effects awareness.

## **22. Kimberly Merriner**

**Faculty Mentor: Karen Slovak**

### *Who Am I, Where Am I, Have You Seen Me?*

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This research project aims to investigate the concerns of the current Point-In-Time (PIT) Count Survey that is done to count homeless adolescents in Stark County and be able to identify strategies that can better the current PIT Count Survey for youth. The PIT Count Survey serves as a tool to count homeless individuals. School counselors in Stark County will be asked to complete a short survey about the current PIT Count Survey as it pertains to them, their perceptions of what areas should be modified, and what areas should be omitted for easier use with this population. A survey will be handed out in the monthly meeting of school guidance counselors. The intended results of the survey are to identify areas that need modification and areas that need to be omitted in the current PIT Count Survey. Once these areas are identified, strategies can be developed in order to better the current PIT Count Survey. This research project will help in improving the current PIT Count Survey for youth.

### **23. Megan Lee**

**Faculty Mentors: Karen Slovak and Elizabeth Patterson Roe**

#### *A Study on Burnout and Compassion Fatigue within Aultman Hospice Homecare*

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Helping professionals working in hospice care often face burnout and/or compassion fatigue. This project seeks to assess the levels of burnout and compassion fatigue within the Aultman Hospice Home Care team which consists of about 25 employees. This will be done through a 22 question pretest/posttest survey with a burnout prevention intervention in between. The intervention will provide the helping professionals with tools, such as a burnout prevention chart to help combat and prevent future issues with burnout and compassion fatigue. The goal of this project is to help provide the best care possible to Aultman clients by caring for their staff.

### **24. Candice Anderson**

**Faculty Mentor: Karen Slovak**

#### *CCHO Residential Program Outcomes*

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Christian Children's Home of Ohio is an agency located in Wooster, Ohio. It provides many different services to the community. A few of those services include outpatient counseling, foster care and adoption services, and a residential center for children. The present study will conduct a secondary data analysis on the outcomes of services in the residential center. This will be done to gain some information on what counties the children are coming from, how long they are in the program, and where they went after being discharged. The state of Ohio is moving to an outcomes based platform. This secondary data analysis will provide the agency with the data needed to evaluate incomes. By organizing this data, the agency will be able to see where their strengths and weaknesses are in these areas. This data will help to create ideas that will help strengthen the areas of weakness at the agency. One outcome will be identifying counties in Ohio that they may not have a connection with.

## **25. Mollie Ridings**

**Faculty Mentors: Elizabeth Patterson Roe and Karen Slovak**

### *Creating Community Assessment Models for Early Adolescence*

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Early adolescent development research shows that young adolescents possess certain characteristics that make them ideal candidates for problem solving. Early adolescent development research has revealed that many early adolescents have strengths in problem solving beyond the capacity of many adults. This purpose of this research study was to help TomTod Ideas learn how effective they are at facilitating the natural characteristics of middle school students to help them succeed at creating solutions to perceived community problems. The data for this study was collected through interviews and surveys of parents, teachers, and adult volunteers with TomTod Ideas. The results of this research show the strengths of TomTod Idea's practices in empowering adolescents to problem solve as well as areas of improvement and expansion.

## **26. Katelyn Manda**

**Faculty Mentor: Karen Slovak**

### *Bereavement Services Survey and Improvement*

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This study looked at and evaluated the satisfaction rate of clients receiving services from CrossRoads Hospice bereavement department for the previous 6 months. CrossRoads Hospice is an organization that works with clients who are in need of hospice, palliative, and bereavement services in relation to clients. This study looks at satisfaction rates amongst clients in relation to bereavement services offered by Crossroads Hospice, pertaining to phone calls, visits, groups, and mailings received by clients. The results were evaluated by a 10-question survey, which was conducted over the phone. This study looked at the satisfaction rate of clients that reach the 6-month mark on bereavement services and asked participants how services could be improved. The study also looked at how males and females respond to the question being asked on the survey to examine if there are any differences between the gender of respondents. This study was constructed in order to improve services offered by Crossroads Hospice bereavement department.

**27. Katrina A. Bell****Faculty Mentor: Elizabeth Patterson Roe**

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*Benefits and Recommended Improvements of Respite*

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This research project was conducted with Pathway Caring for Children's post-adoption services. Respite is short term care provided for families who have children with special needs who are adopted or with birth parents. The benefits of respite services are to give the caregivers and the child a one to two day break from caring for the child(ren) with the goal of improving their ability to care for the child(ren) long term. The purpose of this study was to explore the effectiveness of Pathway's respite services in order to learn how services could be improved. The study was conducted by using a phone survey to call past and previous clients that utilize/utilized respite services through Pathway. Results from the study indicated both the strengths and weaknesses of the respite services offered. Feedback from this survey will help Pathway Caring for Children improve their respite services.

**28. Suzi Pachmayer****Faculty Mentor: Karen Slovak**

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*Retaining Home Health Aides*

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As the elderly population grows in the United States, finding and keeping home health aides is a problem that needs to be addressed. Direction Home is an agency that provides case management to Medicare and Medicaid consumers. The purpose of the research is to survey home health aides from a provider at Direction Home to determine employee satisfaction. A survey will be given to the employees asking basic questions about employee satisfaction and training that has been provided by their employers. By conducting this survey, home health aide concerns can be addressed through their agency and will help Direction Home to help keep home health aides, have lower turnover rate of these positions, and provide consistent services to our consumers.



## **29. Ashlie Lamp**

**Faculty Mentors: Karen Slovak and Elizabeth Patterson Roe**

*Employee Satisfaction at Direction Home Akron Canton Area  
Agency on Aging and Disabilities*

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Employee job satisfaction is directly related to the level of service provided to consumers. An employee satisfaction survey was administered to the staff at Direction Home Akron Canton Area Agency on Aging and Disabilities to determine the levels of satisfaction with varying aspects of the agency. Elements of employment that were explored include remote access to the internet outside of the office, salary, benefits, parking, and docking stations in the office. The goal in conducting this survey was to determine what aspects of the agency are perceived as satisfactory and what aspects were not. Upon evaluating the surveys, results were shared with the appropriate department supervisors of the agency in order to make possible improvements to aspects of the agency and, as a result, improve employee and consumer relations to ensure consumers are receiving the best services possible.

## **30. Taylor Hetrick**

**Faculty Mentor: Karen Slovak**

*Evaluating Customer Feedback to Propose a Human Centered Design for  
the Referral Process at OhioMeansJobs Stark and Tuscarawas Counties*

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The purpose of this research was to determine different trends of what was and was not effective in the resource rooms at OhioMeansJobs Stark and Tuscarawas counties. By completing interviews with customers, trends were noted to help better capture what customers really desire when utilizing the OhioMeansJobs centers. Information was also gathered about other services customers might be interested in receiving. This data can be utilized to better assist the partner agencies of OhioMeansJobs so that they are able to provide services to the customers of OhioMeansJobs. The results of this research will help highlight possible changes to better assist customers in their job search venture.

### **31. Kenneth Stephen Lancaster**

**Faculty Mentor: Karen Slovak**

#### *Program Evaluation of Specific Training of Child and Adolescent Behavioral Health Employees*

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Child and Adolescent and Behavioral Health Agency is a full service, trauma-informed mental health organization specializing in the emotional and behavioral needs of children, adolescents, young adults, and their families. This present study is a secondary data analysis on the outcomes of the training and procedures those employees have received. This will be completed to determine if the employees believe they are receiving the training necessary to continue to provide the best quality service to their clients. The data that will be used comes from a previously conducted organizational staff survey that collected data on training, what training staff believes is effective, what additional training they believe is needed, staff's overall opinion of the agency, and if they would refer the agency to others for employment purposes. The research will benefit by showing some outcome results on the attitudes of their employees and revealing what can be done to continue to provide quality training to improve services to clients.

### **32. Kailey Sikula, Tyler Bowman, Ryan Clark, Aston Crooks**

**Faculty Mentor: Lauren Seifert**

#### *College Students' Experiences of a Loved One's Dementia*

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We studied college-student caregivers' perceptions of the onset of dementia in loved ones. First we constructed a survey to be distributed among Malone University students who have a loved one with dementia. Our questionnaire consisted of both open- and closed-ended items regarding symptom onset. We intended to find information pertaining to the onset of dementia symptoms relative to the preparedness of the family member. Our poster will discuss our intriguing findings about the experiences of college students who have/had a loved one with dementia.

### **33. Brittany McCue, Carolin Friedrich**

**Faculty Mentor: Lauren Seifert**

#### *How Yoga Influences the Lives of College-Athletes*

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We aimed to study the role of yoga, focusing on college-athletes' stress levels and sleeping patterns. Contacting Malone University athletes from each sport, we asked them to take part in a 30-minute yoga session for five days. To measure the effects, we asked the participants to complete three different surveys in these five days. They filled out a health checklist first to make sure that were physically capable of completing the yoga sessions. During the days of yoga, we collected self-reports about various aspects of stress and sleeping. Our goal was to show that there can be a positive impact from yoga on athletes' stress level and sleeping patterns. Our poster will discuss the results of our research.

### **34. Olivia Lane, Rachel Neidlinger, Natesha Hicks, Micaela Michalk**

**Faculty Mentor: Lauren Seifert**

#### *Life Boosters*

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We strived to explore spiritual development in adolescence, using Bible studies with a set of pre- and post-questions. We wanted to determine how much middle and high school students can grow in spiritual formation in five weeks. Through individual reflections, group discussions, and teacher-led instruction, the adolescents could explore the will of God and their experiences of being created in His image. Our initial findings indicate that the students are struggling with spiritual formation tasks. Our poster will report our final results and conclusions.

**35. Victoria Hall, Mikayla Fowler, Rachel Goddard, Ryan Cartwright,  
Jordyn Ott, Kyra Gundy**  
**Faculty Mentor: Lauren Seifert**

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*The Anatomy of Attraction*

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We intended to study the personal characteristics that play a role in perceived attractiveness. We asked Malone University students to watch an episode of Grey's Anatomy in a controlled setting. They were asked to take a pre-survey regarding demographics and pre-knowledge of the show. Then they watched the episode and were asked to complete a post-survey regarding perceived attractiveness of the characters. We wanted to discover how characteristics influence, and possibly interact with, perceived attractiveness and whether there are gender differences. Our poster will discuss our findings.

**36. Cory Edwards**

**Faculty Mentors: Jim Glasgow and Kyle Calderhead**

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*Super Capacitor Technology*

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The ability to use super (ultra) capacitors as a source for a battery is investigated. The time to charge the super capacitor is measured and recorded. The subsequent time to discharge by powering a single LED is measured and recorded. It is observed that the capacitor can take four hours and twenty-four minutes to discharge on a twenty-four hour charge. We conclude that there is potential to use a super capacitor as a possible battery; however, further strides to improve the efficiency of the capacitor need to occur before it can be considered a viable alternative to a traditional lithium battery.

### **37. Cory Edwards**

**Faculty Mentors: Jim Glasgow and Kyle Calderhead**

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*Machine Learning Using Tic Tac Toe*

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Genetic programming is used to program a computer in the game of Tic Tac Toe. The computer uses probability along with past experience of past game play to predict winning moves, thus learning from its experience. In comparison, a computer making random moves can rarely win. However, the computer using genetic programming, after a period of learning, can rarely be beaten.

### **38. Zachary Murray**

**Faculty Mentor: Jacci Welling**

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*The Tale of Two Missions*

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My presentation explores the missionary journeys of Matteo Ricci and Ernst Faber in China, compares and contrasts their respective philosophies on missions by examining their writings and practices, and proposes possible missiological applications to current cross-cultural ministries. Matteo Ricci (1552-1610) was a Jesuit missionary from Italy who founded the Roman Catholic mission in China, where he served from 1582 until his death in 1610. Ernst Faber (1839-1899) was a German Pietist who served with the Rhenish Mission in China in the latter half of the nineteenth century. Although the two men represented different Christian and cultural traditions, as well as time periods, both Ricci and Faber were gifted scholars who contributed to the political and intellectual life of China. While both men attempted to facilitate the growth of Christianity in China, they also faced cultural challenges that complicated their effectiveness as evangelists. Based on my findings, I argue that Ricci's philosophical approach was more effective due to his willingness to adapt Christian belief to the culture of those missioned and, therefore, more useful to current missionary practice.

**39. Amanda Najjar**  
**Faculty Mentor: David Beer**

*Christians and the State*

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My project will first consider different approaches Christians take when considering the degree to which they should be involved in the state. Some denominations of Christianity teach that pacifism is the only way to approach the state because it is so corrupt in its dealing with people, war, and violence. Other denominations and church thinkers teach that it is an obligation for Christians to involve themselves in the state. I will consider the first approach I listed (pacifism), views in between, and the second approach I listed (Just War Theory). After detailing several different views churches have on the subject, I will state my personal views on the matter which will be supported with in depth Biblical subject matter.

**40. Rachel Jenkins**  
**Faculty Mentors: Scott Waalkes and David Beer**

*Are Christian and Jewish Interpretations of Scripture  
Hindering Peacemaking between Israelis and Palestinians?*

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My paper will attempt to answer the following question: To what extent are the ways Christians and Jews are interpreting scripture hindering them from seeking peace and reconciliation between Israelis and Palestinians? To answer this question, I am focusing on dispensationalist interpretations of scripture which place Israel at the center of Christian eschatology. I will look specifically at the dispensationalist understanding of the Antichrist and the necessity of a Third Temple in Jerusalem. From the Jewish perspective, I am focusing on the Jewish understanding of the Third Temple and the radical right groups that have developed in support of it. To establish a connection between interpretation of scripture and actions, I will look at the funding. Have dispensationalist Christian Zionist groups supported groups known for violent actions? Have Jewish interpretation of scripture led to attacks on Palestinians or the Dome of the Rock?

#### **41. Joe Howard**

**Faculty Mentor: David Beer**

##### *The Effects of Saudi Arabian Oil Production Policy on the Ohio Shale Industry*

In this project, I will delve into the effects of Saudi Arabian oil production on the economy of Ohio in large perspective and in smaller scope the shale industry of Ohio. I will use various data trends and policy information to do so. I will also look at the political policies that are in play on both the Saudi Arabian side and the domestic United States perspective.

#### **42. Brittney Wilson, Tara Hilverding**

**Faculty Mentor: Cindy Ries**

##### *The Discrepancy in Education of African American Students*

The purpose of this project will be to explore the treatment of African American students in both inner city and suburban schools. Questions that we hope to answer are: 1. How did historical events impact treatment of African American students? 2. What is the educational impact on the African American students? 3. What is the psychological impact on the African American students? 4. Is there a way to make the situation better for the future of schooling?

### **43. Derek Muncy**

**Faculty Mentors: David Beer and Jay Case**

*How the 17th Amendment Repealed the Great Compromise of 1787*

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This project is a theoretical evaluation of the unique polity designed by the founders and the deviation from that polity caused by the 17th amendment. This project will focus on the relationship between democracy, liberty, and order. This evaluation will begin with a theoretical examination of democratic polity according to Aristotle, Tocqueville, and John C. Calhoun. Then, using this theory, we will examine the American experience with a democratic polity. My goal in this project is to reveal the shortcomings of the 17th amendment and majoritarian democratic regimes. I wish to show how the 17th amendment fundamentally changed the federal republic constructed by our founders and what ramifications that change had.

### **44. Melody Sabo**

**Faculty Mentor: Kyle Calderhead**

*Retaining Interests: What Student Interests Reveal about Retention Rates*

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Social network analysis is becoming increasingly popular in our world of ever-expanding user data sets. Surprising relationships have been found between seemingly unrelated attributes of human behavior. Suppose that potential university students belong to network communities with other trait-sharing students. At a modest, private university all of these students fill out admissions applications, including a section identifying future activities in which they are interested. Perhaps these students do not actually become involved in the activities, but do their choices reveal something about their future retention status? This study looks at student interests data from admissions applications of the 478 incoming freshman at Malone University in 2009. The involvement interests marked are studied along with the retention rates of those students. The goal of this study is to use the analysis of social networks to determine if there is a relationship between retention rates and the interests chosen by incoming freshman.



#### **45. Julia Newton**

**Faculty Mentor: Diane Chambers**

*Homes of Our Own: A Qualitative Journey of  
Bhutanese Refugees to Northeast Ohio*

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This study looks at two case studies of Bhutanese refugees in northeast Ohio. After interviewing both research co-participants, I created a collaged, collaborative work that combines direct quotations from the interviews, the participants' edited stories, and research about the situations in both Bhutan and Nepal. This written art project was done in the hopes that it could challenge common misconceptions about refugees living in the United States today.

#### **46. Josh Campbell**

**Faculty Mentor: Lisa Beltz**

*Accuracy of Board Game Pandemic as a Real World Model*

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The board game Pandemic, released in 2007 originally and then rereleased in 2013, is a cooperative game where a team of players attempts to cure four diseases spreading around various geographic regions. After a bit of consideration, it was unclear as to whether or not this game's mechanics and systems resemble the real-world means by which diseases spread and are managed, as well as how cures are developed. Over the course of the past year, this study looked at the game mechanics for the base game as well as its supplemental expansion modules in comparison to their real world analogs, including which diseases should be considered the best for a region, which concepts effectively parallel their actual counterparts, and which require modifications to their name or function in order to work.

#### **47. Stephanie Eidt**

**Faculty Mentor: Karyn Collie**

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*Disney's Animated Animals: A Potential Source of Opinions and Facts?*

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It is widely accepted that the media are capable of strongly influencing the opinions of the public on a variety of topics. The media serve as teachers for children about the nature of the world, and thus it is important to study the content of such outlets and their subsequent transfer of ideas. Videos can become particularly salient because of young children's typical consumption patterns of repetitive exposure. Animated Disney movies are ideal to study because of their undeniable presence in American culture due to a wholesome, family image and relentless advertising. This study compared college students' opinions about and knowledge of particular animals with the animals' portrayal in popular Disney movies. Potential factors for influencing the amount of transfer examined were the anthropomorphic nature and screen time of the characters in question. High levels of correlating ideas could suggest transfer and would be worth further study.

#### **48. Brendan Cress**

**Faculty Mentors: Jason Courter and Cindy Johnson**

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*A Proposed Campus Tree Plan for Malone University*

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The Proposed Campus Tree Plan for Malone University is the start of a long-term project that will incorporate the beautification of Malone, future studies of the plant and animals here on campus, and the interaction between birds and their feeding/nesting grounds at Malone University. Given the uniqueness of Malone's setup and latitude, we needed to take a specific look at the current trees on campus and their fruiting and flowering times as well as their ability to attract birds and beneficial wildlife. In the future, this project could serve as the basis for studies of feeding habits, nesting, and social behaviors of birds that live/migrate through Malone's campus based on the potential trees that will attract these birds.

#### **49. Jacquelyn Peterson, Laura Tweedie**

**Faculty Mentor: Jason Courter**

##### *Exploring Tree Campus USA Certification at Malone University*

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There are numerous benefits to planting trees on college campuses, which include improving green spaces for students to study, relax and enjoy. In addition, trees can reduce the amount of energy that a campus needs to generate, reduce atmospheric CO<sub>2</sub> levels, attract desirable birds and wildlife, and draw attention to other campus-wide sustainability initiatives. Numerous institutions, including several in Northeast Ohio, have formalized their commitments to improving their campus landscapes by becoming certified as Tree Campus USA participants by the Arbor Day Foundation. Therefore, the goals of our study were to: (1) Identify and map the existing trees on Malone's campus; (2) Assess the steps needed for Malone to become a certified Tree Campus by the Arbor Day Foundation; (3) Compile a preliminary application packet to be reviewed by university administrators; and (4) Communicate our findings with students, faculty, staff, and other campus stakeholders to raise awareness and support.

#### **50. Tim Makowski, Alec Hillyer**

**Faculty Mentor: Jason Courter**

##### *Bobwhite Quail Reintroduction in a Highly Managed Habitat*

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The Northern Bobwhite Quail is a native upland game species found throughout the United States in agricultural fields and grasslands. Once plentiful in Ohio, habitat loss and reverse degradation and loss have drastically reduced populations, and the Ohio DNR is actively working to restore native populations. Since the majority of land in the eastern United States is privately owned, it is important that habitat improvement recommendations are tailored to the needs of private landowners. During the 2015-16 school year, we improved the quail habitat on a 12-acre plot of land at Bichsel Farm in Tuscarawas County, Ohio, by mowing, tilling, planting winter cover crops, and creating living brush piles. In April 2016, we will be releasing 40 quail and tracking their survival during summer months. Monthly bird surveys have already indicated that our habitat improvements have benefitted other wildlife species. We anticipate that the results of our project will provide important recommendations for reintroducing quail in Ohio.

**51. Rachel Belliveau, Andrew Hill, Mackenzie Keller, Michael Husk**  
**Faculty Mentor: Kathryn Huisinga**

*Transgenerational Effects of High Caloric Diets on Drosophila melanogaster*

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Differential diets are known to directly affect the metabolism of the individual. Here, we investigate the transgenerational effect of parental diet on the body composition of *Drosophila melanogaster* progeny. Numerous studies have demonstrated the link between parental diet and the epigenetic and genetic inheritance of the progeny. Parents were raised on hyper caloric diets of high-sugar or high-protein, alongside a normal-diet control. Adults were mated and all progeny were raised on the control diet. Third instar larvae were collected and assayed for levels of trehalose, glucose, glycogen, and triglycerides. Metabolic pools of the experimental larvae were compared to the control larvae and data analyzed to determine metabolic differences occurring in experimental progeny.

**52. Maggie Houston, Caitlyn Ridenour, Destiny Ross,**  
**Daniel Bancroft**  
**Faculty Mentor: Kathryn Huisinga**

*Transgenerational Effects of High Caloric Diets on Drosophila melanogaster*

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Previous studies indicate that parental diet can affect the metabolic output of their offspring. To better understand this correlation and observe how famine conditions may affect future offspring, we will utilize *Drosophila melanogaster* as a model organism. The primary benefit to this model is the ability to observe the transgenerational effects in a relatively short period of time and have the freedom to control diets, including starvation conditions, and easily perform a variety of metabolic assays. In our experiment, we utilize four different groups of flies and assign each a different diet. A previous study noted the differences in progeny metabolism between a normal diet and a diet with highly reduced carbohydrate levels. We have set out to determine how sensitive the progeny metabolism is to more minute changes in the parental diet.

### **53. Jessica Jones**

**Faculty Mentor: Kathryn Huisinga**

*Examination of Metabolic Effects of an Increased Sugar Parental Diet  
in *Drosophila melanogaster* and the Potential Differences in  
Metabolic Activity of the *Su(var) 3-9<sup>06</sup>* Mutation*

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High sugar diets have been known to negatively affect the metabolism of the individual. Recent studies have shown that the altered metabolic effects can also be witnessed in the progeny, vastly utilizing *Drosophila melanogaster*. The heritable characteristics of metabolic adjustments can be attributed to epigenetic modifications made to the parental DNA during altered diet consumption. Here we compare the larva metabolic pools between wild type and *Su(var)3-9<sup>06</sup>*. Parents were raised on either 34% or 9% sugar diets, high and normal sugar respectively, and mated on a controlled diet. Third wandering were collected and assayed. Mates were crossed between mutant and non-mutant strains to determine epigenetic contribution. Metabolic values were compared against controlled larva and significant differences were noted.

### **54. Megan Dues**

**Faculty Mentor: Kathryn Huisinga**

*Feeding Assay of Fruit Flies - Measurement of Food Consumption  
in *Drosophila melanogaster**

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Several studies have demonstrated a link between parental diet and the metabolism of their offspring. As part of a larger effort to better understand the molecular mechanism responsible for this observation, I am developing and implementing an assay to monitor that the flies are eating the food that they are being fed. Flies are an ideal model organism to use for these studies because they reproduce quickly and are a very well-established genetic system. My initial experiment entails assaying for food consumption by adding a chemical dye to the food. After consuming the food, the flies are homogenized in a phosphate buffer solution and the amount of dye in the fly will transfer to the buffer and can be measured in a spectrophotometer. Therefore, the spectrophotometer measurements will reflect the food consumption of the flies. Initial experiments indicate that the amount of time on food is an important consideration.



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