FIRST ANNUAL SUNY UNDERGRADUATE RESEARCH CONFERENCE

APRIL 10, 2015

The College at BROCKPORT SUNY UNIVERSITY OF NEW YORK
SURC Volunteers check in . . . ready for the day
Welcome to SURC 2015!
They arrived in groups of 2 and 3 and by the busload!
SURC 2015 congratulates over 500 student presenters . . .
Performances!
and Oral Presentations!
Dominant Western Directors, Subservient Subaltern Performers: Subjectivity in Mahesh Rao’s *The Smoke is Rising*

by Lucki Cooper
and

posters . . .

posters . . .

Posters!
Title: The Role of Nuclear Gene, SGST1, in Mitochondrial Genome Stability in Saccharomyces cerevisiae

Authors: Kathryn Werhing, Christopher Prevost, and Ray A. Bai

Institute: The College at Brockport, State University of New York, Brockport, NY 14420

Keywords: Gene Expression, Mitochondrial Genome, Saccharomyces cerevisiae

Abstract:

The role of nuclear gene, SGST1, in mitochondria genome stability was investigated. SGST1 encodes a mitochondria localization protein. The results showed that overexpression of SGST1 can enhance mitochondrial function and genome stability in Saccharomyces cerevisiae.

Methods:

1. mRNA expression level analysis using qRT-PCR.
2. Mitochondrial DNA copy number assay.

Results:

1. SGST1 overexpression significantly increased the mitochondrial DNA copy number.
2. SGST1 overexpression improved mitochondrial function as measured by MTT assay.

Conclusion:

SGST1 plays a crucial role in maintaining mitochondrial genome stability and function in Saccharomyces cerevisiae. Further studies are needed to understand the molecular mechanisms underlying these effects.
SURC 2015 offered multi-disciplinary research approaches from visual arts and dance, to wildlife ecology and history, from computer science and psychology, to gender studies and creative writing.
DEVELOPING AN EFFECTIVE ROUTE FOR EDUCATION IN WIND RENEWABLE ENERGY

1. The Goal of the Study

2. Wind as a sustainable solution to energy demand

3. Advantages of wind energy

4. Wind power generation:
   - Wind farm setup
   - Wind turbine components
   - Wind farm layout

5. Wind energy on the grid

6. Results

Researcher(s):
- Name
- Affiliation:
- Advisor:

Institution:
- Farmingdale State College
SURC welcomed amazing faculty mentors . . .
High mobility group B proteins modulate histone methylation in Mouse Embryonic Fibroblasts.

**Abstract**

1. Suffolk Community College, NY
2. Department of Pharmaceutical Sciences, Stony Brook University
3. Stony Brook University

**Methods**

- Experimental design
- Data analysis

**Results**

- Graphs and charts
- Statistical analysis

**Discussion/Conclusion**

- Implications
- Future studies

**References**

- Scientific literature
- Additional resources
The Effect of Race on Mentees’ Experience of Mentoring

Nedina Lopez
SEM ANALYSIS OF TURTLE EMBRYOGENESIS

Karlina Cruz, Kamedha Trujilarowski, Patricia Goeller-Laganish
Dept. of Biological Sciences, SUNY Orange, Orange, NY.
President John Halstead, The College at Brockport welcomes SURC 2015

Keynote Speaker
~ Dr. George Kuh
Over 700 for lunch at SERC House of Fields!
The Interplay of Science Education and Cultural Context

Antara Majumdar & Sushmita Gelda
University at Buffalo, The State University of New York

INITIATIVE

1. Letter Writing
2. Building Models

SCIENCE COMMUNICATION

2. Letter Writing

1. Letter Writing

FUTURE DIRECTIONS

Prototypes

BUFFALO Ideas

KOLKATA

Acknowledgements

Received letters from Calcutta Rescue

Students at P.S. 31 introduce themselves and share hobbies and interests.

Kolkata students respond & write about water quality issues found in their community.

P.S. 31 students respond and discuss environmental challenges faced in their school and use the Lexus Eco-Challenge as an example.

Future Directions: The development of a blog where students can discuss environmental issues on a global
Does Parental Health Produce Better Health in the Community?

Introduction
- Parental health can have a significant impact on the health of their children.
- Poor parental health can lead to adverse outcomes for children.

A Behavioral Economic Analysis of Preventive Healthcare

Do our current institutions encourage efficient decision-making in the context of health?

Structure
- Introduction
- Methodology
- Results
- Discussion

Principle of Utility

Principle of Utility

Decision Theory

Healthcare and prevention are two separate entities.

Conclusion

The goal is to improve the health of individuals and communities through preventive healthcare.

Analyzing the Correlation Between Cost and Prevention

Cost
- Decrease in healthcare costs
- Increase in preventive healthcare

Prevention
- Decrease in healthcare costs
- Increase in preventive healthcare

The Affordable Care Act

The Affordable Care Act (ACA)
- Increased access to healthcare
- Expanded coverage for preventive care

The Baby Boom and the Present and Future

The Baby Boom (1946-1964)
- Increased healthcare needs
- Aging population

The Future (2020-2030)
- Challenges in healthcare delivery
- Prediction of healthcare needs

The Function of Neural Synchrony Between Speakers and Listeners During Language Comprehension

Stanley Beaurevoir & Alexia Toskos Dils
Psychology Board of Study, Purchase College, SUNY

Questions

Method

Research:

Participants:

Results:

Discussion:

Conclusion:

Acknowledgements:

References:

Appendix:
SURC 2015 hosted 39 SUNY campus cohorts . . .
CAN MUSIC BE USED TO REDUCE RACIAL BIAS?

Ainigriv Morrison and Dr. Meagan Curtis
Purchase College, SUNY

Introduction

There is a certain degree of prejudice towards music. Music can influence people's attitudes towards certain groups. The purpose of this study was to explore whether music can influence people's attitudes towards racial bias.

Materials

A pre-song was used to establish a baseline for attitudes towards music. Pre-test scores were taken before the song was played. Post-test scores were taken after the song was played.

Procedure

The music was played in a randomized order, and participants were asked to rate their attitudes towards music after each song.

Results

The results showed that the music significantly influenced participants' attitudes towards music. The music with positive messages had a positive impact on participants' attitudes, while the music with negative messages had a negative impact.

Discussion

The results suggest that music can be used to reduce racial bias. The use of music with positive messages can increase people's attitudes towards music, while the use of music with negative messages can decrease their attitudes.

References

1.12345, 6.7890, 10.1112, 13.1415, 17.1819
Beliefs About Romantic Relationships

Lia Monteleone
Sponsor: Yanine Hess
Department of Psychology, SUNY Purchase

Introduction

- ROMANTIC RELATIONSHIP: PERCEIVED MEANING AND IMPORTANCE
  - Relationships are fundamental to human life and well-being, providing emotional support, social connection, and opportunities for growth.
  - Romantic relationships influence various aspects of individuals' lives, including mental health, self-esteem, and overall happiness.

- The psychological impact of romantic relationships varies depending on the cultural context and individual experiences.

- Recent studies have highlighted the importance of understanding the unique aspects of romantic relationships and their impact on mental health.

Materials

- **Participants:** University students enrolled in introductory psychology courses.
- **Materials:** Self-report questionnaires assessing attachment styles and relationship satisfaction.
- **Procedure:** Participants completed questionnaires during class time, with demographic information collected prior to participation.

Method

- **Data Collection:** Questionnaires were administered using a secure online platform.
- **Data Analysis:** Descriptive statistics and inferential tests were employed to analyze the data, focusing on the relationship between attachment styles and relationship satisfaction.

Results

- Participants showed a range of attachment styles, with a predominance of secure attachment.
- Relationship satisfaction was higher among those with secure attachment styles, suggesting a positive correlation between attachment security and relationship quality.

Conclusions

- Attachment styles significantly impact relationship satisfaction, highlighting the importance of early relationship experiences.
- Future research should consider individual differences in attachment styles and their implications for romantic relationships.
The Lying Game:
The Role of Acting Experience in Lie Detection
Kathleen E. Dengler  Stephen Flusberg, Sponsor

Abstract
The ability to tell whether or not someone is lying has practical value in both the criminal justice system and in life. This research has demonstrated that microexpressions are an important part of nonverbal communication. The ability to detect these microexpressions is crucial for those in positions that require accurate lie detection skills, such as law enforcement or military. The purpose of this study is to examine the role of acting experience in detecting lies. Participants in our study were asked to identify microexpressions from video clips of actors expressing different emotions. Participants with acting experience detected microexpressions more accurately than those without acting experience. Further research is needed to determine the extent to which microexpressions are detectable in real-life situations.

Methods
1. Microexpression Identification Task
   - Faces were drawn from the NDEP database
   - 3 Emotions: Anger, Fear, sadness
   - Half male faces, half female faces
   - 60 Trials (20 per emotion) presented in randomized order

2. Lie Detection Video Task
   - Videos taken from Lusse, Shaw & Shinman (2010)
   - Participants watched 30 videos (20 True, 10 False)

3. Questionnaires
   - Dengler Arts Experience Scale
   - Measured experience in visual art, music, acting
   - Davis’ 36-Item Empathy Scale
   - Measures levels of empathy on 4 subscales

Results
A series of linear regression models were used to analyze the data.

Discussion
Numerically, higher arts experience was correlated with higher empathy scores.

Future research could include
- More extensive measures of empathy
- More diverse samples
- More varied microexpression stimuli

References

[Insert references here]
The Impact of Race on the College Experience of Minority Students

Tomasilienne Lewis-Jones

Introduction
According to previous research there are important differences in the college experience of underrepresented minority students in comparison to the college experience of majority students. These differences include weaker feelings of engagement, and lower academic performance. The current study focuses on examining the efficacy of an intervention designed to improve the experience of both minority and majority students through class based mentoring and brief psychological interventions.

Hypothesis
Experiencing class-based peer-led mentoring sessions which include two brief social psychological interventions (Affirmations and Sense of Belonging) will lead to an increase in the feelings of engagement, grit, and comfort discussing ethnicity for ethnic minority students and majority students.

Method
Participants
104 undergraduate college students
70 Female Participants and 34 Male Participants
53 Underrepresented Minority Students
16 African American, 16 Hispanic, 13 White, 3 Asian
Students completed surveys during the first and 7th week assessing:
Connection to Campus (cronbach’s alpha = .92)
Grit (cronbach’s alpha = .79)

Procedure
Four senior psychology students implemented a mentoring program in which students in a lower level course were given brief mentorship in which students were matched to small groups once a week for six weeks. The students were divided into groups for the psychology students who were assigned to mentor the groups over the six-week period. Half of the participants were monitored during the first six weeks of the course and the other half of the participants are currently being monitored.

Results

1) Mentored students spoke significantly more often in class than non-mentored students regardless of ethnicity or mentor matching (p < .05).

2) Mentored students made significantly more references to ethnicity in class comments and written work than non-mentored students regardless of ethnicity (p < .05).

3) Mentored students expressed more grit in class comments and written work than non-mentored regardless of ethnicity (p < .05).

4) Students who received mentoring from a mentor of the same ethnicity made significantly more references to academics in class comments and written work than students who received mentoring from a mentor of a different ethnicity or students who have not received mentoring.

Academic References

Conclusions
Class-based mentoring within brief psychological interventions benefited both minority and majority students.
- Mentored students made more references to ethnicity than non-mentored students.
- Mentored students spoke more in class than non-mentored students.
- Mentored students made more references to grit than non-mentored students.
- Perhaps mentoring allowed students to feel more comfortable in a large lecture class.
- Mentoring with mentors of the same ethnicity produced more positive reflections on academic performance than mentors who had mentors of a different ethnicity.
- Perhaps mentoring is more effective when there is a match between the ethnicity of the mentor and mentee.
- Importantly, there were no differences in feelings of belonging to campus for minority students and majority students.
- Perhaps this will take longer than 6 weeks to occur.
The Effect of Familiarity with Motor Actions on Object Perception
Kasey Bury and Alexio Toskos
Psychology Board of Study, Purchase College, SUNY

Abstract

Background

There have been several studies showing that familiar actions can improve memory. In most cases, the

Methods


Results

Discussions

The effect of familiarity on memory is further illustrated by the findings of the present study. Participants

who were familiar with the action were able to remember the object more accurately. This suggests that

familiar actions may have a greater impact on memory than previously thought.
Statewide Department of Transportation
Policy Response to Climate Change

Jennifer Perry, State University of New York at Purchase

Abstract:
This project expands the role of the Department of Transportation in state policy by incorporating climate change considerations. The project's goal is to identify areas with high vulnerability to climate change impacts and assess the potential for adaptation measures. The study focuses on the development of a comprehensive policy response framework that integrates transportation planning with climate change mitigation and adaptation strategies. By incorporating stakeholder input and using innovative decision-making tools, the project aims to enhance the resilience of transportation systems and promote long-term sustainability.
Waiting for the bus home . . . safe travels!
See you at SURC 2016!!
SURC 2015 thanks . . .
the countless volunteers
of SUNY and Brockport -
students, faculty, and staff