MANUAL FOR SYSTEMATIC REVIEW
Doctor of Nursing Practice (DNP)
Scholarly Project
For internal use only.

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Prior to beginning the work of any DNP scholarly project, Walden students will complete the steps of prospectus development and approval. Once the prospectus is approved, the committee will be formed, proposal developed, and oral proposal defense completed per the DNP Project Process Guide. The ethics approval process begins during proposal development but can only be finalized after the proposal defense is entered into MyDR.

For the DNP nurse, systematic reviews are used to help inform best clinical practice. Systematic reviews are often focused on clinical problems. Clinicians who are considering different treatment modalities may access systematic review articles to inform treatment and practice decisions. When systematic review articles are not available for a particular clinical practice problem, systematic reviews are an excellent option for the DNP student to examine the literature, further understand treatment options, systematically synthesize the literature, and bring that knowledge to practice as their DNP scholarly project.

It is important to understand what is meant by a systematic review of the literature and the expectations for accomplishing a systematic review in the context of the DNP scholarly project.

Systematic reviews are aligned with the DNP Essentials.
DEFINITION OF A SYSTEMATIC REVIEW OF THE LITERATURE

While the systematic review as a method of synthesizing scientific evidence from the literature began in the 1960’s with American social scientists, current systematic evidence reviews are driven by the evidence-based practice movement from the methods developed by the Cochran Collaboration. A systematic review is defined as “a review of the evidence on a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant primary research, and to extract and analyze data from the studies that are included in the review” (Undertaking Systematic Reviews, 2001).

A systematic review is prepared using a systematic approach to minimizing biases and random errors and arbitrariness by making explicit the review process, so that, in principle, another reviewer with access to the same resources could undertake the review and reach broadly the same conclusions. Findings of a literature review may be open to inherent bias that arises from the selective inclusion of studies that support the authors’ views. The Systematic Review aims to overcome this, and does so by following a structured, transparent, and recorded process of review.
CHARACTERISTICS OF A SYSTEMATIC REVIEW

A Systematic Review has the following characteristics:

• A clearly stated set of objectives with predefined eligibility criteria for studies, which may be qualitative or quantitative.
• An explicit, reproducible methodology.
• A systematic search that attempts to identify all studies that would meet the eligibility criteria.
• An assessment of the validity of the findings of the included studies.
• A systematic presentation, and synthesis, of the characteristics and findings of the included studies.
PURPOSE OF SYSTEMATIC REVIEW

The purpose of a systematic review is to provide comprehensive and unbiased summaries of the research on a single topic bringing together multiple individual studies in a single document. As part of the systematic review process, individual research studies are subject to critical appraisal. Even when research evidence is limited or nonexistent, systematic reviews summarize the best available evidence on a specific topic providing the best evidence for clinical decision making as well as identifying future research needs. (JBI, 2001:1)
STEPS IN A SYSTEMATIC REVIEW

• Identify the scope of the review.
  o List databases and search engines used to find outcomes and research related to the practice problem.
  o List key search terms and combinations of search terms used.
  o Define the scope of the review in terms of years searched, types of literature, and sources searched.
  o Clarify how the search will be exhaustive and comprehensive.
• Formulate the review question.
• Define explicit inclusion and exclusion criteria.
• Perform a comprehensive search to find all relevant studies:
  o Describe the systems used for recording, tracking, organizing, and analyzing the evidence—including any software used for these purposes.
  o Outline the procedures used to assure the integrity of the evidence, including approaches to managing outliers and missing information.
  o Describe analysis procedures used in the doctoral project to address the practice-focused question(s) (e.g., coding, statistical analyses, etc.).
• Select the studies.
• Apply established standards to appraise the study quality.
• Collate all that is known on the topic and identify the basis for that knowledge.
• Extract and synthesize the study findings.
• Analyze/summarize and synthesize relevant studies.
• Interpret results/determine the applicability of results.
• Present results.
SYSTEMATIC REVIEW OF THE LITERATURE: STRATEGIES

Key Elements:

• Define the practice question:
  – Is the issue clear?
• Survey the literature to determine the level of empirical evidence available:
  – Can we provide more detail on the issue?
• Perform strategic searches of Walden Library databases and Systematic Review resources:
  – How is the current evidence connected to our practice question?
• Document search strategies:
  – Do we need other points of view? Are there other ways to look at the question?
  – Include links to key Walden Library resources regarding searching strategies.
• Determine inclusion and exclusion criteria.
• Conduct a systematic search of the literature:
  – Search peer-reviewed primary sources and systematic reviews.
• Evaluate Search Results:
  – Key questions to ask?
    o Who authored it?
    o Was it funded?
    o What was the research design?
    o When was it published?
    o Were the results significant?
    o Were measures of validity provided?
    o What was the sample size
    o Were the methodological limitations described?
    o Has it been cited by others?
• Organize literature:
  – Use table(s) to identify the level of the evidence (see N8200).
  – Use tables to identify the quality of the evidence—use an adopted quality rating scheme.
• Analysis and synthesis of relevant studies:
  – Identify gaps that exist in the current literature.
  – Summarize the strengths and weaknesses of the existing literature.
• Develop recommendations
  – Are the recommendations clearly related to the presented evidence?
  – How will these recommendations improve clinical practice or organization operations?
  – Are the recommendations directly related to the identified clinical practice problem?
A Representation From a DNP Student’s Paper

“The gap in nursing knowledge exists in implementing evidence-based practices that identify and facilitate effective communication for cancer patients who suffer with cognitive deficits associated with chemotherapy. The purpose of this systematic literature review is to examine the causes of ineffective communication and the tools available for nurse practitioners who provide treatments for patients who have been diagnosed with cancer in an oncology setting.”

Obtaining Ethics Approval in Compliance With Institutional Review Board (IRB) Requirements

All doctoral studies are required to have ethics approval from the university’s IRB, even those that might not be considered “research.” The DNP program has set up a blanket ethics approval for Systematic Literature Review Doctoral Projects falling within the parameters described in the blue table below (i.e., analysis of literature and public reports only).

These steps can be completed any time after the chair has uploaded the proposal into MyDR for URR review.

**Step 1:** Each doctoral student completing this project type is responsible for completing the web-based Form A (the same form that all DNP students use to start the ethics approval process). In the first page of Form A, the student needs to indicate that he or she will be conducting a project that falls within the preapproved parameters for Systematic Review and this will cause the form to skip the questions that are not applicable. The final page in Form A will provide instructions for next steps, based on the responses the student enters into Form A.

**Step 2:** Once Form A is received by the IRB, an IRB staff member will respond within 10 business days to the student and chair with either (a) an e-mail confirmation that the ethical standards have been met (i.e., the data collection procedures fall within the preapproved parameters), or (b) a request for more information. The IRB would continue to correspond with the student until all ethical issues are addressed. Once (a) occurs, the student can focus on working toward proposal approval. Doctoral students with project data falling outside the preapproved parameters will be directed to obtain IRB approval in the standard manner, which is likely to take a minimum of 4 weeks longer.

**Step 3:** At this point, to finalize ethics approval, a student just needs to have the project design approved via the proposal defense. Thus, once the student successfully defends the proposal, the MyDR system will automatically copy the IRB on the proposal approval notice and that will trigger the IRB to reach out to the student via e-mail to confirm whether/how the data collection plan might have changed as a result of the proposal defense. If changes to the data collection plan were made, then the IRB will need updated versions of the ethics application materials. If the student confirms no changes were made, then the IRB will e-mail the student and chair a formal ethics approval notification.
The doctoral student must be actively enrolled in the doctoral study course shell to receive the IRB’s final ethics approval notification and must remain enrolled while completing the project. Ethics approval is not valid if a student is on a leave of absence or otherwise not enrolled.

A systematic literature review project is also required to adhere to the following ethical requirements:

- If there is a partner organization: The doctoral student must change the name of any partner organizations and generalize the location(s) so that the organizations are not identifiable. It is important that the doctoral student redact any information that will lead a reader to identify the organization’s identity. It is up to the organization to choose if the project should be publicized. Therefore, it is not appropriate for a doctoral student to make the partner’s name known in the doctoral project document that is published in ProQuest. The doctoral student is required to change the name of the organization in all materials (including drafts shared with peers and faculty members) to protect the organization’s identity. In some cases, the doctoral student may elect to maintain confidentiality by removing key pieces of evidence and/or data that might give away the organization’s identity or inappropriately divulge proprietary details. The doctoral student should direct questions to irb@mail.waldenu.edu when these situations arise.

- The doctoral student may not survey or interview individuals for this type of project. If at some point the doctoral student wishes to pursue interviews or surveys, he or she will need to follow the standard university procedures to obtain prior approval from the Walden University Institutional Review Board (IRB). Collecting data from human subjects without appropriate IRB approval can result in invalidation of the data and dismissal from the program.

- The doctoral student is responsible for ensuring that no proprietary, sensitive, or confidential information is disclosed in the doctoral project document. The doctoral student is responsible for learning about the organization’s policies on use of the organization’s resources (including email addresses, printing materials, etc.) for individual projects. Many organizations have restrictions on use of company resources for educational projects.

Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB’s ethics approval, and the university will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

Other student obligations will be outlined in the final page of Form A. Faculty supervision requirements for CPGD projects include the following:
• The supervising faculty member will ensure that the student properly requests any project design changes by e-mailing ethicsDNP@mail.waldenu.edu.

• The supervising faculty member will ensure that the student promptly reports any unexpected or otherwise significant adverse events and general problems within 1 week by e-mailing ethicsDNP@mail.waldenu.edu.

• The supervising faculty member will report any possible noncompliance on the part of the student by e-mailing ethicsDNP@mail.waldenu.edu.

• The supervising faculty member’s supervision role continues as long as the student remains enrolled in the present course with the faculty member.

<table>
<thead>
<tr>
<th>Data Sources That Have been Preapproved by IRB for Systematic Doctoral Projects</th>
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<tbody>
<tr>
<td><strong>Public Reports</strong></td>
</tr>
<tr>
<td>Media coverage, publically disseminated reports, public websites, and any information that is available to the public</td>
</tr>
<tr>
<td><strong>Literature as Data</strong></td>
</tr>
<tr>
<td>Books, peer-reviewed articles, and other bodies of written knowledge that communicate theories and findings about practices that are relevant to the student’s doctoral project</td>
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</tbody>
</table>

The table below includes those data tools that do NOT fall under the IRB’s preapproval. Any student wishing to analyze one of the data sources below must go through the standard IRB process to gain formal IRB approval independently.

<table>
<thead>
<tr>
<th>Data Sources that are NOT Preapproved by IRB for Systematic Review Doctoral Projects</th>
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<tbody>
<tr>
<td>(These all require the student to obtain IRB review/approval independently via the standard process.)</td>
</tr>
<tr>
<td><strong>Data From a Partner Site</strong></td>
</tr>
<tr>
<td>The preapproval does not cover students accessing any type of internal site records.</td>
</tr>
<tr>
<td><strong>Data Collection From Patients, Experts</strong></td>
</tr>
<tr>
<td>The preapproval does not cover posing questions via questionnaires, interviews, focus groups, or any other method.</td>
</tr>
<tr>
<td><strong>Video as Data</strong></td>
</tr>
<tr>
<td>The preapproval does not cover filming of events to observe behaviors, study environments and processes, or capture products and/or outcomes.</td>
</tr>
<tr>
<td><strong>Observations of Specific Individuals</strong></td>
</tr>
<tr>
<td>The preapproval does not include collection of observational data.</td>
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This manual and its appendices may not be modified without prior approval from the IRB. Please submit proposed revisions to IRB@mail.waldenu.edu.
SYSTEMATIC REVIEW OF THE LITERATURE

Resources

Cochrane Library
http://www.cochrane.org

Evidence-Based Practice Research Guide at Walden University Library
http://academicguides.waldenu.edu/healthevidence

Joanna Briggs Institute EBP Database
https://www.brainshark.com/wkovid/vu?pi=zHrzq3No5z2tkwz0&cmpid=Brainshark:IntroToJBI
EBPDatabase

National Guideline Clearinghouse
AHRQ database of clinical practice guidelines summaries and video tutorial:
http://www.youtube.com/watch?feature=player_embedded&v=pytfoQ2K-u8

References
