Caruth School of Dental Hygiene

Dallas, Texas

DDHS 4715: Research Methods

Fall 2016

Course Director:
Faizan Kabani, RDH, MHA, MBA

Course Number and Name: DDHS 4715 / Research Methods
Academic Year/Semester Offered: 2016-2017, Fall Semester
Course Meeting Details: Tuesdays, 10am-12pm in Room 310
Course Type: Lecture and Independent Study Hybrid
Learning Format: Traditional Didactic, Online EBDM Courses, Group Discussion, Case-Based Scenarios, Exercises, Use of Computerized Technology, and Electronic Databases*. *Diverse educational instruction techniques will be employed to maximize student learning.

Course Director: Faizan Kabani, RDH, MHA, MBA (Kabani@bcd.tamhsc.edu)
Suite 136
214.828.8483 Office
214.874.4525 Facile
Office Hours: Please email for all appointment requests

Other Participating Faculty Mentors:
Eric Fox, RDH, MS
Jane Cotter, RDH, MS
Kathleen Muzzin, RDH, MS
Leigh Ann Wyatt, BSDH, MA, MS
Lisa Mallonee, BSDH, MPH, RD, LD
Mary Vu, RDH, MS
Patricia Campbell, RDH, MS

Other Guest Speakers/Lecturers:
Emet Schneiderman, PhD
Eric Solomon, DDS
Joyce McFadden, MLS

Course Description:
This course is designed into two, complimenting, sections that aim to help students understand the research process and how it applies to evidence-based practice. The first section focuses on topics including overviewing the research process and scientific method, the use of library resources, research designs and levels of evidence, biostatistics, dissemination and implementation of health sciences research, and critically evaluating published research. The second section encompass an independent study mode where students collaborate with assigned faculty mentors for their research narrative, table clinic development, & participate in at least one journal club. The course emphasizes the student’s application of research principles enabling them to become prudent consumers of literature.

Course Goals
1. To provide the dental hygiene student with the fundamental knowledge of scientific methodology employed in contemporary oral health care research.
2. To develop the dental hygiene student’s appraisal skills when critically reviewing research proposals and current scientific publications.
3. To facilitate the dental hygiene student’s intellectual exploration throughout the scientific process leading up to table clinic presentation of research findings.

Course Objectives
By the end of the course, the student will be able to:
1. Explain how research informs knowledge development and daily practice.
2. Differentiate between sources of human knowledge relative to research approaches.
3. Explain how evidence-based approach enhances critical thinking & professional decision-making.
4. Describe the scientific method and research process and its relevance to health care.

**Proficiency-Based Learning Objectives (PBLO)**

5. Gain an appreciation for the role of research in evidence-based oral health practice.
6. Evaluate the merits and limitations of oral health care research articles by applying the concepts of research design and methodology.

**MODULE I: Introduction to Research**

**READING ASSIGNMENT:** Frantsve (Ch. 1), Nathe (Ch. 14), & Polgar (Sect. 1)

**EDUCATIONAL OBJECTIVES:**

By the end of the module, the student learner will be able to:

1. Define research and describe the purpose of conducting research in health sciences.
2. Describe the various forms of research including basic, applied, evaluation, and action.
3. Explain steps of the scientific method and its application in health sciences research.
4. Differentiate between the deductive and inductive approaches to reasoning.
5. Compare and contrast qualitative versus quantitative approaches to research.
6. Define health and identify factors influencing the social context of health.
7. Outline and discuss the standardized research process.
8. Describe the fundamentals of a research question and hypothesis.
9. Identify current and relevant themes/topics on the ADHA research agenda.
10. Discuss the PICO & FINER criterion in the context of formulating research questions.

**MODULE II: Orientation to Library Resources**

**READING ASSIGNMENT:** Darby (Ch. 2), Frantsve (Ch. 3-4), & APA Manual

**EDUCATIONAL OBJECTIVES:**

By the end of the module, the student learner will be able to:

1. Identify the purposes and advantages of utilizing library resources in conducting research.
2. Identify key search terms using the components of a PICO research question.
3. Navigate diverse institutional computerized databases for informational retrieval.
4. Describe and apply advanced search features in conducting efficient literature searches.
5. Discuss how to utilize Boolean operators (AND, OR, and NOT) to combine search terms.
6. Articulate the process for detecting the credibility and timeliness of various resources.
7. Discuss how to use advanced filter features to assist in finding highest levels of evidence.
8. Compare and contrast diverse generalized citation styles including APA, AMA, & NLM.
9. Articulate the ‘Researcher’s Oath’ and its universal applicability in conducting research.
10. Apply the ‘Aggie Honor Code’ & principles of academic honesty in conducting research.
MODULE III: Legal & Ethical Concerns in Research
READING ASSIGNMENT: Darby (Ch. 4), Polgar (Sec. 2), & Nathe (Ch. 15)
EDUCATIONAL OBJECTIVES:
By the end of the module, the student learner will be able to:
1. Define and differentiate therapeutic and nontherapeutic research.
2. List the various ethical and legal considerations for research involving human subjects.
3. Identify responsibilities of the principal investigator engaged in human experimentation.
4. Define the purpose of the institutional review board for the protection of human subjects.
5. List problems indigenous to the review process in human experimentation.
6. Identify major historical examples of domestic and international research studies that failed to appropriately protect human subjects.
7. Discuss the guidelines for using human subjects in the context of oral health research.
8. Discuss the diverse components and procedures surrounding informed consent.
9. Articulate the significance of calculating risk versus benefit in research.
10. Discuss the ‘Hawthorne Effect’ and its potential implications in research.
11. Describe the steps indicated for maintaining confidentiality of research records.

MODULE IV: Research Designs & Levels of Evidence
READING ASSIGNMENT: Darby (Ch. 6), Frantsve (Ch. 2), Nathe (Ch. 16 & 18), & Polgar (Sec. 3)
EDUCATIONAL OBJECTIVES:
By the end of the module, the student learner will be able to:
1. Explain the rationale and multidimensional features of a research design.
2. Differentiate between primary and secondary research.
3. Differentiate between qualitative and quantitative research.
4. Compare and contrast diverse research designs including experimental, quasi-experimental, non-experimental, and review-based designs.
5. Compare and contrast diverse study designs including retrospective, prospective, cross-sectional, case study, case-control, cohort, and experimental designs.
6. Differentiate between random selection and random assignment.
7. Identify the merits and limitations of various research designs and studies.
8. Describe the implications associated with the placebo effect.
9. Articulate the hierarchical levels of evidence in research designs.
10. Differentiate between dependent, independent, and extraneous variables.
11. Identify criteria used to indicate a causal relationship between variables.

MODULE V: Data Acquisition & Measurement Scales
READING ASSIGNMENT: Darby (Ch. 5, 7-8), Nathe (Ch. 16 & 18), & Polgar (Sec. 2-4)
EDUCATIONAL OBJECTIVES:
By the end of the module, the student learner will be able to:
1. Identify the primary objective in data acquisition.
2. List the various types of sources for data collection.
3. Discuss the purposes of sampling and its associated typologies.
4. Differentiate discrete and continuous data measurements.
5. Compare and contrast the different types of measuring indices and scales.
6. Identify the purpose and applicability of dental indices in oral health research.
7. Define and discuss internal/external validity and its associated threats.
8. Define and discuss intra/inter observer reliability and its associated threats.
9. Describe methods used to improve validity/reliability in measuring instruments.
10. Differentiate sensitivity and specificity as diagnostic quality measurements.
11. Describe the overall purpose and significance for regular calibration exercises.

**MODULE VI: Introduction to Biostatistics**

**READING ASSIGNMENT:** Darby (Ch. 9), Frantsve (Ch. 7), Nathe (Ch. 17), & Polgar (Sec. 5-6)

**EDUCATIONAL OBJECTIVES:**

By the end of the module, the student learner will be able to:

1. Explain the value of understanding statistics as a probability tool in research.
2. Define indigenous terms in statistics including statistic, descriptive statistics, inferential statistics, degrees of freedom, statistical significance, alpha level, tests of significance, measures of association, parametric, non-parametric, and central limit theorem.
3. Define mean, median, mode, range, variance, and standard deviation according to their characteristics, indications, advantages, limitations, and computations.
4. Differentiate parametric & non-parametric tests including their features & assumptions.
5. Differentiate between bar graphs, histograms, frequency polygons, and scattergrams.
6. Explain the characteristics of a standard normal ‘bell’ curve distribution.
7. Compare and contrast various non-normal curved distributions including positive-skew, negative-skew, one-tailed, and two-tailed distributions.
8. Define and differentiate descriptive and inferential statistics.
9. Differentiate between the concepts of causation and correlation.
10. Differentiate between positive and negative correlations.
11. Interpret the meaning of a correlation coefficient in a given situation.
12. Define and discuss post hoc fallacy in research.
13. Describe the steps in hypotheses testing.
15. Explain the significance of Type I and Type II errors in statistical decision-making.
16. Explain the characteristics, assumptions, and indications for diverse statistical tests including t-test, ANOVA, Chi Square, Mann-Whitney U-test, Sign and Wilcoxon Matched-pairs, and Spearman rank-order correlation coefficient.
17. Differentiate between data analysis and interpretation.

**MODULE VII: Dissemination & Implementation**

**READING ASSIGNMENT:** Darby (Ch. 10), Frantsve (Ch. 8-9), Nathe (Ch. 20), & Polgar (Sec. 7)
EDUCATIONAL OBJECTIVES:
By the end of the module, the student learner will be able to:

1. Define the function of translational research in the discovery-delivery continuum.
2. Identify the primary goal of dissemination and implementation science.
3. List the significances of dissemination as a service at both the public and personal level.
4. Describe what the ADA’s Council on Journalism considers a successful publication.
5. Identify the primary mode for transmitting professional knowledge.
6. Compare and contrast the responsibilities of an editorial board and journal referees.
7. Discuss the principles utilized in selecting a journal for potential publication.
8. Compare and contrast the research publication and process.
9. Explain the referee system for the review of potential manuscripts.
10. Articulate the process in which research papers are selected for publication.
11. Describe the different signposted components of a research report.
12. Discuss the characteristics of favorable tables & figures in a scientific literature.
13. Discuss the factors considered when planning and delivering an oral presentation.
14. Identify several communication techniques for effective oral presentations.
15. Discuss the principles of effective media utilization for presenting research.
16. Discuss approaches for effectively responding to questions following oral presentations.
17. Differentiate between the diverse writing types styles and their contextual use in research.
18. List the reference texts essential for improving professional oral and writing skills.
19. Identify and improve upon common writing errors.
20. Identify and discuss the importance of professional attire for oral presentations.

MODULE VIII: Evaluating Published Research
READING ASSIGNMENT: Darby (Ch. 11), Nathe (Ch. 20), & Polgar (Sec. 7)
EDUCATIONAL OBJECTIVES:
By the end of the module, the student learner will be able to:

1. Define and discuss the purposes of a research critique.
2. Discuss the reasons for evaluating research reports.
3. Define the role and responsibility of the critic.
4. Discuss the parts of the research report/article and what is included in each section.
5. Outline the criteria utilized to critically analyze professional literature.
6. Identify specific questions asked by critics when evaluating professional literature.
7. Discuss implications of finding problems in research design, measurement, and analysis.
8. Apply principles of research methods & scientific writing when evaluating articles.
9. Discuss the implications of critical evaluation of research for health care practices.
10. Identify strategies for summarizing and analyzing evidence from a set of papers.
11. Identify weaknesses in a written professional communication which might lead the critical reader to question the validity or reliability of the contents.
12. Describe how to evaluate dental care products.
13. Defend the dental hygienists’ value in advocating the use of effective dental care products and treatment modalities.
14. Educate the public in evaluating dental care products.
15. Effectively critique dental research reported in dental and lay publications.
Learning Outcomes/Competencies:

**COMPETENCIES FOR THE DENTAL HYGIENIST**

<table>
<thead>
<tr>
<th>Domain I – Professionalism</th>
<th>Section 1: Ethics</th>
<th>Section 1.1: Apply ethical reasoning to dental hygiene &amp; practice with professional integrity.</th>
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</thead>
<tbody>
<tr>
<td>Section 2: Information Management &amp; Critical Thinking</td>
<td>Section 2.1: Apply critical thinking skills &amp; evidence based decision making to the practice of dental hygiene. Section 2.2: Commit to self-assessment &amp; lifelong learning in order to provide contemporary clinical care. Section 2.3: Effectively communicate with diverse populations without discrimination. Section 2.4: Employ the principles of scientific writing.</td>
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<tr>
<td>Section 3: Professional Identity</td>
<td>Section 3.1: Prepare for career opportunities within health care, industry, education, research, &amp; other roles as they evolve for the dental hygienist. Section 3.2: Advance &amp; promote the values of the profession through leadership, service activities &amp; affiliation with professional organization. Section 3.3: Contribute towards the knowledge base of the dental hygiene profession.</td>
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**Domain II – Health Promotion & Disease Prevention**

| Section 5: Community Involvement | Section 5.3: Influence the public (consumer groups, businesses and government agencies) to support important health care issues. |

*Refer to the Caruth School of Dental Hygiene’s “Competencies for the Dental Hygienist” for details.

**Evaluation Criteria/Methods:**

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<tr>
<th>ASSESSMENT CATEGORIES</th>
<th>PROPORTIONATE VALUE</th>
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<tr>
<td>Examination I</td>
<td>25%</td>
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<tr>
<td>Examination II</td>
<td>25%</td>
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<tr>
<td>Journal Club</td>
<td>20%</td>
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<tr>
<td>Table Clinic Development</td>
<td>30%</td>
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**Grading Scale:**

A = 90-100  B = 80-89  C = 75-79  D = 70-74  F = <70

**Remediation Policy:**
If the student is eligible, remediation will occur in the subsequent Spring semester.
Learning Materials:

| REQUIRED RESOURCES | Dental Public Health & Research (4th Ed.)  
Author: Christine Nathe  
Published: 2017  
ISBN: 978-0-13425-546-0  
| Introduction to Research in the Health Sciences (6th Ed.)  
Authors: Stephen Polgar and Shane Thomas  
Published: 2014  
| RECOMMENDED RESOURCES | Evidence-Based Dentistry for the Dental Hygienist  
Edited by Julie Frantsve-Hawley  
Published: 2014  
ISBN: 978-0-86715-646-1  
| Research Methods for Oral Health Professionals  
Authors: Michele Darby and Denise Bowen  
Published: 1986  
ISBN: 0-8016-1207-1  
Reserved as reference material in school library |

Attendance and Make-up Policy:
There is no attendance policy but it is to your advantage to attend the lectures, participate in class discussions and hear announcements. You must take the exams according to the published schedule. Illness must be documented by a doctor’s excuse. If a problem arises, discuss it with the course instructor before the examination. For University excused absences, refer to Student Rule 7 for details. For an excused absence, a missed exam must be made up within one week of the excused absence.

Laboratory/Clinic Policies and Procedures: Not applicable.

Special Accommodation for Persons with Disabilities:
The Americans with Disabilities Act is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Associate Dean for Academic Affairs in charge of Disability Services, Room 514, or call 214-828-8208 for more information.

Academic Integrity Statement and Policy:
“An Aggie does not lie, cheat or steal, or tolerate those who do.”
Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the honor Code, to accept responsibility, and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the TAMU community from the requirements or the processes of the Honor System.
### TENTATIVE CLASS SCHEDULE (Fall 2016)
**DDHS 4715: Research Methods**

<table>
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<tr>
<th>SESSIONS</th>
<th>LEARNING MODULES</th>
<th>ADDITIONAL INFORMATION</th>
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| **Week 1** 8/16/2016 | **Course Overview:**  
  - Syllabus, Rubrics, & Expectations  
  - Journal Club Requirements  
  - Research Narrative Requirements  
  - Table Clinic Expectations | **Pre-Reading Materials:**  
  -Frantsve (Chapter 1)  
  -Nathe (Chapter 14)  
  -Polgar (Section 1) |
| **Introduction to Research:**  
  - Foundations of Research  
  - Evidence-Based Dentistry  
  - Scientific Methodology  
  - Research Process Overview  
  - Research Question & Hypothesis  
  - PICO and FINER Criteria  
  - ADHA Research Agenda | **ACTION ITEMS:**  
  - Identify Research Topic  
  - Identify Research Partner  
  - Submit Topic by Sept 1st |
| **Week 2** 8/23/2016 | **Orientation to Library Resources:**  
  - Workshop with the Modern Librarian  
  - Computerized Information Retrieval  
  - Detecting Source Credibility/Timeliness  
  - Utilizing Institutional Databases  
  - Generalized Citation Style Lab  
  - Universal Code: A Researcher’s Oath  
  - Upholding the Aggie Honor Code | **Pre-Reading Materials:**  
  -Darby (Chapter 2)  
  -Frantsve (Chapters 3-4)  
  -APA Manual |
| **GUEST SPEAKER:**  
Joyce McFadden, MLS  
Public Services Librarian  
Health Sciences Library | |
| **Week 3** 8/30/2016 | **Legal & Ethical Concerns in Research:**  
  - Informed Consent & Confidentiality  
  - Human Experimentation  
  - Risk vs. Benefit Considerations  
  - Institutional Review Board  
  - Council on Dental Research | **Pre-Reading Materials:**  
  -Darby (Chapters 4 & 6)  
  -Frantsve (Chapter 2)  
  -Nathe (Chapter 15)  
  -Polgar (Section 2-3) |
| **Research Design & Levels of Evidence:**  
  - Primary vs. Secondary Research  
  - Qualitative vs. Quantitative Approaches  
  - Diverse Research Designs & Studies | **GUEST SPEAKER:**  
Emet Schneiderman, PhD  
Professor & IRB Chair  
Biomedical Sciences |
<table>
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<tr>
<th>Week 4</th>
<th>9/6/2016</th>
<th>EXAMINATION I</th>
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<tr>
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<td>Review Modules:</td>
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<td>- Introduction to Research</td>
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<td>- Orientation to Library Resources</td>
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<td>- Legal &amp; Ethical Concerns</td>
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<td>- Design &amp; Levels of Evidence</td>
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<td>ACTION ITEMS:</td>
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<td>- Schedule appointment with Mr. Kabani for research topic. (Submit Annotated Bibliography)</td>
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<tr>
<th>Week 5</th>
<th>9/13/2016</th>
<th>Data Acquisition &amp; Measurement Scales</th>
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<td>- Data Collection &amp; Sourcing</td>
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<td>- Sampling Typologies &amp; Techniques</td>
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<td>- Data Measurement Indices &amp; Scales</td>
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<td>- Validity &amp; Reliability</td>
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<td>- Sensitivity &amp; Specificity</td>
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<td>- Significance of Calibration</td>
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<td>Pre-Reading Materials:</td>
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<td>- Darby (Chapters 5 &amp; 7-8)</td>
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<td>- Frantsve (Chapter 7)</td>
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<td>- Nathe (Chapter 16 &amp; 18)</td>
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<td>- Polgar (Sections 2-4)</td>
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<th>Week 6</th>
<th>9/20/2016</th>
<th>Introduction to Biostatistics:</th>
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<td>- Parametric vs. Non-Parametric Tests</td>
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<td>- Measures of Central Tendency</td>
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<td>- Normal &amp; Non-Normal Distributions</td>
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<td>- Selection &amp; Use of Statistical Tests</td>
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<td>- Significance of Type I &amp; II Errors</td>
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<td>- Descriptive &amp; Inferential Statistics</td>
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<td>- Understanding Hypothesis Testing</td>
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<td>- Statistical &amp; Clinical Significance</td>
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<td>- Data Analysis &amp; Interpretation</td>
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<td>- Polgar (Sections 5-6)</td>
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<td>GUEST SPEAKER: Eric Solomon, DDS</td>
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<td>Professor &amp; Executive Director</td>
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<td>Public Health Sciences</td>
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<th>Week 7</th>
<th>9/27/2016</th>
<th>Dissemination &amp; Implementation:</th>
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<tr>
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<td>- Presenting Health Sciences Research</td>
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<td>- Publishing Health Sciences Research</td>
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<td>- Professional Dress Code Guidelines</td>
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<td>- Professional Writing Guidelines</td>
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<td>Evaluating Published Research:</td>
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<td>- The Art &amp; Science of Criticism</td>
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<td>- Elements of Critiquing Research</td>
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<td>- Journal Club Participation</td>
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<td>Pre-Reading Materials:</td>
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<td>- Darby (Chapters 10-11)</td>
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<td>- Frantsve (Chapter 8-9)</td>
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<td>- Nathe (Chapter 20)</td>
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<td>- Polgar (Section 7)</td>
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<td>ACTION ITEMS:</td>
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<td>- Schedule appointment with Mr. Kabani to finalize research topic. (Submit Annotated Bibliography)</td>
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<tr>
<td>Week 8</td>
<td>10/4/2016</td>
<td><strong>EXAMINATION II</strong></td>
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<tr>
<th>Week 9</th>
<th>Week of Oct. 11th</th>
<th><strong>Independent Study:</strong> <em>(Faculty Mentors Posted!)</em> 😊</th>
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<tbody>
<tr>
<td>Tentative</td>
<td></td>
<td>• <strong>ACTION ITEM:</strong> Schedule Appointments with Faculty Mentors</td>
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<td>• Start Identifying Title, Objectives, and Narrative</td>
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<tr>
<th>Week 10</th>
<th>Week of Oct. 18th</th>
<th><strong>Independent Study:</strong> <em>(Meet with Faculty Mentors)</em></th>
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<tr>
<td>Tentative</td>
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<td>• Start Identifying Tables/Pictures/Figures</td>
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<td>• Continue Refining Title, Objectives, and Narrative</td>
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<td>• Continue Writing Research Narrative</td>
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<tr>
<th>Week 11</th>
<th>Week of Oct. 25th</th>
<th><strong>Independent Study:</strong> <em>(Meet with Faculty Mentors)</em></th>
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<tr>
<td>Tentative</td>
<td></td>
<td>• Submit Finalized Title &amp; Objectives to Mentors</td>
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<td>• Start Sketching Table Clinic Design</td>
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<td>• Continue Refining Tables/Pictures/Figures</td>
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<td>• Continue Writing Research Narrative</td>
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<tr>
<th>Week 12</th>
<th>Week of Nov. 1st</th>
<th><strong>Independent Study:</strong> <em>(Meet with Faculty Mentors)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tentative</td>
<td></td>
<td>• Submit Finalized Tables/Pictures/Figures to Mentors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue Refining Sketch of Table Clinic Design</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue Writing Research Narrative</td>
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<thead>
<tr>
<th>Week 13</th>
<th>Week of Nov. 8th</th>
<th><strong>Independent Study:</strong> <em>(Meet with Faculty Mentors)</em></th>
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<tr>
<td>Tentative</td>
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<td>• Continue Refining Sketch of Table Clinic Design</td>
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<td>• Continue Writing Research Narrative</td>
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<thead>
<tr>
<th>Week 14</th>
<th>Week of Nov. 15th</th>
<th><strong>Independent Study:</strong> <em>(Meet with Faculty Mentors)</em></th>
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<tbody>
<tr>
<td>Tentative</td>
<td></td>
<td>• Submit Final Sketch of Table Clinic Design to Mentor</td>
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<tr>
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<td></td>
<td>• Continue Writing Research Narrative</td>
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<table>
<thead>
<tr>
<th>Week 15</th>
<th>Week of Nov. 22nd</th>
<th><strong>HAPPY THANKSGIVING!!!</strong></th>
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<tbody>
<tr>
<td></td>
<td><strong>FALL SEMESTER RECESS</strong></td>
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<thead>
<tr>
<th>Week 16</th>
<th>Week of Nov. 29th</th>
<th><strong>DEADLINE ALERT!!!</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>MOCK NATIONAL DENTAL HYGIENE BOARD EXAMINATION (NDHBE) – TBA</strong></td>
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</tbody>
</table>

**Independent Study:** *(Meet with Faculty Mentors)* |

- **ACTION ITEM:** Submit Finalized Research Narrative to Mentor |
- **ACTION ITEM:** Submit **ALL** Table Clinic Information to Media Resources for Proofing *(i.e. text, designs, graphics, slides, tables, etc.)* |
<table>
<thead>
<tr>
<th>Weeks 17 &amp; 18</th>
<th>Independent Study: <em>(Meet with Faculty Mentors)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Week of Dec 6th &amp; Week of Dec. 13th</td>
<td>• Obtain Preliminary Feedback on Narrative from Mentor</td>
</tr>
<tr>
<td></td>
<td>• Grade for Finalized Research Narrative Submitted by Mentor for DDHS 4710: Applied Research Methods (Spring Semester)</td>
</tr>
<tr>
<td></td>
<td><strong>Mock NDHBE Results:</strong></td>
</tr>
<tr>
<td></td>
<td>• Results Shared by End of Fall Semester</td>
</tr>
<tr>
<td></td>
<td>• DH Students Encouraged to Prepare for NDHBE Over Winter Break!</td>
</tr>
</tbody>
</table>
**Table Clinic Introduction & Expectations**
*(Adapted from the ADHA)*

**A. General Purpose & Significance:**

A ‘table clinic’ is a professional table top presentation that intertwines both oral communication skills and engaging media to inform, clarify, and/or review material on a current topic. A table clinic **DOES NOT** present as an exhibition of materials or extend into original research.

Table clinic presentations display useful and timely information in an original, interesting manner. This information may be a technique, theory, service, trend, or expanded opportunity in the practice of dental hygiene and/or the realm of oral and systemic health. Table clinics should present synthesized information in a direct and concise manner with an element of action to stimulate attention and interest. As a clinician and presenter you have an opportunity to expand your knowledge in a special area of interest, arouse research curiosity, and increase professional awareness in a unique and creative manner.

**B. Table Clinic Categories/Themes:**

![Table Clinic Categories/Themes](image)

*Source: Conceptual Model for the ADHA National Research Agenda*
C. Course Assignment:

Students are able to select a research partner of their choice – there may be one group of three if the class has an uneven quantity of students. Students are expected to collaborate with their research partner(s) and faculty mentor in the fall semester to develop a table clinic that will be presented in the subsequent spring semester. **Students will be required to present their table clinics on (1) Practice Presentation Session in DDHS 4710, (2) Judging Session in DDHS 4710 (3) Student Scholars Day and (4) Dallas Dental Hygiene Association’s CE Meeting.** The details of these events will be shared when the dates/times are confirmed.

The table clinics will be rank ordered by a panel of judges using a standardized criterion – the results are calculated and the highest ranking table clinics are publicly recognized. It is important to note that these results **WILL NOT** influence the student’s course grade, but **WILL** contribute towards identifying candidates to receive the Student Research Award.

The **HIGHEST RANKING** research group will be endorsed by the Caruth School of Dental Hygiene to present their table clinic at the **American Dental Hygienists’ Association Summer Annual Session**. The details of these events will be shared when the dates/times are confirmed.

The table clinic is a **GROUP SUBMISSION** where students are expected to participate and contribute proportionately. The latter half of the course structure purposefully lends itself to an independent study to enable students to utilize class time to progress on their research project. Students are expected to also submit **PEER EVALUATIONS** to subjectively identify individual group member’s proportionate contribution.

The **table clinic is DUE BY WEEK 16.** Faculty mentors will evaluate the digital version of the table clinic utilizing the ‘Rubric for Table Clinic’. The *digital version of the table clinic will be submitted and account for 30% of the total grade.*

D. Criteria for Preparing YOUR Table Clinic:

1. Identify one partner to collaborate with on this culminating research project. There may be a group of three if the class has an uneven quantity of students.
2. Identify a theme or topic and work towards its development with the course director.
3. Faculty mentors will be identified, based on proximate research interests, for each group’s research topic. There will be one faculty mentor to two research groups ratio.
4. Conduct a thorough literature review and cite your resources appropriately.
5. Anticipate and prepare for questions and discussions from the audience after presenting.
6. Communicate synthesized information clearly within **5-7 MINUTES.**
7. Presentation should be professional and rooted in sound science with qualified references.
8. Practice to improve communication skills. Seek constructive feedback from colleagues.
9. Utilize appealing visual aids to reinforce your research effectively.
10. Handouts are optional supplements to the presentation but can leave lasting impressions.
11. Students are required to wear attire suitable for the professional presentation context.
E. Use of Table Clinic PowerPoint Template & Media Resources Department

Students are expected to collaborate with faculty mentors as guides to create a preliminary digital version of their table clinic presentation. Students need to utilize the approved PowerPoint template for table clinic presentations provided by the Media Resources Department. Students are expected to design their preliminary submission to scale in the PowerPoint template. Faculty mentors will need to formally approve the finalized template prior to submitting the presentation to Media Resources for proofing.

Be sure to submit all content, including layout, text, graphics, photos, etc. to Media Resources. Refer to Media Resources for acceptable file formats before submitting documents for professional proofing. You will be given a professional colorized digital proof of your table clinic presentation by Media Resources for review either towards the end of the fall or early part of spring semester. **Students must have final approval from faculty mentors before bringing finalized proof to Media Resources for production.**

**Media Resources Contact:**
Mary Noon, Publications Designer (Suite 519-A)
214.828.8426 Office
M Noon@bcd.tamhsc.edu

**Tentative Deadlines:**
Week of Nov. 29th – Submit **ALL** Documents to Media Resources

**Approximate Costs:**

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Physical Materials</td>
<td>$115.00</td>
</tr>
<tr>
<td>Labor</td>
<td>$50.00 ±**</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$165.00 ±</strong></td>
</tr>
</tbody>
</table>

*Prices may vary depending on individual needs.

**Students are financially responsible for this investment as it is not included as an additional part of course fees. Students have an alternative option of coordinating this process with an external facility; however, it is the student’s responsibility of notifying the faculty mentor and course director in advance.

F. Examples of Previous Table Clinics
Research Narrative Introduction & Expectations
A. General Purpose & Significance:

A ‘research narrative’ is a professional composition of evidence-based knowledge that will be articulated on the table clinic. The research narrative exercise provides a unique and beneficial opportunity for student presenters to communicate major discussion points in a clear, concise, and systematic manner. Moreover, the iterative practice of refining the research narrative facilitates learning on identifying, synthesizing, and highlighting on the points of most significance (POMS) that will be discussed in the table clinic presentation.

A research narrative is NOT a research proposal. However, a research narrative can assist investigators in identifying a “knowledge gap” in the literature that can potentially evolve into an original research proposal.

B. Required Components:

1. Innovative Opening Statement
2. Engaging Topical Introduction
3. Establishing Contemporary Significance/Relevance
4. Major Constructs Discussed Concisely
5. Concluding Remarks
6. Compelling Call for Action

C. Course Assignment:

Students are expected to conduct a narrative literature review to gain knowledge on the research topic of choice. Students will be required to schedule at least one appointment with the research course director before finalizing the research topic (submit literature review matrix with ≥5 PUBLISHED RESOURCES PRIOR to the meeting with the research course director).

Students are expected to collaborate with their research partner(s) and faculty mentor in the fall semester, AFTER RESEARCH TOPIC IS APPROVED to develop a research narrative. The research narrative is an INDIVIDUAL SUBMISSION. Students are expected to compose a 500-word-minimum paper that systematically articulates scientific, evidence-based, knowledge on their research topic. Students are to apply scientific and technical writing skills in completing this assignment.

The research narrative is DUE by 5:00pm on Friday, December 2nd. The research narrative is expected to have BETWEEN 8-12 PUBLISHED SOURCES. Faculty mentors will evaluate the research narrative utilizing the ‘Rubric for Research Narrative’ and provide formative feedback by the end of the fall semester. Students are expected to review/internalize the feedback received from faculty mentors and integrate the recommendations into the finalized research narrative. The finalized research narrative will account for 10% of the total grade in the subsequent spring semester’s DDHS 4710: Applied Research course.
Table Clinic Introduction & Expectations
A. General Purpose & Significance:

Evidence-based research is the scientific basis for health care and its associated practices. Introducing fundamental concepts and constructs in the research process is an important for translating theory into clinical practice. There are multiple mediums for clinicians to access current evidence including computerized databases, continuing education meetings, and participating in journal club exercises.

A ‘Journal Club’ is broadly defined as a collective group of individuals who regularly meet to discuss and evaluate current, published, literature on particularly relevant topics. Journal club provides a unique format for the development of critical evaluation skills for the clinician by encouraging precise questioning of research methodology, implications for policy and practice, etc. The selection of articles to appraise are based primarily in relevant peer-reviewed journals that have been approved for publishing by experts in their respective fields. The uniqueness of this review format ideally serves to ensure the quality, relevance, appropriateness, and limitations of the scientific research. Journal clubs support an interdisciplinary endeavor for high-quality professional development while embracing diverse adult learning theories and frameworks. Evidence suggests that participation in journal clubs develop participants analytical, critical, evaluative, reflective, and presentation skills.


B. Journal Club at Texas A&M University College of Dentistry:

The College of Dentistry’s Public Health Sciences (PHS) Department currently offers a journal club as part of their post-doctoral residency program. The Program Director is Dr. Peggy Timothé, DDS. The journal club will meet on a bi-monthly/monthly interval on Thursdays at 8am in the PHS Conference Room 740 for approximately 45 minutes. The dates, times, and articles will be shared as they are made available.

Tentative Dates (Fall 2016): September 29th, October 20th, and November 17th

C. Course Assignment:

Students are expected to participate in at least one journal club during the fall semester AFTER the ‘Evaluating Published Research’ learning module. It is the responsibility of each student to read and independently critique the article(s) in advance utilizing the template provided. During the journal club session, students are expected to observe and contribute (where applicable) to the active discussions. At the end of the session, students are expected to submit both an attendance sheet and their independent critique of the article(s).
## DDHS 4715: Research Methods
### Team Rubric for Table Clinic Development

**Student:** ________________________________  
Grade: _______ / _______

**Faculty Mentor:** __________________________  
Grade: _______ / _______

### Team Rubric for Table Clinic Development – 30 points

<table>
<thead>
<tr>
<th>Evaluation Categories</th>
<th>Remediation Indicated 0 – 2.5 points</th>
<th>Progressive Development 2.5 – 5 points</th>
<th>Competency Demonstrated 5.1 – 7.5 points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conceptual Development: Title &amp; Objectives</strong></td>
<td>Student exhibited minimal contribution in developing a title and/or objectives. Student does not demonstrate a significant understanding of this category.</td>
<td>Student partially contributed towards the development of an appropriate title. Student created only one educational objective.</td>
<td>Student clearly demonstrates enthusiasm and originality in developing an attractive and inclusive title with explicit educational objectives.</td>
</tr>
<tr>
<td><strong>Literature Review: Content Acquisition &amp; Proper Citations</strong></td>
<td>Student did not demonstrate basic understanding of evidence-based research and/or identify credible sources. Student consistently did not utilize appropriate citations.</td>
<td>Student partially identified valid and reliable sources. Mentors regularly intervened and assisted in acquiring appropriate literature. Inconsistent use of proper citations.</td>
<td>Student utilized diverse credible sources that were current and scientific. Student demonstrated mastery of particular citation style.</td>
</tr>
<tr>
<td><strong>Independent Study: Student Leadership &amp; Decisiveness</strong></td>
<td>Student demonstrated minimal initiative throughout independent study with mentor. Student did not consistently collaborate with partner.</td>
<td>Student required some intermittent assistance from mentors throughout the independent study. Student was a contributive team player.</td>
<td>Student consistently showed personal creativity and initiative. Student contributed equally and encouraged efficient productivity.</td>
</tr>
<tr>
<td><strong>Collaborative Professionalism: Timeliness &amp; Demeanor</strong></td>
<td>Student had minimal communication with partner and mentor. Student exhibited inappropriate demeanor. Student did not consistently adhere to project submission deadlines.</td>
<td>Student had intermittent and/or episodic communication with mentor and partner. Student demonstrated minor discrepancies in professional demeanor and/or timeliness in submission deadlines.</td>
<td>Student maintained frequent and progressive communications with partner/mentor. Student consistently displayed professional demeanor and adhered to all project submission deadlines.</td>
</tr>
</tbody>
</table>

**Comments:**

### Table Clinic Peer Evaluation Rubric

#### Peer-Evaluation Rubric for Table Clinic Development

<table>
<thead>
<tr>
<th>Measurement Scale:</th>
<th>Self-Evaluation:</th>
<th>Group Member 1:</th>
<th>Group Member 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(0 = \text{Strongly Disagree})</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1 = \text{Disagree})</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2 = \text{Agree})</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3 = \text{Strongly Agree})</td>
<td></td>
<td></td>
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</tbody>
</table>

- Actively participated in group meetings & correspondences
- Demonstrated punctuality in completing assigned work
- Committed to valuing ideas and perspectives of all team members
- Exhibited professional ethics in all communication and demeanor
- Contributed towards a positive team-based learning environment

Comments:
### Individual Rubric for Research Narrative

**Student:** ____________________________________________  **Grade:** _______ / _______

**Faculty Mentor:** ____________________________________________  **Grade:** _______ / _______

<table>
<thead>
<tr>
<th>Evaluation Categories</th>
<th>Remediation Indicated 0 – 0.8 points</th>
<th>Progressive Development 0.9 – 1.7 points</th>
<th>Competency Demonstrated 1.8 – 2.5 points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Establishing Significance:</strong> Research Topic Literary Evidence</td>
<td>Student unable to establish clear rationale/significance of research. Literature review did not include evidence to support research.</td>
<td>Student establishes limited rational/significance for research. Literature review includes evidence to support research.</td>
<td>Student clearly establishes rationale/significance of research. Literature review demonstrates compelling need for research.</td>
</tr>
<tr>
<td><strong>Systematic Presentation:</strong> Logical Flow of Ideas Balanced Objectivity</td>
<td>Student submits narrative that is grossly unbalanced introducing bias/subjectivity. Major concerns with progression of ideas.</td>
<td>Student submits narrative that is generally balanced and objective. Moderate concerns with the progression of ideas.</td>
<td>Student submits narrative that is clearly balanced and objective. Minimal concerns with the progression of ideas.</td>
</tr>
<tr>
<td><strong>Professional Writing:</strong> Research Formatting Scientific Terminology Citation Prose &amp; Syntax</td>
<td>Standard formatting guideline for research proposals not followed. Narrative excluded professional vocabulary and syntax. Gross evidence of academic dishonesty.</td>
<td>Standard formatting guideline for research proposals followed. Narrative includes professional vocabulary and syntax. Moderate concerns with proper citations.</td>
<td>Standard formatting guideline for research proposals followed. Narrative includes proficient use of professional terminology and syntax. No citation concerns.</td>
</tr>
<tr>
<td><strong>Miscellaneous</strong> Timeliness Word Count</td>
<td>Narrative submitted after deadline without official excuse. Word count under/over 25% of expectations.</td>
<td>Narrative submitted in timely manner. Word count is under/over 15% of expectations.</td>
<td>Narrative submitted in timely manner. Word count is under/over 15% of expectations.</td>
</tr>
</tbody>
</table>

**Comments:**
**DDHS 4715: Research Methods**  
*Literature Review Matrix*

Students: ________________________________

<table>
<thead>
<tr>
<th>CITATION</th>
<th>STUDY DESIGN</th>
<th>RESEARCH QUESTION</th>
<th>RELEVANT IMPLICATIONS</th>
</tr>
</thead>
<tbody>
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</table>
# Journal Club Article Review Guide

Adapted from PHS Department (Conference Room 740)

<table>
<thead>
<tr>
<th>Student Name: ______________________</th>
<th>Date of Attendance: _____________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article(s) Critiqued: ____________________</td>
<td>______________________________</td>
</tr>
</tbody>
</table>

## Research Question:
*What is the problem being explored? What question(s) does the study address?*

______________________________________________________________________________

______________________________________________________________________________

---

## Clinical & Public Health Significance:
*Why are the research questions significant? Is this a current, peer-reviewed, published article?*

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

---

## Study Approach & Methodology:
*What is the study design and time frame examined? Is this qualitative and/or quantitative study?*

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

---

## Subject Selection Criterion:
*Who are the subjects? How were participants selected, sampled, and recruited in the study? Did the researchers employ randomization?*

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

---

## Variables Examined/Measured:
*What/How was the dependent, independent, and extraneous variables examined in the study? How were each of the variables measured (i.e. dichotomized, Likert scale, etc.)*

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
Statistical Analysis:
What statistical tests and software were used by the researchers? Were the results appropriately adjusted to reduce error?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Data Results:
What were the results of the research? Were they statistically and/or clinically significant?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Limitations:
Were study limitations explicitly addressed? What are the limitations of the study?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Conclusion/Discussion:
What are the implications of the conclusion? What are the next steps for research on this topic?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Overall Manuscript Structure & Composition:
Did the authors follow general guidelines in demarcating and labeling the different components of the research process? Were the tables and/or graphs labeled with descriptive footnotes?

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Follow-Up Questions to Authors:
DDHS 4715: Research Methods
Memorandum of Understanding

(Please initial each line)

I have read and understand the course syllabus and my responsibilities to successfully complete **DDHS 4715: Research Methods**.

I have read and understand the institutional policies on academic honesty and have pledged accordingly to the **Aggie Honor Code**.

I have read and understand the course syllabus provides a **tentative** timeline and that the course director has the ability to adapt/modify the syllabus, as needed. The course director will provide written notice to all students in as advance as possible for any changes that may arise.

Print Student Name: ____________________________________________

Student Signature: _____________________________________________

Date Signed: _________________________________________________

Research Course Director Use Only:

Received by: _________________________________________________

Date Received: _______________________________________________