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An investigation of the process of multicultural competence development in graduate level counseling students through mindfulness, cognitive complexity, and cognitive flexibility.

Jadelyn Martinez and Shengli Dong

An Investigation of Multicultural Counseling Competence Development among Graduate-Level Counseling Students through Mindfulness, Cognitive Complexity, and Cognitive Flexibility

Abstract

This study aimed to explore the potential association of mindfulness, cognitive flexibility, and cognitive complexity with multicultural counseling competency (MCC) while controlling for race and mindfulness practice among counseling trainees. Seventy-eight graduate-level counseling students from multiple campuses within U.S. completed an online survey study. Results indicated significant positive correlations among mindfulness, cognitive flexibility, cognitive complexity and MCC. Results also found significant differences in self-perceived ratings of MCC based on race and engagement in mindful practice. Additionally, cognitive flexibility, cognitive complexity and mindfulness practices explained a great amount of adjusted variance (r^2=.52) in MCC. Implications for research and practiced were discussed.

Keywords: multicultural counseling competence, mindfulness, cognitive flexibility, cognitive complexity, mindfulness practice

An Investigation of Multicultural Counseling Competence Development among Graduate-Level Counseling Students through Mindfulness, Cognitive Complexity, and Cognitive Flexibility

The concept and importance of multicultural counseling competence (MCC) has received a growing amount of global attention over the past several decades (Fuertes & Brobst, 2002; Tao, Own, Pace, & Imel, 2015; Tomlinson-Clarke, 2013). Within the United States, the focus on MCC has been attributed to attention to the demographic changes and mental health needs of diverse clients (Fuertes et al., 2006; Jones, Sander, & Booker, 2013), as well as the significant discrepancies that exist in access to and quality of mental health services provided among racial and ethnic groups (Tao et al., 2015). Additionally, the importance of MCC is demonstrated by its positive relationship with positive counseling outcomes and clients' satisfaction with therapeutic process (Drinane, Owen, Adelson, & Rodolfa, 2016). Research indicates ethnic minority clients emphasize MCC above other therapeutic factors in ratings of therapeutic satisfaction (Fuertes & Brobst, 2002).

The significance of MCC also stems from professional associations. For example, the American Psychological Association (APA) and the American Counseling Association (ACA) have adopted models of multicultural competence (e.g., the tripartite model of MCC; Sue, Arredondo, & McDavis, 1992) and professional standards of MCC to guide therapists in addressing cultural factors as well as requiring training programs to integrate multicultural competency training into their curricula (ACA, 2014; Drinane et al., 2016). The tripartite model posits that counselors must develop knowledge, skills, and awareness of cultural factors to serve their clients to their best ability (Sue, Arredondo, & McDavis, 1992). Sue and Sue (2003) further extended the definition of MCC by including the need for counselors to have awareness of their own values and biases, as well as understand how these may differ from their clients' worldviews. Multiculturally competent counselors must have 1) knowledge of the systems impacting clients and barriers related to their

background, 2) skills to appropriately communicate with clients in a way that is sensitive to cultural differences, and 3) awareness of clients' cultural heritage and the counselor's own related biases (ACA, 2014).

Although the construct of MCC has been examined extensively, the process through which counseling trainees develop MCC is still poorly understood (Fuertes, Bartolomeo, & Nichols, 2001; Jones et al., 2013). Understanding this process is critical to help counselors-in-training develop MCC. Previous research studies have investigated factors and interventions that promote MCC development such as mindfulness (Campbell, Vance, & Dong, 2017; Ivers, Johnson, Clarke, Newsome, & Berry, 2016), cognitive complexity (Cannon, 2008; Endicott, Bock, & Narvaes, 2003) and cognitive flexibility (Kim, Cartwright, Asay, & D'Andrew, 2003). The current study aimed to explore the accumulative impacts of cognitive complexity, cognitive flexibility, and mindfulness on MCC development among counselors-in-training, while controlling for race and mindfulness practice. The current study was informed by previous literature that established the connections between MCC and key factors found to be critical to trainee development (cognitive complexity, cognitive flexibility, and mindfulness) as well as mindfulness practice and race.

Literature Review

Mindfulness and MCC

Mindfulness, a practice rooted in Buddhist tradition, has gained growing popularity in academic and mainstream cultures (Chiesa, 2013). Mindfulness refers to non-judgmental awareness that encourages openness and non-reactivity while staying in the present moment with deliberate concentration (Kabat-Zinn, 2015). With its increasing popularity, there is variability in the operational definition of mindfulness (Chiesa, 2013). For the purposes of this study, mindfulness is

defined as "being able to pay attention in a particular way: on purpose, in the present moment, and non-judgmentally" (Kabat-Zinn, 1994, p. 4).

In addition to its therapeutic use for clients, mindfulness has gained attention for its use in helping counselors and trainees. For example, mindfulness has been found to be helpful in reduction of burnout (Vilardaga et al., 2011), self-care (Schure, Christopher, & Christopher, 2008), and development of professional identity (Dong, Campbell, & Vance, 2017; Dong, Miles, Abell, & Martinez, 2018). Recent studies have found mindfulness as a trait that is significantly correlated with MCC after controlling for race, ethnicity, education, and empathy (Ivers et al., 2016). Campbell et al. (2017) found that counselor trainees who reported higher levels of mindfulness also rated themselves higher on self-assessment of MCC. Although other factors such as course work in multicultural counseling and demographics (i.e., race) contribute to MCC development, Campbell et al. (2017) found trait mindfulness along with mindfulness practices to account for greater variance in MCC ratings. The existing literature highlights the significance and potentials of mindfulness on the development of MCC.

Cognitive flexibility and MCC

Cognitive flexibility serves as a critical component of successful interpersonal communication, and broadly refers to individuals' ability to accomplish complex tasks and adapt to the environment (Ionescu, 2012). While multiple definitions of cognitive flexibility have been presented, it typically includes at least one of three elements: (i) a willingness to adapt or the ability to change, (ii) an overall awareness that alternatives exist, with the ability to consider a variety of concepts, and (iii) an ability to acknowledge and consider various perspectives and ideas (Martin & Rubin, 1995; Moore, 2013). Cognitive flexibility serves as a key indication of MCC with diverse populations as it assists counseling professionals in being able to shift their perspectives within a

counseling setting (Constantine & Yeh, 2001; Kwong, 2009). Higher levels of cognitive flexibility are associated with the flexibility required to develop MCC, by being able to adjust to various cultural situations and sensitivities (Benet-Martinez, Lee, & Leu, 2006; Leung & Chiu, 2008). Kim et al. (2003) also found that cognitive flexibility can be beneficial for counselors to comprehend diverse world views of clients from different cultural backgrounds.

These findings demonstrate that high levels of cognitive flexibility may enable counselors to consider multiple perspectives, especially those different from one's own, adapt to new situations and considerations, and understand clients from diverse backgrounds. These skills are some of the building blocks of MCC, which suggests that high levels of cognitive flexibility may be a critical aspect in the development of MCC for counselors-in-training.

Cognitive complexity and MCC

Cognitive complexity can be defined as the ability to take in, integrate, and utilize multiple perspectives to facilitate understanding (Granello, 2010; Wilkinson, 2011). This means that someone with high cognitive complexity can be open to other points of view and critically examine their own as they integrate new information. Cognitive complexity has been identified as a critical aspect of professional development for counselors-in-training by enhancing their ability to conceptualize and promote clients' welfare (Choate & Granello, 2006; Wilkinson, 2011). Although there is little prior research on the connection between MCC and cognitive complexity in counselors, the development of cognitive complexity has been correlated with several counseling skills, including multicultural appropriateness (Granello, 2010) and multicultural social desirability (Wendler & Nilsson, 2009). Past research has also connected higher levels of cognitive complexity with specific MCC skills such as avoidance of stereotyping, including bias in clinical judgement, and increased ability to empathize with clients from different cultures (Cannon, 2008; Chung & Bemak, 2002; Granello, 2002). These

findings suggest that cognitive complexity may be positively correlated with MCC, and may also play a role in the process of its development.

Race, Engagement in Mindfulness Practice and MCC

In addition to mindfulness, cognitive completxity and cognitive flexibility, the current study also considered race and engagement in mindfulness practice. Studies have revealed a significant relationship between race and MCC, and found that race serves as a key factor attributing to variance in MCC (Campbell et al., 2017; Ivers et al., 2016; Pope-Davis & Ottavi, 1994). For example, Campbell et al. (2017) revealed that individuals with minority backgrounds reported a significantly higher level of MCC than that of their Caucasian peers.

In addition, mindfulness practice (i.e. duration of weekly mindfulness practice) has also been found to be significant in contributing to MCC (Campbell et al., 2017) and has a strong positive correlation with cognitive flexibility (Moore, 2013). Therefore, these factors were included in this study due to their consistent presence throughout the literature and potential to be confounding variables when examining the key factors under consideration.

Research Gaps and the Current Study

Although there has been research on the reasons why MCC is important and the necessity for improving training programs in regard to it (Cook, Krell, Hayden, Gracia, & Denitzio, 2016; Fuertes et al., 2006; Jones et al., 2013), there is still much to learn about how MCC is developed (Fuertes et al., 2001), and, thus, on how best to facilitate it among trainees. Despite a few recent studies that have investigated the impact of mindfulness, cognitive complexity, and cognitive flexibility on mindfulness separately, no study has examined the association of these three factors on MCC in one study while also controlling for race and mindfulness practice among counselor trainees.

The goal of this study was to explore the contribution of cognitive complexity, cognitive flexibility, and mindfulness to the process of MCC development among counselors-in-training, while controlling for race and mindfulness practice. The study therefore investigated the following research questions:

1. Is there a positive correlation among cognitive complexity, cognitive flexibility, mindfulness, and MCC among graduate-level trainees in the counseling field?
2. Will MCC vary between White and Non-White participants, and participants with different weekly mindfulness practice?
3. How do cognitive complexity, cognitive flexibility, and mindfulness impact MCC, while controlling for race and mindfulness practice?

Methods

Participants

One hundred graduate-level students in counseling and related programs in the United States were recruited. For the context of the study, graduate-level students in counseling refers to those enrolled in higher education courses at the graduate-level, including masters students, doctoral students, specialist-degree students, and non-degree seeking students. After removing incomplete responses and those who did not meet the participation qualifying criteria (i.e., being a current graduate-level student in counseling and related fields), a total of 78 participants were included in the data analysis.

Among the participants, 13 (16.7%) self-reported as males, 64 (82.1%) as females, and one (1.2%) as transgender. Participants also self-identified their racial and ethnic identities: 30 (38.5%) identified as White, 35 (44.9%) as African American, two (2.6%) as Asian American, six (7.7%) as Hispanic or Latino, and five (6.4%) as Multiracial. Around 70% of particpants reported they were

from southern region of the United States. Thus, the participants seemed to be overpresented in the following demographics: female, African American, and from southern part of the U.S. (see Table 1).

<Insert Table 1 about here>

Procedure and Design

To be eligible for participation, participants had to be current students enrolled in courses within a graduate-level counseling or counseling-related program. Participants were recruited through emails sent to identified contacts at training programs across the United States, randomly selected from online listings of graduate-level applied psychology programs. The contacts at the selected programs were asked to distribute the notice of research to graduate students in their programs or to post it on the institutional research pool website in which participants would receive one research course credit for participation in a research project. In addition, a snowballing recruitment method was used, in which existing participants recruit future participants from among their acquaintances.

The notice of research included an email explaining the purpose of the study, details on what participation would entail (i.e., eligibility, time commitment, etc.), and the contact details of the principal investigator. The notice of research also included an online Qualtrics survey link. After accessing the link, participants were presented the informed consent and a description of the study including its potential benefits and considerations for maintaining confidentiality. Additionally, participants were informed that they had the option to enter a raffle for one of three Amazon gift cards as an incentive. After signifying their informed consent online, participants completed the following measures.

Measures

Demographics questionnaire. Participants were asked to complete a demographic questionnaire, which included questions on age, sex, race and ethnicity, the highest level of education

completed, experience with mindfulness practices *('Have you practiced any kind of mindfulness practices? For example: this may include mindful meditation, breathing exercises, mindful journaling, yoga, etc.')*. Among those who reported practicing mindfulness, participants were asked to indicate their level of mindfulness practice on a weekly basis: less than 1 hour, 1-3 hours, 4-6 hours, or more than 6 hours. Considering low frequency in some groups, we have collapsed the above groups into: none, less than one hour, and more than one hour. Participants also self-reported the region and type of current training program involved in. The participants also completed the following scales:

MCC. The Multicultural Counseling Inventory (MCI) is a 40-item self-report scale that measures one's MCC on a 4-point Likert scale (Sodowsky, Taffe, Gutkin, & Wise, 1994). MCI includes four subscales: multicultural counseling skills, multicultural counseling awareness, multicultural counseling knowledge, and multicultural counseling relationship. The first three subscales are considered the key components of MCC recognized by the APA (Drinane et al., 2016; Sue & Sue, 2008). The unique aspect of MCI is its inclusion of the multicultural counseling relationship subscale that addresses a current lack in multicultural training (Sodowsky et al., 1994). Items on the multicultural counseling relationship subscale are designed to measure one's stereotypes and comfort with minority clients (Ponterotto, Rieger, Barrett, & Sparks, 1994). Sample items on the MCI include those such as, *"I consider the range of behaviors, values, and individual differences within a minority group"* and *"I examine my cultural biases."*

The measure has demonstrated good internal consistencies, with .81 for skills, .80 for awareness, .67 for relationship, and .80 for knowledge (Sodowsky et al., 1994). Previous research has found adequate construct and criterion-related validity for the MCI scale (Ponterotto & Alexander, 1996; Sodowsky et al., 1994). The current study found internal consistencies with the alpha

coefficients for each subscale as follows: .80 for skills, .78 for awareness, .69 for relationship, and .80 for knowledge.

Mindfulness. The Five-Facet Mindfulness Questionnaire (FFMQ) is a 39-item self-report measure of five key facets of mindfulness: Observing/Noticing, Describing, Acting with Awareness, Non-judging of Experience, and Non-reactivity to Inner Experience (Baer et al., 2006). The FFMQ was created as the result of factor analyses aimed at identifying key elements of mindfulness from several popular mindfulness scales, such as the Mindfulness Attention Awareness Scale (Brown & Ryan, 2003) and the Freiburg Mindfulness Inventory (Walach, Buchheld, Buttenmuller, Kleinknecht, & Schmidt, 2006). The FFMQ asks participants to rate statements such as, *"I have trouble thinking of the right words to express how I feel about things"* and *"When I have distressing thoughts or images, I am able just to notice them without reacting."*

Higher overall scores on the FFMQ indicate that the respondents hold greater levels of trait-based mindfulness (Baer et al., 2006). The FFMQ has been found to have reasonable reliability and internal consistency, as demonstrated by a high Cronbach alpha ranging from .75 to .91 (Baer et al., 2006; Williams, Dalgleish, Karl, & Kuyken, 2014). Previous research has also found evidence for convergent validity (Baer et al., 2006, 2008) and divergent validity (Christopher, Neusser, Michael, & Baitmangalkar, 2012). The current study found the alpha coefficients for each subscale as follows: .83 for observing, .88 for describing, .84 for acting with awareness, .87 for nonjudging, and .76 for nonreacting.

Cognitive flexibility. The Cognitive Flexibility Scale (CFS; Martin & Rubin, 1995) is a 12-item self-report measure that measures individuals' flexibility in communicating within interpersonal relationships. The measure uses a 6-point Likert scale ranging from "strongly agree" to "strongly disagree" on which participants rate statements such as, *"I avoid new and unusual situations",* and

"My behavior is a result of conscious decisions that I make." The scale was designed to address three components of cognitive flexibility: i) awareness of alternatives, ii) willingness to adapt to situations, and iii) self-efficacy in being flexible. The emphasis on interpersonal relationships used in the development of this scale is ideal when addressing therapeutic relationships among counselors and their clients.

The CFS has been found to have a test-retest reliability of .83 and demonstrated high construct and concurrent validities (Martin & Rubin, 1995). The current study found the alpha coefficient for the CFS to be .80.

Cognitive complexity. The 12-item 'Abbreviated Three-Dimensional Wisdom Scale' (3D-WS-12; Thomas et al., 2017) is a brief version of the original 40-item 'Three-Dimensional Wisdom Scale' (3D-WS; Ardelt, 2003). The scale has three subscales: (i) cognitive, (ii) reflective and (iii) affective/compassionate dimensions of wisdom. An overall high score on the 3D-WS-12 is achieved by high scores on all three subscales and indicates greater overall wisdom, or cognitive complexity. Participants are asked to rate statements such as *"I don't like to get involved in listening to another person's troubles"* and *"I'm easily irritated by people who argue with me"* using a 5-point Likert scale ranging from 'Definitely true of myself' (1) to 'Not true of myself' (5).

The subscale reliability estimates of the 3D-WS-12 (.62 to .64), although slightly lower compared to the 3D-WS (.69 to .70.), reveal no significant difference in reliability between the two versions given the former's brevity (Thomas et al., 2017). The scale demonstrates good discriminant validity through its negative correlations with the 'Cognitive Failures Questionnaire' (Thomas et al., 2017) and the 'Patient Health Questionnaire Depression Module' (Thomas et al., 2017). The scale reveals convergent validity through its positive correlations with the 'Connor-Davidson Resilience Scale' (Thomas et al., 2017), the 'CES-D Happiness Scale' (Thomas et al., 2017), and the

'Satisfaction with Life Scale' (Thomas et al., 2017). The current study found the alpha coefficients for each subscale of the 3D-WS-12 to be: .46 for the cognitive dimension, .71 for the reflective dimension, and .48 for the affective dimension. The alpha levels of the cognitive and affective dimensions were relatively low in this sample.

Data Analysis

To answer the first research question, a correlational analysis was used to examine the relationship among mindfulness, cognitive flexibility, cognitive complexity, and MCC. To test the second research question, we used ANOVA tests to explore differences in MCC between White and Non-White participants, and participants who reported different weekly mindfulness practice (i.e., none, less than an hour weekly, more than an hour weekly). To answer the third research question, a multiple regression analysis was used to examine the impact of mindfulness, cognitive flexibility and cognitive complexity on MCC, while controlling for race (White/Non-White) and weekly mindfulness practice. We also conducted a power analysis through using GPower 3.1 to estimate the necessary sample size. A sample of 72 was estimated to be acceptable when parameters were set for an alpha level of .05, an effect size of .25, and a power of .90 with 5 predictors in the regression model.

Results

A series of bivariate correlations was run examining the correlation among the target variables to test the first research question. Significant correlations ($p < .01$) were found among the total scores of all scales. Also, significant correlations were found between the overall mindfulness score with cognitive flexibility ($r = .38$) and with cognitive complexity ($r = .50$), respectively. In addition, a significant correlation was found between cognitive flexibility and cognitive complexity ($r = .71$). The findings supported hypothesis 1, with findings of significant positive correlations

among the three target variables. Additionally, MCI scores were significantly associated with each of the three target variables with varying levels of strength, thereby supporting hypothesis 2 through findings that each of the three target variables appeared to be significant factors in ratings of MCC (see Table 2).

<Insert Table 2 about here>

To test the second research questionn, ANOVA tests were conducted. Results of the ANOVA tests showed significant differences in self-perceived MCC between White and Non-White participants. Non-White participants reported significantly higher levels of MCC than the White participants ($p<.05$); participants who practiced more mindfulness weekly reported relatively higher levels of MCC though not statistically significant (see Table 3).

<Insert Table 3 about here>

To answer the third research question, a multiple regression analysis was conducted to examine the impact of five independent variables on MCC: cognitive complexity, cognitive flexibility, trait mindfulness, race, and weekly mindfulness practice. Cognitive complexity ($p<.05$), cognitive flexibility ($p<.01$), race ($p<.01$), and weekly mindfulness practice ($p<.05$) were all significant predictors of MCC in this study. However, trait mindfulness was not a significant predictor in this model. The presented model accounted for 52% of the adjusted variance in MCC (see Table 4).

<Insert Table 4 about here>

Discussion

The study aimed to examine correlations among mindfulness, cognitive complexity, cognitive flexibility, and MCC for graduate-level counselors-in-training. In addition, it explored how mindfulness, cognitive complexity, cognitive flexibility, race and mindfulness practice are predictive

of MCC development. Results indicated positive correlations among cognitive complexity, cognitive flexibility, mindfulness, and MCC. The high positive correlations among these variables seemed to align with findings of previous research (Campbell et al., 2017; Cannon, 2008; Goonetilleke, 2016; Granello, 2002, 2010; Ivers et al., 2016; Scott, 1962; Wilkinson, 2011). The current findings thus offer support that not only are each of the three target factors independently positively correlated with MCC, but that they are also correlated with each other; suggesting interactions between them could further facilitate MCC development.

However, the correlations among the variables indicated that there was a much stronger relationship between cognitive flexibility and cognitive complexity than either had with mindfulness practice and MCC, respectively. In 2011, Wilkinson found that individuals with higher cognitive complexity also tended to endorse increased cognitive flexibility and open-mindedness; the current study's finding of a strong positive relationship between cognitive complexity and cognitive flexibility supports that previous research.

The study found that cognitive flexibility, cognitive complexity, race, and mindfulness practice served as significant predictors of MCC. The predictive power of cognitive complexity on MCC in this study supports the contribution of cognitive complexity on developing MCC among counselors-in-training shown in the literature (Cannon, 2008; Chung & Bemak, 2002; Granello, 2002). The findings support the idea that counselors who are inclined to use diverse perspectives in counseling to understand the complex nature of clients' issues are more likely to use non-stereotyped approaches in conceptualization, put themselves in the clients' perspectives, and adopt multiple and integrative strategies to solve clients' issues. These skills and abilities can help counselors in fostering competency in multicultural counseling, if cultivated appropriately during the training process.

The results of this study also revealed that cognitive flexibility serves as a predicting variable for MCC. This result supports the findings of previous research (Benet-Martinez et al., 2006; Kim et al., 2003; Leung & Chiu, 2008). Thus, current and past studies highlight the importance of cognitive flexibility in developing MCC. The ability to stay cognitively flexible in the course of counseling may assist in reconciling the discrepancy in beliefs between counselor and client, and help counselors build stronger relationships with clients from differing backgrounds and cultures (Garland, Farb, Goldin, & Fredrickson, 2015), thus enhancing MCC.

Previous literature has consistently found race to be an important factor associated with MCC. The current study supported this with the finding that Non-White participants self-reported higher levels of MCC in comparison with their White counterparts (Campbell et al., 2017; Ivers, 2012; Ivers et al., 2016; Ponterotto et al., 1994; Pope-Davis & Ottavi, 1994). The current study also supported previous findings (Campbell et al., 2017) that engagement in active weekly mindfulness practice is significantly associated with MCC. These findings highlight the importance of mindfulness practice in contributing to MCC.

Trait mindfulness, however, was not found to be significant in relation to MCC. This finding was not consistent with what has been found in previous research (Campbell et al., 2017; Ivers et al., 2016; Tourek, 2014). It may then be possible that while the current study did not find trait mindfulness to have a significant relationship to MCC, it could still contribute to development through interactive effects with other factors such as cognitive flexibility and cognitive complexity.

Limitations

There were several limitations to this study. First, the self-reported nature of the study may be subjected to questions of objectivity and accuracy of the participants' responses due to potential social desirability and other biases. Second, the demographics of the participants were not

representative of the population and may limit the generalizability of the study. For example, nearly 70% of the participants were recruited from the southern part of the U.S. Third, the snowball recruiting methods applied in this study allowed for anonymity for participants, but restricted the ability to calculate the response rate. Fourth, the relatively small sample size could lead to challenges in regard to the reliability of the results. Fifth, the reliability of cognitive complexity (i.e., the cognitive and affective dimensions) in this study was low.

Implications for Practice

With an ever-increasingly diverse population it is crucial for counseling trainees to develop MCC to be effective in their work. The findings of this study reveal that cognitive flexibility, cognitive complexity, and mindfulness practices have the potential to be strong factors in the development of MCC. Counselor educators should foster MCC of counselors-in-training by increasing learning in regard to cognitive flexibility and cognitive complexity and encourage mindfulness practice. Training exercises such as using culturally diverse case studies that consider clients' families, communities, and ecological environments may assist students to see different perspectives and operate within the levels of complexity involved. By incorporating didactic and experiential training that promotes diverse ways of thinking, adaptability, and openness to new perspectives into the early stages of counselor training, educators could play an active role in enhancing the skills and cognitive abilities required in MCC development.

Furthermore, it is important for counselors-in-training to be exposed to diverse groups and multiple perspectives. Exposure to different people with various backgrounds and perspectives can help trainees to consider different perspectives and further develop their understanding of human complexity and the need for flexibility in addressing problems of concern. This knowledge can be combined with the tripartite model of MCC (Sue, Arredondo, & McDavis, 1992; Sue & Sue, 2003)

and be expanded to multiple levels such as micro, meso, and macro levels of clients' systems. It would, therefore, be important for training to include not only client-counselor considerations but also incorporate discussions focused on larger systems. Counselor development of multicultural knowledge, awareness, and skills is important at the individual level; however, by expanding to group and institutional applications counselors-in-training can add richness to their understanding of clients' issues from an ecological perspective and be more creative and flexible in their interventions. By presenting layered cases and challenging students to identify multiple interventions and strategies, both cognitive complexity and cognitive flexibility can be further developed.

Educational programs may also consider providing trainees with more exposure to and training in mindfulness practices, as the findings in the current study reveal that engaging in mindfulness practices was associated with higher levels of multicultural counseling competence. Educators need to highlight not only the therapeutic utility of mindfulness in clinical settings, but also the benefits of mindfulness practices for the counselors themselves. Trainees' increased engagement in mindfulness practice presents multiple potential benefits, such as increasing self-care and reducing burnout (Vilardaga et al., 2011) as well as professional development in MCC, ultimately leading to increased clinical effectiveness.

Implications for Research

Constantine (2001) stated that more research is required to examine the correlation between cognitive flexibility and multicultural counseling competence in practicing school counselors and school counselor trainees. The current study offers preliminary evidence that there is a correlation between the two and expands on it by exploring how cognitive flexibility appears to be associated with other factors such as cognitive complexity and mindfulness practice. Future studies should expand on these findings to better understand how cognitive flexibility may impact MCC. For

instance, due to the small sample size this study was unable to determine the correlation between cognitive flexibility and the four subscales on the MCI (skills, awareness, knowledge, and relationship). Future studies should investigate this further to develop a better understanding of how cognitive flexibility functions to predict and potentially promote MCC.

Future research should also explore the relationship between cognitive complexity (including its subscales) and the subscales of the MCI, considering the limited empirical research in the area and cognitive complexity's potential utility in training. When testing this relationship, it would also be important for future research to consider the low alpha levels obtained in this study for two of the subscales on the 3D-WS-12 scale (.46 for the cognitive dimension and .48 for the affective dimension) used to measure cognitive complexity. Higher alpha levels could lead to more reliable results and so future research may consider alternative measures of cognitive complexity than was used in the current study.

Future research may also investigate the differential impact of trait mindfulness and engagement in mindfulness practice on MCC development. While this study did not find a significant relationship between trait mindfulness and MCC, the contrasting existing body of research on this matter suggests further research is need with larger sample sizes for a better understanding of the relationship between trait mindfulness and MCC. Additionally, future studies may consider experimental design and longitudinal methods to identify mechanisms on how the variables in this study interact to develop MCC.

Conclusions

This study provided preliminary data on the connections among trait mindfulness, cognitive flexibility, cognitive complexity and mindfulness practices to the development of MCC. These variables accounted for variance in multicultural counseling competence. Future research is needed to

provide more empirical evidence to support the infusion of mindfulness and mindfulness practices, cognitive complexity and cognitive flexibility in MCC training.

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Table 1

Descriptive Statistics of Participants

Variables	Category	N	Percentage (%)	*M*	*SD*
Age		78		26.56	6.69
Gender	Female	64	82.0		
	Male	13	16.7		
	Transgender	1	1.3		
Race	Caucasian	30	38.5		
	African American	35	44.9		
	Asian American	2	2.6		
	Hispanic	6	7.7		
	Multiracial	5	6.4		
Regional location	Pacific northwest	1	1.3		
	West coast	2	2.6		
	Southwest	1	1.3		
	Midwest	2	2.9		
	South	54	69.2		
	Northeast	7	9		
	East coast	11	14.1		
	Missing	1	1.3		
Highest level of education completed	Bachelor	58	74.4		
	Masters	17	21.8		
	Other[1]	3	3.8		
Current program	School counseling	12	15.5		
	Rehabilitation counseling	4	5.1		
	Career counseling	2	2.6		
	CMHC[2]	11	14.1		
	Counseling psychology	4	5.1		
	Combined program[3]	11	14.1		
	Social work	6	7.7		
	Community psychology	25	32		
	Sport psychology	1	1.3		
	Chose not to disclose	2	2.6		

[1]Refers to students who have obtained other degrees than a bachelors or masters such as a doctorate or specialist degree as their highest level of education
[2]CMHC refers to Clinical Mental Health Counseling
[3]Combined program refers to combined school and counseling psychology

Table 2

Bivariate Correlations among MCC and Three Key Variables

Variable	*1*	*2*	*3*	*4*
1. Trait mindfulness	-	.38*	.50*	.35*
2. Cognitive flexibility		-	.71*	.66*
3. Cognitive complexity			-	.59*
4. MCC[1]				-
M	*131.42*	*57.61*	*44.80*	*123.40*
SD	16.06	6.91	6.51	14.01
Skewedness	.23	-.64	-.73	.11
Kurtosis	-.35	.35	.46	.12
Range	100-168	36-71	26-56	86-158

[1]MCC refers to multicultural counseling competence

* indicates that the correlation is significant ($p<.01$) (two-tailed)

Table 3

Multicultural Counseling Competence based on Race and Engagement in Mindfulness Practice

Variables	Category/n	MCC[1]		*p*
		M	*SD*	
Race	Non-White (n=48)	126.09	14.31	.04
	White (n=30)	119.11	12.61	
Weekly mindfulness practice	None (n=16)	114.44	8.79	.12
	Less than an hour (n=38)	124.23	13.26	
	More than an hour (n=34)	125.23	15.32	

[1] MCC refers to multicultural counseling competence

Table 4

Factors Affecting Variance of Multicultural Counseling Competence

Variables	R	Adjusted R^2	β	*t*	*p*	*F*	*VIF*
Model	.74	.52		3.75	.00	15.77	
Cognitive complexity			.29	2.22	.03		2.48
Cognitive flexibility			.42	3.38	.00		2.16
Trait mindfulness			.01	.05	.96		1.37
White (vs. Non-White)			-.25	-2.95	.00		1.06
Weekly mindfulness practice			.21	2.42	.02		1.03