



Writing a Winning Abstract

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Webinar Objectives:

- Discuss the purpose of writing an abstract.
- Discuss abstract guidelines, using SNRS as an example.
- Identify basic components of a scientific abstract.
- Identify common mistakes found in abstract submissions.
- Discuss tips for successful abstract writing.
- Q&A

Why write an abstract?

- Dissemination of your work
- Opportunity for feedback on your work
- Ideas for what to do next
- Exposure – get your name and face out there
- Networking
 - Employment opportunities
 - Collaborators

Review the Call for Abstracts

- Review the abstract guidelines carefully
- What is the purpose of the meeting?
- Who is the audience?
- What is the required abstract format?
- What type of studies are accepted?
 - Do the studies have to be completed at the time of submission?
 - Only data base studies or are others accepted?

Example: SNRS Guidelines

- Instructions:
 - Text is limited to 2,250 characters which includes any characters, punctuation and spaces.
 - Title case only will be accepted for abstract titles (capitalize the first letter of words other than short conjunctions, articles and prepositions).

Example: This is a Title

Example: SNRS Call for Abstracts

SNRS Guidelines for Research Abstracts (Podium and Poster):

- SNRS accepts completed research as well as theoretical, conceptual and methodological projects to colleagues. If research is not complete upon abstract submission, it will be scored lower and may be denied.
- You can improve this score and may possibly still be accepted if you state such, include a preliminary analysis or proposed plan for analysis, and expectations for conclusions.
- Study must be complete prior to presentation. Failure to submit a completed study is often the reason for declination. SNRS does not accept abstracts which are concept analysis, systematic reviews, critical analysis, literature reviews or reviews of any kind. Submissions which do not follow submission guidelines will be disqualified.

Review the Call for Abstracts

- Consider if your research fits the call for abstracts
- Find the peer review criteria and follow it carefully
 - This is what the reviewers will use to evaluate your abstract
- Some organizations publish conference abstracts in a journal.
 - Review examples of previously accepted abstracts for that conference

Components of a structured abstract

- Title
- Background
- Objective/Purpose/Aims
- Methods
- Results
- Conclusions

***These parts may vary by organization. Always follow their guidelines*

Title

- Important
 - Descriptive
 - Compelling
-
- Should be short, specific, and describe the nature of the study
 - Do not use abbreviations in the title

Title

Consider 3 titles:

- What Heart Failure Factors Affect Exercise Treadmill Test Performance?
- Female Gender and History of Depression are Associated with Less Maximal Effort on an Exercise Treadmill Test in Persons with Heart Failure
- Factors Affecting Performance on a Symptom-Limited Exercise Treadmill Test in Persons with Heart Failure

Title

- Factors Affecting Heart failure Knowledge and Retention after an Integrated Self-Care Intervention in Persons with Heart Failure and Diabetes
- Patterns of ASC Methylation are Associated with Ejection Fraction, Quality of Life and Depression in Persons with Heart Failure

SNRS Guidelines

	Unacceptable	Poor	Fair	Good	Excellent
	0	1	2	3	4
Abstract Title	Title appears unrelated to abstract content.	Abstract title does not align closely with content of abstract	Abstract title appears congruent with abstract content and includes some key words in the study purpose.	Abstract title shows congruency with abstract content, study purpose, and nursing research	Abstract title includes key words from study purpose and abstract text as well as relevancy to nursing research.

Background

- Usually 2-3 sentences, depending on overall abstract length
- Use a problem statement approach:
 - Despite the fact that _____ occurs, we don't know...
- Example:
- Studies show 30-47% of persons with heart failure (HF) have concomitant diabetes mellitus (DM). Self care for persons with these chronic conditions is conflicting, complex and often inadequate.

Objective/Purpose/Aims

- 1 sentence, 2 at most.
- This should stem from problem statement in background section.
- This should tell the reader exactly what to expect in the rest of the abstract
- This is where the reader makes the judgement as to how important this topic is.

If guidelines do not call for a separate section, this should be included in the background section

Objective/Purpose/Aims

- Examples:
- The purpose of this study is to describe the trajectory and concentration of pro-inflammatory factors in PCF after cardiac surgery over time and compare levels of inflammatory molecules in post-surgical PCF to those in the blood.
- The purpose of this study is to examine factors that affect performance on an exercise treadmill test in persons with heart failure

Background + Purpose

Heart failure (HF) is the primary cause for over one million hospitalizations each year. Of those hospitalized with HF, approximately 40% have concomitant diabetes mellitus (DM). HF self-care management is complex, requiring HF knowledge to assess and manage symptoms. Symptomatic comorbidities, such as DM, add to the complexity of HF self-care, leading to worse clinical outcomes. The purpose of this study is to examine clinical and demographic factors related to HF knowledge, knowledge change, and knowledge retention after an integrated HF-DM self-care intervention in persons with both HF and DM.

	Unacceptable 0	Poor 1	Fair 2	Good 3	Excellent 4
Study Purpose/ Problem Statement <i>(Note: If qualitative or basic, descriptive study, hypotheses are not expected)</i>	Problem statement, purpose and aims not described.	Problem statement is irrelevant to study/abstract and lacks connections to other research/ EBP activities. Aims, research questions/ hypotheses are not clear, concise or justified.	Problem statement appears somewhat relevant to the study and weakly connects to other research/ EBP. Aims, research questions/hypotheses present but not clear, concise or completely justified.	Problem statement is relevant but lacks some clarity or is wordy. Includes problem statement connections to current research/ EBP. Aims, research questions/hypotheses justified but lack clarity and conciseness.	Problem statement is clear and strongly connects to previous/current research/ EBP. Aims, research questions/ hypotheses are clear, concise, and consistent with purpose.
Significance of Study	Significance to nursing research is unclear or not well articulated.	Significance to nursing research is inferred. Shows minimal alignment with rest of abstract and may lack clarity	Significance to nursing research clearly appears in abstract but lacks strong congruency with rest of abstract	Significance to nursing research is mostly clear and fits the SNRS Mission	Significance to nursing research and SNRS Mission is clearly expressed and well- articulated with other components of the abstract. Rationale given to support that the study addresses an important problem.

Methods

- Should include:
 - Design
 - Procedure
 - Sample
 - Measurement
 - Operational definitions
 - Grouping, if relevant
 - Statistical analysis if not in results

Methods

- Your methods section tells the reader what to expect in the results
- It conveys the quality and strength of the study
- Tells the reader the design, measures, and sample used in the study

- Try to fit in all the reader needs to know about how the study was conducted.

Methods: Examples

Hospitalized HF-DM participants (n=71), mean age 60.4 years, 68.7% men, 61.2% minority, were randomized to usual care (UC) or intervention (I) using a 1:2 allocation and followed at 30 and 90 days. Intervention was an integrated education and counseling program focused on HF-DM self-care. Variables and measures were demographic and clinical data, HF and DM QOL (Minnesota Living with Heart Failure Questionnaire [MLHFQ], Audit of Diabetes-Dependent Quality of Life [ADDQOL]), HF self-care behaviors (Self-Care Heart Failure Inventory Maintenance subscale [SCHFI-m]), and DM self-care behaviors (Summary of Diabetes Self Care Assessment). Descriptive statistics and mixed models with post-hoc testing and effect size calculations were used in the analysis.

Methods: Examples

Pericardial fluid was collected immediately after the pericardial sac was incised with the heart beating (time 0), and from the mediastinal drains at times 4, 12, 24 and 48 hours after surgery in adults (N=18) undergoing cardiac surgery for ischemic or valvular heart disease. Blood samples were collected in parallel. Paired t-tests were used to determine differences in measures between PCF and blood values at each time point.

SNRS Guidelines

	Unacceptable 0	Poor 1	Fair 2	Good 3	Excellent 4
<p>Methods <i>Necessary Elements:</i> <i>If a quantitative approach:</i> appropriateness of design, sampling, sample size, procedures (including measurement & instruments), power analysis, data analysis, limitations, and rigor. Statistical techniques appropriate for research question and methods. <i>If a qualitative approach:</i> appropriateness of design, sampling, sample size, data collection, analysis procedures, limitations, trustworthiness</p>	<p>Methods do not include detail to provide evidence of a logical consistency between the study's purpose and methods. In general, it lacks necessary methods described.</p>	<p>Methods do not include sufficient details to provide evidence of a logical consistency between the study's purpose and methods. Most necessary methods elements are missing</p>	<p>Methods do not include sufficient details to provide evidence of a logical consistency between the study's purpose and methods. Some necessary elements are missing.</p>	<p>Methods include most of the details to provide evidence of a logical consistency between the study's purpose and methods, but is lacking in either cohesiveness or just a few elements required.</p>	<p>Methods include sufficient detail to provide evidence of a logical consistency between the study's purpose and methods.</p>

Results

- Data are essential here!
- Data should be presented so they address the study purpose.
- Be succinct and do not add data unrelated to the purpose
- Be sure to put into context if needed
 - Small/large
 - Good/bad

Results: Example

The purpose of this study is to examine relationships between ASC methylation and HF outcomes.

Results: Mean total ASC methylation was $5.41 \pm 5.55\%$ (median 3.45, IQR 2.5–5.9). Total ASC methylation had a positive linear relationship with BNP ($p=0.05$), controlling for age and LVEF. Increased methylation of CpG sites 1, 3 and 9 had a positive linear relationship with improved KCCQ scores ($p=0.05$) and a negative linear relationship with PHQ-9 scores ($p=0.03$). Increased methylation of CpG sites 1, 5 and 7 were linearly related to increased LVEF ($p=0.05$). No differences in age or gender were found.

Results: Example

The aim of this study was to test an integrated HF and DM self-care education and counseling program intervention for its effects on HF and DM self-care behaviors and QOL and examine relationships between change in HF and DM self care and QOL.

Results: At 30 days, I group exhibited improved overall HF self-care behaviors ($p < .001$) and improved exercise ($p = .01$) over baseline. At 90 days, I group had improved physical QOL as measured by the MLHFQ Physical Score ($p = .02$), improved foot care ($p = .04$) and exercise ($p = .01$) over baseline. Effect sizes were small to moderate. In addition, change in SCHFI-m score in the I group at 90 days was significantly associated with total HF QOL ($r = .51$, $p = .036$). No significant group or time effect was noted on the ADDQOL.

SNRS Guidelines

	Unacceptable	Poor	Fair	Good	Excellent
	0	1	2	3	4
Results	Lacks description of study results related to data analysis method.	Limited results are presented and lack relationship to stated research question(s), hypothesis(es), and/or purpose.	Results are presented, but incomplete or not in a systematic manner following the research question(s), hypothesis(es), and/or purpose.	Results mostly presented in relationship to stated research question(s), hypothesis(es), and/or purpose.	Results clearly presented in relationship to stated research question(s), hypothesis(es), and/or purpose with logical progression/order.

Conclusion/Discussion

- Interpret results – do not just repeat your findings
- You may need to summarize several results to better put into context
- Implications for future research or practice

Conclusion/Discussion: Example

An integrated HF-DM self-care intervention was effective in improving essential components of self-care, including exercise and foot care behavior and perceived physical aspect of HF physical QOL. Improving overall self-care behaviors was associated with improved HF QOL. These relationships were not observed for the DM QOL and self-care variables. Future studies testing HF-DM integrated self-care interventions with longer follow up in a larger sample are warranted.

Conclusion/Discussion: Example

A 3-month exercise intervention was related to increased mean percent ASC methylation and decreased IL-1 β and ASC mRNA gene expression in persons with HF. Epigenetic regulation of ASC can be a biological mechanism by which exercise can promote better outcomes in HF. Further research examining mechanisms of change can lead to improved understanding of physiological adaptations and more precise prediction of adverse outcomes in persons with HF.

SNRS Guidelines

	Unacceptable 0	Poor 1	Fair 2	Good 3	Excellent 4
Discussion: Findings and Implications for Practice	Study findings and implications are unclear, missing, or inappropriate related to study purpose and other components of abstract	Study evaluation information does not reflect methods or outcome measures or lacks clarity. Findings have no defined implications for nursing science, patient outcomes, nursing practice, education, administration, leadership, and/or policy making.	Study evaluation information reflects some reliable methods and outcome measures. These lack clarity for full understanding. Findings have no defined implications for nursing science, patient outcomes, nursing practice, education, administration, leadership, and/or policy making.	Study evaluation process information reflects reliable methods and outcome measures. Findings may have implications for nursing science, patient outcomes, nursing practice, education, administration, leadership, and/or policy making.	The study evaluation process information shows use of valid and reliable methods and outcome measures and is clearly expressed. Findings have clear implications for nursing science, patient outcomes, nursing practice, education, administration, leadership and/or policy making.

SNRS Guidelines

	Unacceptable 0	Poor 1	Fair 2	Good 3	Excellent 4
Abstract Guidelines Followed	Abstract text contains author or identifying information regarding the location/ identity of research is included. Does not tie together information nor ensure smooth flow of abstract. Multiple spelling and grammatical errors found	N/A	Abstract text contains no reference to author identifying information. Mostly demonstrates appropriate words and sentence organization to provide study overview and inform reviewer understanding. Minor grammatical or spelling errors found.	N/A	Abstract text contains no reference to author or study identifying information. Abstract grammatically correct, shows no spelling errors, and uses appropriate words to convey content and understanding of study by reviewer

Common mistakes

- Not following submission guidelines
- Grammatical errors
- Lack of clarity
- Too much background, leaving little space for methods and results
- Conclusions or implications do not align with presented data

Tips for Success

- Start early and plan ahead
- Get input from others – work with a mentor or experienced peer
- Review examples of previously successful abstracts.
 - Abstracts are often published in journals from previous meetings – varies by conference/society.
- Proofread carefully for spelling, grammar, and typos.
 - Have other authors read for content and grammar/typos.
 - Have someone not on the abstract proofread.
 - Put the final abstract away for a day or two then proofread again.

Tips for Success

- Write each section first, then check word count
- Then edit with laser-like precision to meet word/character count
 - For SNRS, spaces are included in character count.
 - 54 ± 22 has more spaces than 54 ± 22
 - $p=.001$ has fewer spaces than $p = 0.001$
- Spell out abbreviations the first time they are used, and limit them to 3-5 at most. Too many abbreviations can be distracting.
- Be sure to adhere to word limit and other technical formatting guidelines.

What do reviewers look for?

- Immediate impact
 - Informative title
 - Significant problem
 - Clearly written
 - Data that match the purpose and support the conclusions
 - Conclusion that builds on data

- Keep their attention – be interesting, clear, and stay on point

What do reviewers look for?

- The reviewer may not be an expert in your area
 - Do not assume they understand why your study is important
 - Do not be overly technical using obscure language or jargon
- Make sure your abstract has a logical flow
 - BACKGROUND leads you directly to the PURPOSE statement
 - The METHODS and RESULTS directly address the PURPOSE statement
 - The CONCLUSIONS are supported by your results and address implications and/or next steps

Summary

- Abstract presentation and conference participation provide great exposure for you and your research
- Calls for abstract submission include specific guidelines that should be followed exactly
- Plan ahead and get input from collaborators, mentors, and peers
- Watch for typos, misspellings, and grammatical errors
- If at first you don't succeed, try again!

Further Questions?

Contact me at brittany.butts@emory.edu

Abstract examples:

<https://brittanybutts.weebly.com/conference-presentations.html>

