Examining Counselor's Executive Function Skills Across Career Phase: Comparing Preservice, Novice and Experienced in Healthcare Performance

Mila Yunita[1], Nur Hidayah[1,*], Adi Atmoko[1], M. Ramli[1], Fifi Khoirul Fitriyah[2], and Husni Hanafi[1]

[1]*Department of Guidance and Counseling, Faculty of Education, Universitas Negeri Malang, Indonesia. Email: nur.hidayah.fip@um.ac.id*
[2]*Department of Early Childhood Education, Faculty of Teaching and Education, Universitas Nahdatul Ulama Surabaya, Indonesia.*

KEYWORDS

Executive Function, Career Phase, School Counselor

ABSTRACT

Executive function became an internal counselor skill that plays a role in navigating complex client problems, making informed decisions, and maintaining professional effectiveness. Counselor executive function skills were not primarily developed during preservice education. This study aims to examine executive function skills by comparing the performance of preservice, novice, and experienced counselors. This research method uses a non-experimental quantitative design involving 99 counselors (36 experienced, 28 novice, and 35 preservice). Measurements used the Counselor's Executive Function Questionnaire (CEFQ), and the data results were analyzed using descriptive and comparative analysis (ANOVA). The results showed there were no significant differences between preservice, novice, and experienced counselors. However, experienced counselors still show the most important differences among others. These results predict that education and experience factors are unstable and may trigger executive dysfunction. This research suggests exploring executive function skill factors related to counselor performance, as well as programming counseling evaluation and supervision to optimize counselor professional growth.

1. Introduction

Recent research developments categorize counseling skills into internal skills and external skills (Hidayah, 2010; Mulawarman & Antika, 2020; Radjah, 2016). Internal skills include thinking skills (mind skills), and external skills include mastery of counseling technique approaches and basic communication skills (Irani & M. Ramli, 2022; Mulawarman & Antika, 2020; Purwaningrum, 2014; Radjah, 2016; Ramli et al., 2023). The counselor's internal skills are the abilities, attitudes, and attributes of the counselor internally or mentally, which influence how a person thinks, feels, and interacts with themselves and others (Hidayah et al., 2023). Based on previous research, internal skills that have been proven to influence counseling performance are thinking skills (Atmoko et al., 2018; Hanafi et al., 2021; Nelson-Jones, 2005) (Fauzan et al., 2023). As the implementation of counseling practice progresses, the form of internal counseling skills needs to be explored further. Several conflicts hinder the achievement of counseling goals in the school environment (Hulloli et al., 2024). These obstacles include impulsive conditions in responding to counselees and emotional hijacking. Impulsiveness in responding to counselees is a condition of internalization of automatic thoughts that manifest into counseling behavior (Deacon et al., 2011; Hope et al., 2010; Larsson et al., 2016). Emotional hijacking refers to difficulty inhibiting personal emotions into counseling behavior (Gutierrez & Mullen, 2016; Martin et al., 2004; Mustaffa et al., 2013; Testa & Sangganjanavanich, 2016). This process refers to counselors not being able to implement sub-executive function skills optimally in counseling sessions. Many studies have proven that executive function skills have been a predictor or key to achievement of problem-solving (Best & Miller, 2010; Chami et al., 2021; Gottfried & Little, 2017; Neitzel, 2018; Palomino & Brudvig, 2021; Stephens et al., 2018; Usai et al., 2014; Executive function skills play a crucial role in the counseling profession, encompassing a range of cognitive processes essential for effective practice, including to avoid emotional hijacking during counseling sessions (Yolvi et al., 2023). These skills include but are not limited to working memory, cognitive flexibility, inhibitory control, and planning/problem-solving abilities (Cristofori et al., 2019;

Karbach & Kray, 2016; Otero & Barker, 2014). Executive function skills are a sub-brain function of the prenatal cortex located at the front of the head (Friedman & Robbins, 2021; Funahashi & Andreau, 2013). The sub-prefrontal cortex consists of several coordinate points, each of which contains various functions. Rooted in the prefrontal cortex's intricate neural circuitry, executive function skills enable counselors to regulate attention, inhibit impulsive responses, and flexibly adapt their strategies to meet clients' diverse needs (Sindhusaranya et al., 2023). The ability to effectively utilize executive function skills is vital for counselors to navigate complex client issues, make informed decisions, and maintain professional effectiveness (Chami et al., 2021; Dube et al., 2020; Kofman et al., 2011; Mazzocco & Kover, 2007; Otero et al., 2014; Executive function skills are closely related to the accuracy and speed of information processing to become behavior in communication (Otero et al., 2014; Otero & Barker, 2014). On the other hand, executive function failure or executive dysfunction in counseling can give rise to an inability to focus or maintain attention to the counseling object, impulsive negative thinking, which is implemented in counseling actions, and personal emotions being executed into the counseling process (emotional hijacking) and difficulty producing or implementing appropriate counseling strategies. Appropriate and achieve counseling goals (Anderson et al., 2010; Hur et al., 2020). Even though counselors gain experience with professional growth, executive dysfunction remains a threat to the failure of the counseling process (Özben et al., 2022). Understanding how executive function skills develop across different career phases in counseling is essential for optimizing counselor training and professional development programs (Auxier et al., 2003; Dye et al., 2020; Neyland-Brown et al., 2019). The transition from preservice education to novice practice and experienced counseling involves significant changes in knowledge, skills, and competencies (Brat et al., 2016; Mažgon et al., 2018; Swank & Houseknecht, 2019; Yager & Tovar-Blank, 2007; Handayani et al., 2023). This professional development generally focuses on the counselor's technical competence, with executive function skills tending to emerge as an unstructured nurturant effect (Aydın et al., 2021). This condition gives a vague picture of how executive function skills evolve throughout these career phases. Therefore, the present study aims to address this gap in the literature by comparing the performance of counselors at various career phases on executive function tasks. Specifically, we examine the executive function skills of preservice counselors currently enrolled in counselor education programs, novice counselors with limited professional experience, and experienced counselors with several years of practice. By investigating executive function abilities across these career phases, we seek to gain insights into the developmental trajectory of counselor cognitive abilities and inform strategies for enhancing counselor training and practice. The Main hypothesis addressed for this research purpose is "There are significant differences in executive function skills among preservice, novice, and experienced counselors." In specific, there were three hypotheses: Ha1: Experienced counselors will demonstrate higher levels of executive function skills compared to preservice and novice counselors.

Ha2: Novice counselors will exhibit higher levels of executive function skills compared to preservice counselors but lower levels compared to experienced counselors. Ha3: Preservice counselors will have the lowest levels of executive function skills among the three groups.

2. Methodology

Design and Participants

This research used quantitative method with non-experimental design, especially the comparative design. Participants involved were 99 school counselors in Indonesia from different levels of

professionalism. All of the respondents were selected randomly in East Java, Indonesia. From those numbers, there were 36 experienced counselors (who had more than five years of professional experience), 28 novice counselors (who had less than five years of experience), and 35 preservice counselors (who had no professional experience). All selected respondents agreed to the research informed consent to be fully involved during the measurement processes from 2022-2023. The detailed participants were describe in Table 1.

Table 1. Participant description

Career Phase	N	Age Average	Gender Ratio
Experienced	36	46.86	(5:31)
Novice	28	28.32	(6:22)
Preservice	35	23.00	(9:26)

Data collection tool

The data collection tool used is the Counselor's Executive Function Questionnaire (CEFQ). The CEFQ was a Likert scale adapting the Executive Function Questionnaire for adults Peg Dawson and Richard Guare Version (Peg & Guare Richard, 2018) relating to the counselor performances & Indonesian language. The CEFQ has 36 items based on 12 dimensions of executive function skills. Twelve dimensions include Response Inhibition, Working Memory, Emotional Control, Task Initiation, Sustained Attention, Planning/Prioritization, Organization, Time Management, Flexibility, Metacognition, Goal-Directed Persistence & Stress tolerance. Three items represent each dimension. A seven range of scales follows each item to define strongly disagree, disagree, tend to disagree, neutral, tend to agree, agree & strongly agree. The CEFQ had high-reliability on Cronbach's alpha at 0.838 and Guttman at 0.857. The Item validity using item-rest correlation was ranged from 0.329 to 0.629..

Data analysis

The research data analysis procedure used descriptive analysis and ANOVA with the posthoc test. Descriptive analysis is the basis for understanding counselor data in general; ANOVA will be the primary analysis to answer the main hypothesis through comparison between variables. The follow-up results from ANNOVA, namely the post-hoc test, will provide coefficients and magnitudes in answering Ha1, Ha2, and Ha3.

3. Results and discussion

Descriptive Analysis Results

Descriptive statistics for executive function performance scores revealed variations across career phases. In general, the performance of counselors' executive function skills in East Java, Indonesia, is at a medium level with an overall average of M=69,957. The data are in Table 2.

Table 2. Descriptive results

Career Phase	N	Mean	SD	SE	Coefficient of variation
Experienced	36	71.351	6.718	1.12	0.094
Novice	28	68.637	5.877	1.111	0.086
Preservice	35	69.58	7.047	1.191	0.101

Next, Figure 1 shows the identification data for each executive function indicator, providing a portrait of instability. The indicators of executive function skills that need to be highlighted by counselors in East Java are currently related to inhibitory control, working memory, and set-shifting skills.

Figure 1. Executive Function skills of counselor.

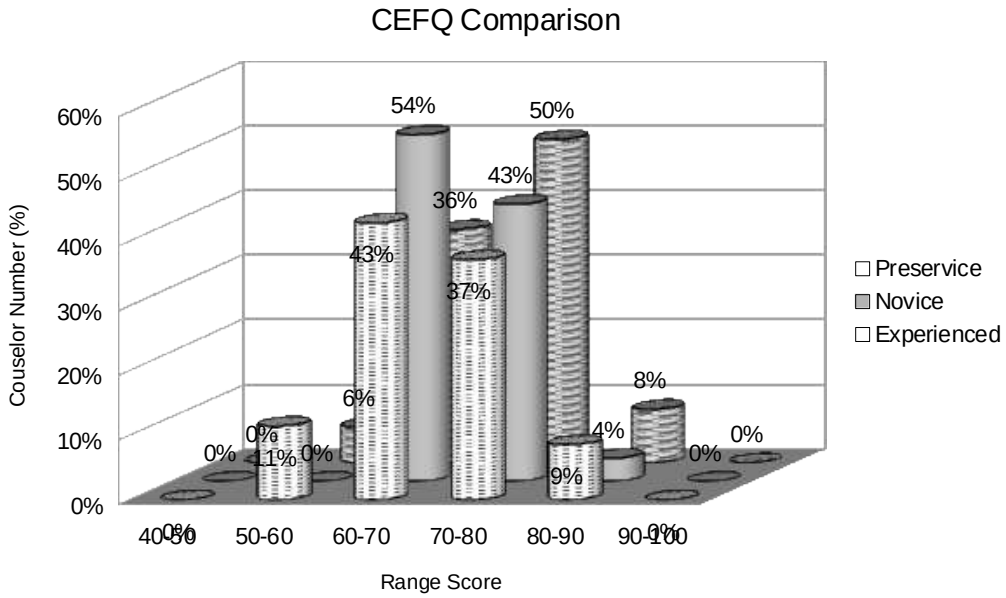

Figure 1. Executive Function Skill Comparison.

A general comparison of each career phase group shows different levels of performance with a close range, especially regarding the difference in the overall average. The experienced counselor group showed a mean difference of 1.39, with novice counselors at -1.32 and preservice counselors at -0.38. In simple terms, this number indicates that Ha1 was accepted, but Ha2 and Ha3 were rejected. However, figures and graphs based on Figure 2 still require statistical proof for further testing.

Comparative Analysis Results

An analysis of variance (ANOVA) revealed data in overall executive function scores between preservice, novice, and experienced counselors. Further data details are presented in Table 3.

Table 3. Model Fit

Cases	Sum of Squares	df	Mean Square	F	p
Career Phase	123.774	2	61.887	1.414	0.248

Residuals	4200.757	96	43.758		

Table 3 data shows that the F and p values are F=1.414 and p=0.248 (p>0.05), respectively. These results indicate that the experienced, novice and preservice counselor groups did not show any significant differences between each other. These results refute the main hypothesis and accept the null hypothesis of this study. These results are in line with descriptive data that the overall M value of counselors has a difference (N-gain) that is not much different in each group.

Table 3. Post-hoc test results

	Mean Difference	**SE**	**t**	**Cohen's d**	**ptukey**
Experienced* Novice	2.715	1.667	1.629	0.41	0.239
Experienced* Preservice	1.771	1.57	1.128	0.268	0.499
Novice* Preservice	-0.944	1.677	-0.563	-0.143	0.84

Further analysis data presented in Table 4 show the results of post-hoc tests (Tukey's HSD), which indicate that the comparison of each group does not show any significant differences. This refers to the p-turkey value, which shows the comparison between groups is above 0.05. However, the magnitude of the T value shows that the experienced counselor group shows more positive results compared to the other two groups. At the same time, the novice and preservice groups showed more homogeneous and similar results. The results of this study indicate that the executive function skills of the preservice, novice, and experienced counselor groups do not have significant differences. However, in comparison between groups, the experienced counselor group showed executive function skills performance that was more positively different than the other two groups. These results lead to indications of instability in the level of executive function skills in the professional growth counselor process.

Referring to the factors that influence a person's executive function skills are genetic factors, environmental factors, neurological factors, educational and experience factors, and emotional well-being factors (Best & Miller, 2010; Perone et al., 2021). Brain development, especially the prefrontal cortex, had the functions as an executive function (José et al., 2020; Salehinejad et al., 2023). The prefrontal cortex develops significantly during childhood and adolescence and peaks in development in early adulthood (Kolk & Rakic, 2021; Taffer & Semendeferi, 2012; Jumiatmoko, 2022). It means that the age at which the counselor profession begins is the peak period for executive function development. This condition implies that the prenatal cortex, which functions as an executive function, is ready to be optimized for professional performance. Functionally, each counselor's brain development varies, but in general, it goes through the same stages of physical and cognitive development (Afridah et al., 2023; Kurniawan & Wahyuni, 2021; Ngussa et al., 2020). So these findings speculate that education and training factors are other factors that can be differentiating predictors between experienced, novice, and preservice counselor groups. These two factors in the process become part of the counselor's professional growth and development (Hanafi et al., 2022; Hidayah et al., 2022). This condition should be a predictor of the development of executive function skills in counselors at various levels.

Instability in the level of executive function skills of counselors has the potential to experience executive dysfunction conditions. The condition of executive dysfunction in counselors has the potential to disrupt the achievement of personality competence and professional competence of counselors (Perone et al., 2021; Warren et al., 2021). In this context, it will interfere with problem-solving performance in counseling and lead to failure in counseling. Executive function skills need to be checked continuously to ensure effective and efficient services (Wardhani et al., 2019). This statement is closely related to a study stating that a person's executive function skills need to be checked throughout life so that they do not affect their performance in carrying out professional tasks (Dube et al., 2020; Kofman et al., 2011; Mazzocco & Kover, 2007). Furthermore, the impacts of concern

regarding executive dysfunction in counseling include mental tension, disruption of relationships with clients, and difficulty choosing counseling treatment (Fitriyah et al., 2022; Ramli et al., 2023) . This condition interferes with counselor practitioners in carrying out professional duties (Değerli & Odacı, 2020; Hilts et al., 2022; Malkoç & Aydın Sünbül, 2020; Wahyuni et al., 2019; Yuen et al., 2020).

Implementation of a comprehensive BK program can involve the evaluation & supervision process as an integral part so that professional obstacles can be avoided, including executive dysfunction. In summary, the instability of executive function skills in the three groups of counselors hypothetically shows that there is a suboptimal educational process and professional experience of counselors. This fact is supported by several research studies which explain that the condition of evaluation and supervision of guidance and counseling in Indonesia is not running optimally and even tends to lead to administrative and procedural assessment and supervision (Kardina et al., 2022; Nurismawan et al., 2022; Pendidikan et al., 2022; Nurismawan et al., 2022; Pendidikan et al., 2022; al., 2022; Rahim et al., 2022; Sugiyo & Purwanto, 2014; This study contributes to the theoretical analysis of executive function factors, which have a variety of conditions, especially regarding counselor professionalism. Education and experience factors can be determining predictors of counselors' executive function skills so that they can optimize counselors' professional growth and competence. The instability of the executive function condition requires regular and continuous inspection or supervision.
At the same time, this research also provides practical implications based on the results regarding the suboptimal personal and professional development services for counselors and the resulting instability in executive function. Optimizing education and experience as one of the supporting factors for executive function is a recommendation through a structured, systematic, and sustainable evaluation and supervision program. While the study provides valuable insights, several limitations should be acknowledged, including the relatively small sample size and limited cross-sectional design. Future research should employ longitudinal designs to track changes in executive function skills over time and explore potential moderators and other factors of executive function development in counseling professionals.

4. Conclusion and future scope

This research succeeded in showing that the condition of counselors' executive function skills was not significantly different between the experienced counselor, novice counselor, and preservice counselor groups. This result indicates that instability in executive function skills can occur throughout the professional journey. The impact is that the tendency for executive dysfunction to emerge threatens the quality of counseling services. Based on these results, this research provides recommendations for optimizing education and experience factors so that they can support counselors' executive function skills in their professional growth. Analysis and exploration of executive function skills factors in counselor performance is one of the recommended further research. A structured, systematic, and sustainable evaluation and supervision program has practical implications for school counselors in improving and maintaining the performance of their executive function skills.

Acknowledgment

We are thankful for the funding provided by the Directorate of Research and Community Service (DRPM) of Indonesia. We also thank the Research and Community Service Institution, the State University of Malang, which has facilitated the funding process from DRPM Indonesia.

Conflict of interest

There is no conflict of interest in this reaserch, and publications.

Reference

[1] Afridah, W., Mursyidul Ibad, Farida Umamah, & Fitriyah, F. K. (2023). Self-awareness of health students as peer educators of adolescent reproductive health. *Bali Medical Journal*, *12*(3), 2792–2796. https://doi.org/10.15562/bmj.v12i3.4377

[2] Anderson, V., Jacobs, R., & Anderson, P. J. (2010). *Executive Function And The Frontal Lobes: A Live Span Perspective*. Taylor & Francis Group.

[3] Atmoko, A., Henny Indreswari, Irene Maya Simon, Nugraheni Warih Utami, & Aryudho Widyatno. (2018). Counselor Self-Talk in Counseling Services. *International Conference on Education and Technology* , 52–57.

[4] Auxier, C. R., Hughes, F. R., & Kline, W. B. (2003). Identity Development in Counselors-in-Training. *Counselor Education and Supervision*, *43*(1), 25–38. https://doi.org/10.1002/J.1556-6978.2003.TB01827.X

[5] Best, J. R., & Miller, P. H. (2010). A Developmental Perspective on Executive Function. *Child Development*, *81*(6), 1641–1660. https://doi.org/10.1111/J.1467-8624.2010.01499.X

[6] Hulloli, P. B., & Venkatesh, G. (2021). Bradford's Law in the Field of Psychology Research in India. Indian Journal of Information Sources and Services, 11(2), 52–57.

[7] Brat, M., O'Hara, C., McGhee, C. M., & Chang, C. Y. (2016). Promoting Professional Counselor Advocacy Through Professional Identity Development Efforts in Counselor Education. *Https://Doi.Org/10.1080/2326716X.2016.1145560*, *3*(1), 62–70. https://doi.org/10.1080/2326716X.2016.1145560

[8] Chami, S., Charalambous, C., Knijnik, S. R., & Docking, K. (2021). Language and executive function skills as predictors of semantic fluency performance in pre-school children. *Https://Doi.Org/10.1080/17549507.2021.2008005*, *24*(6), 626–635. https://doi.org/10.1080/17549507.2021.2008005

[9] Cristofori, I., Cohen-Zimerman, S., & Grafman, J. (2019). Executive functions. *Handbook of Clinical Neurology*, *163*, 197–219. https://doi.org/10.1016/B978-0-12-804281-6.00011-2

[10] Deacon, B. J., Fawzy, T. I., Lickel, J. J., & Wolitzky-Taylor, K. B. (2011). Cognitive Defusion Versus Cognitive Restructuring in the Treatment of Negative Self-Referential Thoughts: An Investigation of Process and Outcome. *Journal of Cognitive Psychotherapy*, *25*(3), 218–232. https://doi.org/10.1891/0889-8391.25.3.218

[11] Sindhusaranya, B., Yamini, R., Manimekalai Dr, M. A. P., & Geetha Dr, K. (2023). Federated Learning and Blockchain-Enabled Privacy-Preserving Healthcare 5.0 System: A Comprehensive Approach to Fraud Prevention and Security in IoMT. Journal of Internet Services and Information Security, 13(3), 199-209.

[12] Değerli, F. İ., & Odacı, H. (2020). Effect of an Emotional Intelligence Training Program Developed for Prospective Psychological Counselors on Psychological Counseling Skill Levels. *Journal of Rational - Emotive and Cognitive - Behavior Therapy*, *38*(4), 568–578. https://doi.org/10.1007/S10942-020-00352-5/FIGURES/1

[13] Dube, S. L., Sigmon, S., Althoff, R. R., Dittus, K., Gaalema, D. E., Ogden, D. E., Phillips, J., Ades, P., & Potter, A. S. (2020). Association of self-reported executive function and mood with executive function task performance across adult populations. *Https://Doi.Org/10.1080/23279095.2020.1794869*, *29*(4), 605–616. https://doi.org/10.1080/23279095.2020.1794869

[14] Dye, L., Burke, M. G., & Wolf, C. (2020). Teaching Mindfulness for the Self-Care and Well-Being of Counselors-in-Training. *Journal of Creativity in Mental Health*, *15*(2), 140–153. https://doi.org/10.1080/15401383.2019.1642171

[15] Fauzan, L., Hidayah, N., Wahyuni, F., Hanafi, H., Rofiqoh, R., & Kurniawan, N. A. (2023). The effect of reverse roleplay training to improve the counselor's mind skills. *Journal of Education and Learning (EduLearn)*, *17*(4), 491–498. https://doi.org/10.11591/edulearn.v17i4.20752

[16] Fitriyah, F. K., Chuma, M., Sodikin, M., Muhammad Afwan Romdloni, & Asma'ul Lutfauziah. (2022). A New Approach to Counseling Relations in Islamic Boarding Schools Based on the Ta'limul Muta'alim Book: An Emansipatory Hermeneutical Study. *Journal of Islamic Civilization*, 4(2), 186–195. https://doi.org/10.33086/jic.v4i2.3634

[17] Friedman, N. P., & Robbins, T. W. (2021). The role of prefrontal cortex in cognitive control and executive function. *Neuropsychopharmacology 2021 47:1*, *47*(1), 72–89. https://doi.org/10.1038/s41386-021-01132-0

[18] Funahashi, S., & Andreau, J. M. (2013). Prefrontal cortex and neural mechanisms of executive function. *Journal of Physiology-Paris*, *107*(6), 471–482. https://doi.org/10.1016/J.JPHYSPARIS.2013.05.001

[19] Gottfried, M. A., & Little, M. H. (2017). Full- Versus Part-Day Kindergarten for Children With Disabilities: Effects on Executive Function Skills. *Https://Doi.Org/10.1080/10409289.2017.1408372*, *29*(2), 288–305. https://doi.org/10.1080/10409289.2017.1408372

[20] Gutierrez, D., & Mullen, P. R. (2016). Emotional Intelligence and the Counselor: Examining the Relationship of Trait Emotional Intelligence to Counselor Burnout. *Journal of Mental Health Counseling*, *38*(3), 187–200. https://doi.org/10.17744/MEHC.38.3.01

[21] Yolvi, J.O.F., Walter, G.G., Luis, A.V.F., Segundo P.V.R., Huguette, F.D.Z., Jackeline R.H.F., & Marco, A.A.B. (2023). A Novel Approach to Predict the Early Childhood Special Education Learning Skills of Autistic Children Using Ensemble Machine Learning. Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications, 14(2), 59-65.

[22] Hanafi, H., Hidayah, N., Atmoko, A., & Ramli, M. (2021). Identification Counselor-Student's Mind Skills As Their Metacognitions Level In Counseling Process. *International Conference on Learning Innovation (ICLI 2021)*, in press.

[23] Hanafi, H., Hidayah, N., Atmoko, A., M., R., & Triyono, T. (2022). Cognitive fusion on counselor performance: A comparative study of the experienced and novice counselor. *Pegem Journal of Education and Instruction*, *12*(1), 48–55. https://doi.org/10.47750/PEGEGOG.12.01.06

[24] Handayani, L., Fridani, L., & Rahayu, W. (2023). Strategy Preschool Teachers' Experiences in Handling Early Childhood Children with Indications of Speech Delay. *Child Education Journal*, 5(3), 190–200. https://doi.org/10.33086/cej.v5i3.5770

[25] Hidayah, N. (2010). Process-Audit Dalam Penyelenggaraan Pendidikan Akademik Jenjang S-1 Bimbingan Dan Konseling. *Jurnal Pendidikan Dan Pembelajaran Universitas Negeri Malang*, *17*(2), 129–139.

[26] Hidayah, N., Afdal, A., Budiman, N., Hanafi, H., & Yunita, M. (2023). Assessing ideal teacher's personality: Students' perspective and expectations. *Journal of Education and Learning (EduLearn)*, *17*(4), 669–676. https://doi.org/10.11591/edulearn.v17i4.20772

[27] Hidayah, N., Ramli, M., Fauzan, L., Rahman, D. H., & Hanafi, H. (2022). Mind skills training effect on prospective counsellor' performance. *Cypriot Journal of Educational Sciences*, *17*(4), 1178–1191. https://doi.org/10.18844/CJES.V17I4.7130

[28] Hilts, D., Liu, Y., & Luke, M. (2022). School Counselors' Emotional Intelligence and Comprehensive School Counseling Program Implementation: The Mediating Role of Transformational Leadership. *Professional Counselor*, *12*(3), 232–248. https://doi.org/10.15241/dh.12.3.232

[29] Hope, D. A., Burns, J. A., Hayes, S. A., Herbert, J. D., & Warner, M. D. (2010). *Automatic Thoughts and Cognitive Restructuring in Cognitive Behavioral Group Therapy for Social Anxiety Disorder*. 1–12. https://doi.org/10.1007/s10608-007-9147-9

[30] Hur, J., Deyoung, K. A., Islam, S., Anderson, A. S., Barstead, M. G., & Shackman, A. J. (2020). Social context and the real-world consequences of social anxiety. *Psychological Medicine*, *50*(12), 1989–2000. https://doi.org/10.1017/S0033291719002022

[31] Irani, L. C., & M. Ramli. (2022). Internalization Of Mind Skills Training On Cognitive Flexibility Of Counselors In Islamic Counseling Practices: It Is Effect? . *Jurnal Konseling Religi* , *13*(2), 243–266.

[32] José, R. G., Samuel, A. S., & Isabel, M. M. (2020). Neuropsychology of executive functions in patients with focal lesion in the prefrontal cortex: A systematic review. *Brain and Cognition*, *146*, 105633. https://doi.org/10.1016/J.BANDC.2020.105633

[33] Jumiatmoko. (2022). Gen Z Teachers Candidates: Perspective on Early Childhood Moral Religious Values Development. *Child Education Journal*, 4(3), 175–185. https://doi.org/10.33086/cej.v4i3.3009

[34] Karbach, J., & Kray, J. (2016). Executive functions. In *Cognitive Training: An Overview of Features and Applications*. Springer International Publishing. https://doi.org/10.1007/978-3-319-42662-4_9/COVER

[35] Kardina, N., Azwar, B., & Hartini. (2022). Peranan Kegiatan Supervisi dalam Pelayanan Bimbingan dan Konseling dengan Kegiatan Pengajaran di Sekolah. *LITERASI: Jurnal Pendidikan Guru Indonesia*, *1*(2), 148–156. https://doi.org/10.58218/LITERASI.V1I2.416

[36] Kofman, O., Meiran, N., Greenberg, E., Balas, M., & Cohen, H. (2011). Enhanced performance on executive functions associated with examination stress: Evidence from task-switching and Stroop paradigms. *Http://Dx.Doi.Org/10.1080/02699930500270913*, *20*(5), 577–595. https://doi.org/10.1080/02699930500270913

[37] Kolk, S. M., & Rakic, P. (2021). Development of prefrontal cortex. *Neuropsychopharmacology 2021 47:1*, *47*(1), 41–57. https://doi.org/10.1038/s41386-021-01137-9

[38] Kurniawan, C., & Wahyuni, F. (2021). Exploring Demographic Variations of Freshmen to Online Learning Anxiety: A Data Visualization Analysis Based Approach. *2021 International Research Symposium On Advanced Engineering And Vocational Education (IRSAEVE)*, 33–38. https://doi.org/10.1109/IRSAEVE52613.2021.9604012

[39] Larsson, A., Hooper, N., Osborne, L. A., Bennett, P., & McHugh, L. (2016). Using Brief Cognitive Restructuring and Cognitive Defusion Techniques to Cope With Negative Thoughts. *Behavior Modification*, *40*(3), 452–482. https://doi.org/10.1177/0145445515621488

[40] Malkoç, A., & Aydın Sünbül, Z. (2020). The relationship between emotional literacy, cognitive flexibility and counseling self-efficacy of senior students in psychology and psychological counseling and guidance. *Educational Research and Reviews*, *15*(1), 27–33. https://doi.org/10.5897/ERR2019.3848

[41] Aydın, M., Ağaoğlu, A., & Barış, Ö. (2021). Azo dye decolorization by using four different psychrotolerant Bacillus species. Natural and Engineering Sciences, 6(1), 19-29.

[42] Martin, W. E., Easton, C., Wilson, S., Takemoto, M., & Sullivan, S. (2004). Salience of Emotional Intelligence as a Core Characteristic of Being a Counselor. *Counselor Education and Supervision*, *44*(1), 17–30. https://doi.org/10.1002/J.1556-6978.2004.TB01857.X

[43] Mažgon, J., Jeznik, K., & Ermenc, K. S. (2018). Evaluating Future School Counselors' Competences for Inclusive Education. *SAGE Open*, *8*(4), 1–10. https://doi.org/10.1177/2158244018811406

[44] Mazzocco, M. M. M., & Kover, S. T. (2007). A Longitudinal Assessment of Executive Function Skills and Their Association with Math Performance. *Http://Dx.Doi.Org/10.1080/09297040600611346*, *13*(1), 18–45. https://doi.org/10.1080/09297040600611346

[45] Mulawarman, & Antika, E. R. (2020). *Mind-skills Konsep dan Aplikasinya dalam Praktik Konseling*. KENCANA.

[46] Mustaffa, S., Nasir, Z., Aziz, R., & Mahmood, M. N. (2013). Emotional Intelligence, Skills Competency and Personal Development among Counseling Teachers. *Procedia - Social and Behavioral Sciences*, *93*, 2219–2223. https://doi.org/10.1016/J.SBSPRO.2013.10.191

[47] Neitzel, J. (2018). What measures of program quality tell us about the importance of executive function: implications for teacher education and preparation. *Https://Doi.Org/10.1080/10901027.2018.1457580*, *39*(3), 181–192. https://doi.org/10.1080/10901027.2018.1457580

[48] Nelson-Jones, Richard. (2005). *Practical counselling and helping skills* . SAGE publications.

[49] Neyland-Brown, L., Laux, J. M., Reynolds, J. L., Kozlowski, K., & Piazza, N. J. (2019). An Exploration of Supervision Training Opportunities for School Counselors. *Journal of School Counseling*, *17*(1).

[50] Ngussa, B. M., Fitriyah, F. K., & Diningrat, S. W. M. (2020). Correlation Between Facebook Use, Mental Health and Learning Engagement: A Case of Universities in Surabaya City, Indonesia. *Turkish Online Journal of Distance Education*, *22*(1), 229–245. https://doi.org/10.17718/TOJDE.849912

[51] Nurismawan, Ach. S., Purwoko, B., & Wiryosutomo, H. W. (2022). Supervisi Bimbingan Dan Konseling Di Indonesia: Problematika Dan Alternatif Solusi. *Jurnal Mahasiswa BK An-Nur : Berbeda, Bermakna, Mulia*, *8*(3), 9–13. https://doi.org/10.31602/JMBKAN.V8I3.7242

[52] Otero, T. M., & Barker, L. A. (2014). The frontal lobes and executive functioning. *Handbook of Executive Functioning*, 29–44. https://doi.org/10.1007/978-1-4614-8106-5_3/COVER

[53] Otero, T. M., Barker, L. A., & Naglieri, J. A. (2014). Executive Function Treatment and Intervention in Schools.

Https://Doi.Org/10.1080/21622965.2014.897903, *3*(3), 205–214. https://doi.org/10.1080/21622965.2014.897903

[54] Özben, İ., Şenormancı, G., Demirci, O. O., & Şenormancı, Ö. (2022). Associations of dysfunctional attitudes, ruminations and metacognitive beliefs about rumination with pharmacological treatment response in patients with first episode of major depression. *Https://Doi.Org/10.1080/13651501.2022.2087529*. https://doi.org/10.1080/13651501.2022.2087529

[55] Palomino, C. I., & Brudvig, A. (2021). Examining the role of demographic characteristics, attachment, and language in preschool children's executive function skills. *Https://Doi.Org/10.1080/03004430.2021.1958803*, *192*(12), 1967–1981. https://doi.org/10.1080/03004430.2021.1958803

[56] Peg, D., & Guare Richard. (2018). Executive skills in children and adolescents: A practical guide to assessment and intervention, 3rd ed. - PsycNET. *American Psychological Association*. https://psycnet.apa.org/record/2018-21800-000

[57] Pendidikan, M. M., Lian, B., & Putra, A. Y. (2022). Efektivitas Supervisi Sebaya Melalui Mgbk Sma Dalam Meningkatkan Kinerja Guru Bk Di Kota Palembang. *HELPER : Jurnal Bimbingan Dan Konseling*, *39*(1), 33–42. https://doi.org/10.36456/HELPER.VOL39.NO1.A5219

[58] Perone, S., Simmering, V. R., & Buss, A. T. (2021). A Dynamical Reconceptualization of Executive-Function Development. *Https://Doi.Org/10.1177/1745691620966792*, *16*(6), 1198–1208. https://doi.org/10.1177/1745691620966792

[59] Purwaningrum, R. (2014). Internalisasi Mind Skills Mahasiswa Bimbingan Konseling (BK) Melalui Experiential Learning. *Jurnal Pendidikan Humaniora*, *1*(3), 233–241. https://scholar.google.com/citations?view_op=view_citation&hl=en&user=o0h854wAAAAJ&citation_for_view=o0h854wAAAAJ:u5HHmVD_uO8C

[60] Radjah, C. L. (2016). Keterampilan Konseling Berbasis Metakognisi. *Jurnal Kajian Bimbingan Dan Konseling*, *1*(3), 90–94. https://doi.org/10.17977/UM001V1I32016P090

[61] Rahim, M., LastNameHulukati, W., & Siregar, I. K. (2022). Pelaksanaan Supervisi Bimbingan dan Konseling di Provinsi Gorontalo. *Indonesian Journal of Guidance and Counseling: Theory and Application*, *11*(Special Ed), 62–74. https://doi.org/10.15294/IJGC.V11I2.60823

[62] Ramli, M., Hanafi, H., Hidayah, N., Atmoko, A., & Fitriyah, F. K. (2023). Identification of counselor mind process on online counseling. *International Journal of Evaluation and Research in Education (IJERE)*, 12(1), 319–326. https://doi.org/10.11591/IJERE.V12I1.22987.

[63] Salehinejad, M. A., Ghanavati, E., Rashid, M. H. A., & Nitsche, M. A. (2023). Hot and cold executive functions in the brain: A prefrontal-cingular network. *Https://Doi.Org/10.1177/23982128211007769*, *5*, 239821282110077. https://doi.org/10.1177/23982128211007769

[64] Stephens, R. L., Langworthy, B., Short, S. J., Goldman, B. D., Girault, J. B., Fine, J. P., Reznick, J. S., & Gilmore, J. H. (2018). Verbal and nonverbal predictors of executive function in early childhood. *Https://Doi.Org/10.1080/15248372.2018.1439493*, *19*(2), 182–200. https://doi.org/10.1080/15248372.2018.1439493

[65] Sugiyo, U. , & Purwanto, E. (2014). Model Pengembangan Instrumen Supervisi Bimbingan Dan Konseling. *Jurnal Bimbingan Konseling*, *3*(1). https://doi.org/10.15294/JUBK.V3I1.4606

[66] suharmawan, wahid, & Isriyah, M. (2023). Kualitas Layanan Bimbingan Konseling: Peran Supervisor Dalam Peningkatan Mutu. *Psikodidaktika: Jurnal Ilmu Pendidikan, Psikologi, Bimbingan Dan Konseling*, *8*(2), 465–473. https://doi.org/10.32663/PSIKODIDAKTIKA.V8I2.4128

[67] Swank, J. M., & Houseknecht, A. (2019). Teaching Competencies in Counselor Education: A Delphi Study. *Counselor Education and Supervision*, *58*(3), 162–176. https://doi.org/10.1002/CEAS.12148

[68] Teffer, K., & Semendeferi, K. (2012). Human prefrontal cortex: Evolution, development, and pathology. *Progress in Brain Research*, *195*, 191–218. https://doi.org/10.1016/B978-0-444-53860-4.00009-X

[69] Testa, D., & Sangganjanavanich, V. F. (2016). Contribution of Mindfulness and Emotional Intelligence to Burnout Among Counseling Interns. *Counselor Education and Supervision*, *55*(2), 95–108.

https://doi.org/10.1002/CEAS.12035

[70] Usai, M. C., Viterbori, P., Traverso, L., & De Franchis, V. (2014). Latent structure of executive function in five- and six-year-old children: A longitudinal study. *Http://Dx.Doi.Org/10.1080/17405629.2013.840578*, *11*(4), 447–462. https://doi.org/10.1080/17405629.2013.840578

[71] Wahyuni, F., Wiyono, B. B., Atmoko, A., & Hambali, I. M. (2019). Assessing Relationships between Emotional Intelligence, School Climate and School Counselors Burnout: A Structural Equation Model. *Journal for the Education of Gifted Young Scientists*, *7*(4), 1361–1374. https://doi.org/10.17478/JEGYS.639397

[72] Wardhani, N. S., Farida, E., & Yudha, E. S. (2019). Profil Kompetensi Pedagogik dan Profesional Guru Bimbingan dan Konseling SMA di Kota Bandung. *Indonesian Journal of Educational Counseling*, *3*(2), 147–154. https://doi.org/10.30653/001.201932.63

[73] Warren, S. L., Heller, W., & Miller, G. A. (2021). The Structure of Executive Dysfunction in Depression and Anxiety. *Journal of Affective Disorders*, *279*, 208–216. https://doi.org/10.1016/J.JAD.2020.09.132

[74] Willoughby, M. T., Piper, B., Kwayumba, D., & McCune, M. (2018). Measuring executive function skills in young children in Kenya. *Https://Doi.Org/10.1080/09297049.2018.1486395*, *25*(4), 425–444. https://doi.org/10.1080/09297049.2018.1486395

[75] Wilson, R., Sulak, T., & Bagby, J. (2021). Effect of the Advancement Via Individual Determination (AVID) Program on Middle Level Students' Executive Function. *Https://Doi.Org/10.1080/19404476.2021.1972203*, *44*(8), 1–10. https://doi.org/10.1080/19404476.2021.1972203

[76] Yager, G. G., & Tovar-Blank, Z. G. (2007). Wellness and Counselor Education. *Journal of Humanistic Counseling, Education and Development*, *46*(2), 142. https://doi.org/10.1002/j.2161-1939.2007.tb00032.x

[77] Yuen, J., Lee, S. Y., Courtney, E., Lim, J., Soh, H., Li, S. T., Chen, Y., McAllister, M., Fenwick, E. K., & Ngeow, J. (2020). Evaluating empowerment in genetic counseling using patient-reported outcomes. *Clinical Genetics*, *97*(2), 246–256. https://doi.org/10.1111/CGE.13646