

## 02- Critical reading and academic writing

<b>Lesson Plan</b>	
<b>Topic</b>	O2 MODULE1- NATURE OF SCIENTIFIC ENQUIRY
<b>Title</b>	<b>Introduction to philosophy of science: paradigms and the nature of truth</b>
<b>Learning Outcome</b>	Describe and discuss critically their own world view that drives their approach towards a specific research philosophy.
<b>Summary</b>	<p>The palliative care team comprises members with different backgrounds- doctors, nurses, psychologists, social workers, priests and so on. They share the same work objective improving the quality of life for the patients and families confronted with life limiting illnesses and addressing the multiple needs of such patients in the physical, emotional, social and spiritual domain</p> <p>When it comes to knowledge and interventions to be applied, they might be a more heterogenous group with diverse perspectives and understanding of what is the nature of reality, what constitutes acceptable knowledge and what are the best ways we go about knowing it. Even if not involved in research in their endeavor to keep UpToDate in their clinical practice they will all read/consume research and according to the research paradigm they adhere to for different team members different research approaches, different data will be seen as valid and convincing. It is important for the palliative care clinicians to be aware of the variety of research paradigms and understand that multidimensionality of the human being nature cannot be examined through a single set of lenses. The session will clarify concepts as ontology, epistemology, axiology, methods for theory generation or testing and will explain major research paradigms and their links to various research methodologies. Palliative care clinicians will be encouraged to asses and discuss their own research philosophy and reflect on how this drives their learning and their own clinical practice. Understanding that palliative care as a novel concept embracing the holist dimensions of the human being.</p>

<b>Learning Objectives</b> <b>C- Cognition</b> <b>S – Skills</b> <b>A – Attitudes</b>	Cognition: 1. Define Key concepts for research philosophy – ontology, epistemology, axiology, deductive approach, inductive approach, abduction 2. Explain Major Philosophical Identities in research (research paradigms)– positivism, interpretivism, critical realism, pragmatism 3. Understand the impact of the research paradigm on research methodology, data collection methods Skills: 1. Self-assess own research philosophy Attitudes: 1. Recognize and address the challenges/misconceptions about various research paradigms
<b>Learning Methods</b>	<ul style="list-style-type: none"> <li>• Pre-modular assignment: HARP questionnaire</li> <li>• Icebreaker</li> <li>• Brainstorming</li> <li>• Individual / group exercises</li> <li>• Videos- discussions</li> <li>• Lecture</li> </ul>
<b>Timing</b>	90 minutes session
<b>Bibliography / Resources</b>	<a href="https://www.researchgate.net/publication/309102603_Understanding_research_philosophies_and_approaches">https://www.researchgate.net/publication/309102603_Understanding_research_philosophies_and_approaches</a> <a href="https://spcare.bmj.com/content/4/2/122">https://spcare.bmj.com/content/4/2/122</a> <a href="https://journals.sagepub.com/doi/abs/10.1191/026921698670608019?journalCode=pmja">https://journals.sagepub.com/doi/abs/10.1191/026921698670608019?journalCode=pmja</a>

<b>Lesson Plan</b>	
<b>Topic</b>	O2 MODULE1- NATURE OF SCIENTIFIC ENQUIRY
<b>Title</b>	<b>Science Literacy</b>
<b>Learning Outcome</b>	Defining the different aspects of Science Literacy, how it is developed and measured
<b>Summary</b>	<i>Science</i> is a way of knowing about the world. <i>Science</i> is a naturalistic material exploratory system used to account for natural phenomena that ideally must be objectively and empirically testable. Science literacy requires the ability to find, integrate and interpret information, as well as the time and ability for reflection and evaluation.
<b>Learning Objectives</b> <b>C- Cognition</b> <b>S – Skills</b> <b>A – Attitudes</b>	<p>Cognitive</p> <ol style="list-style-type: none"> <li>1.Describes science literacy definitions and history</li> <li>2.Defines the different aspects of science literacy</li> <li>3.Understands the interrelation of science and humanities and how they shape peoples’ engagement with science</li> <li>4.Describes similarities and differences of individual and civic science literacy</li> </ol> <p>Skills</p> <ol style="list-style-type: none"> <li>1.Demonstrates inquisitiveness and observation qualities as well as inventive thinking</li> <li>2.Shows critical thinking, adaptability and can handle uncertainty</li> <li>3.Is able to prepare logical arguments and critique qualities when appraising scientific theories and results</li> </ol> <p>Attitudes</p> <ol style="list-style-type: none"> <li>1. Recognizes how personal beliefs affect scientific interpretation and practice</li> <li>2.Recognizes how individual science literacy can be augmented or mitigated by civic literacy</li> </ol>
<b>Learning Methods</b>	90 min session Lecture (Power point) Puzzle game

	Classroom voting Self-Assessment
<b>Timing</b>	90 min session
<b>Bibliography / Resources</b>	<p><i>Science Literacy: Concepts, Contexts, and Consequences (2016)</i>  <a href="http://nap.edu/23595">http://nap.edu/23595</a></p> <p>Lemke C. Metiri Group. 2002  <a href="https://www.researchgate.net/publication/234731444_enGauge_21st_Century_Skills_Digital_Literacies_for_a_Digital_Age">https://www.researchgate.net/publication/234731444_enGauge_21st_Century_Skills_Digital_Literacies_for_a_Digital_Age</a></p> <p><b>Howell EL &amp; Brossard D</b>, (Mis)informed about what? What it means to be a science-literate citizen in a digital world          PNAS 2021 Vol. 118 No. 15,  <a href="https://doi.org/10.1073/pnas.1912436117">https://doi.org/10.1073/pnas.1912436117</a></p> <p><a href="https://www.curriculumonline.ie/Assessment_Guidelines_Science.pdf">https://www.curriculumonline.ie/Assessment_Guidelines_Science.pdf</a></p> <p><a href="https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2019)629188">https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2019)629188</a></p>

<b>Lesson Plan</b>	
<b>Topic</b>	<b>O2 MODULE 2 CRITICAL READING &amp; CRITICAL THINKING</b>
<b>Title</b>	<b>How to perform a literature search</b>
<b>Learning Outcome</b>	At the end of the course clinicians will be capable to find the relevant information by searching in a database.
<b>Summary</b>	Palliative care clinicians need certified medical information to improve patient care. Literature search helps clinicians to improve their knowledge and can be the bridge to the research side in professional development. A search in a database allows them to get answers to medical questions and update new medical opinions/ according to evidence-based medicine. A systematized search in a database allows clinicians to obtain information in the shortest time and perform an efficient search. This session it Will presented what is the path of making an effective search following some search steps and to develop effective strategies using standard search techniques and database refine options. Understanding the literature search cycle helps clinicians to improve their scientific knowledge.
<b>Learning Objectives</b> <b>C- Cognition</b> <b>S – Skills</b> <b>A – Attitudes</b>	Cognitive 1. Will understand the importance of literature search and will understand the literature search cycle  Skills 1. Will be able to access appropriate databases, will be able to identify appropriate search terms for their topic or research question and will be able to develop search terms into an effective strategy using standard search techniques and database refine options
<b>Learning Methods</b>	<ul style="list-style-type: none"> <li>• power point presentation,</li> <li>• demonstration,</li> <li>• video</li> <li>• individual work</li> </ul>
<b>Timing</b>	ppt – 30 min, 30 min - demonstration, 10 min - summarizing and 20 min - individual work

<b>Bibliography / Resources</b>	<p>Aakash Pandita., et al. "How to do a Literature Search?". EC Paediatrics 7.9 (2018): 862-866.</p> <p>Ecker ED, Skelly AC. Conducting a winning literature search. Evid Based Spine Care J. 2010;1(1):9-14. doi:10.1055/s-0028-1100887</p> <p>Fraenkel, J. R., &amp; Wallen, N. E. (2006). How to design and evaluate research in education (6th ed.). New York, NY: McGraw-Hill</p> <p><a href="https://www.hope.ac.uk/media/gateway/library/How%20to%20do%20a%20literature%20search.pdf">https://www.hope.ac.uk/media/gateway/library/How%20to%20do%20a%20literature%20search.pdf</a></p> <p><a href="https://www.open.ac.uk/library/help-and-support/how-do-i-do-a-literature-search">https://www.open.ac.uk/library/help-and-support/how-do-i-do-a-literature-search</a></p> <p><a href="https://web.library.uq.edu.au/research-tools-techniques/search-techniques/where-and-how-search/searching-databases">https://web.library.uq.edu.au/research-tools-techniques/search-techniques/where-and-how-search/searching-databases</a></p>
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<b>Lesson plan</b>	
<b>Topic</b>	O2- NATURE OF SCIENTIFIC ENQUIRY
<b>Title</b>	<b>Introducing palliative care clinicians to critical reading and academic writing</b>
<b>Learning Outcome</b>	To develop critical thinking and critical evaluation of scientific literature.
<b>Summary</b>	<p>Scientific literature can contribute to the improvement of palliative practice and the development of evidence-based public policies in healthcare. However, the results shown in the scientific literature may sometimes not be rigorous. In addition, research related to Palliative Care has special characteristics due to the study population and the context in which it is developed. For all of the above, it is necessary to train palliative care professionals on how to develop a critical reading and evaluation of the scientific literature.</p> <p>The session will help health professionals to b) develop the vision and critical evaluation of the scientific literature and b) identify the important aspects that must be considered in the population and context of Palliative Care.</p>

	<p>A practical session will be held where, through two published scientific articles, the participants together with the expert will analyze and develop critical reading and evaluation skills. In the first place, a joint analysis of an appropriate published article will be made. Subsequently, the attendees will be divided into groups of four people, so that they carry out the critical analysis of a second article that shows deficiencies. This analysis of the articles within the field of Palliative Care will also help to identify those specific characteristics of this population. This methodology will help participants understand and develop tools for critical reading of articles.</p>
<p><b>Learning Objectives</b>  <b>C- Cognition S</b>  <b>- Skills</b>  <b>A – Attitudes</b></p>	<p>Cognition:</p> <ol style="list-style-type: none"> <li>1. Define how to develop a critical reading of the scientific literature.</li> <li>2. Explain which aspects should be considered when reading critically the scientific literature.</li> <li>3. Understand how important is to critically read a scientific literature in order to improve palliative practice.</li> </ol> <p>Skills:</p> <ol style="list-style-type: none"> <li>1. To develop self-abilities to conduct a critical reading and evaluation of literature.</li> </ol> <p>Attitudes:</p> <ol style="list-style-type: none"> <li>1. Know how to carry out a critical reading and evaluation of the literature in the context of palliative care.</li> </ol>
<p><b>Learning Methods</b></p>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group exercises</li> <li>• Group discussions</li> </ul>
<p><b>Timing</b></p>	<p>90 minutes session</p>
<p><b>Bibliography / Resources</b></p>	<p>Marinangeli F, Ciccozzi A, Leonardis M, Aloisio L, Mazzei A, Paladini A, et al. Use of strong opioids in advanced cancer pain: a randomized trial. J Pain Symptom Manage. United States; 2004 May;27(5):409–16.</p> <p>Temel JS, Greer JA, Muzikansky A, Gallagher ER, Admane S, Jackson VA, et al. Early palliative care for patients with metastatic non-small-</p>

	cell lung cancer. N Engl J Med. United States; 2010 Aug;363(8):733-42.
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<b>Lesson Plan</b>	
<b>Topic</b>	<b>O2 MODULE 2 CRITICAL READING &amp; CRITICAL THINKING</b>
<b>Title</b>	<b>Understanding the quality of the research</b>
<b>Learning Outcome</b>	To recognize reliable scientific publications and make appropriate decisions for patients care based on scientific evidences.
<b>Summary</b>	Palliative care clinicians need certified medical information to improve patient care. Scientific literature helps clinicians to improve their knowledge and can be the bridge to the research side in professional development. The quality of the articles needs to be considered by conducting a rigorously quality assessment. Related to quantitative studies, the palliative care clinician assesses the methodological procedures, how bias and errors have being avoided. Regarding the qualitative studies, research process and the depth of its analysis need to be appraised.
<b>Learning Objectives</b> <b>C- Cognition</b> <b>S – Skills</b> <b>A – Attitudes</b>	<ol style="list-style-type: none"> <li>1. To describe the influence of methodology on quality assessment of an article (C)</li> <li>2. To present available tools to guide quality assessment (C)</li> <li>3. To name criteria use to appraise the quality of the journal (C)</li> <li>4. To make a quality assessment of an article (S)</li> </ol>
<b>Learning Methods</b>	Lecture Group exercises Group discussion
<b>Timing</b>	Lecture – 30 min, 30 min – group exercises, 30 min – group discussion
<b>Bibliography / Resources</b>	<p><a href="#">Critical Appraisal</a> Skills Programme (2019). CASP [online] Available at: <a href="https://casp-uk.net/casp-tools-checklists/">https://casp-uk.net/casp-tools-checklists/</a> Accessed: 19/04/2022.</p> <p>Moher, D., Shamseer, L., Clarke, M. <i>et al.</i> Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. <i>Syst Rev</i> <b>4</b>, 1 (2015). <a href="https://doi.org/10.1186/2046-4053-4-1">https://doi.org/10.1186/2046-4053-4-1</a>.</p>



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[https://www.youtube.com/watch?v=iZg\\_3AjFJH0&ab\\_channel=SCHARRLibrary](https://www.youtube.com/watch?v=iZg_3AjFJH0&ab_channel=SCHARRLibrary)

Critical appraisal and types of designs.  
[https://www.youtube.com/watch?v=H8Y-yfi3vp4&ab\\_channel=CochraneCommonMentalDisorders](https://www.youtube.com/watch?v=H8Y-yfi3vp4&ab_channel=CochraneCommonMentalDisorders)

<b>Lesson Plan</b>	
<b>Topic</b>	O2 MODULE 3- PRESENTING RESEARCH RESULTS
<b>Title</b>	<b>How to write scientific papers for publication</b>
<b>Learning Outcome</b>	<p>Describe the process of writing a research manuscript for publication in journals</p> <p>Understands the use of different international standards for the drafting of bibliographic references</p> <p>Awareness of how to deal with reviewers' comments</p>
<b>Summary</b>	<p>The session will explain the processes of transforming research findings into potentially publishable manuscripts for submission to academic and professional journals. It will cover the requirements of different international referencing systems and the importance of acknowledging the sources drawn upon in writing a manuscript. The selection of appropriate journals, the submission procedures and the handling of editors and reviewer's feedback in revisions to the manuscript will be considered. In addition, how to deal with rejection of papers will be discussed.</p>
<b>Learning Objectives</b> <b>C- Cognition</b> <b>S – Skills</b> <b>A – Attitudes</b>	<p>Cognition:</p> <ol style="list-style-type: none"> <li>1. Explains the rationale for selection of appropriate journals</li> <li>2. Awareness of the concept of plagiarism and of requirements for citations of others' work</li> <li>3. Understands how to cite original sources, using different referencing systems</li> <li>4. Understand the process of writing that includes critical reflection, editing of content, editing of language, proof reading and responding to feedback</li> <li>5. Can describe the structure of a scientific paper</li> </ol> <p>Skills:</p> <ol style="list-style-type: none"> <li>1. Academic writing</li> </ol> <p>Attitudes:</p> <ol style="list-style-type: none"> <li>1. Recognize the challenges of writing within a team</li> <li>2. Recognizes that writing is an iterative process.</li> </ol>

<b>Learning Methods</b>	<ul style="list-style-type: none"> <li>• Individual / group exercises</li> <li>• Discussions</li> <li>• Lecture</li> </ul>
<b>Timing</b>	90 minutes session
<b>Bibliography / Resources</b>	Catherine Walshe 2018 <a href="#">Clear, Simple, Precise, Meaningful: A Quick Guide to Writing for Publication - Indian Journal of Palliative Care (jpalliativecare.com)</a>

<b>Lesson Plan</b>	
<b>Topic</b>	O2 MODULE 3- PRESENTING RESEARCH RESULTS
<b>Title</b>	<b>How to prepare a conference poster</b>
<b>Learning Outcome</b>	To achieve necessary knowledge and skills to produce a poster that reflects accurately the results of the research.
<b>Summary</b>	This session will enable participants to transfer their research results into a poster presentation. This will be achieved by reflection on the characteristics of an ideal poster, discussions on how to present key messages through a poster and aspects to consider when designing a poster; presentation of templates for posters and groupwork that will provide the opportunity to design own poster
<b>Learning Objectives</b>	Cognitive
<b>C- Cognition</b>	1.Present the characteristics of an ideal poster
<b>S – Skills</b>	2.Explain how to present key messages for a poster
<b>A – Attitudes</b>	3. Describe steps necessary to design a poster
	Skills
	1.Design a poster on a given abstract /research
<b>Learning Methods</b>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group exercises</li> <li>• Group discussions</li> </ul>
<b>Timing</b>	120 min session

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/ Resources**

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