### Supplementary File

<table>
<thead>
<tr>
<th>Nursing Theory Textbook</th>
<th>Meta-theory in index</th>
<th>Definition of meta-theory</th>
<th>Meta-theory and author mentioned in text</th>
<th>Example of nursing meta-theory</th>
</tr>
</thead>
</table>
### Table 1: Evaluation of Metatheory in 26 Nursing Theory Textbooks Frequently Required for Nursing Courses in the United States of America.

<table>
<thead>
<tr>
<th>Evidence of Metatheory (APA Citation)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nursing Aerohemodynamics Metatheory</strong></td>
<td>Comprehensive with a focus on flight nursing. Discusses both a conceptual model and the aerohemodynamics metatheory, however, may in actuality be a practice theory for flight nursing.</td>
</tr>
<tr>
<td><strong>Paterson and Zderad's Humanistic Nursing Theory</strong></td>
<td>Paterson and Zderad focused on humanistic nursing and interpersonal relationships. &quot;The book was originally written to define the Humanistic Nursing Theory which presented a way for each nurse to become-more as a person and to extend that becoming-more to the community of nurses in which he or she practices&quot; [41]</td>
</tr>
<tr>
<td>Nursing Metatheory</td>
<td></td>
</tr>
</tbody>
</table>
**Theory of Relational Caring Complexity**

**Nursing Metatheory**


**Rational Caring Complexity Theory**

Derived from sociology and built on Bureaucratic Nursing Theory foundation.

Comprehensively developed specifically for psychiatric and mental health nursing; widely adapted in the United Kingdom (England, Ireland, Scotland, and Wales), as well as internationally. Extensive research and publications regarding Tidal Model. A debated surfaced questioning if Tidal Model was a metatheory or a high-level mid-range theory.

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**Nursing Metatheory**

**Tidal Model**


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**Table 2:** Continue..
Table 2: Summary Table of Selected Interdisciplinary Metatheories with Application to Nursing Meeting Inclusions Search Criteria

<table>
<thead>
<tr>
<th>Metatheory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integral Metatheory</td>
<td>Derived from Jung's psychology with the integration of disciplines of nursing and psychology, and is an evolving theory with multidisciplinary relevance.</td>
</tr>
<tr>
<td>Integral Philosophy and Definition of Nursing</td>
<td>Derived from Jung's psychology with the integration of disciplines of nursing and psychology, and is an evolving theory with multidisciplinary relevance.</td>
</tr>
<tr>
<td>Metaphor of Transcendence, Tidal Model</td>
<td>Comprehensive, unifying metatheory for the nursing profession that articulates overarching nursing grand theories, acknowledges all nursing theories past, present, and future, and applies to all nursing domains.</td>
</tr>
<tr>
<td>Complexity Integration Nursing Theory</td>
<td>CINT applied as research framework by Binner, Ross, and Browner which proved the research-practice gap as individual nurses' knowledge deficit [58].</td>
</tr>
</tbody>
</table>


**Complexity Integration Nursing Theory**


**Meta-Theory of Transcendence**

**Nursing Metatheory**


**Derived from Jung's psychology with the integration of disciplines of nursing and psychology, and is an evolving theory with multidisciplinary relevance.**

**Integral Metatheory**

**Integral Philosophy and Definition of Nursing: Nursing Metatheory**


Interdisciplinary Synergy

Complex Synergistic System

Interdisciplinary Complexity

Interdisciplinary General Systems

Applied to Nursing

Theoretical Model of Complex Synergistic Systems incorporates Interdisciplinary

Complexity, Synergy, and General Systems.

Kuyper's Metatheory

Nursing Applying Social Work Metatheory


Complex Synergistic System

Interdisciplinary Synergy


Interdisciplinary Complexity Science


Johnson, J. (2010). The future of the social sciences and humanities in the science of complex systems. The European Journal of Social Science Research, 23(2), 115-134. ISSN: 1351-1610; E-ISSN: 1469-8412; doi: 10.1080/13511610.2010.518422.


Grady, C. M. (2016). Can complexity science inform physician leadership development? Leadership in Health Services, 29(3), 251-263. ISSN: 17511879; E-ISSN: 17511887.

Interdisciplinary General Systems


Applied to Nursing


Theoretical Model of Complex Synergistic Systems incorporates Interdisciplinary

Complexity, Synergy, and General Systems.


Notes

Complex Synergistic Systems theory was originally developed by Constantino and Crane [50] to be used by forensic nurses and served as a theoretical model consisting of complexity, synergy, and general systems. Not identified as a metatheory, even though presented with many metatheory characteristics.

Integral Theory

Interdisciplinary


Applied to Nursing


Table 3: Continue...
Table 3: Summary Table of Selected Interdisciplinary Metatheories with Application to Nursing Meeting Inclusions Search Criteria.

<table>
<thead>
<tr>
<th>Nursing Metatheory</th>
<th>Description</th>
<th>1*</th>
<th>2*</th>
<th>3*</th>
<th>4*</th>
<th>5*</th>
<th>6*</th>
<th>7*</th>
<th>8*</th>
<th>9*</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanistic Nursing Theory</td>
<td>A conceptual framework in which the nurse-patient relationship is analyzed as a human-to-human event rather than a nurse-to-patient interaction [53].</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Metaparadigm surfaced after the original publication of the theory.</td>
</tr>
<tr>
<td>Theory of Relational Caring Complexity</td>
<td>A metatheory that evokes the complexity of the nursing practice situation today and provides a foundation for new ideas and nursing which explains the origins of both the living and non-living worlds [54-55].</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Focus is on nursing practice, complexity science, and bureaucratic caring theory.</td>
</tr>
<tr>
<td>Tidal Model Barker, P., &amp; Buchanan-Barker, P. (2001).</td>
<td>A radical, Catholic model of psychiatric nursing practice, focused on the care processes that are fundamental (radical) to nursing practice in mental health and possessing a universality of application (Catholic) that would render it appropriate for any care setting and any mental health population [56].</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Authors identified Tidal Model as a metatheory, which has made a significant international contribution to psychiatric and mental health nursing. Identified as a high-level mid-range theory in nursings metatheory textbook [57, p. 231]. Focus specific to psychiatric and mental health nursing. The Tidal Model defined nursing constructs, however developed in Scotland, which uses a different nursing metaparadigm.</td>
</tr>
<tr>
<td>Complexity Integration Nursing Theory</td>
<td>Individual nurse's synthesis and integration of human being nursing theory, social equality nursing theory, the theory of nursing knowledge, and theory of nursing practice. The individual nurse, as a human being, has absolute autonomy over her practice and as such acknowledges all nursing theory, past, present, and future, and uses components from any nursing theory or associated discipline theory to facilitate effective outcomes [40].</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>CINT applied as research framework by Binner, Ross, and Browner which proved the research-practice gap as individual nurses' knowledge deficit [58]. CINT is the primary metatheory for unifying the profession of nursing.</td>
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</tr>
<tr>
<td>Meta-Theory of Transcendence</td>
<td>An evolving theory with multidisciplinary relevance which promotes communication between nurse and patient as well as among disciplines [44].</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>Foundation from Jung psychology. Emphasis on patient-nurse communication. Integrated disciplines of nursing with psychology. Multidisciplinary relevance.</td>
<td></td>
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</tr>
<tr>
<td>Integral Philosophy and Definition of Nursing Metatheory</td>
<td>Informed by integral theory, presents the philosophical foundation and application of an integral worldview and process [59].</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>Metatheory informed by Integral theory, however not derived to nursing, evolving to the Integrality of Situated Caring in Nursing and the Environment [60]. Note: The Theory of Integral Nursing by Barbara Montgomery Dossey in 2008 presented a similar theory based on Wilber's Integral Theory. However, it was judged to be a grand theory instead of a metatheory, which raises the question of whether Jarrin's or Dossey's theories are metatheories or grand theories.</td>
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</tr>
<tr>
<td>Nursing Aerohemodynamics Metatheory</td>
<td>Applies material from every aspect of the flight environment and interrelates the dynamics of physiology with stressors endemic within the flight environment [61].</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>Comprehensive with a focus on flight nursing. Discusses both a conceptual model and the aerohemodynamics metatheory, however, may in actuality be a practice theory for flight nursing.</td>
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Table 4: Analysis of Interpreting Nursing Metatheory According to Nine Questions.