

Mission

The mission of the Lewis-Clark State College Research Symposium is to celebrate academic achievement, enhance professional development, and promote scholarship and research excellence by providing students, faculty, and guests the opportunity to present and share their work.

Participating Programs

Business & Computer Science Division

*Business
Computer Science*

Physical, Life, Movement & Sport Science Division

*Biology
Chemistry
Earth Science
Exercise Science Kinesiology
Sport Administration*

Humanities Division

*Communication Arts
English
Art
Music*

Social Sciences Division

*Justice Studies
Social Sciences
Social Work*

Nursing & Health Sciences Division

Nursing

Teacher Education and Mathematics

Teacher Education

Technical and Industrial Division

Engineering Technology

2024 LC State Research Symposium Committee

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Joe Proud (Humanities: Music)

Rachel Kaitz (Business & Computer Science)

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Gene Straughan (Social Sciences: Justice Studies)

Kelsey Grafton (Humanities: Art)

Michelle Pearson-Smith (Nursing & Health Sciences)

Sarah Graham (Humanities: Music)

A special thank you is extended to the following people who made the 2024 Research Symposium a reality:

President Cynthia Pemberton

Provost Frederick Chilson

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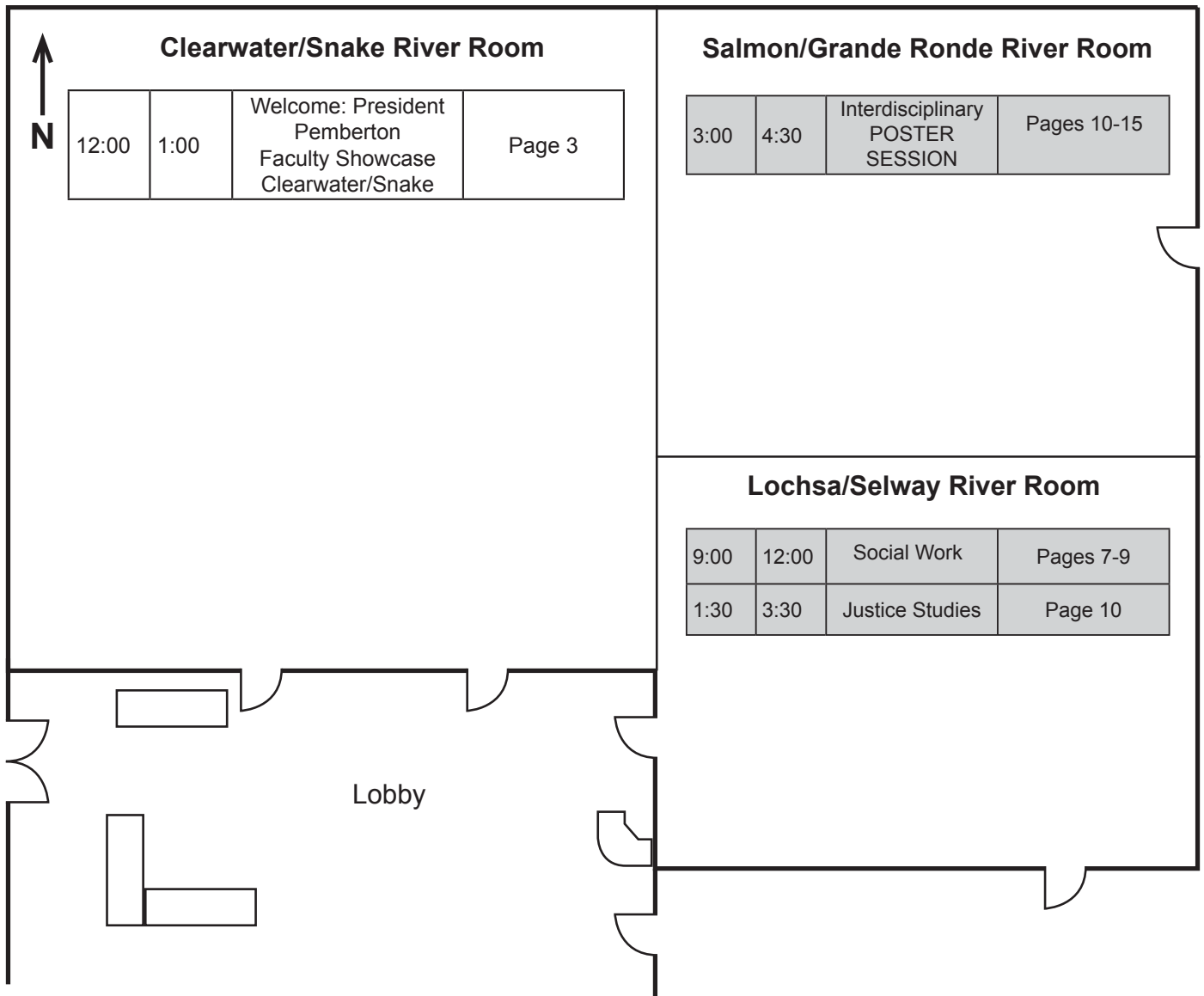
Ms. Hailey Denton -Web Coordinator

Ms. Monika Pande - SODEXO

Ms. Julie Wilson and Ms. Lynne Whisner - Graphic Communications

Williams Conference Center Map & Schedule by Room

Wednesday, May 1st



Library Foyer Art Gallery		
5:00-7:00	Art Exhibit	Page 16

FACULTY SHOWCASE

A symposium session highlighting the scholarly endeavors of LC State faculty.

Wednesday, May 1st, 12:00-1:00
Clearwater & Snake River Rooms



Keegan Schmidt
Physical, Life, Movement & Sport Sciences
Roadside Geology of Idaho



Amanda VanLanen
Social Sciences
Big Apples, Big Business



Leigh Latta
Physical, Life, Movement & Sport Sciences
Pathogen Surveillance Using Wastewater Based Epidemiology



Renee Harris
Humanities
Association, Affect, and Material Reading Practices



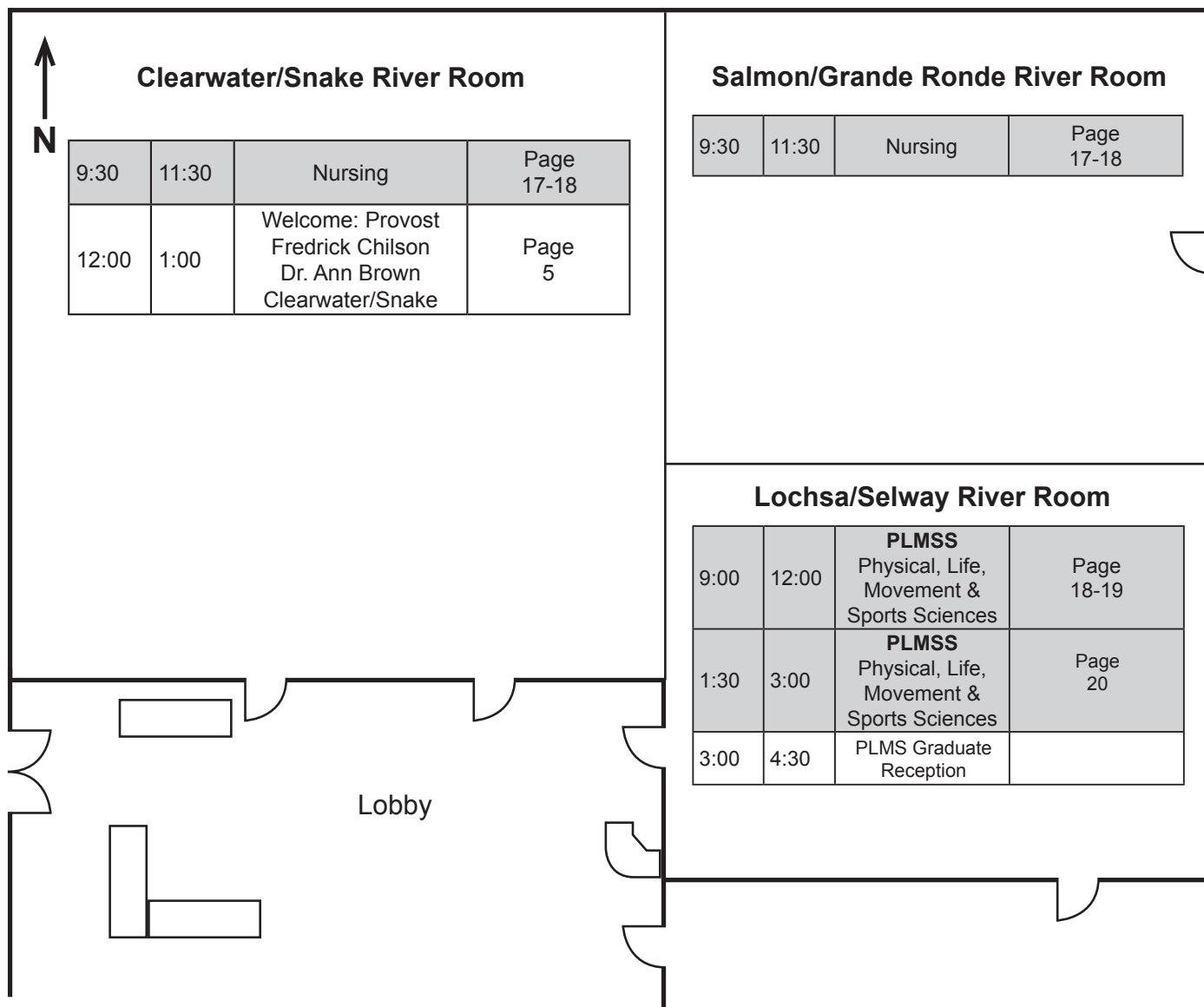
Thomas Hill
Teacher Education and Mathematics
(De)Constructing Social Narratives of Gender: A Cross-Grade Analysis of Children's Gendered Meaning-Making During Read-Alouds



Nina Peterson
Business and Computer Science
Software Engineering, Cybersecurity Management
and the Idaho Cyberdome

Williams Conference Center Map

Thursday, May 2nd Schedule by Room



Center for Arts & History		
Located at 415 Main Street		
3:00-5:00	Humanities Senior Presentation & Humanities Graduate Reception	Page 20-21

Keynote Address 2024

Dr. Ann Brown

Associate Dean for Graduate Studies, Associate Professor of Exercise, Sport & Health Sciences, Director of the Human Performance Laboratory; University of Idaho

Welcome & Opening Remarks: Provost Fredrick Chilson

Being a Female and Studying Female Physiology in Academia

Thursday, May 2nd 12:00-1:00
Clearwater Room



Biography: Dr. Ann Brown graduated from Florida State University in 2016 with her doctorate in exercise physiology with a research focus in protein supplementation for aesthetic athletes. Additionally, while completing her doctorate she completed her didactic program in dietetics and became a certified sports nutritionist (CISSN). Prior to moving to Florida, she studied Biology at Seattle University all while being a member of a pre-professional dance company. She has a unique background in dance, which has allowed her to combine her education and interests into a developing area of research, dance science. Her early work in dance science naturally led to her current work investigating the impacts of body composition on female physiology. More specifically, she is investigating the body composition phenomenon known as normal weight obesity and how this may impact female health and physiology. Brown is a member of the American College of Sports Medicine, National Strength & Conditioning Associate and Associate Editor for journals from the International Society for Sports Nutrition and the International Association of Dance Medicine and

Science. In 2022, Dr. Brown was named Fellow of the Year for the International Association for Dance Medicine and Science for her scholarly contributions to the area of dance nutrition. Most recently, she is a co-principal investigator on the \$12 million grant awarded by the National Institutes for Health to establish the Center for Biomedical Research Excellence in Women's Health and Nutrition at the University of Idaho.

Abstract: Dr. Brown's presentation will share her academic journey that has led to her success in academia, specifically as a female scholar and leader in the male dominated area of exercise science. She will discuss the importance of mentorship, benefits of networking, struggling with life's challenges, and ultimately believing in yourself. As a child, Dr. Brown struggled in the classroom but quickly learned that her social aptitude would allow her to develop supportive relationships, find impactful mentors and identify collaborators to fill the knowledge gaps. She will discuss her team approach in leadership and research and share ongoing scholarly projects and plans for her research group at the University of Idaho.

MUSICAL PERFORMANCES

ROCK BAND – MON. April 29th 7:30pm, SUB Amphitheatre

JAZZ BAND – WED. May 1st 7:30pm, Silverthorne Theatre

Director: Joe Proud



LC State Humanities and LC State Music
present
The LC State Concert Choir

Expressions of Joy

Tuesday, April 30, 2024
7.30pm
LCSC Silverthorne Theatre

To request disability accommodations, please contact the Humanities Division, humanities@lcsc.edu or 208.792.2297, at least one week prior to event date.

CONCERT CHOIR

TUES. April 30 7:30pm, Silverthorne Theatre

Students: Kailey Carpenter, Gavin Dittmar, and Madelyn Hutchison

Director: Sarah Graham

WEDNESDAY MORNING SESSION

WEDNESDAY, MAY 1

WCC: Selway/Lochsa Room • 9:00 – 12:00
SOCIAL WORK

Zoom link: <https://lscs.zoom.us/j/86162261661>

Presenters: Samantha Sams - *Zoom*

Mentor: LaChelle Rosenbaum

Title: The Prevalence of Early Childhood Trauma

Abstract: In the prevalence of early childhood trauma, it is important to understand the social/emotional aspects of what will be experienced throughout the lifetime as well as what effects it will have on the individual and society. The participants affected by early childhood trauma will participate in surveys to further determine what can be a beneficial participant in society and their lifetime.

Presenters: Clara Blue, Faith Allen

Mentor: LaChelle Rosenbaum

Title: The Most Effective Way Out of Addiction

Abstract: This research is examining the responses to different treatment modalities among alcoholics who are working towards sobriety. The population we examined are individuals aged 18-65+ who have gone through either inpatient, one-on-one counseling or Alcoholics Anonymous in attempts to get sober. Our research was aimed at finding which treatment type was most effective in helping one become sober and maintain their sobriety.

Presenters: Cristal Reza, Kayite Friesen - *Zoom*

Mentor: LaChelle Rosenbaum

Title: Exploring the Impact of Resources on Inmate Rehabilitation and Reintegration

Abstract: The purpose of this study is to understand the mental health resources of inmates' post-incarceration. The study uses a randomized and anonymous survey to examine the need for reintegration resources in Idaho. Data was collected regarding mental health resources, employment opportunities, and educational options. Correlation shows a current need for more resources upon release. The research shows that a lack of resources can be demotivating for post-inmates in small communities.

Presenter: Andrea Ackerland

Mentor: LaChelle Rosenbaum

Title: Identifying the Influence of Parenting Practices on Children's Screen Time

Abstract: As the frequency of children's screen time usage continues to increase, so do parent's frustrations when it comes to parenting around it. The purpose of this study is to gain a better understanding of the parenting practices in relation to their child's screen time. A survey was administered to gather this data, which will be analyzed and then shared at the research symposium.

Presenter: Sara Clausen - *Zoom*

Mentor: LaChelle Rosenbaum

Title: Hospice Employees' Perceived Level of Support, Training, and Burnout: Comparison Between Rural and Urban Communities

Abstract: Working in end-of-life care can be challenging. The purpose of this study was to test the theory of Maslow's Hierarchy Theoretical Framework as it relates to resources aimed to improve hospice employees' job contentment. Hospice employees were the participants surveyed using a researcher designed Qualtrics survey. This study explores whether there is a difference between urban and rural hospice workers' perceptions of support, training, and burnout experienced. Results will be shared at the research symposium.

Presenters: Lacey Welter-Jordan, Lynnsey Wilson, Kaylynn Moline

Mentor: LaChelle Rosenbaum

Title: College Food Insecurity Correlation with ACE Scores, Age and Gender

Abstract: Food insecurity is experienced by 11.7 million adults in the U.S according to the USDA statistic of 2023. This research was conducted to bring awareness to the issue of students' basic needs being met specifically with food insecurity, and the possibility there are correlations with food security, higher ACEs scores, age, and/or gender. This research was conducted by utilizing Maslow's Hierarchy of Needs framework, Lewis-Clark State College food pantry, and survey questionnaire.

WEDNESDAY MORNING SESSION

Zoom link: <https://lscs.zoom.us/j/86162261661>

Presenter: Amber Allred

Mentor: LaChelle Rosenbaum

Title: The Use of Unguided Music Interventions on Stress and Anxiety of College Students

Abstract: The purpose of this research was to find out if there is a reduction in stress and anxiety for college students with the use of unguided music interventions. The findings indicate that there is a significant reduction to stress and anxiety for college students using unguided music interventions.

Presenter: Samantha Schrankm - *Zoom*

Mentor: LaChelle Rosenbaum

Title: The Needs of Mothers Who Have Been Incarcerated

Abstract: This qualitative case study is being utilized to evaluate the needs of incarcerated mothers in Idaho before, during, and after incarceration. Incarcerated mothers are a unique population due to their concerns for their children while trying to navigate the criminal justice system. Additionally, many incarcerated mothers struggle with mental health, trauma, and substance misuse.

Presenter: Ashley Gauthier - *Zoom*

Mentor: LaChelle Rosenbaum

Title: Unraveling the Spectrum: Exploring Trauma-Induced Drug Addiction and Pathways to Recovery

Abstract: This study investigates the link between Adverse Childhood Experiences (ACEs) and drug use among former substance abusers on an Idaho reservation. Using a quantitative design with a correlational method, it examines early-life adversity's impact on drug initiation. Despite an anticipated correlation, no statistical significance was found between ACEs scores and the duration of addiction. The research offers insights into the complexities of trauma and addiction within this specific demographic.

Presenter: Shelbi Rembold - *Zoom*

Mentor: LaChelle Rosenbaum

Title: Financial Management Skills of Individuals with ADHD who are Medicated and Unmedicated

Abstract: The purpose of this quantitative study is to compare the relationship between 18–31-year-olds with ADHD and their financial management skills, as well as the impact on these individuals. Financial skills will be measured through the Self-Reported Delinquency (SRD) and Inventory of Small Life Events (ISLE) instruments. These will measure the ability of those in the study to pay bills on time, manage debt, live without financial assistance from others, etc. (Altszuler et al, 2016).

Presenters: Heather Fowler, Ernesto Garcia Rosale

Mentor: LaChelle Rosenbaum

Title: The Impact of Social Media on Young Adults

Abstract: Social Media has become a significant part of daily life, with platforms like Facebook and Instagram being popular for various reasons. However, excessive use can lead to mental health issues like anxiety and depression. Researchers analyzed interpersonal interactions among young adults aged 18–25 to examine the frequency of use, reasons for use, and perceived benefits or drawbacks. The results are pending and will be shared at the symposium.

Presenters: Demi Baird, Cheona Haugen - *Zoom/Campus*

Mentor: LaChelle Rosenbaum

Title: ACEs and Postpartum Depression: Is There a Connection?

Abstract: Postpartum depression (PPD) is a phenomenon that occurs to mothers during the perinatal period. The question asked is, do adverse childhood events (ACEs) affect a mother's chance of developing PPD. Research implies that women with a history of ACEs are at a higher risk of developing PPD. Part of investigating this research, women in the perinatal period were sampled and a Pearson's R correlation test was conducted. Results will be shared at the student symposium.

WCC: Selway/Lochsa Room • 9:00 – 12:00
SOCIAL WORK

WEDNESDAY, MAY 1

WEDNESDAY MORNING SESSION

WCC: Selway/Lochsa Room • 9:00 – 12:00

SOCIAL WORK

Presenter: Jennifer Roland - *Zoom*

Mentor: LaChelle Rosenbaum

Title: Is There a Difference in The Comfort Level of Right-Leaning and Left-Leaning Adults When Sharing Political Views with Family, Friends, and Colleagues?

Abstract: A person's political views are often shaped by family, friends, and colleagues, however, sometimes these views can clash, impacting the comfort level of political discussion. The purpose of this comparative quantitative study is to examine the differences between left-leaning and right-leaning political parties regarding their comfort level in discussing political views in personal and professional relationships. Results will be shared at the research symposium.

Presenter: Danyka Gutierrez Morgan - *Zoom*

Mentor: LaChelle Rosenbaum

Title: Judicial Disparity: Examining Race within Idaho's Legal System

Abstract: The US incarceration system presents systemic challenges, especially for rural communities. This study examines racial disparities in Idaho's legal system, focusing on incarcerated populations and sentencing outcomes. It questions whether demographic changes affect incarceration rates and sentence severity. Using categorical scoring and t-tests on Idaho's inmate sample, the study highlights punitive policies and discriminatory factors exacerbating racial disparities in the legal system.

Presenter: Jamie Harrell - *Zoom*

Mentor: LaChelle Rosenbaum

Abstract: Mentorship's Impact on Youth Court Participants: A Focus Group

This qualitative research study was utilized to identify themes that emerged from a focus group consisting of previous mentor participants in the Idaho District 3 Youth Court program. The goal of the study was to evaluate what worked or what could be improved on in developing a connection between mentors and their youth court mentees. Themes that emerged will be discussed during the presentation.

WEDNESDAY, MAY 1



*****Wednesday, May 1st Featured Symposium*****

12:00-1:00, Clearwater/Snake Room

Welcome: President Cynthia Pemberton

FACULTY SHOWCASE:

A symposium session highlighting the scholarly endeavors of LC State faculty. See page 3

WEDNESDAY AFTERNOON SESSION

**WCC: Selway/Lochsa Room • 1:30 – 3:30
JUSTICE STUDIES PRESENTATIONS**

Mentor: Gene T. Straughan

Presenter: Ashley Bailie

Title: Does Providing Education in Correctional Facilities Reduce Recidivism Rates?

Presenter: Daphne Buckland

Title: The Problem With Peremptory Challenges: A Recommended Remodel of the Voir Dire Process.

Presenter: Emma Hostetter

Title: The Death Penalty and its Effectiveness in Deterring First-Degree Murder.

Presenter: Paige Layman

Title: Juvenile Detention, Rehabilitation, and Reducing Recidivism.

Presenter: Aberash Miller

Title: The Prospects and Problems with Defunding Law Enforcement.

Presenter: Isaiah Richards

Title: The Impact of Three Strikes Legislation on Controlling Violent Crime.

Presenter: Jessica Smith

Title: Wrongful Convictions Based on False Confessions.

Presenter: Ju Hyun Son

Title: Solitary Confinement and the Prohibition Against Cruel and Unusual Punishment.

Presenter: Morgan Wenning

Title: The Effects of Absent Fathers on Juvenile Delinquency.

Presenter: Kathryn Yeats

Title: Reporting Sexual Assault: A Legal or Social Problem.

WEDNESDAY AFTERNOON POSTER SESSION 3:00 – 4:30

WCC: SALMON/GRANDE RONDE ROOM

**TECHNICAL & INDUSTRIAL
DIVISION**

Presenters: Emily Bann, Preston Boyer, Michael Steiger, Abbigail Tellez

Mentor: Jenni Light

Title: Old School vs New School: Comparing Drone Survey with Traditional Survey

Abstract: This poster presents the results of a comparative analysis between drone surveying and traditional surveying methods, focusing on their respective effectiveness in generating topographic maps and utilizing established control points. Drone surveying offers advantages in speed, resolution, and accuracy; traditional survey offers advantages with more user-controlled options in producing products but also requires time-consuming manual measurements and specialized skills.

WEDNESDAY AFTERNOON POSTER SESSION

Presenter: Keelyn Pilcher

Mentor: Nina Peterson

Title: Pace Pioneer

Abstract: Pace Pioneer, developed using Ionic framework, enables any track athlete to input their time and distance to monitor their runs and times. These runs are then securely stored in a MySQL database. The App is powered by a Node.js server, which facilitates communication between the Ionic front-end and the database back-end. The App's user interface simplifies submitting runs to then display graphical performance metrics, demonstrating a fully functional tracking app for any track athlete.

Presenters: Brandon Cabrera, Riley Ziegler, Kolby Solomon

Mentor: Nina Peterson

Title: Pitch Tracker Pro

Abstract: PitchTracker Pro, built on the Ionic/React framework and powered by the Firebase database management system, offers a dynamic solution for tracking baseball pitches during games or practices. Through seamless integration, it records and stores pitch data per player, facilitating comprehensive performance analysis. With intuitive UI and real-time updates, coaches and players can monitor specific pitch information, empowering informed decision-making and skill refinement in every game aspect.

Presenters: Carolyn Nickel, Connor Blum, Leah Johnston, Katelyn Brown

Mentor: Nina Peterson

Title: Finance App

Abstract: A mobile application designed to monitor daily transactions and give overview of daily and weekly monetary activity.

Presenter: Joe Burchett

Mentor: Nina Peterson

Title: Software Generated Graphs for Survey Data

Abstract: This project collects data from instances of a periodic Google Survey, imports that data into a SQL database, and uses command-line-based Python tools with Matplotlib to query the data and produce graphs of relevant trends and insights from the survey data. Survey data is anonymized, real-world results from a DevOps usability survey conducted over 9 quarters.

Presenters: Joe Burchett, Marcus Papas, Zac Heimgartner, Keelyn Pilcher, Carrie Nickel

Mentor: Nina Peterson

Title: AI-Assisted Web Deep-search

Abstract: We're exploring basic tools for tunable, topic-specific web search, including rudimentary language-modeling (GenerativeAI) to assist in refining crawler parameters and indexes. Our goal is to manage small-data, topic-specific, deep-search of the web. We've set up a basic search engine; we train Bayesian networks on documents we discover with that engine, and then use a 2-gram model to generate Markov chains. Text generation produces a weighted list of contributing source documents.

Presenters: Jordan Bader, Anna Steffens, Logan Marchant, Michael Bivens

Mentor: Nina Peterson

Title: Theatre Audition Application Manager

Abstract: The Theatre Audition Application Manager ("Taam") is a cross-platform mobile application built using Ionic and ReactJS. It helps managers of community theatres organize audition applications for roles in productions. Once actors fill out a form created by the manager, Taam retrieves their response data and displays it on a single page for easy viewing. Managers may also export the responses as a pdf, either for a single actor or all actors.

Presenters: Alaina Porquis, Jordan Bader, Logan Marchant

Mentor: Nina Peterson

Title: Habit Tracker Mobile App

Abstract: Our mobile application, "Habit Tracker", will help users manage their daily habits. In the app, user's designate actions they wish to turn into habits, frequency goals for those actions, and set any desired reminders. In-app analytics show how often actions are completed, providing visual data and feedback. Users may classify actions as established habits, change their desired frequency, or remove actions completely. Developed using Ionic and ReactJS, with Firebase Store for CRUD operations.

WEDNESDAY AFTERNOON POSTER SESSION

WEDNESDAY, MAY 1

BUSINESS & COMPUTER SCIENCE (cont.)
WCC: SALMON/GRADE RONDE ROOM

Presenters: Jordan Hymas, Cole Devorak, Aiden Lillibridge, Logan Gray, Raven Holt

Mentor: Nina Peterson

Title: Ionic Music App

Abstract: Our group project presents a cross-platform mobile application built with Ionic framework and React, enabling users to explore a comprehensive database of globally streamed music. Users can efficiently sort, search, and visualize data through interactive charts and graphs, gaining insights into the most popular music trends worldwide. This simple yet effective app seamlessly integrates technology with music discovery, offering a dynamic and engaging user experience across different devices, including Android, iOS, and web.

Presenters: Logan Gray, Gabe Pupo, Mason Stephens

Mentor: Nina Peterson

Title: Healthy Habits

Abstract: Our project introduces a user-friendly mental health app designed to streamline well-being tracking. The main page features checkboxes for easy daily monitoring. A secondary calendar page consolidates checkbox data and offers an overall day rating feature. Through intuitive design and efficient functionality, our app simplifies mental health management, providing users with valuable insights and tools for self-care. This project was built with Ionic Framework, ReactJS, and Git tools.

Presenters: Logan Gray, Jordan Hymas, Aiden Lillibridge, Raven Holt, Cole Devorak

Mentor: Nina Peterson

Title: Top Charts

Abstract: Top Charts is a cross-platform mobile application built with Ionic and React, enabling users to explore globally streamed music. Users import a file containing streaming data, and the app displays this information in a graphical way. Users can efficiently sort, search, and visualize data through interactive charts and graphs, gaining insights into music trends worldwide. This simple yet effective app offers an engaging user experience across different devices, including Android, iOS, and web.

PHYSICAL, LIFE, MOVEMENT AND SPORT SCIENCES
WCC: SALMON/GRADE RONDE ROOM

Presenters: Abigail Brown, Sara Hathaway, Ava Hasenoehrl, Brayden Graves, Tesla Presnell, Jayden Youngren

Mentor: Eric Stoffregen

Title: Metabolic dysfunction in survivors of Blm-deficient development in *Drosophila melanogaster*

Abstract: Blm DNA helicase is essential for proper DNA replication during early *Drosophila* development. Progeny from Blm-null mothers die as embryos due to lack of Blm protein. However, a few progeny survive to adulthood. We hypothesized that survivors of Blm-deficient development would display alterations in metabolic function due to DNA damage incurred during development. Our data suggest metabolic processes, particularly those related to nutrient storage, are altered by development without Blm.

Presenters: Ava Hasenoehrl, Abigail Brown, Brayden Graves, Sara Hathaway, Tesla Presnell

Mentor: Lloyd Mataka, Eric Stoffregen

Title: Protein Aggregate Concentration in Aged *Drosophila melanogaster*

Abstract: We investigated protein aggregates in aging *Drosophila melanogaster* to understand age-related phenotypes. *Drosophila* serve as a model for human aging and neurodegenerative diseases caused by misfolded proteins. We hypothesized that there would be an increase in aggregates between 5 and 17 days of age. We focused on male flies because they may show tendencies of aging faster. Quantification and colorimetric assays were employed. Our research project is still ongoing.

Presenters: Ava Hasenoehrl, Abigail Brown, Brayden Graves, Sara Hathaway, Tesla Presnell, Jayden Youngren

Mentor: Eric Stoffregen

Title: In *Drosophila*, survivors of Blm-deficient development exhibit a neurodegenerative phenotype that includes sleep and circadian rhythm disruption

Abstract: *Drosophila* embryos that lack maternally loaded Blm protein experience DNA damage, leading to high embryo mortality. We hypothesized that the few embryos that survived to adulthood would experience neurodegeneration phenotypes. Progeny that developed with or without maternally loaded Blm were studied. Those lacking maternal Blm exhibited reduced motor function, disrupted sleep, and altered circadian rhythms, suggesting increased neurodegeneration in the absence of accelerated aging.

WEDNESDAY AFTERNOON POSTER SESSION

WEDNESDAY, MAY 1

PHYSICAL, LIFE, MOVEMENT AND SPORT SCIENCES (cont.)
WCC: SALMON/GRADE RONDE ROOM

Presenters: Camden Barger, Grace Tiegs, Nallely Leon

Mentor: Lloyd Mataka

Title: Synthesis of Biodiesel Using Locally Sourced Waste Cooking Oil

Abstract: Biodiesel is a renewable fuel source produced from animal fats and plant oils. Biodiesel production must be explored further to make advancements in renewable energy. In this study, fuel was produced using waste cooking oil of a local restaurant and the LC State campus dining hall in Lewiston, ID. Biodiesels were compared using IR Spectroscopy, flame characterization, and other methods. Results will allow for a recommendation of the preferable type of oil for biodiesel production.

Presenters: Cameron Blackburn, Jacob Gish, Grace McCormick, Emma Zelasko

Mentor: Jacob Hornby

Title: Immunity, Inflammation, and Cancer

Abstract: Chronic inflammation along with the build up of genetic alterations and the loss of regulatory processes are hallmarks in the development of tumors and cancer. The effects of acute and chronic inflammation in relation to tumor suppression and formation are described. These culminate to trigger tumor-specific and associated antigens to activate our body's immune responses. The competition between inflammation and the body's immunity impacts the treatment of cancer.

Presenter: Chloe Shumaker

Mentor: Heather Van Mullem

Title: Getting and Keeping Mothers Moving: Perceptions of Exercise by Mothers Before, During, and After Pregnancy

Abstract: Research is clear that engagement in physical activity leads to improved health and wellness. However, certain groups of people, including women and parents, tend to engage in less exercise (Hamilton & White, 2010). Using a mixed-methods design, the purpose of this study was two-fold: 1) to examine perceptions of exercise by mothers and 2) to explore the impact of images posted to social media of pregnant women or women exercising with their children on mother's decisions to engage in exercise.

Presenters: Isabelle Carrillo, Mick Brown, Kyren Morris

Mentor: Lloyd Mataka

Title: Resynthesizing Triacylglycerol from Biodiesel

Abstract: Biodiesel has been an essential part of agriculture in American society. Biodiesel is a biodegradable fuel source made from cooking oil. There has been little research done on reconverting the process from biodiesel. The objective of our project was to break the fatty ester through acid and base hydrolysis, resulting in a carboxylic acid. Then, we would re-esterify the carboxylic acid with glycerol, resulting in a new triglyceride. To confirm our synthesis usage of infrared spectroscopy and NMR.

Presenters: Jayden Youngren, Abigail Brown, Brayden Graves, Ava Hasenoehrl, Sara Hathaway, Tesla Presnell, Kyra Lockett

Mentor: Eric Stoffregen

Title: Y-chromosomes create a survival disadvantage in male *Drosophila* that lack Blm protein in early development

Abstract: *Drosophila* that develop without Blm, a conserved helicase also found in humans, suffer DNA damage that is typically lethal to embryos. In survivors, an extreme sex bias exists towards XX females. In surviving males, an aneuploid sex chromosome karyotype, X0, is more common than expected, and outlives its XY male counterpart. Our data suggest that a Y-chromosome leads to a survival disadvantage for embryos and a reduced lifespan in adults that develop without Blm.

Presenter: KC Wahl

Mentor: Nancy Johnston

Title: Glow in the Dark Clothes: Fluorescent Whitening Agents in Laundry Detergent

Abstract: Fluorescent Brightener 71 (FB71) is a compound that is commonly found in laundry detergent. This compound belongs to a group of molecules known as Fluorescent Whitening Agents (FWAs) which are used to enhance the brightness of white fabrics. The fluorescence of several household laundry detergents was measured as well as the degradation of the fluorescence using a fluorescent spectrometer. The concentration and intensity of FB71 in laundry detergent will be discussed.

WEDNESDAY AFTERNOON POSTER SESSION

Presenters: KC Wahl, Grace Tiegs, Leah Johnston

Mentor: Nancy Johnston

Title: Volatile Organic Compounds in Air Surrounding Former Philadelphia Oil Refinery Site

Abstract: Air samples were collected using Tenax sorbent tubes in multiple locations with close proximity to a former oil refinery site in Philadelphia, PA. Samples were analyzed using gas chromatography-mass spectrometry to measure levels of benzene, toluene, ethylbenzene, xylenes (BTEX), and other gases. Maps of seasonal patterns of BTEX show spatial and temporal variability from summer to winter. Benzene risk calculations reveal a minimal impact on the health of residents due to current concentrations.

Presenter: Kylie Wilson

Mentor: Keegan L. Schmidt

Title: Reaching Community Through Interactive Geologic Experiences

Abstract: Effective communication is key to sharing science. I contributed to geology outreach by sharing the importance of clean drinking water and geologic concepts through co-creating the interactive Lewiston Clarkston Valley Aquifer Atlas using GIS (<https://lcvaquifers-idaho.hub.arcgis.com/>) and teaching the rock cycle to elementary students. My outreach journey is possible through programs like Work Scholars. These public service experiences demonstrated the need for engaging and accessible content.

Presenter: Madilyn Sorenson

Mentor: Nancy Johnston

Title: Chemical Composition of Smoke-infused Growth Media Compared to Non-smoke-infused Growth Media

Abstract: The addition of cigarette smoke in media has increased the growth of the common lung microbe *Streptococcus pneumoniae*. While the growth rates of *S.pneumoniae* have been studied along with the reasons why they are growing faster, the smoke-infused media has not. In this experiment, cigarette smoke-infused tryptic soy broth was evaluated for its chemical composition in comparison to non-infused tryptic soy broth. The differences between the media's chemical compositions will be discussed.

Presenters: Michael Wee, Stevie Gulman, Anika Busz, Cornelius Sia, Leah Johnston

Mentor: Nancy Johnston

Title: Health Risks Associated with Aldehydes and Other Air Pollutants in Lewiston, ID

Abstract: This study of Lewiston-Clarkston Valley monitored air toxics near a paper mill. Sampling was conducted monthly from 2023-2034 using Tenax/Sulficarb tubes and DNPH-coated cartridges, and analyzed via US EPA methods TO-17 and TO-11a with thermal-desorption gas-chromatography mass-spectrometry and liquid chromatography. The LC State site continuously measured SO₂ using a Teledyne T102 analyzer. There were seasonal increases in formaldehyde and acetaldehyde, up to 30 ppb. Health risk will be calculated.

Presenters: Nallely Leon, Grace Tiegs

Mentor: Nancy Johnston

Title: Analysis of Heavy Metal Concentrations in Soil via Flame Atomic Absorption Spectroscopy (FAAS)

Abstract: Heavy metals when combined with different environmental elements, can become extremely toxic to plants, humans, and the environment. As a result, it is important to analyze and monitor their concentrations in soils. In this study, flame atomic absorption was used to quantify copper, zinc, and lead concentrations in samples gathered from local farms and gardens. Results will be compared to toxic thresholds.

Presenters: Reanna Haley, Autumn Ferguson

Mentor: Lloyd Mataka

Title: Studying the Impact of Biodiesel on Organic Matter in Soils

Abstract: Biodiesel is believed to be biodegradable, but we have little knowledge of its effects on various types of soils during the biodegradation process. In this study, we investigated the effect of biodiesel on organic matter content of three types of soils: potting soil, sand and campus soil using UV-Vis spectroscopy. Results show that after biodiesel was added to the soil, eventually the organic matter of all three types of soil decreased. There are a lot of ways to interpret this information.

PHYSICAL, LIFE, MOVEMENT AND SPORT SCIENCES (cont.)
WCC: SALMON/GRANDE RONDE ROOM

WEDNESDAY, MAY 1

WEDNESDAY AFTERNOON POSTER SESSION

WEDNESDAY, MAY 1

PHYSICAL, LIFE, MOVEMENT AND SPORT SCIENCES (cont.)
WCC: SALMON/GRANDE RONDE ROOM

Presenters: Sara Hathaway, Mick Brown, Alex Sol

Mentor: Jacob Hornby

Title: Madison Van Gelder, Autoimmune Encephalitis: Brain on Fire

Abstract: Brain on Fire is a movie based on true events describing untreated autoimmune encephalitis from an ovarian teratoma. Autoimmune encephalitis is the swelling of the brain caused when the immune system targets self-neuroglial antigens in the CNS. The most common antigen is the N-methyl-D-aspartic acid receptor antibody, which causes NMDAR-antibody encephalitis.

Presenter: Stevie Gulman

Mentor: Keegan Schmidt

Title: Marine Science Outreach in Orange County, CA

Abstract: Over the previous summer, I participated in marine science outreach with two local nonprofit organizations in Orange County, CA—Laguna Ocean Foundation and The Ocean Institute. I volunteered as a Docent, educating tide pool visitors on the marine life within the tide pools and the policies regarding marine protected areas. In addition, I was tasked with educating 5-6-year-old summer camp students on marine biology and physical oceanography.

Presenters: Teigan Lockwood, Caristae Robinson, Jayden Youngren

Mentor: Jacob Hornby

Title: GVHD: A Challenge of Tissue and Organ Donation

Abstract: Graft versus Host Disease (GvHD) can be a life-threatening complication after a tissue or organ transplantation. GvHD is caused by the recipient's immune system recognizing the donated cells as a foreign threat. This poster focuses on the necessity of tissue and organ donation, preparation for donation, and immunosuppressant therapies used to prevent rejection.

Presenters: Brooke Barnes, Aiden Weber, Emma Zelasko

Mentor: Dr. Lloyd Mataka

Title: Comparative Analysis of Organic Based Biodiesel to Petroleum Diesel

Abstract: In this experiment, we are comparing the characteristics, properties, and performance of biodiesel (vegetable based and animal based) and petroleum based diesel. We assessed the cleaning efficiency, comparing the functional groups in each sample via IR spectroscopy, and performed a bomb calorimeter test to determine the calorific value of each. We also performed an H-NMR spectroscopy comparing vegetable biodiesel and petroleum based diesel.

Presenter: Aiden Weber

Mentor: Nancy Johnston

Title: Gas and Liquid Chromatography Analysis of Biodiesel

Abstract: The goal of this project was to study the composition of vegetable-based biodiesel, fish-based biodiesel, and normal petroleum-based diesel as well as their combustion products. Gas and liquid chromatography-mass spectrometry were used to determine the compounds present in the samples. Both qualitative and quantitative results will be discussed.

SOCIAL SCIENCE • WCC

Presenter: Adriana Enriquez-Gonzalez

Mentor: Angela Wartel and Leif Hoffman

Title: Applied Learning: Exploring Democracy in Washington, D.C.

Abstract: Connecting learning to life, a small group of LC students ventured to Washington, D.C., during spring break 2024 to gain a deeper understanding of our nation's institutions and history. This poster will detail their experiences with the Legislative, Judicial, and Executive Branches and Special Interest Groups as well as lessons learned for taking future students on such a field trip.

Presenter: Ju Hyun Son

Mentor: Angela Wartel and Leif Hoffman

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WEDNESDAY EVENING SESSION

The Spring Warrior Art Exhibition
Location: LC State's Library Foyer Art Gallery
Artist Reception: May 1, 5-7pm

The Spring Warrior Art Exhibition showcases student works of art created over Spring Semester.

Introduction to Art (ART100)

Personal Logos are created with iconography developed to represent their individual philosophies. They were drawn and transferred onto fabric using cyanotype, a contact printing method.

Drawing (ART 111, 211, 311)

Explorations in Perspective.

Drawing II & III: Students explore transfer techniques and multi-media to create dynamic compositions.

Creative Non-Fiction (ENG 309) & Drawing (ART 111, 211, 311)

Collaboration between Professor Jennifer Anderson's Creative Non-Fiction class and Professor Kelsey Grafton's Drawing class.

Drawing Students illustrate 100-word creative non-fiction essays using a relief printing method, Block Printing.

Painting I (ART-231)

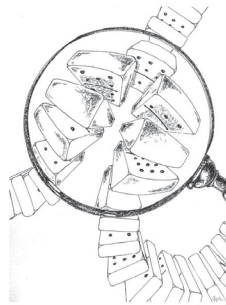
Students explore watercolor techniques to understand color theory and composition.

Oil paintings of paper bag studies to explore form using soft and hard edges and local color.

Masters Studies with a twist!

Plants & People (BIOL-120)

Botanical Illustrations: Collaboration between Dr. Elizabeth Martin and Art Professor, Kelsey Grafton



Emily Talbot,
Perspective, Pen & Ink
 Drawing II: ART-211



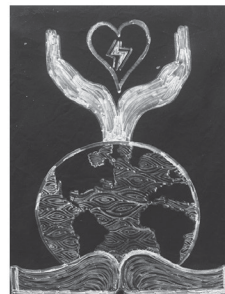
Lillian Vireling
Bag Study, Oil on Canvas
 Painting I: ART-231



Sara Muehlhausen
Sweetness of Spring
 Watercolor
 Painting I: ART-231



Jessica Mallory
Botanical Illustration
 Watercolor and Pen
 Plants & People: BIOL-120



Piper Parsells
 Personal Logo
 Cyanotype
 Into to Art: ART-100

THURSDAY MORNING SESSION

WCC: Clearwater/Snake Room • 9:30 – 11:30
NURSING

Group 3

Presenters: Ethan Ashbaugh, Evan Huber, Brooke Kromminga, Shelby Trent, Lisa Westra

Title: Mental Wellbeing of Lewiston, ID First Responders

Abstract: First responders are at higher risk for behavioral health problems due to repeated exposure to trauma and crisis. Recognition and treatment of post-traumatic stress, and depression are complicated by stigmatizing workplace culture, lack of mental health resources, and a lack of support. Mitigation requires a multi-pronged approach. We propose a multi-dimensional mental health program to minimize and address mental health symptoms, increase responder resiliency, and create and maintain a supportive workplace culture.

Group 5

Presenters: Christian Bothwell, Mackenzie Gilbert, Madison Holm, Megan Leonard, Grace Villelli

Title: Adolescent Obesity

Abstract: High school aged adolescents who exhibit poor dietary choices and sedentary lifestyles are at risk for the development of obesity. Targeted family and school-based interventions may decrease the risk of childhood obesity. Evidence-based recommendations include education regarding healthy nutrition, proper physical exercise, and modification of maladaptive eating behaviors. Our goal is to decrease risk factors and improve the quality of current and future health status for this population via the implementation of a proven interventional program.

Group 6

Presenters: Lindsay Adkins, Allison Barden, Jacie Howton, Fridah Kumenda, Chance Lee, Sophie Peterson

Title: Vaccination Compliance Among U.S. Preschoolers

Abstract: Vaccination rates among preschoolers in the U.S. are a significant public health concern. Low vaccination rates persist, leading to outbreaks and increased health risks. Factors such as vaccine hesitancy and limited healthcare access may impact vaccination compliance. By addressing barriers and promoting informed decision-making, we aim to increase vaccination rates for preschoolers through targeted education and reminders. The goal is to employ evidence-based interventions to increase vaccination rates and improve public health.

Group 7

Presenters: Jestine Bugner, Candice Demers, Emma Eckard, Lori Hembree, Robert Ndambuki, Angelica Orozco Hernandez

Title: Disaster Preparedness in Vulnerable Populations

Abstract: Disaster preparedness increases individual and community resiliency, improving recovery after a critical event. Vulnerable populations face disproportionate challenges and are less likely to be adequately prepared for disasters. Preparedness is crucial to reduce the burden of long-term individual and community impact. Primary healthcare providers can play a pivotal role in assisting vulnerable people to formulate wellness plans that include disaster preparedness. We propose a pilot program to proactively support preparedness in vulnerable patient populations.

WCC: Salmon/Grande Ronde
9:30 – 11:30 • NURSING

Group 1

Presenters: Tina Anderson, Camryn Dierke, Marissa Havens, Sarah Koziol, Savannah Weisgerber

Title: Mental Health of College Students

Abstract: The college years present unique challenges for young adults. A lack of accustomed familial support, heightened social media use, shifting social interactions, lack of awareness of available resources, and substance use play a role in declining mental health. Each element contributes to the development of poor coping mechanisms and mental health disorders. The goal of this evidence-based project is to improve the mental well-being of college students using a web-based program.

Group 4

Presenters: Riley Clark, Ryanne Denning, Janessa Schilling, Kendra Steele, Kortney Trappett

Title: Type 2 Diabetes Mellitus Prevention

Abstract: Type 2 Diabetes Mellitus is a chronic, preventable problem among Idaho adults and the 8th leading cause of death. Research shows that Diabetes Prevention Programs (DPP) decrease the rise of this modern preventable pandemic. DPPs improve patient education related to disease process, diet, and physical activity levels, but significant barriers to implementation remain. The goal of this project is to provide solutions to these barriers and partner with local healthcare partners to deliver DPPs.

THURSDAY, MAY 2

THURSDAY MORNING SESSION

THURSDAY, MAY 2

WCC: Grande Ronde
9:30 – 11:30 • NURSING

Group 8

Presenters: Tara Bowen, Kayla Boyd, Jade Hansen, U. Isaiah Linabary, Ingrid Roise

Title: Adolescent Depression

Abstract: Adolescent mental health is worsening in the U.S. Young people report symptoms of depression, suicidal ideation, and hopelessness at alarming rates. While school and community-based mental health programs can promote teen well-being, a lack of mental healthcare providers gravely complicates identification and treatment. We propose interventions to prioritize student's mental health by facilitating community collaboration and provide nurse-driven strategies for improving the accessibility of mental health resources in the Moscow School District.

Group 9

Presenters: Peyton Ely, Ashley Fernimen, Noah Gunn, Marriah Piazza, Rachel Schroeder

Title: Best Practice Regarding Sudden Unexpected Infant Death Syndrome

Abstract: Infants in Lewiston have the highest risk of sudden unexpected infant death syndrome (SUIDS) in Idaho. We aim to lower rates through increasing education and preventative measures to promote awareness and understanding of SUIDS among expectant mothers. By delivering comprehensive education on safe sleep guidelines prenatally, we seek to empower mothers with the knowledge, time, and tools necessary to reduce the risk of SUIDS for their infants before their delivery and upon taking their baby home.

WCC: Lochsa/Selway River Room • 9:00 – 11:00
PHYSICAL, LIFE, MOVEMENT, AND SPORT SCIENCES

Presenters: Anika Busz, Kylie Wilson

Mentor: Nancy Johnston

Title: Air Monitoring of Sulfur, Particulate matter, Aerosols, and Aldehydes in Lewiston, Idaho

Abstract: The monitoring of air pollutants is important for public health. This study involved continuous sampling of sulfur species (SO₂ and TRS), particulate matter (PM_{2.5}), and aerosols(AOD) of Lewiston air between 2019-2022. In situ measurements of formaldehyde and acetaldehyde were also taken 2023-on. PM_{2.5} and AOD were highest during wildfire events, while sulfur species were less variable and well below EPA guidelines. Aldehyde species were low most of the year, with larger spikes in the spring.

Presenters: Kylie Wilson, Miriam Ames

Mentor: Keegan L. Schmidt

Title: Reverse Left Lateral Shear at Green Knob, Idaho

Abstract: Mesozoic collision of the Wallowa terrane in north central Idaho formed an elbow in the collisional boundary, featuring a well-studied north-south segment and a poorly known east-west segment. We collected new structural data on the EW segment at Green Knob, Idaho, to establish the kinematics and timing of collision. Fabrics are consistent with reverse left lateral shear, which is kinematically compatible with right lateral shear defined along the NS striking segment of the collisional boundary.

Presenters: Cornelius Sia, Shastine Berger, Leah Johnston

Mentor: Nancy Johnston

Title: Volatile Organic Compounds in Wildfire Smoke near an Idaho Dairy Farm and nearby Cities

Abstract: Wildfires have become more intense across the western US over the recent decades due to climate change. Wildfire smoke contains volatile organic compounds (VOC) and particulate matter (PM_{2.5}), which are detrimental to human and animal health. Weekly samples were collected in Tenax sorbent tubes in Boise, Lewiston and Moscow (dairy farm) from 2019 to 2022. Increased PM_{2.5} was accompanied by elevated benzene (human carcinogen), up to 313µg/m³ and 1.81 ppbv respectively.

Presenters: Conner May, Chris Denny, Abby Gorton, Ike Hopper

Mentor: Dr. Clay Robinson & Dr. Jessica Savage

Title: Vitamin C's Effect on Iron Absorption & Aerobic Capacity in Female Cross-Country Athletes

Abstract: The purpose of this study was to determine the effects that Vitamin C has on rates of Iron absorption and whether supplementation of vitamin C and Iron will improve Ferritin, Hemoglobin, Hematocrit levels, and V0₂ Max in female cross-country athletes. Six female cross-country athletes participated in pretesting including, V0₂ max, and blood draws to analyze iron absorption rates & posttest after eight-week Iron & Vitamin C supplementation intervention. All data was analyzed and will be shared at the research symposium.

THURSDAY MORNING SESSION

WCC: Lochsa/Selway River Room • 9:00 – 11:00
PHYSICAL, LIFE, MOVEMENT, AND SPORT SCIENCES

Presenters: Joel Mulikin, Clayton Beachy, Chloe Shumaker, Bonolo Molefe

Mentor: Dr. Jessica Savage

Title: Effects of Stroboscopic Vision on Lower Quarter Balance

Purpose: To determine the effect of stroboscopic vision on the Y Balance Test Lower Quarter (YBT-LQ) in ball sport collegiate athletes.

Methods: Participants completed six trials of familiarization in all reach directions: anterior, posteromedial, and posterolateral, for both legs. Following familiarization, participants completed three trials in each direction and scores were recorded. Limb length measurements were used for calculation of composite scores for both legs. Paired t-tests were used to determine if significant ($p < .05$) differences between composite and anterior reach scores. The results will be shared at the senior research symposium.

Presenter: Kailey Druffel

Mentor: Dr. Clay Robinson

Title: The Effects Robotic Surgery on Bone Tunneling Accuracy in ACL Reconstructions: A Meta Analysis

Abstract: The purpose of this study was to determine if there was a difference in the accuracy of bone tunneling during anterior cruciate ligament (ACL) reconstruction when comparing a robotic drill to drilling by hand. P-values were obtained from research articles and were separated into two categories; cadaver research and living research. These values were analyzed to determine if there was a difference between the two methods, in both cadaver and living patients. The results will be shared at research symposium.

Presenters: Nick Seamons, Charlie Updegrave

Mentor: Dr. Clay Robinson

Title: Does traditional strength training or plyometrics have a greater influence on increasing power?

Abstract: The purpose of this study was to investigate the efficacy of plyometrics and weight training regimens in enhancing the maximum vertical jump height. Pre and post-tests were used to evaluate the impact of each five-week intervention. A Vertec measuring tool was utilized to quantify jump heights before and after intervention phases. Results from this investigation could contribute to development of tailored training programs to enhance explosive power and athletic performance. Results will be shared at symposium.



THURSDAY, MAY 2

Thursday, May 2nd Keynote Address

12:00 – 1:00, Clearwater Room

Dr. Ann Brown

Being a Female and Studying Female Physiology in Academia

Welcome and Opening Remarks: Provost Fredrick Chilson

THURSDAY AFTERNOON SESSION

THURSDAY, MAY 2

WCC: Lochsa/Selway River Room • 1:30 – 3:00
**PHYSICAL, LIFE, MOVEMENT, AND
SPORT SCIENCES**

Presenters: Kyla Currie, Carli Ehlers, Anica Asumendi

Mentor: Dr. Clay Robinson

Title: Physical Activity's effect on Emotional Health

Abstract: This study was to determine if participation in physical activity positively affects emotional health of college students. There's been a reported increase in college students' emotional health. The survey evaluated one's emotional health and physical activity levels. It included questions about: emotional health, and type/frequency of physical activity. Demographic information (age, gender, and athlete/non-athlete) was included. Professors emailed the survey to participants. The results will be presented at the senior research symposium.

Presenters: Kristine Riggers, Anne Mathema

Mentor: Dr. Clay Robinson

Title: Correlation between health and well-being among older adults.

Abstract: The purpose of this research was to compare the quality of life between participants (Age <60) in America versus participants from Nepal/Czech Republic. This study explored socioeconomic backgrounds of participants to determine the influences, if any, and how they correlated to the overall factors of six dimensions of wellness. A survey-based evaluation tool was used to collect the opinions of participants to determine their values in overall longevity. The results will be shared at the Research Symposium.

Presenters: Kyren Morris, Laban Francis, Danner Maves

Mentor: Dr. Clay Robinson & Dr. Jessica Savage

Title: LC State Color The Valley Fun Run

Abstract: There are minimal running opportunities in our community that directly target youth.

A color run event was constructed as an opportunity to participate in a fitness activity for families.

The objective was to have 300 people participate. Various marketing strategies were used to attract people to the event. Qualitative surveys were used to collect response from event participants to determine changes to increase participation. The results of the event will be shared at the symposium.

PHYSICAL, LIFE, MOVEMENT, AND SPORT SCIENCES

Graduate Reception • WCC: • 3:00-4:30

Center for Arts & History
3:00 – 5:00 • **HUMANITIES**

Zoom: <https://lcsc.zoom.us/j/87204771227>

Presenter: Randy Isabelle - Zoom

Mentor: Seth Bradshaw

Title: Exploring the relationship between media economics and college athletics between 1996-2024.

Abstract: For decades business concerns have been encroaching upon the landscape of college athletics. The current work explores the relationships between television rights deals, the structure of college conferences, recruitment, and revenue generated by the introduction of name, image and likeness deals. Using media economics data between 1996 and 2024, I find a positive correlation between increases in the amount of television rights deals and the number of schools in Division I college football conferences.

Presenter: Logan Foster

Mentor: Peter Remien

Title: Girl on Fire: The Environment as a Revolution

Abstract: This presentation uses an ecocritical lens to examine *The Hunger Games* by Suzanne Collins, giving particular attention to how the work's natural setting serves as the catalyst to the revolutionary plot of the novel. By examining the work's numerous natural settings, as well as the genre of young adult dystopian fiction, this presentation draws clear conclusions about the intersection of the environment and revolution.

THURSDAY AFTERNOON SESSION

Center for Arts & History • 3:00 – 5:00
HUMANITIES (cont.)

Presenter: Justin Spencer

Mentor: Renee Harris

Title: War Writing and the Great War.

Abstract: Using the works of Wilfred Owen and *All Quiet on the Western Front*, I will show how war writing changed drastically during WW1. Major advances in warfare technology and tactics caused the romantic themes around war writing to dissolve. War was no longer a grand adventure for a youth, but instead a dehumanizing experience. Poems about men eager to fight for their country became testimonies of the misery men faced upon the front lines.

Presenter: Mackenzie Dimond

Mentor: Renee Harris

Title: Coloring Liberation: Exploring Female Stereotypes in Lamia Narratives

Abstract: This presentation explores color symbolism in John Keats's "Lamia," and A.S. Byatt's "A Lamia in the Cévennes" with a focus on depictions of Simone De Beauvoir's idea of stereotyping women as "Mary" or "Eve." Lamia's womanhood is in question in the texts, showcasing female oppression and the ongoing tension between liberation, femininity, and societal expectations. Like Lamia, women are more complex than a single color and can be liberated by coloring outside the lines.

Presenter: Paxton Taylor

Mentor: Peter Remien

Title: Gender Performativity and Shakespeare

Abstract: Shakespeare's comedies *Twelfth Night* and *As You Like It* challenge traditional gender roles and explore the fluidity of gender identity. Characters cross-dress, revealing that gender is a performance rather than a fixed identity. Using Judith Butler's theory of gender performativity, I demonstrated how this subversive approach was ahead of its time. Male actors played women who then disguise themselves as men, and therefore Shakespeare's exploration of gender highlights the enduring relevance of his work.

Presenter: Courtney M. M. Morgan

Mentor: Jennifer Anderson

Title: Writing the Razor's Edge: The Verity and Variance of Liberties in Creative Nonfiction

Abstract: "Writing the Razor's Edge" is an investigation into literary genres. In considering the verity and variance in creative nonfiction, it is the essence of truth, not factual accuracy, that separates this genre from fiction. Creativity blurs the boundary between fact and fiction; therefore, it is necessary to examine the scope of responsibility within the craft. Some argue for the accountant's truth, others for the ecstatic truth. Is there room for both in a single genre?

Humanities Graduate Reception to be held immediately following the presentation at the Center for Arts & History

THURSDAY, MAY 2



Welcome & Introduction:

Rocky Owens Sr. Director Coeur d'Alene Center and Provost Fredrick Chilson

Lobby Room • 2:00-2:10

FRIDAY AFTERNOON SESSION

Zoom: <https://lcsc.zoom.us/j/2082921290>

Presenters: Dream Beans – Alethea Coddling, Kayla Librande, Magen Goforth, Kylie Christiansen, Catherine Sheppard

Title: Proposed Merger Between Dutch Bros and Café Nero

Abstract: Our strategic opportunity explores the potential for Dutch Bros to merge with Caffè Nero, a boutique coffee chain that provides an elevated coffee experience. By merging Dutch Bros and Caffè Nero, this strategic opportunity would leverage their strengths, expand market reach, enhance product offerings, and improve customer service. This merger would facilitate Dutch Bros' entry into the boutique coffee market, reaching customers who prefer a traditional coffee shop experience over the drive-through service.

Length of time: 30 minutes

Presenters: Deja Brews – Erin Edmonds, Lauren Everhart, Grace Gentry, Elizabeth Pehan, Grace Yost, Wyatt Zylawy

Title: Brewing Success: Delivery and Pickup Innovation at Dutch Bros

Abstract: This project explains the strong need for Dutch Bros, a new and fast-growing coffee company, to establish delivery services and mobile pickup in their business model. With the needs of modern consumers ever-evolving and new technology coming out every day, this strategy stands to improve the customer experience, drive growth, and maintain competitiveness for Dutch Bros. With strengths like their strong social media presence and loyal customer market, Dutch Bros can effectively implement these new services while still aligning with their overall expansion plans focused on opening more locations across the U.S. Their customer-centric approach and strategic partnerships are arguably their strongest assets; assets which can be capitalized on alongside the delivery service implementation to solidify their position as a market leader. This strategy acknowledges the importance of technological integration and adaptation to meet the demands of today's on-the-go consumer. Furthermore, the approach looks at the ever-evolving coffee market with a keen eye focused on efficiency and revenue growth.

Length of time: 30 minutes

Presenters: Group 4 – Jacob Wilhelm, Dylan Bragg, Anthony Martinez, Katherine Fischer, Sydney Singer, Kylie Boller

Title: A Three-Pronged Approach to Growth

Abstract: After researching Dutch Bros' internal and external environments, we have developed a three-pronged strategic plan to advance the company's mission and bring Dutch Bros' "fun-loving, mind-blowing" experience to an increasing number of consumers. The three aspects of our approach are to:

1. maintain the current model of aggressive growth and expansion
2. introduce a more health-focused food and beverage menu, and
3. add seating to more locations - indoor where possible.

Length of time: 30 minutes

Presenters: The Bros - Emily Damschen, Parker Loverich, Davian Brown, Terry Davis, Samuel Stockton

Title: An Internal Analysis and Strategic Opportunity of Dutch Bros Coffee

Abstract: This study of Dutch Bros Coffee, a leading player in the coffee industry, identifies the factors that have led the company to success, as well as the barriers that have held them back. Since going public in 2021, Dutch Bros Coffee has encountered many opportunities and threats that are crucial to their continued growth. This presentation aims to address these factors and provide insights for the company's success in the future.

Length of time: 30 minutes

DARM ROOM #110 • 2:15 - 4:15
BUSINESS & COMPUTER SCIENCE - BUSINESS

COEUR D'ALENE FRIDAY, MAY 3

FRIDAY AFTERNOON SESSION

**DARM ROOM #110 • 2:15 - 4:15
BUCS - BUSINESS (cont.)**

Presenters: Strategic Bros. – Peter Barson, Andrea Cervantes Bustamante, Shelby Lawrence, Teresa Leighton, Garrett Mason, Joseph Trasher
Title: Dutch Bros. Strategic Opportunity Analysis
Abstract: For the past 30 years, Dutch Bros. has proven to be a company with incredible potential. A coffee shop with humble origins, today Dutch Bros. has locations in the majority of the United States and is able to deal with global competitors such as Starbucks and Dunkin Donuts. The company has proven time and time again its adaptability and resilience. Management at Dutch Bros. has implemented strategies that have secured a reputation and loyal customers. Given the company’s success, it would be wise to start exploring territories outside the United States, starting from Canada, a neighboring country that will present good opportunities and fewer challenges. The ultimate goal of this expansion strategy is to broaden the company’s presence in some of the territories that are now monopolized by other companies. The study presented by the group Strategic Bros. analyzes the potential of this expansion strategy, discussing its benefits, the obstacles that could be encountered, and which approach to use in order to guarantee success.
Length of time: 30 minutes

**DARM ROOM #207 • 2:15 - 3:45
HUMANITIES - COMMUNICATION ARTS &
SECONDARY EDUCATION**

Zoom: <https://lcsc.zoom.us/j/86841868102>

Presenter: Katie Sanchez
Program: Secondary Education & Communication Arts
Title: Teachers’ Perspectives on ChatGPT and Education
Abstract: Since the release of ChatGPT in 2022, many have assumed that teachers think this technology will have a negative effect on education and the classroom. However, when I asked teachers about their thoughts on ChatGPT and education I heard a more varied response. My study of over 40 educators along the West Coast demonstrates that although a majority of teachers have a negative outlook on ChatGPT, the views are much more split than previously thought.
Length of Presentation: 15 minutes
Presentation Format: Virtual Remote

Presenter: Jacob Green
Program: Communication Arts
Title: What Types of Nonverbal Communication are Used in Basketball and What Impact Does It Have on the Game?
Abstract: Some people say having a successful basketball team is about recruiting the most physically skilled players. However, recent research suggests nonverbal communication can have a significant impact on the outcome of basketball games. Using content analysis of LC State women’s basketball games, this study will discuss the different types of nonverbal communication used and the impact it has in basketball.
Length of Presentation: 15 minutes
Presentation Format: Virtual Remote

Presenter: Grace Loman
Program: Secondary Education & Communication Arts
Title: How Do I Look? A Research Study all about Appearances.
Abstract: This survey examines experiences individuals have had surrounding physical appearance. It works to answer the question: Is there a correlation between age/weight-groups of people who have witnessed or experienced being treated differently (professionally/socially) due to physical appearance? The online survey asks participants to write testimonies from their experiences (first-hand and/or witnessed); the questions follow the hypothesis that physical appearance affects people professionally and socially.
Length of Presentation: 15 minutes
Presentation Format: Virtual Remote

COEUR D’ALENE FRIDAY, MAY 3

FRIDAY AFTERNOON SESSION

DARM ROOM #207 • 2:15 - 3:45
HUMANITIES - COMMUNICATION ARTS &
SECONDARY EDUCATION (cont.)

Presenter: Josie Hafer
Program: Communication Arts
Title: Algorithmic media and its consequential effects on users' posting habits
Abstract: Algorithmic media is a type of social media characterized by user-centric content customizing algorithms. Previous research asked if social media algorithms can divide and/or polarize users. I performed a comparative content analysis to determine how the influences of algorithmic media change the way that users interact with platforms. My research highlights two major means of succeeding on algorithmic media: by careful strategy and sometimes cutthroat competition.
Length of Presentation: 15 minutes
Presentation Format: Face to Face

Presenter: Bryant Cano
Program: Communication Arts
Title: Why do some people ignore severe weather warnings? What strategies can increase their effectiveness?
Abstract: The negligence of severe weather and its warnings has led to destruction of properties and the loss of many lives. We need a deeper understanding for why weather warnings are not being taken seriously. This study explores research on persuasive solutions to increase adherence to severe weather warnings.
Length of Presentation: 15 minutes
Presentation Format: Virtual Remote

Presenter: Daysa Peppley
Program: Communication Arts
Title: How has mindfulness evolved from a small spiritual practice to a popular technique used in the workplace?
Abstract: The roots of mindfulness stem from Buddhism, but the practice was moved from the East to the West by Professor Jon Kabat-Zinn. While mindfulness can be seen from a religious context, it has adapted in use depending on its context. How did mindfulness change from a strictly meditative practice to a more commonly used strategy to prevent burnout in the workplace, education sector, and other organizations?
Length of Presentation: 15 minutes
Presentation Format: Virtual Remote

Zoom: <https://lscs.zoom.us/j/89654462169>

DARM ROOM #106 • 2:15 - 4:30
SOCIAL SCIENCES - SOCIAL WORK

Presenters: KayLee Wangelin, Joy Fields, Natasha Goddard
Title: Unmet Needs for Those with Physical Disabilities
Abstract: This study identifies and examines the unmet needs of those with disabilities. Surveys administered on social media platforms provide the data for this analysis.
Length of Time: 15 Minutes

Presenters: Heather Carroll, Cierra Gallian, Amy Rentschler
Title: Relationship Between Self-care and Stress Levels in Parents with Special Needs Children
Abstract: This correlational study examined the relationship between self-care and stress levels in parents with children who have special needs. The Perceived Stress Scale and The Mindful Self-Care Scale were used to measure parents of children with special needs stress levels and self-care routine. Surveys shared to parents of children with special needs provide the data for this analysis.
Length of Time: 15 minutes

Presenters: Lisa Calder, Mark Tetzlaff
Title: Assessing Community Perception of Inmate Reentry in North Idaho
Abstract: This exploratory study in North Idaho addresses the challenge of inmate reentry. The research, utilizing a mixed-methods design, focuses on community perceptions of reentry, distinguishing between a reentry facility and a program. The sample comprises North Idaho residents from community Facebook groups who voluntarily participated in a survey. Qualitative data will be integrated with quantitative data to enhance understanding of community views and support for reentry solutions.
Length of Time: 15 minutes

FRIDAY AFTERNOON SESSION

Presenters: Brian Applegate, Carissa Myers

Title: Stigma of People who Inject Drugs and Needle Exchanges in North Idaho

Abstract: The research project aimed to investigate community attitudes towards individuals who inject drugs and needle exchange programs in Northern Idaho. The study used a modified questionnaire to collect data on authoritarianism, benevolence, social restrictiveness, and community substance abuse ideology. Data was gathered through online questionnaires posted on social media platforms. There were 150 participants.

Length of Time: 15 minutes.

Presenters: Alexis Benner, Randi Frazier

Title: Transitions from Hospital to Hospice

Abstract: This study surveys the experience of families and patients transitioning from hospital to Hospice. The surveys were provided to patients and caregivers when enrolling onto hospice service and explored support given during the recommendation to terminate curative care.

Length of Time: 15 minutes

Presenters: Joshua Jennings, Cassidy Sherburne

Title: Effectiveness of Components of Dialectical Behavior Therapy and Social Emotional Learning for Youth

Abstract: This comparative study investigated the outcomes of integrating elements of Dialectical Behavior Therapy elements within a Social Emotional Learning curriculum, when aiming to curve maladaptive behaviors in youth aged individuals in an alternative school setting. The study involves a comprehensive assessment of pre and post-program questionnaires, covering self-awareness, social-awareness, self-management, responsible decision-making, and relationship building; this evaluation aimed to assess the effectiveness of the group as a whole.

Length of Time: 15 minutes

Presenters: Kayla Finch, Rachael Sinnes

Title: Effectiveness of Residential Drug Treatment Model vs. Drug Court Model of Substance Abuse Treatment

Abstract: This descriptive mixed methods study explored a drug court treatment model and a residential treatment model to determine their effectiveness from the perception of the participants. Surveys were given to graduates of an in-patient drug treatment program and graduates of a drug court treatment program, measuring whether their perceived needs were met during their participation in the program they attended.

Length of Time: 15 minutes

Presenters: Sarah Whiteside, Hannemae Witthaus

Title: Effects of Emotional Support Animals on PTSD Severity in Individuals with Childhood

Trauma: Through the Lens of Attachment Theory

Abstract: This quantitative study examines the relationship between PTSD severity scores and the length of time that individual had an emotional support animal. Furthermore, this study will identify if any difference exists between PTSD severity scores and different types of animals (ie. cat, dog, etc.). Surveys will be administered to adults who have been diagnosed with PTSD and used an emotional support animal.

Length of Time: 15 minutes

Presenters: Tyler Taysom, Autumn Tatman

Title: Mental Health Disorders Amongst Individuals on Felony Probation/Parole

Abstract: This study aimed to explore the mental health diagnoses and common felony charges amongst individuals on felony probation or parole. Data from one district of Idaho Probation and Parole was used to collect data for this study.

Length of Time: 15 Minutes

Presenters: Elizabeth Irvin, Randi Lageschulte

Title: The Relationship Between the Age of Diagnosis and Quality of Life in Adult Women with ADHD.

Abstract: This study explores the quality of life of individuals diagnosed with ADHD before and after the age of 18. The Quality of Life questionnaire was used to gather data for this study. The participants were self-selecting individuals on Facebook.

Length of time: 15 minutes

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