How to Write an Effective Abstract

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Overview

Student Research Forum Application Process

How to Write an Abstract
Student Research Forum Application Process

All Shapiro students need to submit an abstract: [https://medwisc.fluidreview.com/](https://medwisc.fluidreview.com/)

**PODIUM** presentation deadline: **Sept 15**

Student Research Committee Review

**POSTER** presentation deadline: **October 6**

**PODIUM PRESENTATION**

**POSTER PRESENTATION**

Chance to win a Research Award!
The Student Research Forum is an annual event that showcases the research accomplishments of SMPH students. The majority of students conduct research under the mentorship of UW faculty mentors during the summer between their first and second year of medical school. Today, more than 100 students will present their work through podium and poster presentations.

Noon - 1:00 PM
Poster Session

1:15 - 1:30 PM
Welcome and Opening Remarks
Dean Robert N. Golden, MD
Dean and Vice Chancellor for Medical Affairs

1:30 - 2:10 PM
SHAPIRO GUEST LECTURE

The Art and Science of Implementation Research

Nasir Safdar, MD, PhD
Associate Chief of Staff for Research, Madison VAH
Professor, Infectious Diseases
Healthcare Epidemiologist, UW Health
Visiting Professor, Institute of Global Health
UW-Madison School of Medicine and Public Health

Dr. Safdar is a professor in the Department of Medicine, Section of Infectious Diseases, the associate chief of staff for research at the William G. Middleton Memorial Veterans (VA) Hospital, the visiting professor for research in the SMPH Department of Medicine, and the medical director for infection control at UW Health. She is a recipient of the 2018 Dean’s Award for Excellence in Medical Student Research Mentorship. Her highly productive research program focuses on preventing health care-associated infections. She is the principal investigator on 10 grants, including awards from the VA, NIH, and the Agency for Healthcare Research and Quality. She earned her medical degree at Aga Khan University Medical College in Karachi, Pakistan. She also completed an internship at Sir Ganga Ram Hospital in Lahore, Pakistan; an internal medicine residency at UW Health in Madison; fellowships in infectious diseases and in women's health and infectious diseases at UW Health; and a postdoctoral degree in clinical research from University of Wisconsin-Madison. Dr. Safdar follows a highly structured, goal-driven approach to mentoring, with a special emphasis on evidence-based research. Since 2006, she has mentored 26 medical students. Her medical student mentees have authored approximately 35 peer-reviewed manuscripts and presented their work at local, regional, and national meetings. Many have been part of the Shapiro Summer Research Program, and—a part due to her efforts—the average number of Shapiro students in the Department of Medicine increased from 12 to 28 per year. Dr. Safdar has facilitated a campus-based mentoring workshop and helped plan the UW-Madison mid-career faculty mentoring program. In addition, she helped develop department-wide training programs for investigators who host medical students for summer research. Nationally, she has been honored with the 2017 President's Early Career Award for Scientists and Engineers, the 2017 Society for Healthcare Epidemiology of America Midcareer Investigator Award and the NIH Director’s New Innovator Award in 2018.

2:15 - 4:00 PM
Podium Presentations

4:00 - 5:00 PM
Poster Session and Reception
What is an Abstract?

An abstract is like a movie trailer:
- Offers a preview and highlights key points
- Helps the audience decide whether to view the entire work

Follows a clear structure and required format
- Don’t jump around
- Each sentence needs to bring new information

Standard tool that allows reviewers to judge your work
- A one paragraph mini-paper

Even after your manuscript is published, this is the first and often only thing that will be read.
Abstract Anatomy

**Title**
Brief and descriptive

**Background**
Describes the significance of your work
*What is the problem?*

**Objectives**
States the hypothesis or research question
*What will you do about solving the problem?*

**Methods**
List materials and procedures
*How did you go about solving the problem?*

**Results**
Include sufficient details about key results
*What did you find?*

**Conclusions**
Implications and take home message
*What does it mean?*
Abstract Format for Research Forum

- The body of the abstract (Background, Objectives, Methods, Results, Conclusions) is limited to 2500 characters with spaces.
- You should use capitalized headings in the body of your abstract.
- Do not use graphs, charts, tables, illustrations, references, or credits in the abstract.
- When using acronyms, spell out in full the first time mentioned, followed by the acronym in parentheses.
Title

- Very first thing reviewers see
- Most important yet overlooked
- Short yet informational
- Frames your message
Background and Objective

• Background
  • Focuses the reader on your main research question and hypothesis
  • Helps the reader understand
    • What do we know?
    • Why do we care about the topic?
    • What don’t we know?
    • Why is what we don’t know important and how will your work help?
  • Three or four sentences in present tense

• Objective
  • Your hypothesis/question/research aim
    • “The purpose of our study” or “We test the hypothesis that...”
Depression Severity in Adolescent Male and Female Athletes Following Sports-related Concussion

**Background:** Concussions are a growing concern in adolescent sports medicine, with over 300,000 high school athletes experiencing a sports-related concussion (SRC) each year. However, there is no prospective data demonstrating an association between sustaining an SRC and long-term depressive symptoms in adolescents.

**Objective:** The objective of this study was to prospectively assess clinically relevant changes in depressive symptoms in high school athletes the six months following an SRC.
Methods

• What did you do? How did you do it?
• Helps the reader understand:
  • Study type
  • Control vs. experimental groups
  • Important methods
  • Statistical analysis
• 3-4 sentences in past tense
  • Indicate study type
  • Define groups
  • Experimental approach
  • Statistical analysis
Methods Example

**Methods**: This longitudinal cohort study consisted of n=1701 adolescent athletes (grades 9-12) who were monitored for SRC. Of those, 99 athletes sustained a concussion during the study period (n=38 females, n=61 males). Participants completed the Patient Health Questionnaire-9 (PHQ-9) survey to measure depressive symptoms at the following time points: baseline (at time of enrollment, pre-SRC), within 24-72 hours post-SRC, and 7 days, 3 months, and 6 months post-SRC. Clinically relevant depressive symptoms were defined as a PHQ-9 score >4, or some depressive symptoms most days and most of each day. Linear mixed-effect models adjusting for sex and time were used to assess changes in PHQ-9 scores from baseline; least-square means and standard errors are reported. GEE models assuming a binomial distribution and logit link were used to model the association between depressive symptoms and time since concussion, stratified by sex.
Results

- Longest part
- Should answer your question
- Past tense
- Focus only on important results
- Provide actual data
- Sometimes you can provide figures and tables
Results Example

Results: When compared to baseline, females reported PHQ-9 scores that were, on average, 1.53(0.56) points higher at 24-72 hours post-SRC and 1.62(0.57) points higher at 7 days post-concussion than at baseline (p=0.007; p=0.004). PHQ-9 scores were lower (i.e. better) than baseline for both males and females at 3 months (M: -1.19(0.48); p=0.01, F: -1.14(0.66); p=0.09) and 6 months (M: -1.43(0.51); p=0.005, F: -1.28(0.80), p=0.11). Additionally, females are 7.6 times more likely to have a PHQ-9 >4 at 24-72 hours post-concussion (95% CI: 1.47, 39.08) than they were at baseline (p=0.02) and 10.36 times more likely at 7 days post-concussion (95% CI: 1.90, 56.59) than at baseline (p=0.007). By 3 months and 6 months, no difference from baseline is noted. There is no evidence to suggest that males experience a shift in clinically relevant depressive symptoms over time compared to baseline.
Parallel Structure

In Objective:
- 1 overarching sentence is fine, but set the stage with 2-3 specific questions.

In Results:
- Stick to the order from Objective!

Particularly important if you plan to present multiple sets of findings.
Objective: The objective of this study was to prospectively assess clinically relevant changes in depressive symptoms, as measured by the PHQ-9, in high school male and female athletes the six months at 24-72 hours, 7 days, 3 months, and 6 months post-SRC.

Results: When compared to baseline, females reported PHQ-9 scores that were, on average, 1.53(0.56) points higher at 24-72 hours post-SRC and 1.62(0.57) points higher at 7 days post-concussion than at baseline (p=0.007; p=0.004). PHQ-9 scores were lower (i.e. better) than baseline for both males and females at 3 months (M: -1.19(0.48); p=0.01, F: -1.14(0.66); p=0.09) and 6 months (M: -1.43(0.51); p=0.005, F: -1.28(0.80), p=0.11). Additionally, females are 7.6 times more likely to have a PHQ-9 >4 at 24-72 hours post-concussion (95% CI: 1.47, 39.08) than they were at baseline (p=0.02) and 10.36 times more likely at 7 days post-concussion (95% CI: 1.90, 56.59) than at baseline (p=0.007). By 3 months and 6 months, no difference from baseline is noted. There is no evidence to suggest that males experience a shift in clinically relevant depressive symptoms over time compared to baseline (still need to report in same format as for males).
Conclusions

- Interpretation of your findings
- Don’t repeat your results
- Present tense
- Answers, implications, future directions
- Concise
- What’s new? Last sentence should be clear, easy to follow, and make people want to read the full paper.
Conclusions: We found no evidence that SRCs have a long-lasting impact on depression symptoms and severity in both males and females. However, in the week following an SRC, both males and females experience a transient increase in depressive symptoms which resolve by the time the player returns to unrestricted play. Furthermore, females are more likely to experience a clinically relevant burden of depressive symptoms at 24-72 hours and 7 days post-SRC compared to male athletes at the same timepoints. It is essential for athletes, parents, coaches, and academic staff to be aware of these transient changes in the athlete’s mental health as to better support these students through their SRC recovery.

Interpretation of your findings
Don’t repeat your results
Present tense
Answers, implications, future directions
Concise
What’s new? Last sentence should be clear, easy to follow, and make people want to read the full paper.
Final Tips

• What an Abstract is NOT
  • A full description of your summer’s work
  • An opinion piece
  • Don’t use falsified data
  • If you don’t have data, it’s OK to say that

• Proofread and read it out loud
• Have multiple people read it
• Should be standalone, “mini” paper
• Use active voice—this is your work, own it.
• Avoid field-specific jargon
• Abbreviations—2 or 3 at most.
Reminders

Path of Distinction in Research 9/25 in HSLC 1325 at noon
How to Prepare a Presentation 9/27 in HSLC 1325 at noon

https://medwisc.fluidreview.com/

→ Research Presentation Travel Support
https://summerresearch.med.wisc.edu More Abstracts under Resources

Fill out the evaluation
Questions?

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