

Reconciling Organic-Medical and Psychological Paradigms in the Study of Counselors' Cognitive Flexibility: a Critical Literature Review

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Abstract

Cognitive flexibility of a counselor or therapist refers to their ability to adapt their cognitive approach to the unique needs and circumstances of their clients. This requires the ability to recognize and adapt to the unique cognitive processes and thought patterns of each individual. In the contextual development of cognitive flexibility in counselors, the organic-medical paradigm and the psychological paradigm have led to a revolution. The existence of these two paradigm perspectives necessitates a unique study that bridges the concept of understanding the two paradigms holistically in order to enhance the cognitive flexibility of the counselor. The purpose of this study is to investigate where the organic-medical paradigm and the psychological paradigm intersect when examining the cognitive flexibility of the counselor. The research design was quantitative and based on a critical literature review. The research focuses on three major components: (1) context issues regarding counselor cognitive flexibility from the perspective of the medical organic paradigm and psychological paradigm; (2) issues regarding the main implicit and boundary problems of counselor cognitive flexibility on professional work performance based on literature research data; and (3) the most promising questions for future research development. In this article, the research findings are discussed further.

Keywords: Counselors' cognitive flexibility, organic-medical paradigm, psychological paradigm

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Introduction

Cognitive flexibility is the ability to think flexibly and quickly adjust thinking and behavior according to different situations. According to (Sapmaz & Doğan, 2013) cognitive flexibility is a part of cognitive executive function that refers to the ability to switch between thinking about two different concepts or to think about multiple concepts simultaneously. Menurut (Tei & Fujino, 2022) cognitive flexibility is important for professional counselors because counselors work with a variety of individuals who have different backgrounds, problems and preferences. By having cognitive flexibility skills, counselors can be more effective in dealing with challenges and complexities that arise during counseling sessions. Therefore, in the educational process counselors need to integrate a learning curriculum that is truly capable of stimulating cognitive flexibility optimization of prospective counselors.

The process of measuring cognitive flexibility cannot be separated from the design of a learning curriculum that can stimulate cognitive flexibility in aspiring counselors in the education sector. Methods

and instruments utilized to measure cognitive flexibility can vary (Bilgin, 2009; Martin & Anderson, 1998; Önen & Koçak, 2015). Cognitive Flexibility (CF) is viewed, according to the organic-medical paradigm, as a skill that depends on healthy and normal brain function. According to this paradigm, CF depends on the central nervous system's capacity to process information accurately and rapidly. Under the organic-medical paradigm, cognitive flexibility can be precisely measured using medical instruments like fMRI and EEG. However, it is difficult to apply these two tools to the counselor education sector. This is because EEG equipment is relatively expensive to use (Wu & Koutstaal, 2020). This may be out of reach for most educational institutions. Moreover, EEG data collection takes a considerable amount of time, and the complexity of data analysis can extend the time required. Even measuring cognitive flexibility with EEG necessitates extensive clinical knowledge and technical expertise. To save time, effort, and money, most cognitive flexibility assessments in the education sector rely on self-report.

In contrast, the psychological paradigm defines Cognitive Flexibility (CF) as the capacity to shift perspectives and adapt to various situations (Huang et al., 2022). CF is one of the many cognitive skills required for successful environmental adaptation. In this paradigm, Cognitive Flexibility can be measured through self-report by completing a questionnaire or rating scale. The CF questionnaire consists of a list of statements that assess a person's capacity to adopt new perspectives and adapt to new circumstances. However, the weakness of measuring cognitive flexibility through self-report can be influenced by subjectivity bias and the tendency of participants to provide answers that are deemed expected or positive (Spiro et al., 2006). In addition, self-report cannot provide an accurate depiction of the brain activity associated with cognitive flexibility. Therefore, the use of self-report measurements in evaluating cognitive flexibility must be balanced with other measurements that can be measured more objectively, such as neuropsychological or brain scanning technology measurements (Dennis & Vander Wal, 2010).

The organic-medical paradigm and the psychological paradigm have different views on cognitive flexibility. The organic-medical paradigm tends to view cognitive flexibility as the result of biological or organic conditions related to brain function, while the psychological paradigm views it as the result of complex psychological processes. Meanwhile, the psychological paradigm views cognitive flexibility as an individual's ability to adapt and move from one task or situation to another task or situation effectively and efficiently. This ability involves several complex cognitive processes, including the ability to understand, recognize, and adapt to changes in different tasks or situations. In the psychological paradigm, there are several factors that affect cognitive flexibility, such as genetic factors, social environment, and individual experiences in dealing with different situations. In this case, the psychological approach focuses more on increasing cognitive flexibility skills through psychological interventions, such as cognitive training or cognitive behavioral therapy (Bilgin, 2009; Sprinthall et al., 1966).

The divergent perspectives on the two paradigms can impede the development of a conceptual framework for cognitive flexibility. Not only in the context of learning, but also in the context of professional performance, the executive function of the brain plays an important role in demonstrating adaptive capacity. In addition, it is feared that the existence of a barrier in comprehending the conceptual framework of cognitive flexibility in the organic-medical paradigm and the psychological paradigm will impact the preparation of future counselors whose professional orientation will involve a great deal of work in the field of mental health. Thus, it is possible to produce professional counselors who lack cognitive flexibility qualifications. The purpose of this study is to investigate holistically the intersectional perspectives of the organic-medical paradigm and the psychological paradigm in framing the concept of cognitive flexibility. It is anticipated that integrating organic-medical and psychological paradigms into the understanding and management of counselor cognitive flexibility will improve the quality of counseling services and the psychological well-being of patients.

Methods

This paper is based on a critical literature review because it is an efficient qualitative method for determining where the current discourse on a given topic stands. (Schryen, G., Wagner, G., Benlian, A., Par'e, G., 2020) argue that a critical literature review is a valuable strategy for an understanding objective that seeks to summarize existing knowledge in a particular field and suggest future research directions. Saunders and Rojon (2011) concur that a critical literature review is the most effective method for achieving this goal, as well as for assessing the current state of discussion, identifying areas of expertise,

and determining research priorities. A critical literature review differs from others in that it emphasizes current strengths and weaknesses in order to advance new hypotheses. On the basis of Fig. 1, researchers chose exploratory qualitative research (Cortellazzo et al., 2019) because they desired a comprehensive understanding of the present and were willing to provide evidence for the study's continued development. The purpose of this study was to identify and incorporate all significant contributions to this field. (Table.1)

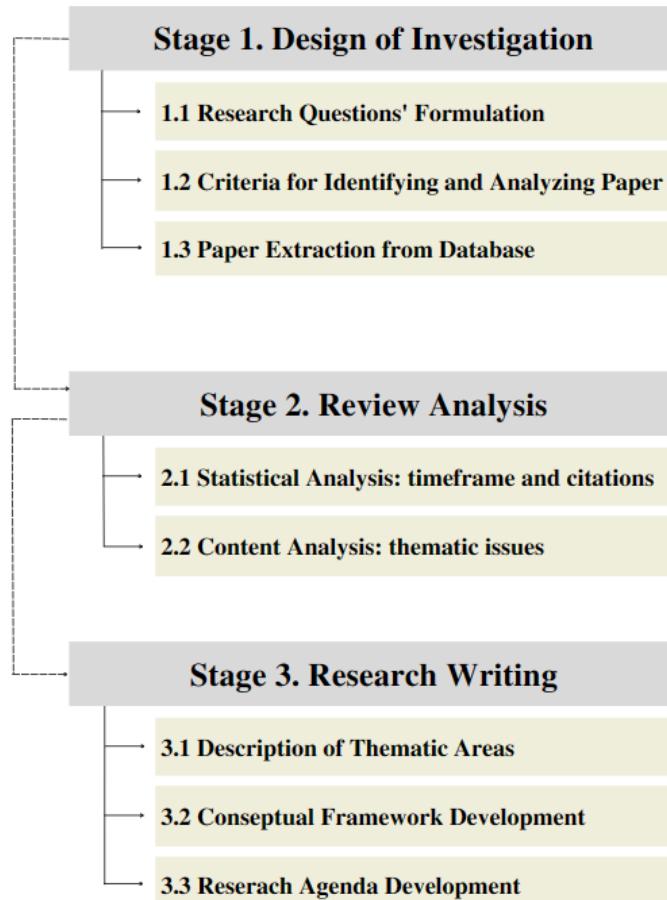


Fig. 1 The Research Stages of the Critical Literature Review

a. Stage 1. Design of Investigation

This stage focuses on investigating differences and identifying gaps in research on cognitive flexibility from the point of view of the organic-medical paradigm and the psychological paradigm. The current research body's analysis was intended to find out how scientific studies relate to the definition and use of physical issues in different fields. This made it possible to come up with the following research questions:

First research question, what are the differences and similarities between the organic-medical and psychological perspectives on the concept of cognitive flexibility in counselors?

Second research question, what are the primary implications and limitations of cognitive flexibility issues in counselors on their professional work performance, based on the reviewed literature?

Third research question, what are the most promising question for future research developments?

The next step, following the compilation of research question formulations, is to identify the paper's criteria. (a) to obtain a conceptual framework referring to research objectives that focus on the issue of cognitive flexibility counselors in the organic-medical paradigm and psychological paradigm; (b) to obtain

theoretical clarifications and implications; (c) to obtain an overview of the future research agenda focusing on recommendations and weaknesses. In this initial phase, the procedure for obtaining papers, namely through the Scopus and Google Scholar databases, is determined. The selection of the Scopus database is based on the most prevalent criteria used in bibliometric research in the field of counseling and related disciplines.

The Scopus database, on the other hand, provides bibliographic data such as indexed documents, article title, article type, author, author's institutional affiliation, keywords, abstract, number of citations, journal name, publisher name and address, year of publication, volume and issue number, and a list of cited references is available for analysis . 2015). In the meantime, the Google Scholar database was chosen due to its comprehensive coverage of numerous research articles and its relative precision. To form a reliable data set extracted from the Scopus database for the ultimate purpose of developing a framework, a quantitative qualitative approach was adopted, structured from the coding standards used and proposed by various authors such as (Zupic and Cater, 2015).

b. Stage 2. Review Analysis

This stage consists of two phases: statistical analysis, which is conducted quantitatively, and content analysis, which is conducted qualitatively. During the *Statistical analysis (quantitative) phase*, an initial search was conducted in the Scopus database using the keyword "counselor cognitive flexibility" and taking the title, abstract, and recommended keywords into consideration (Corteselli et al., 2020). In the Google Scholar database, researchers use Pusblish or Perish (PoP) tools to categorize articles and journals more efficiently. The search term used to access the Google Scholar database is "Counselor Cognitive Flexibility." This criterion was established to select articles with a strong relationship between the variables studied (Jayasekara and Abu, 2018) and to establish population-representative classification criteria (GORITZ, 2003). The study's temporal scope includes all years up to the present. The selection criteria included titles, keywords or abstracts, and English-language peer-reviewed articles. Other authors, including (Fröding & Osika, 2015), have utilized this method. This study included only journal articles, as they contain the most reliable scientific information on the sample (Salmer et al., 2006). In addition, it is possible to obtain a larger sample of articles, which can then be evaluated based on their title, abstract, and keywords. Although this evaluation method can be criticized for its flexibility and greater generalizability, it enables researchers to identify a broader range of topics for study. At this point, 13 articles have been obtained in accordance with the formulation of predetermined criteria.

In the *Content Analysis (qualitative) phase*, an in-depth qualitative study approach is intended. Reading abstracts, data findings, discussions, and conclusions from the 13 selected articles, based on inductive and interactive criteria related to the research questions posed in stage 1, is the objective of the in-depth exploration, which aims to determine whether there are: (1) differences and similarities in the concept of counselor's cognitive flexibility from the perspective of the organic-medical paradigm and the psychological paradigm, (2) the main implications and limitations, and (3) the main implications and limitations. The 14 articles were accepted because they were pertinent to establishing the current state of the cognitive flexibility counselor debate in light of the organic-medical and psychological paradigms. In the absence of a connection between the abstract and conclusion, the entire article is read to determine its irrelevance.

c. Stage 3. Research Writing

This phase aims to develop an analysis research framework, a description of emerging mathematical fields, and a future research agenda. This stage is crucial in assisting researchers to better comprehend research topics, evaluate pertinent literature, construct a solid theoretical framework, and identify appropriate research methodologies. The next section describes this phase.

Results

a. Statistical Analysis: period, research areas, and location

Regarding publication date, the number of papers included in the sample spans the years 1966 to 2022. (January). Regarding thematic areas (Fig. 2), Scopus data enables the grouping of the majority of papers on psychology (6 papers), social sciences (2 papers), neuroscience (3 papers), nursing and medicine (2 papers), health and professional (1 paper), art and humanity (1 paper), and pharmacology (1 paper).

Regarding geographic location (Fig. 3), the sample reveals a substantial amount of interest in the topic of cognitive flexibility among counselors in ten countries. Nevertheless, the United States (8 papers), Turkey (6 papers), and Germany (3 papers) are the countries with the greatest concentrations of papers (3 papers). All other nations only present a single paper.

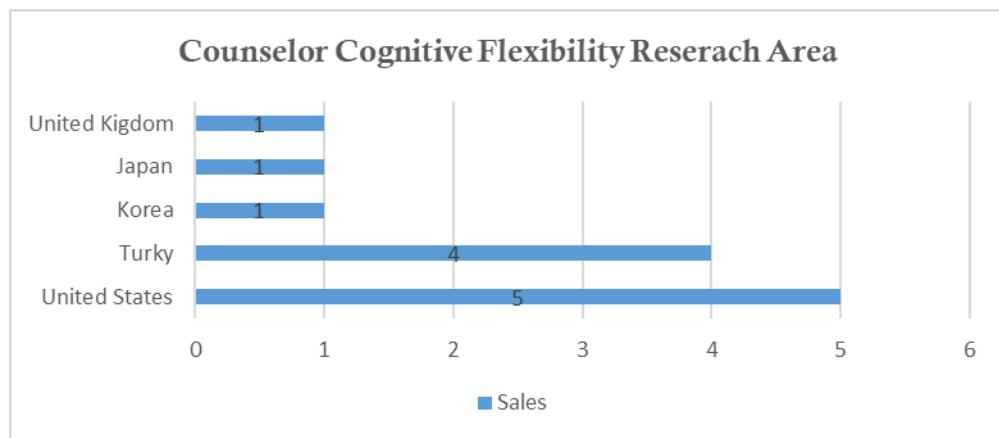


Fig 2. Research Area of Research Sample Paper

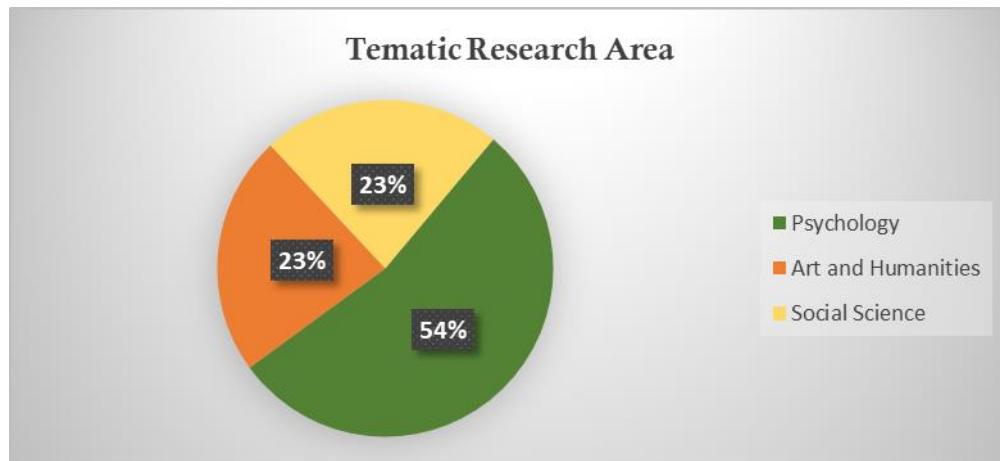


Fig. 3 Tematic Research Area

b. Content Analysis

Table 1. Qualitative Matriks Review

Paper Title	Authors	Year	Source	N. of Citations	Findings
Examining cognitive flexibility of counselor according to the effectiveness counselor characteristics, counselor self efficacy and some variabels	Arzu Buytuk Genc, Fulya Yuksel Sahin	2020	Cukurova University Faculty of Education Journal	5	The findings revealed that effective counselor characteristics such as empathy, active listening ability, job experience, and additional training were favorably related to the counselor's cognitive flexibility. (Buyruk Genç et al., n.d.)
School counsellors' job satisfaction: what is the role of counselling self-efficacy, trait anxiety and cognitive flexibility	Fatih Aydin, dan Hatice Odaci	2020	Journal of Psychologists and Counsellors in Schools	10	Counseling self-efficacy and cognitive flexibility have a favorable relationship with school counselor job satisfaction. Anxiety tendencies, on the other hand, have a negative association with school counselor work satisfaction. (Aydin & Odaci, 2020)
The relationship between emotional literacy, cognitive flexibility and counseling self-efficacy of senior students in psychology and psychological counseling and guidance	Asude Malkoç, and Zeynep Aydin Sünbüll.	2020	Educational Rerserach and Review	16	This study contributes to an important practical realization in the field of guidance and counseling: the importance of training students to improve their emotional literacy and cognitive flexibility in order to become more effective counselors in the future. Furthermore, this study demonstrates that developing emotional literacy and cognitive flexibility, which can be the focus of counselor training programs in tertiary institutions, can improve counseling self-efficacy. (Asude & Zeynep, 2020)
Cognitive flexibility: a focus for research on counselor effectiveness	Norman A. Sprinthall., John M. Whiteley., & Ralph L. Mosher	1966	Counselor Education and Supervision	25	Cognitive flexibility can be learned and increased through training and various counseling practice experiences. In research, cognitive flexibility has been shown to be associated with better counseling skills and a more positive quality of counselor-client interactions. This article demonstrates the importance of paying attention to aspects of cognitive flexibility in counselor training and identifies strategies to increase cognitive flexibility. (Sprinthall et al., 1966)

An investigation of multicultural counseling competence development among graduate-level counseling students through mindfulness, cognitive complexity, and cognitive flexibility	Martinez, Jadelyn K., & Dong, Shengli	2020	International Journal for the Advancement of Counselling	18	Counseling students who were taught mindfulness methods as well as cognitive complexity and cognitive flexibility were more likely to be competent in multicultural counseling than the control group. The dominant element influencing the rise in students' multicultural competence is environmental conditioning. (Gantman, Ana; Gomila, Robin; Martinez, Joel E; Matias, 2018)
A study on impact of cognitive complexity and coping flexibility of the counselor on the countertransference management ability	Youngeun Lee and Chang H. Lee	2011	Journal of the Korea Academia-Industrial cooperation Society	12	According to the findings of this study, cognitive complexity and handling flexibility add to counselor counter-transference management skills. Counselors with greater cognitive complexity and handling flexibility tend to be better at counter-transference control. The writers believe that training counselors in cognitive complexity and handling flexibility can help them improve their counter-transference management skills. (Ridley et al., 2021)
Dimensions of effective counseling: cognitive flexibility and psychological openness in counselor selection	By Thomas W. Allen and John M. Whiteley	1968	American Psychological Association (APA)	48	The selection of a successful counselor is influenced by two dimensions: cognitive flexibility and psychological openness. Cognitive flexibility is the ability to adapt to change and solve issues creatively, whereas psychological openness is the ability to embrace and acknowledge internal emotions and experiences. Counselors with high levels of cognitive flexibility and psychological openness were deemed more successful in delivering quality counseling services by study participants. (MacFarland & Yates, 2016)

The relationships between the big five personality traits and attitudes towards seeking professional psychological help in mental health counselor candidates: mediating effect of cognitive flexibility	Ferah Çekici	2019	Educational Research and Reviews	5	The findings revealed a positive relationship between neuroticism and a positive attitude toward seeking professional psychological help, while there was no significant relationship between the other four big five personality factors (familiarity, extroversion, willingness to experience new experiences, and cognitive flexibility). That is, participants in the study with higher levels of neuroticism had more positive attitudes toward seeking professional psychological assistance, which was explained by higher levels of cognitive flexibility. Participants with greater levels of neuroticism (accuracy) and attitudes toward getting professional psychological help scored higher. (Ferah, 2019)
Asian and european american cultural values, collective self-esteem, acculturative stress, cognitive flexibility, and general self-efficacy among asian american counseling college students	Bryan S. K. Kim & Michael M. Omizo	2005	Journal of Psychology	346	The study's findings suggest a positive connection between Asian cultural values and collective self-confidence in counseling students of Asian American origin, implying that students who practice more Asian cultural values have a higher level of collective self-confidence. This research also discovered a link between collective self-confidence, cognitive flexibility, and general self-efficacy among Asian American counseling students. That is, students with greater levels of collective self-confidence have higher levels of cognitive flexibility and general self-efficacy. (Kim et al., 2017)

The effect of cognitive style sets of flexibility upon counselor perception: field dependence and repression-sensitization in relation to empathic accuracy	Richards, Terry	1971	New York University Library	4	The findings revealed a link between cognitive style and the counselor's perception of the client, with participants with low field dependence having greater empathy accuracy than participants with high field dependence. This research also discovered that cognitive flexibility moderated the relationship between field dependency and empathic accuracy, implying that the relationship was stronger in participants with lower levels of cognitive flexibility. (Lapan et al., 2001)
The relationship between cognitive flexibility, depression, and work performance: employee assessment using cognitive flexibility test	Toshiki Fukuzaki, Shiya Takeda	2022	Journal of Affective Disorders	1	The results showed that there was a significant negative relationship between depression and employee work performance. In addition, this study also found that there is a significant positive relationship between cognitive flexibility and employee work performance. That is, employees who are more cognitively flexible tend to have better work performance. (Fukuzaki & Takeda, 2022)
Cognitive flexibility as a counselor meta-competency	Yu, Calvin and Beckmann, Jens F. and Birney, Damian P.	2019	Estudios de Psicología	12	Cognitive flexibility predicts counselor competency positively and significantly. In addition, this study also shows that cognitive flexibility has a greater influence on several aspects of counselor competence, such as the ability to understand client perspectives and the ability to build effective counseling relationships. In conclusion, this study concluded that cognitive flexibility is one of the important meta-competencies for a counselor in carrying out his duties.

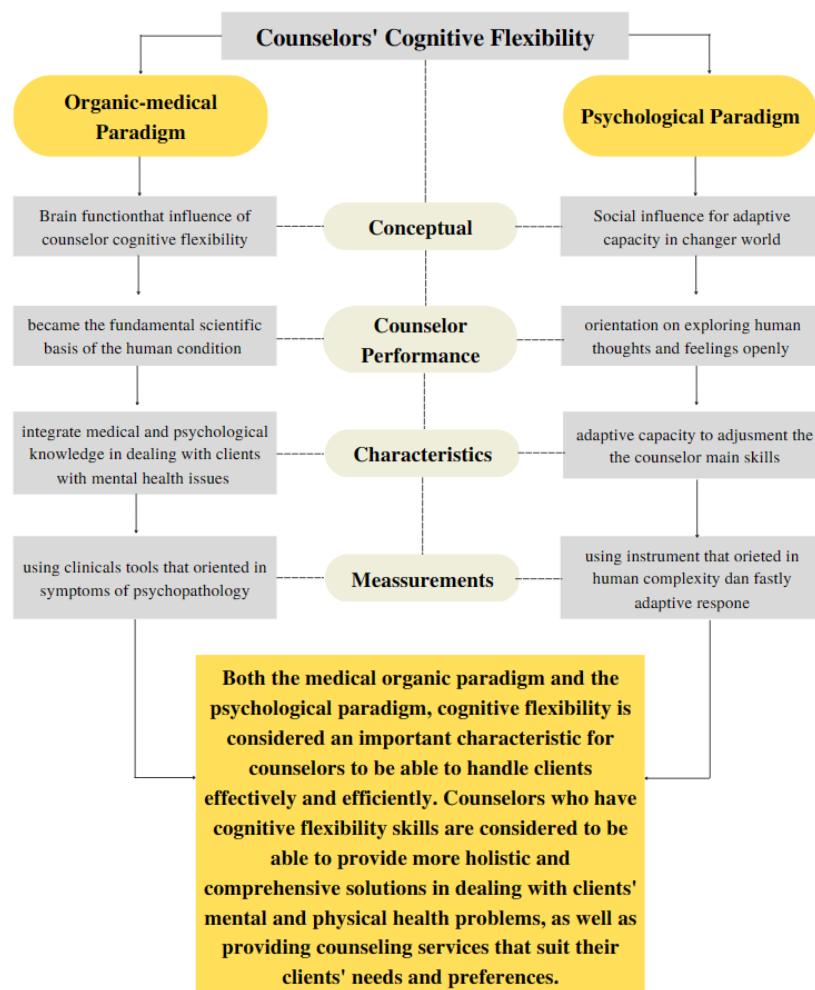


Fig 4. The Intersection of Organic-Medical and Psychological Paradigms in Assessing the Cognitive Flexibility of Counselors

Discussion

Based on the content analysis of the 13 articles discussing the counselor's cognitive flexibility, the significance of cognitive flexibility for counselors can be inferred from how the organic-medical paradigm and the psychological paradigm view it (Collins et al., 2010; Önen & Koçak, 2015). Cognitive flexibility can be interpreted as a person's ability to adapt to change and different situations, which is related to the concept of urgency. Cognitive flexibility is significant for a counselor because:

- improve counselors' ability to comprehend clients: Counselors with cognitive flexibility skills can comprehend the diverse perspectives and points of view of their clients. Counselors are able to comprehend how clients think and react to various situations in order to provide superior assistance.
- develop counselors' capacity to manage complex situations. Counselors who possess cognitive flexibility are able to generate a greater number of solutions and alternatives when confronted with complex situations. This enables the counselor to address a variety of client issues and identify appropriate solutions. ,
- enhance the counselor's communication skills: Counselors with cognitive flexibility can also communicate more effectively with clients. This is because they are able to comprehend the client's perspective, adapt their communications to the client's communication style, and expand their communication approach to meet the client's needs. And

- d. serve as a model and example for clients: Counselors with cognitive flexibility can serve as role models for their clients. Counselors can demonstrate to clients how to deal with and adapt to change, as well as inspire them to increase their cognitive flexibility.

From an organic-medical perspective, cognitive flexibility is the physiological capacity of the brain to adapt to environmental changes. In this instance, physical brain changes, such as neurons and synapses, play a significant role in the development of cognitive flexibility (Fröding & Osika, 2015). Counselors who adhere to the medical organic paradigm may employ techniques and therapies that stimulate the brain to increase the cognitive flexibility of their clients. In contrast, the psychological paradigm defines cognitive flexibility as the ability to adapt one's mindset and behavior to different situations. Counselors who focus on psychological paradigms are able to assist clients in recognizing rigid thought or behavior patterns and developing more adaptable thought and behavior patterns (Ritter et al., 2012). Although there are differences in perspective between the organic medical paradigm and the psychological paradigm, both recognize the importance of cognitive flexibility in enhancing mental health. Both aim to help clients develop cognitive flexibility so that they can better manage change and adapt to an ever-changing environment.

In addition, to address the research objectives regarding the intersection of the organic-medical paradigm and the psychological paradigm in assessing counselor cognitive flexibility, the following three sub-discussions are presented.

a. Comparison of the Counseling Profession's Notion of Cognitive Flexibility

Be a model and example for clients: Counselors with cognitive flexibility can serve as role models for their clients. Counselors can demonstrate to clients how to deal with and adapt to change, as well as inspire them to increase their cognitive flexibility (Nazarzadeh et al., 2015; Toraman et al., 2020). In contrast, the psychological paradigm defines cognitive flexibility as the ability to adapt one's mindset and behavior to different situations. Counselors who focus on psychological paradigms are able to assist clients in recognizing rigid thought or behavior patterns and developing more adaptable thought and behavior patterns. The psychological paradigm emphasizes psychological factors that impact cognitive flexibility.

Both the medical organic paradigm and the psychological paradigm recognize the significance of cognitive flexibility in enhancing an individual's mental health. Both aim to help clients develop cognitive flexibility so that they can better manage change and adapt to an ever-changing environment. The medical organic paradigm and the psychological paradigm differ, however, in their perspectives (ColA© et al., 2014; Spiro, 1987) on cognitive flexibility. The medical organic paradigm emphasizes physical brain changes, whereas the psychological paradigm places greater emphasis on psychological factors and environmental influences that affect cognitive flexibility. The following diagram illustrates how the organic-medical paradigm and the psychological paradigm correspond to the cognitive flexibility of the counselor.⁴

b. The Primary Implications of Counselors' Cognitive Flexibility Problems on Professional Performance are based on research data from the literature

Research in the literature suggests that cognitive flexibility is an essential skill for counselors to possess to effectively meet the needs of diverse clients and navigate complex therapeutic situations (Ritter et al., 2012). Counselors who struggle with cognitive flexibility may experience a range of negative implications on their professional performance, including:

1. Limited Effectiveness: Counselors who lack cognitive flexibility may have difficulty adapting their approach to meet the unique needs and perspectives of each client, which can lead to a lack of progress in therapy and potential negative outcomes for clients.
2. Reduced Scope of Practice: Counselors with limited cognitive flexibility may struggle to work with clients from diverse backgrounds or with complex mental health issues, which can limit their scope of practice and potentially reduce their effectiveness as a counselor.
3. Burnout and Stress: Cognitive inflexibility may lead to stress and burnout for counselors, particularly when they encounter unexpected challenges or difficult client dynamics. A lack

of cognitive flexibility can make it challenging for counselors to adapt to new situations and manage stress effectively.

4. Ethical Concerns: Counselors who are not able to adapt to the needs and perspectives of their clients may encounter ethical concerns, particularly if they are not providing culturally responsive or evidence-based care.

Meanwhile, when viewed from the concept of the organic-medical paradigm, research suggests that individuals with certain neurological and developmental disorders may experience cognitive inflexibility. For example, individuals with autism spectrum disorder may have difficulty adapting to new situations or changes in routine (Schneider, n.d.). In counseling, a counselor who experiences cognitive inflexibility may struggle to adapt their approach or interventions to meet the needs of a diverse range of clients, leading to a limited scope of practice or potential negative outcomes for clients who do not respond well to their preferred methods. On the other hand, a review of the psychological paradigm, is considered a crucial component of successful therapy, and research has demonstrated that it is positively associated with better outcomes for clients. Counselors who struggle with cognitive flexibility may have difficulty adapting their approach to meet the unique needs and perspectives of each client, leading to a lack of progress or disengagement from the therapeutic process. Additionally, cognitive inflexibility may hinder a counselor's ability to respond effectively to unexpected challenges or to navigate complex client dynamics.

c. The most Promising Research Topic for the Future

There are several promising research topics for counselor cognitive flexibility in both the organic-medical and psychological paradigms. Here are some potential areas for future research:

- 1.) *The relationship between cognitive flexibility and client outcomes:* Further research is needed to explore the relationship between counselor cognitive flexibility and client outcomes. Specifically, studies could investigate whether counselors who are more cognitively flexible are more effective in helping clients achieve their therapeutic goals.
- 2.) *The impact of cognitive flexibility training:* Researchers could investigate the effectiveness of cognitive flexibility training for counselors, particularly in terms of improving client outcomes and reducing counselor burnout and stress.
- 3.) *The role of cognitive flexibility in cultural competency:* Studies could explore how cognitive flexibility relates to cultural competency in counseling. Specifically, researchers could investigate whether counselors who are more cognitively flexible are better able to provide culturally responsive care to clients from diverse backgrounds.
- 4.) *The influence of cognitive flexibility on counselor decision-making:* Researchers could investigate how cognitive flexibility influences counselor decision-making, particularly in challenging or complex therapeutic situations.
- 5.) *The role of cognitive flexibility in counselor supervision:* Further research is needed to explore the impact of counselor cognitive flexibility on supervision. Specifically, studies could investigate whether counselors who are more cognitively flexible are more receptive to feedback and more effective in implementing changes based on supervision. In more detail discussed further in Table 2.

Table 2. Future Research Agenda

Research Areas	Future Research Question
(1) Counseling Education	<ul style="list-style-type: none"> • How does cognitive flexibility affect students' ability to master counseling theory? • What is the influence of cognitive flexibility in increasing the problem solving skills of prospective counselors in counseling practice? • How to increase the cognitive flexibility of prospective counselors in educational settings? • How to create an educational curriculum that can optimize the cognitive flexibility of prospective counselors? • What are the differences in cognitive flexibility activation between prospective counselors and junior counselors?

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|--|--|
| (2) Cognitive Flexibility Measurement | <ul style="list-style-type: none"> • How to measure the cognitive flexibility level of a valid and reliable counselor candidate? • How to combine the measurement of the level of cognitive flexibility in the concept of the organic-medical paradigm and the psychological paradigm? • How to create a measurement tool that can stimulate cognitive flexibility activation of prospective counselors? • What is the picture of the cognitive flexibility measurement tool revolution from year to year? • How to make a measuring tool that is affordable but has high validity in measuring the counselor's level of cognitive flexibility? |
| (3) Therapeutic process and Outcome | <ul style="list-style-type: none"> • How examine the role of counselor cognitive flexibility in the therapeutic process and its impact on client outcomes? • How counselor cognitive flexibility affects the quality of the therapeutic relationship, the effectiveness of interventions, and the satisfaction of clients? |
| (4) Cultural Competence in Psychology Paradigm | <ul style="list-style-type: none"> • Where counselors need to be aware of and adaptable to cultural differences? • How elationship between cognitive flexibility and cultural competence and how to develop these skills among counselors? |
| (5) Neuroscience and Cognitive Psychology | <ul style="list-style-type: none"> • How could investigate the neural mechanisms involved in cognitive flexibility, such as the neural circuits that support shifting attention, inhibiting prepotent responses, and updating mental representations? • How develop and test interventions designed to enhance cognitive flexibility in counselors. These interventions might involve cognitive training exercises? |

Conclusions

According to the medical organic paradigm, cognitive flexibility in counselors is a condition associated with brain function and neurobiological processes. In this paradigm, cognitive flexibility in counselors is viewed as a mental ability dependent on the structure and function of the brain. Neurological diseases or disorders that limit a person's cognitive flexibility and ability to adapt to various situations. Consequently, cognitive flexibility may necessitate medication and medical intervention. The psychological paradigm, on the other hand, views cognitive flexibility in counselors as a psychological skill or ability that can be learned and developed. This paradigm views cognitive flexibility as a mental ability that is influenced by psychological factors including life experiences, learning, and environmental demands. Training and psychological therapies, such as cognitive-behavioral therapy or adjustment therapy, are believed to enhance the cognitive flexibility of counselors. These two paradigms have different perspectives on the cognitive flexibility of counselors, but they can complement one another by highlighting different aspects of cognitive flexibility skills. As a counselor, it is important to understand that cognitive flexibility skills can be influenced by a variety of factors and enhanced through a variety of medical and psychological interventions.

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