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## CRITICAL THINKING IN INTEGRATIVE AND COMPLEMENTARY PRACTICES

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**Abstract:** This essay, comprising an analytical, descriptive, critical-reflexive and concise review of the literature, presents a conceptual-theoretical framework conceived by the multidimensional aspects of critical thinking: ability or capacity for reasoning, skeptical worldview, values and disposition, fundamental in judgment for practitioners of Integrative and Complementary Practices – PIC, better evidence-based decision making and problem solving; establishing a debate about its use in the efficient clinical practice of health care.

**Keywords:** Critical Thinking; Integrative and Complementary Practices; Evidence-Based Practices.

## INTRODUCTION

In Brazil, in 2006, therefore, more than 15 years ago by recommendation of the WHO, traditional/alternative and complementary medicine – MT/MAC, or simply, MAC was incorporated under the name of Integrative and Complementary Practices – PIC in the unified health system – SUS (BRASIL, 2018), where the biomedical model predominates. However, the integration of TCM with the biomedical model is not a consensus in the scientific community, because due to the divergences between these paradigms, it becomes necessary to broaden the debate on fair integration in the presence of hegemonic biomedical influence (Possamai-Inesedy; Cochrane, 2013). It is noteworthy that the terms MAC, MTC and PIC are used interchangeably in this study.

Although CAM refers to more than 100 health care approaches, across philosophies and therapeutic modalities from around the world, which are not provided by conventional medicine (Almoussa et al, 2015), currently, PIC represent only 29 therapeutic approaches, which they can undoubtedly be a care/self-care option for the well-being and health of

many people (da Silva, 2022).

As a better performance in the provision of health care is intrinsically related to duality, knowledge and thought, in which knowledge is a process carried out by thought and all existing knowledge is due to critical thinking (Paul, 1992), the need for systematization of a body of knowledge becomes essential for the development of critical thinking skills and, consequently, the disposition or internal motivation to use it in professional judgment processes (Facione, N; Facione, P, 2008), translating into the application in a context practical and professional (Facione et al, 1997).

Although approaching critical thinking is quite controversial, it is essential that this subject be debated in order to broaden its understanding, so that it can be put into everyday professional practice (Finn, 2011). Therefore, since critical thinking is a preponderant factor in professional practice in the health area, this essay proposes a conceptual-theoretical structure conceived by multidimensional aspects: reasoning ability or ability, skeptical world view and values to get as close as possible to reality (Gabennesch, 2006). In addition to another aspect considered essential, the disposition (Ennis, 1996; Facione et al, 1997; Facione, 2000; Facione, N; Facione, P, 2008).

This contribution to the literature has a formative character of critical thinking for the development of all PIC practitioners. Thus, in this essay, so that the reading of the text does not become tiring, we chose the acronym PICS to name all these practitioners involved in health care. In addition to not having as objective, to present ways of teaching and learning to think critically, nor to suggest methods of evaluating skills for the application of critical thinking.

Initially, a brief approach is made to health care practices based on scientific evidence.

Then, the concept of critical thinking and its formation from knowledge are described, in addition to presenting it as a form of privilege and presenting the multidimensional aspects of critical thinking. The third part establishes a brief debate addressing aspects of critical thinking and its use by PICS. Finally, final considerations are made on the subject, proposing guidelines for future studies.

## **EVIDENCE-BASED HEALTH CARE PRACTICES**

Health care encompasses the various actions taken in the quest to promote health and well-being (Campbell et al, 2000) and which, in a holistic way, must be extended to groups or population. In clinical care practice, a new concept has been used, that of evidence-based practices – EBP, referring to the harmony between: the best level of evidence available, the clinical experience of caregivers in health and the values and expectations of the patient (Chiwaula et al, 2018; Cleary-Holdforth, 2020). Thus, this concept seems to be more suitable for PICS, as it will reflect on better decision-making and problem solving, in addition to being centered on the person's health care (Chiwaula et al, 2018).

## **INTEGRATIVE AND COMPLEMENTARY PRACTICES AS APPROACHES TO CARE**

The process of institutionalizing PICS in the SUS began in 2006, when they were officially regulated by the National Policy for Integrative and Complementary Practices – PNPIC. The analysis of this process, correlating the experiences lived in Brazil with the international ones reported in the literature, points to a probable influence of the hegemonic power of the biomedical paradigm, such as, among others, the non-incorporation of traditional indigenous medicine (da Silva, 2022; 2023).

This preponderant influence on the Brazilian health system is corroborated by Frenopoulo (2021) in his analysis of the medical mission in Amazonian indigenous villages, which he cites as characteristics: the ideological supremacy of biomedicine and medical segregation, mentioning that the mission is far from being an integral or complementary element to the indigenous model of health care.

## **BRIEF DESCRIPTION OF CRITICAL THINKING**

According to Paul (1992) the human being is capable of being logical and illogical, the only animal that uses the meaning of ideas, concepts, analogies, metaphors, models, theories and explanations to give meaning, understand, predict and control something, in addition to having clear, precise, relevant, consistent, deep and fair thinking and also, paradoxically, the antagonistic side. For the author, this continuum influences the learning process, in which critical thinking makes perfect sense, and must not be procedural thinking, but thinking based on principles.

Therefore, it is important to understand that knowledge is produced, analyzed, understood, organized, evaluated, maintained and transformed by thought, in addition to being a consequence of learning to think critically (Paul, 1992). In this context, authors clarify the levels of thought, which proceed from the lower order level to the higher order level (Paul; Elder, 2008; Aktar, 2019).

Critical thinking will always occur when exercising the art of questioning (Akhtar, 2019), being fundamental a systematic, disciplined, deep and centered questioning on concepts, principles, theories and essential questions, used to follow the logical implications of thought, called Socratic questioning (Paul; Elder, 2007) and which involves: analyzing and understanding concepts, discovering

facts, examining and discovering assumptions and distinguishing knowledge from ignorance (Ho et al, 2023).

For Coney (2015) the way of thinking is driven by the objective and need of the individual and occurs in four ways: contemplative-theoretical, practical, technical-instrumental and critical. Therefore, then, critical thinking is approached, which generally presents itself in seven aspects: judgment, rationality, questioning, self-reflection, active commitment to knowledge, originality and attentive or in-depth reading (Moore, 2013; Coney, 2015).

### SCOPES OF CRITICAL THINKING

Interestingly, Jones (2015) states that we always think critically about something. However, the quality of thinking is determined by knowledge, and the depth of this knowledge, understanding and experience determine the level of critical thinking (Bailin et al, 1999). Although there is no consensus on an ideal definition for critical thinking, here are some that complement each other.

Healthy critical thinking creates, in stages, a new and better way of thinking, in which in the creative stage, weak thinking is replaced by stronger (Paul, 2005). Critical thinking is an enlightened experience, which emancipates the mind, not only being critical of the opinion of others, but not accepting the arguments created without proper study and investigation (Akhtar, 2019).

Paul (1992) states that critical thinkers must be aware of the limitations of their knowledge and examine the points of view involved. Critical thinkers must understand that this stems from the accumulation of feelings, knowledge and lived experiences, which influence their way of thinking (Thurmond, 2001). When thinking critically, this individual develops characteristic traits of the mind, which Paul (1992) categorized into:

intellectual humility, intellectual courage, intellectual integrity, intellectual perseverance, intellectual empathy, sense of intellectual justice and confidence in purpose, in addition to intellectual autonomy (Paul, 2005; Paul; Elder, 2008). On the other hand, uncritical thinkers are those who fail to perceive the relevance of thinking about an issue and are, most of the time, confused, unreflective, vague, imprecise, illogical, superficial, incoherent, incorrect or trivial (Paul, 1992).

It is important to mention other types of thoughts and warn that the bad or negative thoughts of the human being, which seem to be good and repeatedly manifest themselves, in the form of a pseudo-critical thought (Paul, 1993), the egocentric in which the individual does not respect the rights and needs, limitations and point of view of others and, contradictorily, the sociocentric, which refers to an individual's uncritical tendency to internalize and act according to norms and beliefs of the group and to submit to its arbitrary or coercive restrictions (Paul; Elder, 2008).

It is worth noting the possibility of manipulation, as a form of illegitimate influence by the person manipulating, either through manipulative behavior (Cleary et al, 2019) or through speeches, aiming to influence the knowledge, beliefs and actions of those being manipulated, in addition to being related to the abuse of power, that is, domination (van Dijk, 2006). The author still considers that only through critical knowledge can manipulation be dealt with. Therefore, critical thinking, as pondered by Coney (2015), must be perceived as essential to stop and reverse the movement of ideological convictions and practices present in science and technology, through discussions and reflections.

Understanding critical thinking, as well as knowledge and thinking, as a form of privilege (Dotter, 2019). In this essay, the form

of privilege is highlighted, which refers to some people having aptitude while others do not. In practice, it is evident when the health professional is sought after for their skills, knowledge and being able to provide health care to others (Robinson, 2022).

However, there are other forms of privilege, such as that which refers to undeserved advantages, in which the privileged may find it natural and still not recognize the lack of them to others (Holm et al, 2017) and the advantage achieved by the subordination of groups who oppress themselves, usually intentionally and out of a certain supremacism (Krieger, 2001).

## **MULTIDIMENSIONALITY OF CRITICAL THINKING**

In professional practice, for there to be a commitment to critical thinking, it is necessary to perceive the multidimensional aspects: the ability or reasoning ability, the skeptical world view, the values and disposition. Therefore, in the following subsections these four aspects are described.

### **THE SKILL/CAPACITY DIMENSION**

Generally, we are always in the mood to do something, but often we do not feel capable or lack the necessary skills to carry it out, which means that these skills only manifest themselves in practice (Facione, 2000). For the author, individuals with greater skills tend to be able to perform a series of tasks, making fewer mistakes, when these skills are required. Generally, these are supported by knowledge and developed by a transformative educational process (Akhtar, 2019), in a scenario where the importance of doubt is recognized (Southworth, 2022). According to the author, perspective-taking skills, that is, understanding from another point of view, is capable of generating the condition of doubt and critical thinking, in which reflection and reasoning are strengthened to solve them.

there.

For Gabennesch (2006), thinking critically requires skills related to the many higher order cognitive operations involved in processing information and not just absorbing it by analyzing, synthesizing, interpreting, explaining, evaluating, generalizing, abstracting, illustrating, applying, comparing and recognize false arguments or glaring fallacies. These skills in a cognitive process will allow differentiating information between relevant and irrelevant, generating and evaluating possible solutions or strategies for a problem, and weighing their advantages and disadvantages (Falcó-Pegueroles et al, 2020). Soon, all abilities to be developed determine the vision of the world and its convictions or beliefs of it.

### **THE WORLDVIEW DIMENSION**

Although there are several definitions of the concept of worldview, for Schlitz et al (2010), it is an aspect of an individual's consciousness, which associates their convictions or beliefs, assumptions, attitudes, values and ideas, forming a comprehensive representation of the reality of the world. world you live in. Still according to the author, this view influences how the individual perceives, understands and interacts with the world.

In other words, Westerlund (2013) refers to the interpretation of reality, in a comprehensive context of how the world is formed and includes belief systems, religions, ideologies and science, with their different images of the world. Education helps to understand human dialectical thinking as a continuum of logical and illogical extremes, in which the first uses theories, concepts, ideas and explanations to give meaning to different worldviews (Akhtar, 2019).

### **THE DIMENSION OF VALUES**

Values are basic, stable and lasting beliefs

that individuals or groups consider right, good or desirable (Moyo et al, 2016). Personal values reflect an individual's ethnocultural identity, which considerably influence the development of professional values (Gassas; Salem, 2022). Such values can also be found as guides in professional ethics codes for ethical decision-making and from these codes professional values originate (Kantek et al. 2017). Professional values underlie actions, behaviors and decisions, especially in ethical dilemmas (Al Shammari et al, 2021), in addition to guiding the individual's behavior as a member of a work group (Moyo et al, 2016). According to the authors, these values can influence the decisions of health care practitioners.

### **THE DISPOSITION DIMENSION**

Disposition, for Ennis (1996), is a tendency to do something under certain conditions. For Profetto-McGrath (2005), disposition refers to attitudes, attributes and habits of mind, to use knowledge and complement acquired skills. This disposition, intention or motivation to use critical thinking, according to Facione (2000), is related to a solid internal motivation to use the skills, when acting or responding to events or circumstances, according to attributes related to the character of an individual, to face problems and make decisions.

Profetto-McGrath (2005) argues that in addition to knowledge and skills for strong thinking, one must be willing to use this knowledge and complement their critical thinking skills. Therefore, an individual can possess or develop the skills and not have the necessary disposition to use them and transform a problem into a solution. So, being skilled does not guarantee that the person is willing to use critical thinking and even if the person is willing, this does not guarantee that he is skilled (Facione, 2000).

### **PIC PROFESSIONALS AND THE IMPROVEMENT OF CRITICAL THINKING**

In the literature, there is a lack of national and international studies, addressing critical thinking, aimed at practitioners of traditional and complementary medicine. I think that the observation made by Facione et al (2021) about the importance of developing and improving the critical thinking skills of nurses and other health professionals during the pandemic is appropriate for all adverse and complex scenarios, in addition to the numerous challenges to be faced by Pics in their clinical practice.

As one of these scenarios, health care systems have been influenced by the power and privilege (Holm et al, 2017), of dominant interest groups such as biomedicine (Quadagno, 2004; Patel et al, 2021). Therefore, it becomes essential that Pics reflect on their search for a niche within the SUS (da Silva, 2023). As discussed by the author, it is necessary to understand that their performance must be conscious in the salutogenic, holistic and vitalist model of well-being and health, in a complementary way to the biomedical model and its professions, which are focused on the pathogenic, mechanistic and hospital-centered paradigm of the disease.

In line with Almousa et al (2015) consider that their clinical performance must be in carrying out multiple treatments to maintain well-being and prevent diseases, instead of treating or curing them. Thus, in this context, Pics will be able to develop their higher-order critical thinking, progressively moving away from pseudo-critical thinking, which would undoubtedly be a differential in their clinical reasoning and, consequently, better assistance or health care.

Critical thinking is fundamental in clinical care practice and requires certain skills and attitudes from the professionals involved in

order to achieve excellence in health care (Falcó-Pegueroles et al, 2020). It may be an opportune moment for Pics to experience serenity, even if only on a personal level (Copeland, 2019) and to start a difficult paradigm shift, ceasing to act with biomedical reductionist clinical reasoning, giving priority to model-oriented reasoning holistic and salutogenic (da Silva, 2023). Its use must be through a cognitive process, in which critical thinking is fundamental in clinical decision-making based on evidence and not on assumptions (Victor-Chmil, 2013).

Undoubtedly, with the improvement of critical thinking there is a great chance of expanding the understanding and recognition of this recent profession, as different characteristics will be highlighted, such as the knowledge base, advanced skill set and commitment to altruism or love of neighbor, in addition to recognizing health as a public good (Weinberg, 2015).

It is hoped that this improvement will lead the Pics to a new, holistic way of thinking, recognizing their thoughts and their abilities to be able to develop those that they still lack or are deficient, and even make them capable of perceiving the privilege that it is, to be able to take care of from other people (Robinson, 2022), strengthen the plans to continue with dedication and commitment, and develop salutogenic resources to face professional challenges.

This privilege of having the ability to know and do, provides increased confidence in learning more and more and applying it in health care responsibly. However, as Dotter (2019) ponders, great privileges come with many responsibilities. It is essential that Pics must increase awareness of their personal-professional values and identify possible incompatibilities in multidisciplinary teamwork, in addition to improving decision-making and quality of care (Moyo et al, 2016).

In addition to understanding the importance of promoting health more fairly, cultivating virtues (Falcó-Pegueroles et al, 2020), expressing the privilege of caring (Robinson, 2022), without ethically transgressing against people (Weinberg, 2015). Then comes an opportune moment for Pics to present themselves as a new professional, who demonstrates great confidence in taking care of others and facing challenges in their work environment without compromising their values.

According to Falcó-Pegueroles et al (2020), attitudes and skills for critical thinking, cultivated by virtues, are essential for health care professionals. For the authors, this will favor the care relationship in how to listen to the interactor and understand what their concerns and needs are, pay attention to their priorities and respond to these needs.

## **CRITICAL THINKING IN EVIDENCE-BASED PIC**

Critical thinking is seen as indispensable and fundamental for acquiring knowledge, skills and attitudes that one does not naturally possess, leading to an improvement in scientific knowledge and thus avoiding ignorance due to indoctrination or acceptance of knowledge not properly explained. (Dellantonio; Pastore, 2020). In addition, their skills and willingness are necessary to support evidence-based practices (Profetto-McGrath, 2005).

Therefore, it is essential that Pics are aware that even in a world scenario under a dominant paradigm, there are several studies and research in the literature on scientific evidence and clinical effectiveness, such as, for example, the maps of the Brazilian Academic Consortium of Integrative Health - CABSIN (Gallego-Pérez et al, 2021), which demonstrate the legitimacy of PICs. This puts it on an equal footing with conventional medicine, as evidence of the effectiveness of practices is

important, especially when only about 15% of medical decisions use scientifically valid studies (Friedman, 2021). In addition, this is an opportune moment to establish itself in an appropriate and fair space in the field of health care (Vickers, 2001).

Pics must develop their skills in clinical practice by performing the EBPs (Finn, 2011), where they can improve their critical thinking, becoming more rationalized and effective, making better analyzes and better clinical decisions, fundamental for the safety of the interactors and reduction of care unnecessary in health (Melnik et al, 2012). In addition to being able to apply scientific knowledge in practice, it contributes to filling gaps in knowledge-practice in health care, in addition to leading to understanding and distancing the body of knowledge from a possible pathological science (Turro, 1999).

## FINAL CONSIDERATIONS

As this essay is not intended to provide a definitive answer to what critical thinking is, it is hoped that this theoretical framework will contribute to a greater understanding of this subject for Pics in evidence-based clinical practice. This structure is based on four dimensions: skills, worldview, values and willingness to use critical thinking in problem solving, decision making and achieving goals in clinical practice.

The improvement of critical thinking through Pics becomes essential for achieving excellence in health care and the development of knowledge, skills and attitudes cultivated by virtues (Falcó-Pegueroles et al, 2020), appropriate values for empowerment (Al Shammari et al, 2021), willingness to use these knowledge and skills (Profetto-McGrath, 2005), develop Socratic thinking (Paul; Elder, 2007; Ho et al, 2023). Therefore, the teaching of critical thinking cannot be trivialized to a set of skills (Paul, 1992; Facione et al, 1997),

as it is a multidimensional, complex, weighted process in which reason and evidence are used.

Pics must be humble in providing care and assume their cognitive deficiencies and limitations of their knowledge (Paul, 1992) in certain subjects, as it is fundamental to have doubts and question for the improvement of critical thinking and, with this, to understand the uncertainty of the knowledge and that there is nothing wrong with showing humility (Friedman, 2021). In addition to seeking to act, avoiding and minimizing the damage of using an intervention, with the precautionary principle (Aronson, 2021).

It is essential that the Pics understand the need to reformulate their thoughts to the higher order or explicitly reflective (Paul; Elder, 2008) and a reorientation in the development and application of a theory of knowledge based on the salutogenic paradigm, strengthening themselves in a niche of action of creating well-being and health (da Silva, 2023).

The trade associations representing the Pics, democratically, must encourage professionals to dialogue from different perspectives and to think for themselves, using critical thinking based on evidence (Abrami, 2008). Undoubtedly, a major challenge for the Pics lies in applying and improving this way of thinking about the SUS, in which the dominant model is the biomedical one. At the same time, these professionals must be aware of a possible domestication process (Fadlon, 2004; da Silva, 2022; 2023), isomorphic behavior (Shuval; Mizrach, 2004; da Silva, 2022; 2023) and manipulation (Cleary et al., 2019).

Future studies must analyze what active Pics know about critical thinking and their skills as fundamental in providing health care. In sequence, you can use the tools to measure critical thinking (Faccione, 2021) and also develop studies proposing a better way to teach it to these professionals.



## REFERENCES

1. BRASIL. Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Atenção Básica. **Manual de Implantação de Serviços de Práticas Integrativas e Complementares no SUS**. Brasília: Ministério da Saúde, 2018, 56 p. <https://pesquisa.bvsalud.org/bvsms/resource/pt/biblio-905958>.
2. POSSAMAI-INESEDY, Alpha; COCHRANE, Suzanne. The Consequences of Integrating Complementary and Alternative Medicine: An Analysis of Impacts on Practice. **Health Sociology Review**, v. 22, n. 1, p. 65-74, 2013. <https://doi.org/10.5172/hesr.2013.22.1.65>.
3. ALMOUSA, H; RABIE, F. M; ALSAMGHAN, A. S; ALSALULI, M; ALBQAMI, S; ALMUSA, M; AL-SHAHRANI, A. Prevalence, Types and Determinants of Complementary and Alternative Medications among Health Clinic Clients. **Journal of Education and Practice**, v. 6, n. 18, p. 51-58, 2015. EJ1079748. <https://doi.org/10.7176/JEP>.
4. DA SILVA, Luis C. Política Nacional de Práticas Integrativas e Complementares: Uma Breve Análise Reflexiva. **Revista Brasileira de Práticas Integrativas e Complementares em Saúde**, v. 2, n. 3, p. 59-72, 2022. <https://revistasuninter.com/revistasauade/index.php/revista-praticas-interativas/article/view/1276>
5. PAUL, Richard. Critical Thinking: What, Why, and How. **New Directions for Community Colleges**, v. 77, p. 3-24, 1992. <https://eric.ed.gov/?id=EJ443438>.
6. FACIONE, Noreen C.; FACIONE, Peter A. Critical Thinking and Clinical Judgment. In: **Critical thinking and clinical reasoning in the health sciences: An international multidisciplinary teaching anthology**. Insight Assessment/The California Academic Press: Millbrae CA, USA, pp. 1-13, 2008. [www.insightassessment.com](http://www.insightassessment.com).
7. FACIONE, Peter A; FACIONE, Noreen C; GIANCARLO, Carol A. **Professional Judgement and the Disposition Toward Critical Thinking**. California Academic Press: Millbrae, CA, USA, p. 1-15, 1997. [https://t.insightassessment.com/var/ezflow\\_site/storage/pdf/Prof\\_Jdgmnt\\_&\\_Dsp\\_CT\\_97\\_Frnch1999.pdf](https://t.insightassessment.com/var/ezflow_site/storage/pdf/Prof_Jdgmnt_&_Dsp_CT_97_Frnch1999.pdf).
8. FINN, P. Critical Thinking: Knowledge and Skills for Evidence-based Practice. **Lang Speech Hear Serv Sch**, v. 42, n. 1, p. 69-72, 2011. [https://doi.org/10.1044/0161-1461\(2010/09-0037\)](https://doi.org/10.1044/0161-1461(2010/09-0037)).
9. GABENNESCH, Howard. Critical Thinking: What is it Good for? (In Fact, what is it?) **Skeptical Inquirer**, v. 30, n. 2, 2006. <https://skepticalinquirer.org/2006/03/critical-thinking-what-is-it-good-for-in-fact-what-is-it/>.
10. ENNIS, Robert H. Critical Thinking Dispositions: Their Nature and Assessability. **Informal Logic**, v. 18, n. 2, p. 165-182, 1996. <https://doi.org/10.22329/il.v18i2.2378>.
11. FACIONE, Peter A. The Disposition toward Critical Thinking: Its Character, Measurement and Relation to Critical Thinking Skill. **Informal Logic**, v. 20, 1, pp. 61–84, 2000. <https://dx.doi.org/10.22329/il.v20i1.2254>.
12. CAMPBELL, Stephen M; ROLAND, Martin O; BUETOW, Stephen A. Defining Quality of Care. **Social Science & Medicine**, v. 51, n. 11, p. 1611-1625, 2000. [https://doi.org/10.1016/S0277-9536\(00\)00057-5](https://doi.org/10.1016/S0277-9536(00)00057-5).
13. CHIWAULA, C. H; CHINKHATA, M; KAMERA, H; HARUZIVISHE, C. Evidence based Practice: A Concept Analysis. **Health Syst Policy Res**, v. 5, n. 3, p. 75, 2018. <https://doi.org/10.21767/2254-9137.100094>.
14. CLEARY-HOLDFORTH, Joanne. Evidence-based Practice in Nursing and Midwifery: We are Talking the Talk, but are We Walking the Walk? **Worldviews on Evidence-Based Nursing**, v. 17, n.2, p. 94-97, 2020. <https://doi.org/10.1111/wvn.12430>.
15. DA SILVA, Luis C. Integrative and Complementary Practices as a Healthgenic Approach. **International Journal of Health Science**, v. 3, n. 10, 2023. <https://doi.org/10.22533/at.ed>.
16. FRENOPOULO, Christian. Underlying Premises in Medical Mission trips for Madiha (Kulina) Indigenous People in the Brazilian Amazon. **Aporia**, v. 13, n. 1, 2021. <https://doi.org/10.18192/aporiam.v13i1.5284>.
17. GALLEGÓ-PÉREZ, D.F; ABDALA, C.V.M; AMADO, D.M; de SOUSA, I.M.C; ALDANA-MARTÍNEZ, N.S, GHELMAN, R. Equity, Intercultural Approaches, and Access to Information on Traditional, Complementary, and Integrative Medicines in the Americas. **Rev Panam Salud Publica**, v. 45, p. e82, 2021. <https://doi.org/10.26633/RPSP.2021.82>.

18. PAUL, Richard; ELDER, Linda. **The Miniature Guide to Critical Thinking Concepts and Tools**. 5th Ed. Foundation for Critical Thinking Press, 2008, 28 p. <https://www.criticalthinking.org>. Acesso em: 05/04/2023.
19. AKHTAR, Farhan. Critical Thinking in Education: An Answer to Extremism. **ISSRA Papers**, v. 11, n. I, p. 21-38, 2019. <https://issrapapers.ndu.edu.pk/site/article/view/62>.
20. PAUL, Richard; ELDER, Linda. Critical Thinking: The Art of Socratic Questioning. **Journal of Developmental Education**, v. 31, n. 1, p. 36, 2007. <https://www.proquest.com/openview/ab8902a8099e51ff3874487ea300bea8/1?pq-origsite=gscholar&cbl=47765>
21. HO, Yueh-Ren; CHEN, Bao-Yu; LI, Chien-Ming. Thinking more Wisely: Using the Socratic Method to Develop Critical Thinking Skills amongst Healthcare Students. **BMC Med Educ**, v. 23, n. 1, p. 173, 2023. <https://doi.org/10.1186/s12909-023-04134-2>.
22. CONEY, Christopher L. Critical Thinking in its Contexts and in Itself. **Educational Philosophy and Theory**, v. 47, n. 5, p. 515-528, 2015. <http://dx.doi.org/10.1080/00131857.2014.883963>.
23. MOORE, Tim. Critical Thinking: Seven Definitions in Search of a Concept. **Studies in Higher Education**, 38, 506–522, 2013. <https://doi.org/10.1080/03075079.2011.586995>.
24. JONES, Anna. A Disciplined Approach to Critical Thinking. In: M. Davies & R. Barnett (Eds). **The Palgrave Handbook of Critical Thinking in Higher Education**. New York: Palgrave, p. 169-182, 2015. [https://doi.org/10.1057/9781137378057\\_11](https://doi.org/10.1057/9781137378057_11).
25. BAILIN, S; CASE, R., COOMBS, J.R; DANIELS, L.B. Conceptualizing critical thinking. **Journal of Curriculum Studies**, v. 31, n. 3, p. 285-302, 1999. <https://doi.org/10.1080/002202799183133>.
26. PAUL, Richard. The State of Critical Thinking Today. **New Directions for Community Colleges**, v.130, p. 27-38, 2005. <https://doi.org/10.1002/cc.193>.
27. PROFETTO-MCGRATH, Joanne. Critical Thinking and Evidence-based Practice. **Journal of Professional Nursing**, v. 21, n. 6, p. 364-371, 2005. <https://doi.org/10.1016/j.profnurs.2005.10.002>.
28. THURMOND, Veronica A. The Holism in Critical Thinking: A Concept Analysis. **Journal of Holistic Nursing**, v. 19, n. 4, p. 375-389, 2001. <https://doi.org/10.1177/089801010101900406>.
29. PAUL, Richard. **Pseudo Critical Thinking in the Educational Establishment: A Case Study in Educational Malpractice**. Foundation for Critical Thinking, 1993. <https://www.criticalthinking.org/pages/pseudo-critical-thinking-in-the-educational-establishment/504>. Acesso em: 05/04/2023
30. CLEARY, M; WEST, S; MCGARRY, D; GREENWOOD, M; KORNHABER, R. Manipulation in Health Care: A Positive or Negative Experience?. **Issues in Mental Health Nursing**, v. 40, n. 11, p. 985-987, 2019. <https://doi.org/10.1080/01612840.2019.1643631>.
31. VAN DIJK, Teun A. Discourse and Manipulation. **Discourse & society**, v. 17, n. 3, p. 359-383, 2006. <https://doi.org/10.1177/0957926506060250>.
32. HOLM, A. L; GOROSH, M. R; BRADY, M; WHITE-PERKINS, D. Recognizing Privilege and Bias: An Interactive Exercise to Expand Health Care Providers' Personal Awareness. **Academic Medicine**, v. 92, n. 3, p. 360-364, 2017. <https://doi.org/10.1097/ACM.0000000000001290>.
33. KRIEGER, Nancy. A Glossary for Social Epidemiology. **Journal of Epidemiology & Community Health**, v. 55, n. 10, p. 693-700, 2001. <https://doi.org/10.1136/jech.55.10.693>.
34. DOTTER, Anne. With Great Privilege Comes Great Responsibility. **Journal of the National Collegiate Honors Council**, v. 20, n. 1, p. 45-49, 2019. <https://digitalcommons.unl.edu/nchcjournal/618>.
35. ROBINSON, Evan T. Patient Care and Privilege Therein: The Privilege to Provide Care. **American Journal of Pharmaceutical Education**, p. 9036, 2022. <https://doi.org/10.5688/ajpe9036>.
36. SOUTHWORTH, James. Bridging Critical Thinking and Transformative Learning: The Role of Perspective-Taking. **Theory and Research in Education**, v. 20, n. 1, p. 44-63, 2022. <https://doi.org/10.1177/14778785221090853>.

37. FALCÓ-PEGUEROLES, A; RODRÍGUEZ-MARTÍN, D; RAMOS-POZÓN, S; ZURIGUEL-PÉREZ, E. Critical Thinking in Nursing Clinical Practice, Education and Research: From Attitudes to Virtue. **Nursing Philosophy**, v. 22, n. 1, p. e12332, 2021. <https://doi.org/10.1111/nup.12332>.
38. SCHLITZ, Marilyn M; VIETEN, Cassandra; MILLER, Elizabeth M. Worldview Transformation and the Development of Social Consciousness. **Journal of Consciousness Studies**, v. 17, n. 7-8, p. 18-36, 2010. <http://marjadevries.nl/articles/index.php>.
39. WESTERLUND, K. Worldview. In: Runehov, A.L.C., Oviedo, L. (eds). **Encyclopedia of Sciences and Religions**. Reference work entry, 2013. Springer, Dordrecht. [https://doi.org/10.1007/978-1-4020-8265-8\\_1170](https://doi.org/10.1007/978-1-4020-8265-8_1170).
40. MOYO, M; GOODYEAR-SMITH, F A; WELLER, J; ROBB, G; SHULRUF, B. Healthcare Practitioners' Personal and Professional Values. **Advances in Health Sciences Education**, v. 21, p. 257-286, 2016. <https://doi.org/10.1007/s10459-015-9626-9>.
41. GASSAS, Roaa; SALEM, Olfat. Factors Affecting Nurses' Professional Values: A Comprehensive Integrative Review. **Nurse Education Today**, v. 118, p. 105515, 2022. <https://doi.org/10.1016/j.nedt.2022.105515>.
42. KANTEK, Filiz; KAYA, Ayla; GEZER, Nurdan. The Effects of Nursing Education on Professional Values: A Longitudinal Study. **Nurse Education Today**, v. 58, p. 43-46, 2017. <https://doi.org/10.1016/j.nedt.2017.08.004>.
43. AL SHAMMARI, Farhan F; GRANDE, Rizal A.N.; BERDIDA, Daniel J.E. The Correlates of Social Determinants to Ethico-moral Values on Professional Development of Saudi Nursing Students. **Journal of Taibah University Medical Sciences**, v. 16, n. 2, p. 240-246, 2021. <https://doi.org/10.1016/j.jtumed.2020.11.002>.
44. FACIONE, P.A; FACIONE, N.C; RIEGEL, F; MARTINI, J.G; CROSSETTI, M.G.O. Holistic Critical Thinking in Times of Covid-19 Pandemic: unveiling Fundamental Skills to Clinical Nursing Practice [editorial]. **Rev Gaúcha Enferm**, v. 42, p. e20210235, 2021. <https://doi.org/10.1590/1983-1447.2021.20210235>.
45. QUADAGNO, Jill. Why the United States has no National Health Insurance: Stakeholder Mobilization against the Welfare State, 1945-1996. **Journal of Health and Social Behavior**, p. 25-44, 2004. PMID: 15779464.
46. PATEL, G; BROSNAN, C; TAYLOR, A; GARIMELLA, S. The dynamics of TCAM integration in the Indian public health system: medical dominance, countervailing power and co-optation. **Social Science & Medicine**, v. 286, p. 114152, 2021. <https://doi.org/10.1016/j.socscimed.2021.114152>.
47. COPELAND, Samantha. On Serendipity in Science: Discovery at the Intersection of Chance and Wisdom. **Synthese**, v. 196, p. 2385-2406, 2019. <https://doi.org/10.1007/s11229-017-1544-3>.
48. VICTOR-CHMIL, Joyce. Critical Thinking versus Clinical Reasoning versus Clinical Judgment Differential Diagnosis. **Nurse Educator**, v. 38, n. 1, p. 34-36, 2013. <https://doi.org/10.1097/NNE.0b013e318276dfbe>.
49. WEINBERG, Merlinda. Professional Privilege, Ethics and Pedagogy. **Ethics and Social Welfare**, v. 9, n. 3, p. 225-239, 2015. <http://dx.doi.org/10.1080/17496535.2015.1024152>.
50. DELLANTONIO, Sara; PASTORE, Luigi. Ignorance, Misconceptions and Critical Thinking. **Synthese**, v. 198, n. 8, p. 7473-7501, 2021. <https://doi.org/10.1007/s11229-019-02529-7>.
51. FRIEDMAN, Hershey H. Is Higher Education Making Students Dumb and Dumber? **American Journal of Economics and Sociology**, v. 80, n. 1, p. 53-77, 2021. <https://doi.org/10.1111/ajes.12372>.
52. VICKERS, Andrew J. Message to Complementary and Alternative Medicine: Evidence is a Better Friend than Power. **BMC Complement Altern Med**, v.1, n. 1, 2001. <https://doi.org/10.1186/1472-6882-1-1>.
53. MELNYK, B.M; FINEOUT-OVERHOLT, E; GALLAGHER-FORD, L; KAPLAN, L. The State of Evidence-based Practice in US Nurses: Critical Implications for Nurse Leaders and Educators. **JONA: The Journal of Nursing Administration**, v. 42, n. 9, p. 410-417, 2012. <https://doi.org/10.1097/NNA.0b013e3182664e0a>.
54. TURRO, Nicholas J. Toward a General Theory of Pathological Science. **21 stC**, v. 3, n.4, 1999. <http://www.columbia.edu/cu/21stC/issue-3.4/turro.html>.

55. ARONSON, Jeffrey K. When I Use a Word... Taking Therapeutic Care. **BMJ**, v. 375, p. n3010, 2021. <https://dx.doi.org/10.1136/bmj.n3010>.
56. ABRAMI, P. C; BERNARD, R. M; BOROKHOVSKI, E; WADE, A; SURKES, M. A; TAMIM, R; ZHANG, D. Instructional Interventions Affecting Critical Thinking Skills and Dispositions: A Stage 1 Meta-analysis. **Review of Educational Research**, v. 78, n. 4, p. 1102-1134, 2008. <https://doi.org/10.3102/0034654308326084>.
57. FADLON, J. Meridians, Chakras and Psycho-neuro-immunology: The Dematerializing Body and the Domestication of Alternative Medicine. **Body & Society**, v. 10, n. 4, p. 69-86, 2004. <https://doi.org/10.1177/1357034x04047856>.
58. SHUVAL, Judith T.; MIZRACHI, Nissim. Changing Boundaries: Modes of Coexistence of Alternative and Biomedicine. **Qual Health Res** [Internet], v. 14, n. 5, p. 675-690, 2004. <https://doi.org/10.1177/1049732304263726>.