Scholarly Project Handbook

Physician Assistant Studies Program
College of Health Professions
Grand Valley State University

2013 Edition

Class of 2015

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Introduction

This manual will provide you with an overview of the research requirements for the Master of Physician Assistant Studies degree. It will serve as a guide for your research activities throughout the program, and will compliment the reference materials provided in your classes. Specifically, you should use this manual in conjunction with:

1) The appropriate research text as recommended (in PAS 506, and PAS 605).

2) The style manual American Medical Association (AMA) or American Psychological Association (APA).

Please familiarize yourselves with these pages. Faculty will expect you to be responsible for the content throughout the program. Please direct any questions to a member of the faculty, who will be happy to assist you find the information you need.

Please keep in mind that this handbook should be used as your primary reference.
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Scholarly Project Requirement for the PAS Program

General Requirements

Learning to think independently and scientifically when approaching medical problems and developing a personal process for problem solving are important parts of lifelong physician assistant practice.

Each student in the Master of Physician Assistant Studies program at GVSU is required to actively participate in a scholarly medical project during his or her physician assistant graduate school career. The requirement consists of three major elements:

1) An **experiential component** where the student performs a scholarly project fulfilling the requirement of one of the following:
   - A primary research project
   - Project involving a pre-existing data set
   - Project involving protocol exploration and development
   - A service-learning project.
   Each of these examples of scholarly projects is defined within this research handbook.

2) A **communication component** where the student must orally and/or in poster format present a medical research topic at two forums (one at the GVSU PAS Research Forum, and one at a non-GVSU venue) in addition to the final defense.

3) A **written component** where the student submits a professional scholarly paper on their project which may be in the format of a journal article or another format with approval of research chair.
Educational Goal

The educational goal of the required research experience is for each student to learn the importance of and the process behind applying the scientific method to solve health and medical problems, whether in the laboratory, clinic, or community.

Purpose

The purpose of the Scholarly Research Requirement is to:

1. Get exposed to the scientific process and methodology (whether it be laboratory, clinical or community research) to learn how it is used to answer (or validate) a medical question.
2. Apply the scholarly process through participating in/or experiencing the scholarly process, and understand how crucial thinking leads to new knowledge.
3. Develop and answer a pertinent health question through participating in a longitudinal activity.
4. Write and present to a public forum the scientific results of a scholarly endeavor. In addition to the final defense, a minimum of two presentations: one at a GVSU venue and one at a non-GVSU venue.
5. Demonstrate through writing, a critique of the literature
6. Complete a project that helps to teach independent thinking.
7. Develop reasoning skills by experiencing the logical process necessary for the completion of a scholarly research project.
8. Develop professional behavior by meeting all scholarly research requirements in a timely manner.
General Description of the Scholarly Project

Each student is required to complete the scholarly project requirement prior to graduation. It is encouraged that the research component be completed prior to the clerkship phase of the curriculum.

The student must first select a faculty chair or be assigned a faculty chair. The faculty chair must be a faculty member within the GVSU PAS department. The faculty chair will provide guidance through each step of the scholarly project effort. The student’s chair or research committee (chair, content expert, and statistician) reviews and approves proposals, monitors the student’s progress toward completion of the scholarly project requirements, facilitates the evaluation of the final paper that summarizes the results of the scholarly project, and may provide technical support for the student.

Exceptions to the Research Requirement

Students entering the program with one or more graduate degrees may petition the Physician Assistant Studies program to be exempt from the student scholarly project requirement if they have:

a. A Ph.D. in a biomedical related field, which required a dissertation.

b. A research/thesis based Masters degree in a biomedical related field.

In order to request consideration for the exemption, the student must submit proof of degree, copy of publication(s) or an abstract of the thesis/dissertation, and face page signed by the thesis/dissertation committee. The thesis/degree must have been achieved within the past five years upon matriculation to the physician assistant studies program. However, a waiver of this time limit requirement can be requested. The GVSU Physician Assistant Studies Director of Research will rule on the exemption and, if granted, will notify the registrar’s office and office of the Dean of Graduate Studies of the satisfactory fulfillment of the research requirement for graduation purposes. In replacement of the courses required for the scholarly project requirement, the student must complete non-clinical electives (e.g., Spanish, history of medicine, education in the health professions, or special topics.) after consultation with their academic advisor.
Options for the Scholarly Project Requirement

The following represent the scholarly research options available to Physician Assistant Studies students:

1. **New idea/project:** 1-3 Students per project.
   a. **Description:** Focuses on a project that students design, implement and analyze. Approval of project is dependent on the chair and based on feasibility and merit of the project.
   b. **Outcome:** publishable written bound report preferable in a journal format.
   c. **Example:**
      - Creatinine use in high school athletes: Students identify survey, obtain permission from appropriate schools, develop protocol, create informed consent/assent, submit to HRRC/IRB, distribute surveys, analyze surveys, and report findings.

2. **Analysis of pre-existing data or current on-going project:** 1-3 Students per project.
   a. **Description:** Students participate in an ongoing research project. Students will pair up with faculty to facilitate student learning and faculty scholarly activities.
   b. **Outcome:** publishable written bound report preferably in a journal format.
   c. **Examples:**
      - **Ongoing faculty research project:** Expression of the Inflammatory Marker CD64 on Neutrophils in Acute Coronary Syndrome. Faculty member originated project and submitted to HRRC/IRB if necessary. Students assist faculty in obtaining data and analyzing data.
      - **Secondary analysis of data:**
        - A comparison of BMI change in patients who had a total knee arthroplasty versus a total hip arthroplasty. Data has already been acquired by faculty and students will complete a comprehensive literature review, identify potential questions, analyze the data and report findings.
        - The relationship of gender to salary and job satisfaction for PA faculty. Generalized data collected by faculty and students analyze the data and come up with independent research questions based on a thorough literature review.

3. **Protocol Exploration & Development:** 1-3 Students per project.
   a. **Description:** Identify a medical problem and explore solutions by identifying and evaluating the applicability and scientific merit of a relevant body of research.
   b. **Outcome:** publishable written bound report preferable in a journal format.
c. **Example:**
   - Development of a knee registry to monitor the effectiveness of knee replacement. Students will analyze programs throughout the United States, will establish a protocol to monitor patients who had a knee replacement and will report the findings.

4. **Service Learning Project:** 2-3 Students per group.
   a. **Description:** Students will perform approximately 40 hours per semester of service during at least 3 semesters of didactic phase of the program. During the service-learning project, students will perform a SWOT (Strengths, Weaknesses, Obstacles, and Threats) analysis of an identified community service area.
   b. **Outcome:** submit a bound publishable report with materials developed (this may include a grant application if necessary.)
   c. **Examples:** Students mentor intercity children at a community center on a weekly basis (3 hours/week) and perform a SWOT analysis on the community center’s mentorship program and/or write a community grant.
Procedural Events for the Scholarly Project

The student plans and completes a scholarly project under the direction of a faculty chair. Regardless of the type of scholarly project, the student takes primary responsibility for completion of the project. The project may be performed in any appropriate setting: lab, health care facility, or community. It is suggested that students work in a group of 3, however, other configurations of the group can occur upon approval of the faculty chair. The student(s) should follow the general outline below:

1. Define a research interest, form a research group, and develop a research questions.

2. Select or obtain an assigned faculty mentor (chair), and select a project committee.

3. Write research proposal.
   a. The proposal must be written by the student(s). The faculty chair and project committee is interested in reading how the student describes (and thus understands) the project in his or her own words.
   b. Numerous approaches to the scholarly project are possible. For example
      i. Primary Data Collection. This may be facilitated by designing questionnaires, reviewing charts, collecting samples from participants, or performing laboratory experiments.
      ii. Use of Secondary Data. A comprehensive and complete set of data that has been gathered by another individual or institution is utilized. In this case, the student asks questions, which will be answered using existing information and data, gathered by other individuals or institutions.

4. Submit written scholarly project proposal
   a. Under the guidance of the faculty chair, prepare and defend a project proposal (which is described within this handbook).
   b. Data collection or analysis CAN NOT begin before approval of the project by the committee and the appropriate IRB. Many of the projects will require human subjects review and data collection and/or analysis of pre-existing data CAN NOT occur prior to approval from the appropriate IRB.

5. Approve scholarly project proposal
   a. After the proposal is submitted, the members of the committee will review the proposal. The committee may approve the proposal as it was submitted, request clarification verbally and/or in a memo, require a partial or complete rewrite of the proposal, or disapprove the proposal. A deadline for response, when required, is given to the student(s) and faculty chair in the memo.
6. Perform proposed research  
   a. Time for conducting your scholarly project must be arranged under the direction of the faculty chair after the project approval is obtained. It is advised that a timeline for completion be established to help facilitate the timeliness completion of the project.

7. Present research  
   a. You are required to present your project in the following venues:
      i. **Final Defense** (Appendix D contains requirements for the defense).
         1. This is a 45-minute presentation in an open forum of which your committee members must be present.
      ii. **GVSU PAS Research Forum.**
         1. The research day will be scheduled for a date in December prior to graduation.
         2. The presentation will include a 20-minute oral presentation with classmates and faculty in attendance.
      iii. **Non-GVSU venue.** Each year the graduating class is required to present their project of a non-GVSU forum. The purpose for these formal events is two-fold:
         1. To provide a forum to acquaint the named audiences with the work being done by the PAS students.
         2. To facilitate the students’ ability to present the results of their project to a critical audience. This, we believe, will prepare the students to be able to present at conferences and professional meetings.

This venue can include but is not exclusive to GRMEP Research Day, AAPA, and MAPA. These presentations must be approved by the faculty chair.

The Non-GVSU venue presentation can be done either before or after your final scholarly paper is defended if approved by your faculty chair.

8. Submit final scholarly research paper  
   a. After completion of the scholarly project, submit the final scholarly paper to the following:
      i. An acceptable scientific format (e.g. journal)
      ii. Each committee member
      iii. The PAS department via the PAS Research Coordinator
      iv. GVSU library
         1. Upon submission to the library, you will receive a signed paper confirming that the project has been delivered which you must give to the PAS Director of Research.
Courses Required in the Scholarly Project Requirement

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<td>PAS 580 (2 Cr)</td>
<td>PAS 605 (2 Cr)</td>
<td>STA 610 (3 Cr)</td>
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<tr>
<td>2(^{nd}) Year</td>
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<tr>
<td>3(^{rd}) Year</td>
<td>PAS 689 (3 Cr)</td>
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PAS 580 (2 Credit) First of two courses in which the student(s) defines a problem within the health professions and forms a research group. Application of foundational concepts and methodology used in research are addressed. Coursework involves literature review, research design, and proposals. Students learn how to critique the literature and synthesize the literature in the form of concise literature reviews. Students should aim to refine these skills in the following courses. The concept of evidence-based practice will be reviewed with an emphasis on understanding the link between practice and clinical research.

PAS 605 (2 Credits) Second of two courses in which the student(s) develop a research project based on the problem/question defined. In this course students will work in groups with their faculty chair. The emphasis of this course is to complete the introduction, review das well as methods section of the project.

STA 610 (3 Credits). Project oriented overview of major statistical techniques commonly used in problems encountered in health professions: Hypothesis testing, t-tests, regression, analysis of variance, analysis of covariance, categorical data analysis, and nonparametric statistics. Students will learn to use a major statistical computing package.

PAS 689 (3 credits) Student(s) implement and defend the scholarly project. This involves analysis of data collected, interpretation of the analysis and discussion in relationship to current literature. Students will present written and oral reports discussing pertinent findings. The grading for PAS 689 will include the completion of the required presentations and the final defense of the project.

Committee Structure and Roles of Committee Members

Requirements for the committee of a scholarly project involving a new idea, analysis of an on-going project or previous data set, protocol exploration and development, or service-learning project:

a. At least one member must be from the Physician Assistant Studies Program.

b. A second member should be a content expert.
c. The third member is a statistician or another member as designated by the faculty chair.

Please keep in mind that the committee should be balanced for expertise in clinical area, data analysis and writing. All members of the committee must hold at least a Master's Degree.

**Role of the Student**

1. Determine the scholarly project topic and identify your research group.
   a. Complete the following form:
      - “Scholarly Project Contract” form (page 28) for the new idea project, analysis of an on-going project or previous data set, protocol exploration and development or service learning project

2. Depending on the type of project, find one or two additional committee members while consulting with your faculty chair. These members must hold a minimum of a master’s degree.
   - Obtain the committee member signatures on the appropriate form: “Request for Supervisory Committee” (page 29)

   - Submit all drafts of your proposal to your chair for review (allow 10 days for review and feedback) before forwarding a draft to the other committee members.
   - Upon approval of your faculty chair, forward the proposal to the other committee members and request a date for the proposal defense (allow 2 weeks for the members to read and critique your proposal).
   - Once a date and time has been identified, reserve a room for the defense by contacting event services: www.gvsu.edu/eventservices.
   - On the day of the proposal defense bring copies of the PowerPoint presentation, and the grading sheet for the proposal defense, “Grading Criteria for the Proposal Defense” (page 31). You should review the grading form as it contains the necessary information required in the defense of the proposal.
   - After the proposal defense, obtain signatures from the committee members on the form, “Proposal Approval Form” (page 30) if your project is a new idea, analysis of an on-going project or previous data set, protocol exploration and development, or service-learning project.
   - In conjunction with your chair, submit the necessary paperwork for IRB approval. Remember to obtain approval requirements from external IRBs if applicable.

4. Follow the contracted schedule for carrying out the project protocol, data analysis, and interpretations of the results.
5. Complete the requirements for PAS 689 (Project Defense).
   - Submit all drafts of your final project to your chair for review (allow 10 days for review and feedback) before you forward to the other committee members.
   - Upon approval from your chair, forward the final draft to the other committee members and request a date for the project defense (allow 2 weeks for the members to read and critique your proposal).
   - Once a date and time has been identified, reserve a room for the defense by contacting event services: www.gvsu.edu/eventservices.
   - On the day of the final project defense bring copies of the PowerPoint presentation and the grading sheet for the proposal defense, “Grading Criteria for the Final Defense: PAS 689” (page 34). You should review the grading form as it contains the necessary information required in the defense of the proposal.
   - After the final project defense, obtain signatures from the committee members on the cover page of the project (Sample cover page is located in Appendix A).
   - Obtain the comments from the committee members and make the necessary final revisions of the project.
   - The chair is responsible for reviewing the final revision.
   - Make copies of the final project for each committee member, each participating student member, the PAS department, and a copy for the library.
   - When you turn in your copy to the Library, you will receive a signed form with is validation of submission to the library. Return the signed form to your faculty chair and a copy to the PAS Director of Research.

**Role of the Scholarly Project Chairperson (Checklist present in Appendix B)**

1. Chairperson’s role in the development of the project proposal:
   - Provide primary guidance to student(s) in completion of proposal.
   - Assist student(s) in selecting committee members.
   - Provide feedback to the student(s) within 10 days of receiving a draft of the proposal.
   - Retrieve and hold “research project contracts” for student projects, as needed.
   - Retrieve, hold and forward copy to research chair the “request for supervisory committee.”
   - Guide the preparation for proposal defense which may include, but is not limited to:
     - Oral presentation (10-15 minutes)
     - Problem statement
     - Hypothesis statement
     - Summary of literature
     - Methodology
     - Data and statistical analysis
   - Following proposal defense discuss necessary changes.
   - Insure that all recommended changes to manuscript are complete prior to submission to institutional internal review boards (HRRC/IRB). Guide
students’ preparation for submission to IRB, including making sure that
students know liaisons to IRB’s at Spectrum Health, St. Mary’s Hospital and
Mary Free Bed

- Use evaluation form provided in the research handbook for grading the
  written manuscript and oral defense (use Grading Criteria for PAS 689). It is
  the chair’s responsibility to distribute a copy of the grading criteria to other
  committee members and students.
- Retrieve, hold and forward copies of all signed forms to the PAS Research
  Coordinator.
- Meet with the student(s) regularly to review project progress.

2. Chairperson’s role in the final defense
   
   - Assist with the analysis of results and interpretations
   
   - Provide feedback on the written revisions of the final project in a timely
     manner.
   
   - Advertise the scheduled defense for a minimum of one (1) week before the
     defense date. Include the title of the project, names of the students, the time
     and location.
   
   - Guide students’ preparation for final oral defense which may include, but is
     not limited to:
     - Oral presentation with appropriate audiovisual aides (20-30 minutes)
     - Brief background statement and purpose of study, review of
       methodology, presentation of results, discussion, conclusions, clinical
       implications, limitations, and future research directions.
     - Questions that may be posed by non-committee members
     - Questions that may be posed by committee members
     - Facilitate discussion following oral presentation among committee
       members and students.
   
   - Facilitate discussion of students’ grading of the defense, using the evaluation
     form provided in the research handbook for grading the written and oral
     defense. It is the chair’s responsibility to distribute a copy of the grading
     criteria to other committee members.
   
   - Make final check of manuscript for content and format changes prior to
     signing and allowing students to make final copies for distribution.
   
   - If oral defense occurs prior to public presentations, give feedback to students
     with regard to oral presentation.
   
   - Review and discuss authorship agreement for possible submission of abstracts
     to state and national professional meetings or journal submission

3. Chairperson’s role for the presentation at Non-GVSU Forum
   
   - If possible, attend public presentations of research groups chaired and give
     feedback with regard to oral presentation.

Role of the Scholarly Project Committee Members

1. Provide guidance related to concepts and/or methods, etc.
2. Provide feedback to student(s) within 10 days of receiving a request for input written drafts.
3. Participate in review of the proposal and final paper and provide written feedback
4. Participate in the evaluation of the proposal by attending the initial proposal approval meeting and final defense.
Summary of Procedure and Timeline of Events for the Scholarly Project

1st Year Fall Semester
- Enroll in PAS 580
  Students Select Area of Interest, Formulate Groups and Identify Faculty Chair

1st Year Winter Semester
- Enroll in PAS 605
  Identify Committee Members with Faculty Chair
  1. Content committee member
  2. Statistician (to be determined once design of project is determined)
- Critique the literature
- Complete a draft of Chapters 1, 2, and 3.

1st Year Summer Semester
- Enroll in STA 610
  Finalize Chapters 1-3 for proposal defense
  Research Design established
  Meet with assigned statistician regarding project

2nd Year Fall Semester
- Defend the proposal of the project
- Submit to IRB (outside and GVSU)
- Approval from IRB

2nd Year Winter Semester
- Conduct project: analysis of data and statistical results
- Instruct Students to report on progress every month

2nd Year Summer Semester
- Chapters 4 & 5 are written with assistance of chair and statistician

3rd Year Fall Semester
- Defense of Project
  Present at GVSU PAS Research Forum
  Present at non-GVSU venue

Submit
- “Request for Supervisory Committee” form
- “Request for Supervisory Committee” form

Submit
- “Research Project/Thesis Proposal Approval” form
- “Grading Criteria” form
- Copy of IRB approval from all institutions

Submit
- “Grading Criteria” form
- Bound copy of project to each committee member, library, & department
- Group Evaluation Form
- Advisor Evaluation Form
Funding for Scholarly Projects

Funding for Scholarly Projects: Students are encouraged to work with their faculty mentor to obtain funding for scholarly projects.

Funding for Dissemination of Scholarly Projects: GVSU Center for Scholarly and Creative Excellence has funding for dissemination of scholarly work. Funding will be available on a competitive basis for all students and is subject to available monies. Each student may request up to $500 for travel expenses. Information on available funding and applications can be found at the following website: http://www.gvsu.edu/csce.
Guidelines for a Scholarly Project
Involving One of the Following:

New Idea Project
Analysis of Pre-existing Data or Current On-going Project
Protocol Exploration & Development
Service Learning Project
Components of the Project Proposal for the Following:
New Idea Project
Analysis of Pre-existing Data or Current On-going Project
Protocol Exploration & Development
Service Learning Project

The scholarly project proposal must include the following sections and headings, including chapter headings and secondary headings. Additional subheadings, 3rd level, 4th level, etc. may or may not be needed. Faculty may negotiate with students to format proposal in journal-ready manuscript style. (Example of Chapter 1 is present in Appendix C).

Title Page
Definition of Terminology
Chapter 1 INTRODUCTION
   Background to Problem
   Problem Statement
   Significance of the Problem: to your profession and/or the health care system.
   Purpose/Aims
   Hypothesis/research questions/objectives or research questions

Chapter 2 REVIEW OF LITERATURE AND CONCEPTUAL FRAMEWORK
   Review of literature: Evaluation and synthesis of the literature including strengths and weakness of existing literature and gaps or omissions.
   Reliability/Validity: In particular, attention should be paid to the reliability/validity or trustworthiness of specific methods or procedures used by the authors as they relate to the analysis of the problem. Specifically, if the methods employed or instrument used are not widely accepted or if other tests are available, the pros, and cons of the chosen approach by the author need to be presented.
   Summary and Implications for the Study

Chapter 3 METHODOLOGY:
   Study Design: Describe the design in detail. Indicate any problems that you anticipate and how you plan to deal with them. Briefly discuss the advantages of the methodology which you have selected over other methods.
   Study site and subjects: Include agency approval, description of intended characteristics of the sample, including any inclusion and/or exclusion criteria. Any form used to assess inclusion and/or exclusion criteria should appear in the appendix. Describe the study site and facilities available for the study. Explain how subject confidentiality will be protected.
Chapter 3 Methodology (Continued)

**Equipment and Instruments:** All instruments and equipment used in the study need to be described in detail. Identify the measurement tools*, their origin, reliability and validity and how they will be used in the study. Examples of questionnaire type instruments should be included as an appendix. Include a sample of all instruments used.

**Validity/Reliability of specific procedures/tests***. Trustworthiness is addressed here for qualitative research.

**Procedures:** Describe the data collection procedures including types of data to be collected: when, how, and by whom. Place copy (ies) of data collection forms in the appendix. Describe the intervention, if applicable. Provide details of protection of subjects and any potential hazards. Include a copy of the consent form and the exact description of instruction for subjects in the appendix. Description of the procedure should be at a level of detail such that the reader would be able to repeat the study based on the description.

**Data Analysis:** Describe the plan for preparation and analysis of data.

**Limitations** - describe the limitations that you foresee arising from your study design, procedure, sample population, etc.

**References:** Use the appropriate style for referencing (APA, AMA, etc).

**Appendices:**

1. Informed Consent Form (if applicable)
2. Data Collection Forms, questionnaires, detailed apparatus description, inclusion and/or exclusion criteria forms, etc.
3. Proposal Summary for Human Subject Review Committee (if applicable)
4. Budget Summary (if appropriate)

*Measurement instruments and/or procedures/tests that are widely accepted and used and that have proven to be reliable and valid need only a brief comment with reference as to their intra and/or intertester reliability and validity and do not need to be discussed in Chapter 2. If one measurement instrument or piece of equipment was selected from among several possible alternatives your rationale should briefly be included. Various alternatives and their pros & cons should be described in Chapter 2.
Approval Process for the Proposal of the Scholarly Project
Involving the Following:

New Idea Project
Analysis of Pre-existing Data or Current On-going Project
Protocol Exploration & Development
Service Learning Project

The approval process for the proposal of the scholarly project consists of two parts: 1) a brief presentation of your study, and 2) questioning by your committee.

Oral Explanation

In the first part, the Approval Process provides you with the opportunity to orally summarize each chapter of your thesis/research project for your committee. This presentation must be scheduled when all committee members can attend. You should prepare a 15 to 20 minute overview of your project. Provide some background information on your topic by highlighting key articles from your literature review and explain the problem. Then discuss why your study is needed and state your hypothesis. Describe the study design and methodology and how you will analyze the data. Include the limitations in the presentation.

Questioning

In the second part, the Chair of your committee will guide a session for questions that are intended to probe your comprehension of the material that you presented. The committee will expect you to understand and explain the literature review, your proposed methodology, proposed statistical analysis and the limitation of the study.

PLEASE NOTE: Students must schedule a time and location where the Proposal Approval Process will take place when your committee chair feels your scholarly project is ready to be defended. Be sure that all committee members have a minimum of 10 days to read your project proposal before your defense date. All committee members must be able to attend the scheduled defense. To reserve a classroom in CHS contact Event Services: www.gvsu.edu/eventservices.
Content of the Final Defense of the Scholarly Project
Involving the Following:

New Idea Project
Analysis of Pre-existing Data or Current On-going Project
Protocol Exploration & Development
Service Learning Project

The final document must include the following sections and headings including chapter headings and secondary headings. Additional subheadings, 3rd level, 4th level, etc. may or may not be needed. Faculty may negotiate with students to format final manuscript in journal-ready form.

Title Page
Abstract
Acknowledgments
Preface - Definition of Terms (optional)
Table of Contents
List of Tables
List of Figures
List of Appendixes

Chapter 1 INTRODUCTION
Background to Problem (or context)
Problem Statement
Significance of the Problem: to your profession and/or the health care system.
Purpose/Aims
Hypothesis/research questions/objectives or research questions

Chapter 2 REVIEW OF LITERATURE AND CONCEPTUAL FRAMEWORK
Review of literature: Evaluation and synthesis of the literature including strengths and weakness of existing literature and gaps or omissions.

Reliability/Validity: In particular, attention should be paid to the reliability/validity or trustworthiness of specific methods or procedures used by the authors as they relate to the analysis of the problem. Specifically, if the methods employed or instrument used are not widely accepted or if other tests are available, the pros, and cons of the chosen approach by the author need to be presented.

Summary and Implications for the Study
Chapter 3 METHODOLOGY

Study Design: Describe the design in detail. Indicate any problems that you anticipate and how you plan to deal with them. Briefly discuss the advantages of the methodology which you have selected over other methods.

Study site and subjects: Identify the location of study and include the agency approval. Describe the inclusion and exclusion criteria. Any form used to assess inclusion and/or exclusion criteria should appear in an appendix. Describe the characteristics of the sample in the study. Describe the selection methods for the sample.

Equipment and Instruments: All instruments and equipment used in the study need to be described in detail. Identify the measurement tools*, their origin, reliability and validity and how they will be used in the study. Examples of questionnaire type instruments should be included as an appendix. Include a sample of all instruments used.

Validity/Reliability of specific procedures/tests*. Trustworthiness is addressed here for qualitative research.

Procedures: Indicate how subjects were recruited. Describe the data collection procedure including types of data collected: when, how, and by whom. Place a copy (ies) of data collection forms in the appendix. Describe the intervention, if applicable. Provide details of protection of subjects and any potential hazards. Include a copy of the consent form and the exact description of instruction for subjects in an appendix.

Data Analysis: Describe the statistical methods used and why they were used.

This may be different from the proposal.

Chapter 4 RESULTS/DATA ANALYSIS

Techniques of data analysis: Describe the statistical methods used and why they were used. This may be different from the proposal

Characteristics of subjects.**

Report results under appropriate subheadings.

Other findings of interest.

Chapter 5 DISCUSSION AND CONCLUSIONS

Discussion of findings: Restate purpose and/or hypothesis for readers benefit. Relate the findings to previous literature whether they are in agreement or not.

Application of practice/administration/education: Discuss how the findings advance and/or influence the field.

Limitations

Suggestions for further research/modifications

Conclusion/Summary: include relevance to your profession.
References

Appendices

1. Informed Consent Form (if applicable)
2. Data Collection Forms, questionnaires, detailed apparatus description, inclusion and/or exclusion criteria forms, etc.

*Measurement instruments and/or procedures/tests that are widely accepted and used and that have proven to be reliable and valid need only a brief comment with reference as to their intra and/or intratester reliability and validity and do not need to be discussed in Chapter 2. If one measurement instrument or piece of equipment was selected from among several possible alternatives your rationale should briefly be included. Various alternatives and their pros & cons should be described in Chapter 2.

**Placement of data related to subjects might be included in either Chapter 3 or 4. This should be determined in discussion with your committee. Generally it is appropriate to include it in Chapter 3 unless the demographics are directly related to hypothesis testing, in which case they should be included in Chapter 4.

***Final copies should delete future tense and go to past tense.
Format for the Final Defense of the Scholarly Project 
Involving the Following:

New Idea Project
Analysis of Pre-existing Data or Current On-going Project
Protocol Exploration & Development
Service Learning Project

The Defense consists of two parts:
1) A brief presentation of your study.
2) Questioning by your committee.

Oral Presentation

In the first part, the Defense provides you with the opportunity to orally summarize each chapter of your scholarly project for your committee. This Defense must be scheduled when all committee members can attend. You need to give a 30-45 minute overview of the project. First, you need to describe what you did and why. Next, you need to describe what you found. Finally, you need to explain how your results compared with the literature: in what ways did your findings support the literature and in what ways did they conflict with the literature; then state conclusions describe the limitations of your study, and clinical significance of your research.

Questioning

In the second part, the Chair of your committee will guide a session for questions that are intended to probe your comprehension of the material that you presented. The committee will expect you to understand and explain the literature review, your methodology, statistical analysis and results. Most specifically, the committee will expect you to be able to explain how your work compares with the work of others, how you reached the conclusions that you did, and to defend your conclusions against challenges. You will also be asked to clarify specific points in the written text as needed and make recommendations for further research.

PLEASE NOTE: Students must schedule a time and location where the Defense will take place when your committee chair feels your research project/thesis is ready to defend. Be sure that all committee members have a minimum of 10 days to read your project before your defense date. Students are responsible for assembling the committee. All committee members must be able to attend the scheduled defense.

CHS classrooms or conference rooms: please contact Event services at www.gvsu.edu/eventservices.
Required Forms for Scholarly Projects Involving the Following: New Idea Project, Analysis of Pre-existing Data or Current On-going Project, Protocol Exploration & Development, Service Learning Project

Forms Required

- Scholarly Project Contract
- Request for Supervisory Committee
- Proposal Approval Form
- Grading Criteria for the Proposal Defense Form
- Grading Criteria for the Final Defense Form (PAS 689)
- Evaluation of Group Work Form
- Evaluation of Scholarly Project Chair Form
Scholarly Project Contract

I, ______________________________, having read Part II of the Research Handbook and the corresponding Appendices, do agree that I will be an active participant in the completion of the total project as required to complete PAS 689. I further recognize that the final grade for such a project is dependent upon total cooperation among the team members and their combined equal efforts.

I further agree that the activities listed in this document will be completed by me within the stated projected timeline.

If at any time, during the development and completion of this project, it is determined by my follow team member(s) and my committee chair or research advisor, that my contribution is less than agreed to, I understand that I will be called upon to make a formal explanation. My committee or research advisor and the project team will review this explanation.

It is understood that such a review will determine my ability to continue with the project. Should it be determined that it is not appropriate for me to continue, I realize that I will have to initiate and complete another acceptable research activity in order to complete the requirement for the degree.

Activities to be completed by signee.

Projected timeline for completed activities by signee.

___________________________________   ________________________
Student       Date

___________________________________
Committee Chair/Research Advisor
Request for Supervisory Committee
for Scholarly Projects Involving One of the Following:

New Idea Project
Analysis of Pre-existing Data or Current On-going Project
Protocol Exploration & Development
Service Learning Project

This is to be completed by the student and transmitted to the
PAS Director of Research

**Student’s Supervisory Committee:** The Committee, consisting of a Chairman plus two
members is to be identified by the student.

______________________________________________________________

Student(s) Name(s) (print)

Topic area or tentative thesis title: ___________________________________________

______________________________________________________________

COMMITTEE RECOMMENDATION:

Chairperson/Research Advisor: _____________________________________________

Program/Department: ___________________ Signed:

______________________________________________________________

Member: ____________________________

Program/Department: __________________ Signed:

______________________________________________________________

Member: ____________________________

Program/Department: __________________ Signed:
Proposal Approval for the Scholarly Project Involving One of the Following:

New Idea Project
Analysis of Pre-existing Data or Current On-going Project
Protocol Exploration & Development
Service Learning Project

Student Name(s): ____________________________________________________________

Topic Area: ________________________________________________________________

Title of Thesis/Project: ______________________________________________________

________________________________________________________________________

Anticipated Completion Date: ______________________________________________

Research Advisor/Committee Approval: The aforementioned student(s) has/have completed a satisfactory research proposal and may now submit project materials to HRRC. Following HRRC approval, student(s) may begin data collection.

<table>
<thead>
<tr>
<th>Typed Name(s)</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Chair</td>
<td>____________________________</td>
</tr>
<tr>
<td>Committee Member</td>
<td>____________________________</td>
</tr>
<tr>
<td>Committee Member</td>
<td>____________________________</td>
</tr>
</tbody>
</table>

Date of Proposal Approval: ________________________________________________
Grading Criteria for the Proposal Defense of the Scholarly Project Involving One of the Following:

New Idea Project
Analysis of Pre-existing Data or Current On-going Project
Protocol Exploration & Development
Service Learning Project

Student Name(s): ________________________________________
_________________________________________

Semester/Year: ________
Indicate achievement of criteria by circling the appropriate indicator on the scale below.

Introduction (10%)
1. Problem is clearly stated.
   Fully met 5 4 3 2 1 Not met
2. Significance of problem is clear.
   Fully met 5 4 3 2 1 Not met
3. Purpose of study is clearly stated.
   Fully met 5 4 3 2 1 Not met
4. Research questions and hypothesis (ses) are clearly stated.
   Fully met 5 4 3 2 1 Not met

Literature Review (25%)
1. Sufficient background information on research topic is presented.
   Fully met 5 4 3 2 1 Not met
2. Research articles presented are relevant to research topic questions, described in appropriate detail, and presented clearly. Relationship of articles to other studies as well as proposed study are clearly defined.
   Fully met 5 4 3 2 1 Not met
3. Literature review is summarized with implications for proposed study.
   Fully met 5 4 3 2 1 Not met
4. Important terms are defined.
   Fully met 5 4 3 2 1 Not met

Methodology (25%)
1. Research design is fully described.
   Fully met 5 4 3 2 1 Not met
2. Research design is appropriate to solution of problem.
   Fully met 5 4 3 2 1 Not met
3. Research design is free of specific weaknesses.
   Fully met 5 4 3 2 1 Not met
4. Population and sample is described.
   Fully met 5 4 3 2 1 Not met
5. Method of sampling is appropriate.
   Fully met 5 4 3 2 1 Not met
6. Instruments used are described.
   Fully met 5 4 3 2 1 Not met
7. Validity and reliability of measurements and measurement instrumentation or trustworthiness in qualitative studies are described or established and maintained.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
8. Data-gathering methods or procedures are described.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
9. Data-gathering methods or procedures are appropriate to solution of problem.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
10. Limitations of design and method are discussed.
    | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
11. Appropriate forms are included, i.e., informed consent, instructions to subjects, data collection forms, etc.
    | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
12. Plan for data analysis is presented.
    | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
13. Data analysis plan is appropriate.
    | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |

**Style (15%)**

1. Professional writing including correct grammar, spelling, punctuation, word choice, etc., is used
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
2. Thoughts are presented clearly and progress logically with appropriate transitions.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
3. Format is consistent with either APA or AMA guidelines.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
4. References are correctly cited.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
5. Recommended revisions were made in a timely manner.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |

**Oral Defense (10%)**

1. Summarized research hypothesis(es), or question(s)
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
2. Summarized previous research reported in the literature.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
3. Summarized methodology and analysis used
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
4. Summarized research limitations.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
5. Demonstrated understanding and synthesis of previous literature relative to students’ research.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |
6. Defended methodology and analytic approach or statistics utilized.
   | Fully met | 5 | 4 | 3 | 2 | 1 | Not met |

**Active participation and adherence to contract (if applicable) and deadlines (15%)**

| Fully met | 5 | 4 | 3 | 2 | 1 | Not met |

**Comments:**
GRADE: ________

__________________________________________________________  _________________
Signature of Faculty Chair      Date
PAS 689
Grading Criteria for the Final Defense of the Scholarly Project
Involving One of the Following:
New Idea Project
Analysis of Pre-existing Data or Current On-going Project
Protocol Exploration & Development
Service Learning Project

Student Name(s):________________________________________

Semester/Year:_______

Provide comments evaluating the student’s ability to discuss the following criteria that indicate the ability to critically analyze and synthesize knowledge in the subject of the thesis and its implications for the profession: (Indicate achievement of criteria by circling the appropriate indicator on the scale below.)

Implementation (10%)
1. Data gathering methods or procedures were utilized correctly, i.e. appropriate to the question.
   Fully met 5 4 3 2 1 Not met

2. Validity and reliability of the selected instruments and data were identified.
   Fully met 5 4 3 2 1 Not met

3. Methods utilized in analyzing data were applied correctly.
   Fully met 5 4 3 2 1 Not met

4. Committee members were utilized effectively and appropriately.
   Fully met 5 4 3 2 1 Not met

Written Thesis (35%)

Results
1. Results of analysis were presented clearly in an organized manner.
   Fully met 5 4 3 2 1 Not met

2. Tables and figures were used effectively to enhance presentation of results.
   Fully met 5 4 3 2 1 Not met

Discussion and Conclusions
1. Interpretation of results was accurate.
   Fully met 5 4 3 2 1 Not met

2. Discussion of results and conclusions drawn related to conceptual framework and research question(s).
   Fully met 5 4 3 2 1 Not met

3. Discussion was complete and in-depth; findings of study were related to previous research as presented in review of the literature.
   Fully met 5 4 3 2 1 Not met
4. Conclusions were substantiated by evidence presented.
   Fully met 5 4 3 2 1 Not met

5. Generalizations were confined to the population from which the sample was drawn.
   Fully met 5 4 3 2 1 Not met

6. Implications for further research were discussed and based on outcomes of the study.
   Fully met 5 4 3 2 1 Not met

7. Implications and significance of research findings for the profession were clearly discussed.
   Fully met 5 4 3 2 1 Not met

**Style (10%)**

1. Correct grammar was used (including spelling, punctuation, tense, word choice).
   Fully met 5 4 3 2 1 Not met

2. Thoughts were clearly presented and progressed logically with appropriate transitions.
   Fully met 5 4 3 2 1 Not met

3. Style used was consistent with School of Health Professions and APA/AMA requirements.
   Fully met 5 4 3 2 1 Not met

4. References were correctly cited.
   Fully met 5 4 3 2 1 Not met

5. Tone of the report displayed a neutral attitude.
   Fully met 5 4 3 2 1 Not met

6. Recommended revisions were made in a timely manner without repeated feedback.
   Fully met 5 4 3 2 1 Not met

**Oral Defense**

**Oral Presentation (20%)**

1. Evidence of preparation and appropriate use of AV (or other) equipment.
   Fully met 5 4 3 2 1 Not met

2. Summarized research questions.
   Fully met 5 4 3 2 1 Not met

3. Summarized previous research reported in the literature.
   Fully met 5 4 3 2 1 Not met

4. Summarized methodology and analysis.
   Fully met 5 4 3 2 1 Not met

5. Summarized results.
   Fully met 5 4 3 2 1 Not met

6. Summarized results relative to previous research.
   Fully met 5 4 3 2 1 Not met

7. Stated conclusions, implications, applications and direction for future research.
   Fully met 5 4 3 2 1 Not met
8. Summarized research limitations.
   Fully met  5  4  3  2  1  Not met

Defense (i.e., ability to answer questions from committee members (20%)
1. Demonstrated understanding and synthesis of previous literature relative to students’ research.
   Fully met  5  4  3  2  1  Not met

2. Defended the methodology and analysis used.
   Fully met  5  4  3  2  1  Not met

3. Justified conclusions.
   Fully met  5  4  3  2  1  Not met

Active Participation and Adherence to contract (if applicable) and deadlines (5%)
   Fully met  5  4  3  2  1  Not met

Comments:

GRADE: __________

___________________________________________________  _________________
Signature of Faculty Chair       Date
Title of Project: __________________________________________________________

_______________________________________________________________________

Evaluator: ______________________________  Date: _______________

Rate the contributions to the project of each member of your group (including yourself).

Use a scale from 0 to 4 for each category where:

0  Denotes unacceptable performance
1  Denotes adequate but irregular performance
2  Denotes acceptable performance with minor follow-up required
3  Denotes consistent performance
4  Denotes outstanding performance

Write the number in the box below each member’s name for each category listed. This is not a rank ordering. Several members may earn the same score. Multiply this score by the weight of that category, and put the product in the appropriate box in the “Points” column.

An average of the ratings made by yourself and the members of your group pertaining to your performance will be used to assist in determining your grade.

5% will be deducted from your group’s evaluation of you for each part of this form that is not carefully completed.

<table>
<thead>
<tr>
<th>Person Evaluated</th>
<th>You:</th>
<th>Group Member:</th>
<th>Group Member:</th>
<th>Group Member:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Weight</td>
<td>Eval. (0-4)</td>
<td>Points</td>
<td>Eval. (0-4)</td>
</tr>
<tr>
<td>Organization And Planning</td>
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<td>Dependability</td>
<td>5</td>
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<tr>
<td>Overall Contribution</td>
<td>10</td>
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<tr>
<td>Total Points</td>
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</tbody>
</table>
Describe your specific contribution to the project. Describe what problems/sections you completed and contributions you made as a member of the team.

Characterize the contribution of each member in our group: How well did your group work together? Discuss each member’s level of preparedness for team meetings; and the depth of thought, completeness, and thoroughness of each member’s contribution. Indicate the group’s member’s initials in the space provided. (Explain in the space provided.)

Initials of member: ________ Comments:

Initials of member: ________ Comments:

Initials of member: ________ Comments:

Scheduling: Were there difficulties in scheduling times to meet? Explain

Other Comments/Concerns: Please comment on your level of satisfaction concerning the group’s ability to get along with each other and to complete the project to the satisfaction of each member of the group. Keep in mind that this information is confidential.
Grand Valley State University
Physician Assistant Studies
Evaluation of Scholarly Project Chair

Use the following scale to rate your major research advisor in three major categories listed below. Use the “comments” section to substantiate/support your ratings.

SCALE:

5  Strongly agree
4  Agree
3  Neither agree nor disagree
2  Disagree
1  Strongly disagree
N/A  Not applicable

KNOWLEDGE

_____ Provided clear and accurate information about project or thesis requirements
_____ Provided guidance for the student through the research process
_____ Demonstrated content knowledge
_____ Demonstrated knowledge in research design
_____ Demonstrated knowledge in scientific writing
_____ Demonstrated knowledge in quantitative or qualitative data analysis

Comments: __________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

PROFESSIONALISM

_____ Demonstrated respect for students’ ideas about the research project/thesis
_____ Responded to requests in a timely manner
_____ Provided feedback that was useful for enhancing the quality of students’ work
_____ Demonstrated an attitude of collaboration and/or facilitated collaboration among group members
_____ Exhibited appropriate use of time during research advisement
_____ Demonstrated professional communication skills in meetings with students
_____ Required high standards for writing and scholarship
_____ Presented self as role model of a researcher in the field.
COMMITMENT TO STUDENT PROJECT/THESIS

- Arranged time for student meetings appropriately when needed
- Provided critical questioning to help enhance the logic, accuracy, relevance, depth, breadth, precision and clarify of student’s work (universal standards)
- Offered suggestions and recommendations to encourage high quality work
- Provided additional support or assistance, when requested, to ensure completion of the work (manuscript writing; data collection and analysis) in the timeliest manner
- Provided resources or recommendations for resources if needed
- Provided mentoring and clear expectations for research proposal and final defense
- Provided feedback on the results of defense in a timely manner
- If and when presentation of the project or thesis occurs, he/she provided review and feedback.
- Discussed project with regard to authorship and possibility of publication

Comments:

Overall rating and additional comments:

Title of Projects/Thesis:

Faculty Chair: Year of Graduation: 
Guidelines for Abstract Writing

General Information

Abstracts can be written to summarize previously written research, as well as, summarize one’s own research. You will be required to do both throughout the process of completing your scholarly project. During the literature review required for your scholarly project you will be writing multiple abstracts on the literature you review. In addition, in your final published project you will be required to write an abstract. When you get to the stage of writing the abstract for your scholarly project, the style of writing will be dictated by the journal you are submitting to. For example, the professional journal Physician Assistant is written in the AMA writing style.

Writing an Abstract on a Review of Current Literature

Writing Abstracts: For abstracts of reports of research, the essential four parts to note are 1) purpose of the study (Why did the author do it?), 2) method used (How did the author design and carry out the procedures?), 3) results of the proceedings (What happened?), 4) conclusions of the author (What was learned by all this?) The abstracter’s job is to give a brief account of the important information in each of these sections. Additionally, for research articles it is not necessary to include at the beginning of the abstract a statement of the problem because the purpose usually defines the scope of the study.

For abstracts of all types of articles, it is essential to note the purpose of the article, the pertinent data related to the type of paper presented, the important conclusions, and the clinical relevance discussed by the author.

Tense: Always write the abstract in the past tense for reporting work done in the past. Using the present tense is not only grammatically incorrect, but can cause confusion over what the original article actually stated. “The study results do not have clinical relevance” could be taken as the personal opinion of the abstracter rather than what was reported by the author. To clarify, use past tense and identify the maker of the statement: “The authors said they found no clinically relevant results.”

Most abstracts report work that was done in the past so it is logical to say “the authors found” or “the results showed.” Some abstracts dealing with such material as theories and concepts, however, may need to include both past and present tenses, such as “the author stated he believes all men are created equal.”
Content: The abstract should highlight the main points of the article and not be an abbreviated version of the paper itself. Include only pertinent data germane to the central point, and stay within 100 to 300 words. Including too many facts results in an imbalanced description of the article and will probably make the abstract too long. The abstract must be able to stand alone as a digest of the significant information found in the article, but the abstract is not intended to substitute for the article.

Include only information reported by the author in the article. Do not use related information and facts that the article did not contain. Do not inject your own general information. Take any needed background information from the original article and identify it as such. For example, rather than “Hand surgery is risky,” state “The authors emphasized that because hand surgery is risky, the patients must be...” Make certain you include only those conclusions or opinions presented by the author. Whether you agree with a study, the methods, or the validity of any of the results, the abstract must not reflect your opinions. Also indicate differences between the author’s facts and opinions. For example, say either “The study showed the discrepancy resulted from...” or “The author believed the discrepancy resulted from...”

Clarity and Simplicity: Attempt to make the abstract understandable to as many people as possible, including physical therapists (researchers, therapists, assistants, and students), allied health professionals, and interested nonprofessionals. The key idea is to simplify. Examine three-syllable (and more) words closely. If a shorter word can say the same thing, use it. Here are some examples of swaps that work: repeat for replication, use for usage or utilization, and many for manifold.

When simplifying, however, avoid slang. Anatomical terms should be complete (quadriceps are quadriceps femoris muscles), disease processes should be exact (strokes are cerebrovascular accidents), and individuals usually should not be defined by their dysfunction’s (cystic fibrosis children are children with cystic fibrosis).

Statistics and Abbreviations: One way to achieve clarity and simplicity is to include only essential statistics and abbreviations. Use statistics to register the significance of results, and only list key results. Use standard abbreviations. Use special abbreviations sparingly.
Example of an Abstract
Quality of Life Outcomes After Sacrocolpopexy
Leah Lillmars, Renae Conner; Beth Wiegand; Theresa Bacon-Baguley, PhD, Samir Hamati, MD

Purpose: Uterine prolapse is a common condition in females and has been reported to have an incidence of 50% in females older than 50 years of age. Sacrocolpopexy is a surgical procedure to reposition vaginal vault prolapse into the correct anatomical position. To assess the success of sacrocolpopexy, it is important to consider both the objective outcomes (i.e. complications) as well as the subjective quality of life outcomes, which are assessed from the patients’ point of view. The purpose of this study was to compare pre-surgical and post-surgical quality of life outcomes pertaining to bladder, bowel and vaginal symptoms after sacrocolpopexy.

Materials and Methods: One-hundred patients who underwent daVinci robotic sacrocolpopexy between October-2007 and March-2010 were identified and mailed questionnaires which assessed quality of life: the PFIQ-20 and two versions of the PFIQ-7. One version of the PFIQ-7 was used to assess quality of life measures before the surgery. The second version was used to assess quality of life measures after the surgery. Two additional questions were included in the mailings. The two questions were: “Overall, how do you feel in terms of your prolapse since your surgery?” and “Would you choose to have the surgery again?” In addition, there was a qualitative question that allowed the subject to elaborate on why they would not choose to have the surgery again.

Results: Fifty-seven patients (57%) returned the completed surveys. Age range at the time of surgery was between 40 and 83 years old and the average BMI was 27.5. The pre-and post-surgical PFIQ-7 scores were compared to determine if there was a change in the quality of life. Using the Wilcoxon Signed–Rank test, a significant decrease in symptoms was found when comparing the pre-surgical to post-surgical summary scores of the PFIQ-7, 58.98 and 19.88 respectively (p<0.001). The pre-surgical mean bladder symptoms (mean 25.42) showed a significant decrease when compared to the post-surgical bladder symptoms (mean 10.37) (p<.001). Also, a significant decrease was found between the pre-surgical (12.33) and post-surgical (5.10) bowel symptoms (p=.007). Lastly, a significant decrease was found between the pre-surgical (21.89) and post-surgical (4.69) vaginal symptoms (p<.001). The result of the PFIQ-20 identified that 51.8% of the subjects had no complaints of vaginal prolapse symptoms following surgery, 30.4% had no colorectal symptoms, and 26.8% had no urinary complaints. According to the added questions, 96.4% identified that they had improvement or marked improvement after the surgery. No patients reported to be worse or markedly worse after the surgery, and 94.7% reported that they would have the surgery all over again.

Conclusion: This study found a significant increase in the quality of life (measured by a decrease in symptoms) after undergoing sacrocolpopexy in all three areas assessed by the PFIQ-7: bladder, bowel and vaginal symptoms, as well as a significant overall improvement. In addition, an overwhelming amount of patients (95%) stated that they would have the surgery again.
Guidelines for Critiquing the Literature

The purpose of the literature critique assignment is to develop your skills in reading and interpreting the professional literature. It also helps to enhance your own professional writing skills, and learn how to give professional, valid criticism.

Learning to critique others' work improves a clinician's/researcher's critical thinking and their ability to effectively design and implement a research project. To that end, students will begin to develop skills of critical analysis of research beginning in PAS 506.

The typical literature review:
- is designed to be a critical piece of writing, in which the author attempts to both provide an abstract of the content of the article reviewed.
- is an evaluation of the quality of that content.
- is a critical evaluation of an article, which:
  1) describes the nature of the article
  2) provides an overview of the content of the article
  3) critiques the content of the article, as well as the process and approach, and
  4) provides some evaluative rating of the article.

1) The nature of the article – this part of the review describes the type of article being reviewed…is it an empirical study…is it a piece of historical research…is it a conceptual, narrative or descriptive piece, etc. This part of the review should include what makes the article what it is, with a description of the author’s intent and process.

2) The overview of the content – this part of the review provides the reader with a brief description of what s/he will find in this article. Similar to an abstract, the overview should describe the study or concept discussed, and how the author approached the topic, as well as the findings, results, conclusions, etc.

Parts 1 and 2 can usually be part of the introduction of the critique, and should be a concise and clear description of the work, so that a reader may be able to determine whether or not to read further, or whether to get the entire article to read.

3) The critique of the content – this part of the review should be the longest part, because it is the most important part. It is the place in which you may offer your critical assessment of the article…did the author do a good job with this article/study…was the approach appropriate for the topic…were the author’s biases handled well…is the statistical analysis meaningful…were the results and conclusions well-written and useful, etc. You should note both positives and negatives of the article, and justify your assessment with knowledge based on other research, other reviews, or your own experience.

4) The evaluative rating – this is the part of the review that will be shortest. Here you should rate the value of the article for different purposes, focusing on relevance, readability, ease of applicability, etc. Conclude your review with a clear statement about whether you would recommend this article, to whom you would recommend the article, and for what purpose.
5) The written critique – the best way to approach the literature critique is to create an outline in which you divide the paper into three major sections, and make notations under each heading about what you want to include and address.
Example of a Literature Critique

Introduction
Roughly 39,400 deaths among persons aged ≥65 years were attributable to influenza and pneumococcal disease during the period from 1990-1999. Many theorize that vaccination could have prevented these deaths. However, racial disparities have been well documented with relation to adult vaccination and therefore patient outcomes. The article “Racial/Ethnic Disparities in Influenza and Pneumococcal Vaccination Levels Among Persons Aged ≥65 Years—United States, 1989-2001” by Stein, Wortley, and Singleton was published by the CDC in their weekly newsletter for October 10, 2003. The article describes the CDC’s nonexperimental, cross-sectional study in which they examined vaccination data collected from the 2000-2001 National Health Interview Surveys. This historical research specifically allowed the CDC to examine the most recent data to better describe the marked disparities in vaccination coverage between races/ethnicities. The study sought to describe through qualitative means that race/ethnicity played a stronger role in determining the rate of vaccination coverage than other, widely-variable factors. To this end the study presented the data by subdividing it into the categories of non-Hispanic white, non-Hispanic black, and Hispanic for comparison.

The 2000-2001 NHIS adult core questionnaires were administered by personal interview to a non-institutionalized population ≥18 years of age that represented the prevalent demographics of the overall U.S. civilian population. They were asked “Have you ever had a pneumonia vaccination, sometimes called a pneumonia shot?” and “During the past 12 months, have you had a flu shot?” For the purposes of this study only data from responders ≥65 years of age was included. During 2000-2001 the average influenza coverage was 66% for non-Hispanic whites, 48% for non-Hispanic blacks, and 54% for Hispanics. The average pneumococcal coverage levels for the same time period were 57% for non-Hispanic whites, 33% for non-Hispanic blacks, and 32% for Hispanics. According to the study, after accounting for gender, socioeconomic, and other factors non-Hispanic blacks remained significantly less likely than non-Hispanic whites to report influenza vaccinations (odds ratio [OR] = 0.7; 95% CI= 0.6-0.8) while the difference between Hispanics and non-Hispanic whites was not statistically significant (OR=0.9; 95% CI=0.7-1.5). Both non-Hispanic blacks and Hispanics were significantly less likely than non-Hispanic whites to report pneumococcal vaccination (OR=0.4; 95% CI=0.3-0.5 and OR=0.4; 95% CI=0.3 and 0.5, respectively). Based on these results, the CDC has developed further experimental programs to target elderly non-Hispanic blacks and Hispanics for vaccination.

Critique and Assessment
The authors did a good job with this study. They assumed an appropriate approach for dealing with the topic in question. Specifically, they were able to tailor the data so that it was most applicable to people ≥65 years in age and who exhibit the least favorable outcomes from infection with these diseases. The statistical analysis demonstrated significant values with a high degree of accuracy (Confidence Interval = 95%). These values drew strong lines of association between race and rate of vaccination.
At the heart of the research is the assumption that an overall increase in immunizations is prescribed for the general population. This assumption reveals that perhaps the authors’ biases colored their findings. Stein, Wortley, and Singleton all work as immunization specialists in the public arena and performed this research on behalf of the CDC. This fact was reflected in their findings. Most of the information was presented in the form of a comparison to the national goal established by the CDC for immunizations in the year 2000. Ultimately none of the groups studied achieved the CDC’s goal. Therefore the study findings reflected the need for increasing vaccination rates to bring them in line with the CDC’s recommendations.

There were some other things startlingly lacking from the data. For instance, the entire study is based on the assumption that only three distinct racial/ethnic groups exhibit disparities. Other ethnic/racial groups should share in the representation to complete the picture. Also, given the many racial/ethnic groups present in the United States many participants may belong to more than one group. For this reason, every ethnic/racial group needs to be represented although that would greatly belabor the work done by these researchers. Along the same lines, the authors failed to state whether or not a different or similar life expectancy existed between the different racial/ethnic groups. For example, do non-Hispanic whites live longer in general than non-Hispanic blacks or Hispanics? This question is significant in light of the fact that the targeted population was those ≥65 years old. Do the different groups have different ratios of elderly people?

The authors also failed to list the current data regarding rates of infection and mortality due to pneumonia and influenza within each group. It behooves the reader to know whether or not one or more of the groups are disproportionately susceptible. For example, non-Hispanic whites were assessed as high risk for influenza and pneumonia at respective rates of 11% and 25% more often than their non-Hispanic black and Hispanic counterparts. Does the data reflect differences of susceptibility or diagnostic prejudice? Should the group with the higher rates of infection be targeted for more vaccinations?

Similarly important to the reader is information about the rate of effectiveness of the vaccine against infection by said diseases. Without an understanding of these rates we cannot begin to understand the relevancy of the study. There could theoretically be a 100% vaccination rate against influenza and pneumococcus for all three racial/ethnic groups, but no positive correlation if the vaccine proves ineffective. In this case the research would prove non-applicable.

Finally, the researchers claimed that their study accounted for variations in sex, age, education, poverty status, region, insurance status, number of doctor visits, and high risk conditions. It seems highly unlikely that they could account adequately for all of these factors, especially in light of the landmark 2003 Supreme Court ruling in the University of Michigan affirmative action case, in which the Supreme Court ruled that quantifying factors like those described was impossible. Furthermore, the Supreme Court ruled that these “unquantifiable” factors were central to addressing disparity between the races.

The study’s design offered other limitations. Self-reporting in and of itself proves unreliable because of its dependence on patient memory. Also, past studies revealed that self-reporting was less reliable for pneumococcus than for influenza. Unfortunately, the
validity of vaccine self-reporting by race/ethnicity has not been studied. Discrepancies in this could have a statistically significant effect.

**Evaluation and Conclusion**

Most of the results and conclusions were well-written although they would have been still more readable and understandable if they were presented for each vaccination individually. The editorial note provided useful insight into the shortcomings of the study as well as the CDC’s current applications of the findings. Overall, this study provides information that is easily applicable to elderly patients. For this reason I would recommend it as reading for any primary care provider who regularly serves patients ≥65 years old from multiple ethnic groups in order to raise their awareness of the current disparities and the current CDC guidelines.
Writing Assistance

If writing has been problematic for you, you may wish to seek assistance for writing your research. You may choose to do this by independent reading or by using the Writing Center here on the GVSU campus. The writing center can be contacted through the following website: http://www.gvsu.edu/wc. It is your responsibility to seek out the help you need as soon as problems are identified.
U.S. COPYRIGHT LAW

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Data Analysis Assistance at GVSU

The Statistical Consulting Center (SCC) at GVSU

Location: A 1-178 Mackinac Hall
Telephone: (616)331-3355
E-mail: scc@gvsu.edu
Web: www.gvsu.edu/scc

Services Available To:

Faculty: We will provide help with any part of a project that is for research purposes or for instructional purposes. More specifically, the SCC will provide help with such items as the writing of a questionnaire, the method of analysis, the use of statistical computer programs, the interpretation of results, and the presentation of the results.

Students: Same as faculty, but for research activity only. The student’s advisor must indicate, in writing, the level and amount of assistance to be rendered. This includes finding a statistician to serve on a master’s project committee.

Staff: We will provide statistical help that is directly related to GVSU.

Applying for Consulting Assistance

Any member of the Grand Valley State University community wishing to obtain assistance from the Statistical Consulting Center needs to prepare a short statement of the research program (one or two paragraphs). The statement should briefly describe the overall project, the data, the research hypotheses of interest, and where you are at in the project.

Consulting Sessions

The initial consulting session will take place with a faculty member from the Department of Mathematics and Statistics. This session may often be purely expository, with the researcher explaining his or her research problem and the type of assistance that is needed. The faculty member will then decide how the Consulting Center can best help. In some cases, this may mean consulting with another member of the department and possibly having them contact the researcher for a future meeting. In this way, we can best match researchers with the statistician that is more knowledgeable with the area of their research. The Center services are not available for the Spring/Summer terms.

Acknowledgement and Co-author:

The Statistical Consulting Center should be acknowledged in any paper for which the Center gives advice. If a major amount of work is done on any research project, the consultant should be named as a co-author.
Human Subject Review

Many of you will be undertaking studies involving the use of human subjects. The IRB (Institutional Review Board) at GVSU is titled the Human Research Review Committee (HRRC). Submission to HRRC entails the following requirements of you as a member of a research team:

1. To become familiar with institutional policies regarding research involving human subjects. See the following link: [http://www.gvsu.edu/hrrc/](http://www.gvsu.edu/hrrc/)
2. Approval of the project by the Human Research and Review Committee (HRRC) at GVSU.
3. All researchers (students and mentoring faculty) must demonstrate competency in the CITI (Course in the Protection of Human Research Subjects – [www.citiprogram.org/members/courseandexam](http://www.citiprogram.org/members/courseandexam)). More details will be given in PAS 506 and/or PAS 605.
4. Access and submit all the required forms and documentation regarding the research project from the HRRC website, listed in number 1 above. Students are **strongly advised** to use this website on an on-going basis to access the most recent forms and explanations regarding project submission for approval; such use will minimize delays and better ensure efficiency and timeliness in the approval process.
5. All HRRC applications are completed online using IRBNet ([www.irbnet.org](http://www.irbnet.org)). Please note that you must be registered to complete applications and load documents, and, the faculty advisor must be registered to approve the HRRC application prior to final submission.

There are three categories for review of research project by the HRRC (exempt, expedited, and full board). Explanations and criteria necessary to meet each level can be found on the HRRC website, [www.gvsu.edu/hrrc](http://www.gvsu.edu/hrrc).

1. Projects meeting criteria for exempt review are reviewed for approval by the Chair of HRRC or designated member of the HRRC on an on-going basis.
2. Projects meeting criteria for expedited review are reviewed by the Chair, plus 2 members of the HRRC committee, on an on-going basis.
3. Projects requiring full board review are reviewed by the entire membership of the HRRC committee at a convened meeting (once a month). Projects requiring review in this category must arrive before the meeting deadline to assure that the members have time to review the documents.
4. The federal government definitions and explanations of criteria for all review levels can be found of the HRRC website.
Ethics in Research

All Physician Assistant Studies students are required to complete the Human Research Review Committee training program. The training program is an online program, which validates that you have reviewed the ethical principles as they relate to conducting research, which involves human subjects. At the completion of the online program you will receive a certificate or completion. The certificate obtained upon completion of the program will be used in the submission of your project to GVSU’s Institutional Review Board (Human Research Review Committee: HRRC).

The site of the program is: [www.citiprogram.org](http://www.citiprogram.org). You need to identify the institution you are completing the program for. GVSU will be located under the “Other” category on the first screen. You want the Biomedical Group of modules. There are 9 general categories which must be completed and 3 optional categories. The training program will take approximately 1.5 – 2 hours.

Spectrum Health and St. Mary’s Hospital also require the CITI program prior to IRB submission. However, the modules they require differ from those required by GVSU. It is the students and faculty advisor’s responsibility to familiarize yourself with the requirements of non-GVSU HRRC regulations.
Guidelines for Publishing a Scholarly Project

Students should strive for a quality in their work suitable for publication. The faculty encourage students to submit a summary of their work for publication for a variety of reasons: 1) one of the purposes of research is to address pertinent educational and clinical questions and share the answers with the rest of the world; 2) publication is the ultimate culmination of the effort put forth by the researcher(s); and 3) it could provide an avenue for faculty to collaborate with students on publications.

The first step in preparing to submit for publication is to select the most appropriate journal for your manuscript. Peer-reviewed journals should be considered first. The editor of a peer-reviewed journal will send your manuscript to one or two experts in the area you have researched where your submission will receive a critical review. Your first submission may even be rejected. But the comments you will receive should permit you to produce a superior product. You will always be encouraged to re-submit. Peer-reviewed journals generally publish the higher quality work. Next, you want a journal that tends to publish papers related to the type of research you have completed. For example, it would not make sense to publish a paper on clinical education in a clinical hematology. Finally, you should consider a journal that would most likely publish a manuscript summarizing your research. In other words, be realistic about the journal you submit to (being accepted by The New England Journal of Medicine would be nice, but most likely won’t happen). PAS students will most likely select either JAAPA or Clinician Reviews as their publication vehicle.

After you have selected the journal you wish to submit to you will need to tailor your manuscript according to the general editorial style adopted by that journal. For researchers in psychology the Publication Manual of the American Psychological Association provides the guidelines for publication. Many other journals also use the APA format. Each journal will have a section titled “Instructions to Authors” which should be consulted for specific guidelines (see following page for an example). Read these instructions carefully and follow this exactly.

By now you have all had numerous opportunities to read and review journal articles. Essentially, your proposed journal manuscripts will be a scaled-down version of your thesis. Journal articles, preceded by an abstract, include an introduction and purpose, followed by a brief review of the literature, description of methods, results and a discussion/conclusion section. Yes, it would entail another re-write, but all of the hard work has already been done. Your faculty advisor may offer to assist you at this stage.

The process, as you know, is long, but the final outcome will be worth the effort.
Policy on Authorship of a Journal Submission

Research activity and other scholarly work is expected of faculty in the College of Health Professions at Grand Valley State University. Faculty are expected to responsibly conduct their activities with the highest degree of integrity. Professional competence and expertise, as well as decisions regarding contract renewal, salary, tenure, and promotion, is partially based on scholarly/research productivity and subsequent publication of scholarly work. Scholarly activity may be pursued independently or in collaboration with peers and/or students. In collaborative research endeavors, authorship credit and order are important matters.

In making authorship decisions, faculty, colleagues, and students should consider the following steps:

1. Early in the collaborative effort, colleagues discuss how authorship questions are made, the nature of professional contributions to professional publications, the meaning of authorship credit and order, and the importance of parties agreeing on what contributions will be expected of each collaborator for a given level of authorship credit.

2. Collaborators should assess the abilities of all parties, the tasks required to complete the scholarly publication, the extent of supervision required (if appropriate), and appropriate expectations for what each collaborator can reasonably contribute to the project.

3. On the basis of #2, parties should discuss and agree on what tasks, contributions, and efforts are required of all parties to warrant authorship and to determine the order of authorship. An arbitrator may be sought if parties are unable to agree.

4. Agreements regarding authorship credit and order may need to be renegotiated prior to final manuscript submission.

5. The order of authors’ names on a publication or presentation should reflect the relative strength of their contributions to the project. If there were equal contributions names should be listed alphabetically (the rationale for this should be stated so in a footnote; for student research projects the footnote will be placed on the acknowledgment page of the final manuscript).

The policy of the College of Health Professionals with regard to authorship will follow what was published by the International Committee of Medical Journal Editors (JAMA, 1997;277:927-934).
All people listed as authors should have participated sufficiently in the work to take public responsibility for the content. Authorship credit should be based on substantial contributions to (1) conception and design, or analysis and interpretation of data; (2) drafting the article or revising it critically for important intellectual content; and on (3) final approval of the version to be published. Conditions (1), (2), and (3) must all be met.

With regard to collaborative efforts that do not meet the above criteria, acknowledgment may be appropriate when the following activities occur:

1. Providing an initial research idea without any of the subsequent development of the project.

2. Provision of technical support for the project such as typing, data collection, data entry, construction of devices designed by someone else, etc.

3. Provision of resources such as space, money, equipment or supplies.

4. Having supervisory responsibility over an investigator who is an employee or student.
Guidelines for Submission of the Scholarship Project

The final project of the Scholarly Project can be submitted in the following formats:

- Publication in Scholar Works via electronic submission.
- Publication in a peer-reviewed journal.
- Presentation of a bound hard copy to the PAS Department and GVSU Library.

**Publication in Scholar Works via Electronic Submission.** Student(s) will work with the research chair to submit the final product to Scholar Works.

**Publication in a Peer-Reviewed Journal.** Student(s) will work with faculty in submitting the final product to a journal according to the instructions for that journal. If accepted, the publication will be referenced in Scholar Works.

**Production of a Bound Hard Copy to the PAS Department.** The hard bound copy submission will follow the GVSU Library guidelines:

1. Once your project is complete, you may have your project wire or comb bound with a plastic front and back cover at the location of your choice. Then, deliver one bound copy of the project for the Library’s Collection Service. A receipt will be issued upon receipt of your materials. You will present it to the PAS Director of Research to verify compliance and completion of the requirement.

2. **Places to have your project printed and bound:**

   - **Option A:** Take a copy to the University Book Store (DEVOS BLDG C or KIRKHOF CENTER). There you will pay for copies & binding (.10 cents a page or .5 cents a page if over a 100 pages, binding $4 per item). The bookstore will send it to the GVSU copy center for processing. Processing time varies as to when you will get it back. [http://www.ubs.gvsu.edu](http://www.ubs.gvsu.edu)
   - **Option B:** Crop Marks Printing, 128 Coldbrook St. NE, Grand Rapids, MI 49503. Binding costs $4.50, they also make photocopies. Hours: M-F 8am – 6pm. PDF files work the best. Usually can do it while you wait, or order online and pick it up when ready at their website: [http://www.cropmarksprinting.com/gvsu-students.php](http://www.cropmarksprinting.com/gvsu-students.php) Phone: 616.356.5555, email: orders@cropmarksprinting.com
   - **Option C:** FedEx Office Print & Ship Center (use to be Kinkos), 233 Fulton St., Grand Rapids, MI 49503. Binding cost $5.49 +tax, copies .12 cents each. Open seven days a week. Usually can do it while you wait, or order online and pick it up when ready at their website: [www.fedex.com/us/office/](http://www.fedex.com/us/office/) Phone: 616-336-1900, E-mail: USA5394@FEDEX.COM
Presentation Information

PRESENTATION GUIDELINES

These guidelines apply to any presentation that you may give to any audience within and outside this program: class presentations, clinical in-services, and research presentations.

1. Most people find it difficult to grasp complex, technical concepts from verbal explanations alone. For that reason, you must use audio-visual (A-V) materials when you present research.

2. Handouts for the audience and/or abstracting your study findings may be helpful as well.

3. Whether you use slides, film, video or an overhead projector; you should strive to highlight the essential ideas of your material in the simplest form possible. Visual images and sound leave lasting impressions that reinforce the points you wish to make. The net effect is a more involved, satisfied, and attentive audience.

4. Choose your aids to reach that particular intended audience, and to accommodate the size of the arena in which you will present. For example, where the room is small and your audience is knowledgeable about your material and also seated very close, (e.g. during the defense of your thesis or in class) you may wish to use overheads, or a video presentation and a lot of technical information. However, when you address a large audience that includes lay people and takes place in an auditorium, (e.g. Research Forum) you may choose to use simple overheads that outline and illustrate your main ideas, and you may address your audience with less technical information, keeping jargon to a minimum.

5. Try to create a professional impression with the materials you use for formal presentations (e.g. your Defense, the Research Forum, poster presentation at conferences). Please direct your questions to the faculty in your program for assistance with this on campus.

6. Finally, you should always test your A-V aids in the room that will house your presentation, as far in advance as possible. Of course, to avoid unpleasant surprises, you will also need to test your equipment again on the day of your presentation.

7. Additional resources follow in this appendix and are available in the HPR library.
Presentation Information

Adapted and modified from Beth E. Salo, P.T.
Contributing editor/Consultant

At some point in their career, most clinicians will be required to participate in some form of public speaking. Possibilities include in-services, addressing civic groups, presenting research, or even teaching classes. Many people understandably feel nervous in those situations. There are, however, some basic guidelines that, if followed, can make the experience successful, rewarding, and maybe even fun! These guidelines are just that—guidelines. As you become more experienced, you will find your own ways of preparing and speaking.

There are two main aspects to giving a public speech that need to be included: Preparing and Presentation. These two areas are equally important in giving a successful speech. Neglect one of these areas, and your speech may be a disaster. I have found, through much experience, that if I have both of these areas under control, I can relax and enjoy myself.

Preparation. If you are not ready to give the speech, there is no way you will present it well. There are several areas that are included in preparation.

First of all, pick an interesting topic. If the topic has been chosen for you, find a unique approach to it. One way or another, you need to be interested in your topic so that you can make it interesting to someone else. If the topic is one that seems worn out, find a new approach to it. For example, if giving an inservices on body mechanics and transfers, use superman for an illusion. Use your imagination, and see what comes out. One final note: for inservices that have voluntary attendance, a catchy title may help.

Next, do your research. You need to know enough about the subject to tell your audience something new or give them a new perspective. You also need to be able to answer questions or refer them to the proper source to have their questions answered. Who knows, you may find some obscure fact in your research that makes the speech exceptional.

Write out your speech. If you are inexperienced in public speaking, I suggest you write your speech out word for word. Make sure that you use appropriate anecdotes, but unless you are good at humor, don’t overdo it. Also keep in mind that you need some subtopics if you are going to speak for more than 20 minutes. Twenty minutes is considered the length of a person’s attending span for one subject. You will lose most of your audience if you continue on the same subject for longer than those twenty minutes. Once you have written the speech, go back and reread it, then rewrite it. If it doesn’t look good on paper, it won’t sound good either.

Practice, practice, practice! Practice may not make it perfect, but it will come pretty close. The only way you will know how the speech is going to sound is to practice out loud. You can practice in a mirror, in an empty room, or with a close friend. As you practice, you can edit the speech also. The better you know your speech, the more confidence you will have when you present it. When you feel like you know the speech better, practice some more. You may take an outline with you when you are going to give the speech, if necessary, but it is best to be able to your
speech without one. Knowing your speech well, will also allow you to be more spontaneous while presenting. You will be able to change the order of your subtopics, if needed. It will also enable you to deal with the unexpected. For example, during a play I was once in, a major part of the set simply fell down. The cast immediately set it back up and invented dialog to work it into the play. Some people in the audience never realized that it was not planned!

_Presentation_ – It will be to plan ahead for some areas of your presentation, but if you are confident your presentation will flow more easily. Again, there are several areas, which need attention when thinking and doing your presentation.

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<td>Attire</td>
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<td>Don't forget</td>
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First of all, dress nicely. Your clothes should be neat and conservative. If you normally like to "dress flashy", calm it down a bit or your presentation or you will get much more attention than your speech. And make sure your clothes are neatly pressed.

Don't fidget, but also don't be a statue or a pendulum. Use only natural gestures. Don't add a gesture just to gesture; the audience will recognize the reason behind it immediately. This idea relates back to knowing your speech. You are less apt to act nervous if you are confident in what you're saying.

Maintain eye contact. This may be the hardest part of presenting a speech, but it is one of the most important areas. If you are looking at them, the audience will feel included and pay more attention to what you are saying. Eye contact will also give you invaluable clues as to how your audience is responding. If they all look bored, perhaps now would be a good time to have a subtopic introduced or to give an anecdote. Again, this relates back to knowing your speech well to allow for spontaneity. You also can maintain eye contact better if you don't require notes while giving your speech. Also don't turn your back on your audience while you are speaking.

Use varied tones of voice and pace yourself. Vary the tone of your voice with what you are talking about for emphasis. Using your voice to its full advantage will capture your audience's attention and keep it. Pacing is also important. If you talk too slow, you will lose them and if you talk too slow, you will put them to sleep. Remember – practice beforehand!

Finally, use appropriate visual aids. Don't overdo, but visual aids can give an added dimension to your speech. Visual aids include slides, overheads, posters, demonstrations, etc.

Does public speaking have you running scared? Remember the two areas of preparation and presentation, follow the guidelines, and experience the tremendous satisfaction and feelings of accomplishment when speaking publicly. You can do it!
Guidelines for Content of Platform Presentations

College of Health Professions
Grand Valley State University

1. See “Some Do’s & Don’ts for a Successful Podium Presentation” in your research handbook for general guidelines. Also see “Critiquing and Preparing a Platform Presentation,” an APTA video located in the CHP library.

2. Generally, for a 12-minute oral presentation you should work with your research chair to establish the appropriate number of slides for your presentation; including the title and thank-you/acknowledgement slides. Your content slides must be well organized and concise!

3. Your slides should include the following items:
   a. Concise background/review of literature
   b. Statement of problem & purpose statement (hypothesis statement not necessary)
   c. Methodology & data analysis
   d. Results
   e. Concise discussion/conclusion, including clinical relevance
   f. One or two recommendations for future research (not a shopping list)

Notes: A public professional presentation is not an oral defense so you need to be concise and unhurried; in other words, you should not present all of your data but only the most important results. It is not appropriate to present the limitations of your work, but you need to be prepared to answer questions regarding them.
Appendix A
Example of Title Page
CLINICAL ANTECEDENTS TO IN-HOSPITAL CARDIOPULMONARY ARREST AFTER INSTITUTION OF A RAPID RESPONSE TEAM

By

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RESEARCH PROJECT

Submitted to the Physician Assistant Program at Grand Valley State University
Grand Rapids, Michigan
in partial fulfillment of the requirements for the degree of

MASTER OF PHYSICIAN ASSISTANT STUDIES (MPAS)
2011

Thesis Committee/Research Advisor Approval:

__________________________
Chair: Theresa Bacon-Baguley RN, PhD          Date

__________________________
Member: James Barron, MD                      Date

__________________________
Member: Muhammad Waqas Athar, MD              Date
Appendix B
Check List for Faculty Chairs
Checklist for the Scholarly Project Required for the Master of Science Degree in Physician Assistant Studies Program

_____ Fall of First Professional Year: Enroll in PAS 580
   _____Formulate research problem, review related literature and develop initial research question.
   _____If electing to complete a clinical case report or case study format for your scholarly project, you need to meet with your faculty chair to formulate a literature review for the areas you are interested in.
   _____If you elected to complete a service-learning project, you will complete a literature review on your service-learning field.

_____ Winter of First Professional Year: Enroll in PAS 605
   _____Meet with research chair (Chairperson must be a faculty member in the Physician Assistant Studies Program).
   _____Submit Research Project contract to Research Coordinator
   _____Select 2 other committee members in consultation with chairperson.
   _____Submit Request for Supervisory Committee form to research chair and research coordinator.
   _____Complete a rough draft of Chapters 1-3

_____ Spring/Summer of First Professional year: Enroll in STA 610
   _____Meet with Chairperson at the beginning of the semester to identify and coordinate work for the semester.
   _____Defend project
   _____Submit to appropriate IRBs.

_____ Fall/Winter of Second Professional Year
   _____At the beginning of the semester meet with chairperson and develop a plan for the work to be completed during the semester.
   _____Collect data
   _____Revise chapters 1-3 of your project (change tense as appropriate)
   _____Discuss data with chairperson and committee
   _____Analyze data
   _____Write chapters 4-5
   _____Obtain chairperson’s approval for distributing project/thesis draft to committee members allowing at least two weeks for review before the defense
   _____In consultation with chairperson, schedule meeting for final approval of project.
   _____Present your scholarly project at one non-GVSU forum.
   _____Submit your scholarly project to the library following the library guidelines. The library will give you a written confirmation of submission, which is to be turned in to the PAS Research Coordinator.
   _____Submit a bound copy to the PAS office
   _____Provide copies of your scholarly project to committee members.
Appendix C
Example of Chapter 1
CHAPTER 1
INTRODUCTION

Background

At least 44,000 people or as many as 98,000 people, die in hospitals each year as a result of medical errors that could have been prevented, according to estimates from two major studies. Many experts agree that 50-70% of adverse events that occur in hospitals could be prevented. The concept of failure to rescue describes failure to distinguish changes in a patient’s condition until serious complications, including death have occurred. Failure to rescue often occurs not only because of failure to recognize a problem, but also a failure to appropriately communicate the problem, along with inadequate assessment and treatment of the problem. Failure to rescue does not imply negligence or wrongdoing, but a failure in the health care system to properly educate and manage physiological changes of patients.

In a hallmark study published in 1990, Schein et al identified clinical antecedents which if identified early could lead to the prevention of cardiopulmonary arrest. Cardiopulmonary events are preceded by warning signs on average of 6 to 8 hours before arrest. Based on these findings, it was concluded that if recognition of physiological instability in a non-critical care setting occurred, then an appropriate health care provider could be dispatched to the bedside and intervene early enough to prevent a critical event. Thus the Rapid Response Team (RRT) was born. While a cardiac arrest team responds to the “now”, a RRT is proactive. In most hospitals, the RRT is composed of caregivers (nurses, physicians, respiratory therapists, and other health care providers) who are called...
to respond to established criteria within the institution, that indicates physiological
instability in a patient. The antecedents, which were identified by Schein et al, included
physiologic abnormalities such as changes in cardiac function, respiratory function,
metabolic parameters, and clinical manifestations.

Nearly 15 years later, the Institute for Healthcare Improvement published its
“Saving 100,000 Lives Campaign” which included the implementation of a Rapid
Response Team (RRT) as 1 of the 6 lifesaving strategies. The campaign was initiated in
response to the knowledge that every day unnecessary deaths occur in our hospitals. The
main strategy in the development of the RRT was to identify and treat patients who have
physiological deteriorations prior to developing a cardiac or respiratory arrest. The RRT
is a way to bring critical care experience to the bedside. In recognition of the signs and
symptoms of physiological instability and activation of a team of clinicians who come to
the bedside for direct evaluation, early intervention may lead to a decrease in in-hospital
mortality and a decrease in morbidity from a cardiac arrest. Activation of a RRT often
utilizes the SBAR communication system. The SBAR acronym is as follows: S-situation
of the patient, B-background on the patient, A-assessment of the patient, and R-
recommendation for the patient’s treatment. The SBAR tool is helpful for the nurse
activating the RRT to ensure the proper information is given.

The RAP (Rapid Response Process) team at Spectrum Health is comprised of a
critical care RN, an internal medicine physician, and a respiratory therapist. The RAP
team was implemented to provide urgent evaluation and intervention in a patient with a
declining medical condition when an attending physician is not immediately available.
The team is available 24 hours a day and 7 days a week. The RAP team evaluation is
consulted regardless of a patient’s code status. The team is implemented when there is one of the following indicators of physiologic deteriorations: change in heart rate, blood pressure, respiratory rate, oxygen saturation, mental status and/or intuitive feeling that something is not right. The team must respond within 10 minutes to implementation. To encourage utilization of the RAP team, nurses at Spectrum Health were given pocket cards describing when to initiate the team (Appendix A). The purpose of this study is to evaluate the 24 hours prior to a cardiac arrest to determine if there are other antecedents, which may indicate an impeding cardiopulmonary arrest. In addition, this study will gather data to determine the utilization of the RAP in patients who had a cardiopulmonary arrest.

**Problem Statement**

There is little data to evaluate the utilization of the Rapid Response Teams prior to cardiopulmonary arrest at Spectrum Health-Butterworth campus. An analysis of information in the 24 hours prior to cardiopulmonary arrest may identify if the RAP was utilized, as well as identify other physiologic identifiers, which are indicative of a decline in health status.

**Aims of Study**

The intent of this retrospective study is to identify the use of the RAP prior to a cardiopulmonary arrest and to identify other physiological parameters, which indicate impending cardiopulmonary arrest.

**Significance of Study**
Evaluation of the antecedent events 24 hours prior to cardiopulmonary arrest will allow for analysis on the use of the RAP team. The results of this study may implicate a change in the utilization of the RAP team, which may decrease morbidity and mortality.

**Research Questions**

In the 24 hours prior to cardiopulmonary arrest:

- In the 24 hours prior to the cardiopulmonary arrest, were there any physiological changes in the patient documented?
  - If so, what was done about these changes?

- Was the RAP notified regarding a change in the patients’ physiologic status?
  - If the RAP was notified what was the intervention and outcome?

- Were there any physiologic indicators (other than those which are on the current RAP protocol), which indicate impending cardiopulmonary arrest?
Appendix D
Defense Requirements Handout
A Review of the Research Requirements

You are required to complete public presentations of your Scholarly Project on two separate occasions (NOT including the defense). Those presentations include:

a. GVSU PAS Student Research Day: December 2014

b. Non-GVSU Venue: examples include
   1. MAPA
   2. PAEA
      • October 15-19, 2014 (Philadelphia)
   3. AAPA
      • Boston May 24-28, 2014
      • http://www.aapaconference.org/

4. GRMEP Community Research Day
   • Wednesday April 23, 2014
   • Submission Deadline: February 14, 11:59 pm
   • https://www.grmep.org/research-support/index.html

5. 7th Annual IPE conference- September 18 and 19, 2014
   • Submission Deadline: Midnight, June 27th, 2014
     (Eastern Standard Time)
- [http://www.gvsu.edu/wmipei/annual-conference-5.htm](http://www.gvsu.edu/wmipei/annual-conference-5.htm)

6. University of Toledo Midwest Graduate Student Research Symposium - March 29, 2014
- [http://utoledogsa.com/midwest-graduate-research-symposium/](http://utoledogsa.com/midwest-graduate-research-symposium/)
Defense of Your Scholarly Project

How to Set Up the Defense
(Power Point Presentation)

- You should be working with your research chair on finalizing your written copy of your research project to produce a "semi-final" copy.

- Supply all committee members a copy of your “semifinal” copy of your research project. At that time ask the members of your committee for available dates for the defense.

- Once you have a common meeting time, inform your research chair so that a room and equipment can be reserved. (you will need to contact event services to reserve a room: www.gvsu.edu/eventservices)

- Notify all committee members and the PAS Director of Research (Theresa Bacon-Baguley) of the date, time and location of the defense at least one week (preferably 2 weeks) before the defense is going to take place
Day of the Defense

1. Bring to the defense
   - Grading criteria (PAS 689) located in your research handbook
   - Cover sheet of the thesis/project for committee members to sign upon completion of the defense (10 copies)
   - Handouts of the presentation for the committee members and others attending the defense

2. Dress Professional

3. Arrive 30-40 minutes early to run through your presentation on the computer supplied by GVSU.

4. When the defense is to begin, the research chair will introduce the students and the title of the presentation. In addition, the research chair will describe the sequence of events to occur during the defense:
   - There will be a 40-45 minute oral presentation by the students defending
   - Following the presentation there will be a question and answer period where the committee and the audience may ask questions.
   - Following the question and answer period, the audience (excluding the committee) and students presenting will be asked to leave the room
   - The committee will discuss between themselves the presentation, which the students completed and fill out the grading sheet.
   - After the committee has discussed the performance of the students, the students will be asked to return to the room and they will be informed of any comments or concerns and the grade they received.
5. Once the defense is completed, the students will obtain signatures from the committee members. In addition, students need to make the corrections (if needed) to their ‘semi-final’ copy of their project.

6. The final project of the Scholarly Project can be submitted in the following formats:
   - Publication in Scholar Works via electronic submission.
   - Publication in a peer-reviewed journal.
   - Presentation of a bound hard copy to the PAS Department and GVSU Library.
   If you select to produce a hard copy, you need to make bound copies of your project for:
     - Each committee member ~3
     - PAS department (with original signatures) 1
     - Library* 1
     - Each student receives own copy ~3

   White 20 pound bond paper must be used in the copies.

   The project should be bound in the following manner: velo vinyl black front and back cover, black strip, window in the front cover and plastic sheet behind it.

   In addition to the title page, you need to have a first page with title, author, and date able to be seen through the plastic window.

8. Final research grade will not be granted until a final copy is turned into the PAS Department (TBB).