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***Development and Validation of the Optimal  
Supervision Environment Test (OSET)***

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**Abstract**

The purpose of this study was to develop and validate the Optimal Supervision Environment Test (OSET), an instrument designed to assess the supervisor's ability to create an optimal supervision environment. Using confirmatory factor analysis (CFA), the initial validation of the OSET has yielded a three-factor model that identifies the following three environmental domains of supervision: the Emotional Environment, the Learning Environment, and the Power Environment. The total scale and each OSET subscale have strong internal consistency (.84 to .90). These results provide initial support for using OSET as a valid and reliable multidimensional supervision instrument.

Supervision is a critical element in the training and development of professional counselors (Bernard & Goodyear, 2019). The supervisory relationship often is the most formative relationship that new counselors experience as they develop professional identities (Riggs & Bretz, 2006). Furthermore, supervision consistently promotes counselors' growth and development so that they satisfy the standards of the profession and ensure therapeutic effectiveness (Bernard & Goodyear, 2019). Several studies showed the effectiveness of supervision in promoting the growth and well-being of the counselors and positive client outcomes (Cashwell & Dooley, 2001; DePue et al., 2020; Gibson et al., 2009)

Despite the potential benefits of supervision, the experience of supervision can also be negative and even damaging for supervisees. For example, Gray et al. (2001) interviewed 13 psychotherapy trainees to explore their experiences in "counterproductive" supervision events. The researchers defined a counterproductive event as "any experience that was hindering, unhelpful, or harmful in relation to the trainee's growth as a therapist" (Gary et al., 2001, p. 371). Participants all reported at least one counterproductive experience, including supervisors dismissing trainees' thoughts and feelings, lacking empathy, and inappropriately self-disclosing.

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Most perceived counterproductive events were attributed to supervisors not attending to their trainees' thoughts and feelings. After those experiences, trainees reported changing their behaviors toward their supervisors, most commonly by repressing disclosure. Nelson and Friedlander (2001), who interviewed 13 master's and doctoral-level trainees, reported that "bad supervisors" were viewed by trainees as being "remote and uncommitted to establishing a strong training relationship" (p. 387). As a result of perceived inadequate supervision, some of the trainees reported experiencing long-lasting self-doubt and extreme stress.

In an effort to enhance supervision, considerable research interest has focused on the importance of matching supervisees' developmental levels with appropriate supervisory conditions, typically referred to as the supervision environment (Bernard & Goodyear, 2019). When supervisors match supervisory interventions to their supervisees' current developmental level and then mismatch their interventions to their supervisees by relating from the next developmental level, this approach optimizes the supervisory environment. Stoltenberg (1981) noted that the optimal supervision environment is one in which there is a mismatch in challenge of about one-half step beyond the supervisee's current level of functioning. This optimal mismatch extends the supervisees' thinking but does not overwhelm the supervisees' thinking with more information that they can handle. Borders (1998), applying the framework of ego development, suggested that for

supervisees to transition to a higher level of ego development within the context of supervision, the supervisor must be functioning at least one ego developmental stage higher than their supervisees.

### **The Optimal Supervision Environment**

To maximize the effectiveness of supervision and prevent inadequate and even harmful supervision, supervisors must strive to establish an optimal supervision environment through an ongoing process of adjusting their supervisory interventions based on the varying needs of supervisees. Drawing from the current research, it appears that this adjustment process must optimally occur in relation to three primary environmental dimensions: (a) the emotional environment, (b) the learning environment, and (c) the power environment.

### **The Emotional Environment (EE)**

Studies have demonstrated a strong association between supervisors' and supervisees' emotional bonds and various supervision outcomes (DePue et al., 2020; Ellis, 2010; Ladany, 2004; White & Queener, 2003). Ladany et al. (1999) investigated the relationships between supervisory alliance, supervisee self-efficacy, and supervisees' satisfaction with supervision. A strong emotional bond was found to be predictive of supervisees' satisfaction with supervision. As the emotional bond between supervisor and supervisee increased in strength, supervisees perceived their supervisors' personal qualities and performance and their

behaviors in supervision more positively. Additionally, supervisees perceived a higher level of comfort in supervision.

According to Watkins (2010), the supervisor establishes the relationship as a container or holding environment (Winnicott, 1965) to create a safe space for the supervisee, wherein trust, consistency, and dependability permeate every facet of the supervisory relationship. Watkins suggested that when the supervisee experience anxiety, the supervisor should provide comfort; when the supervisee has doubts, the supervisor should provide reassurance; and when the supervisee lacks direction, the supervisor should provide guidance. In effect, the supervisor creates a secure emotional refuge within which a supervisee can feel safe enough to assume the risks associated with the new experience of counselor training.

White and Queener (2003) found that a supervisor's ability to create secure adult attachments and social provision (i.e., social network) was predictive of both supervisees' and supervisors' perceptions of the supervisory working alliance. The supervisor's abilities to form close attachments and to feel intimate in relationships were found to be more predictive of a strong supervisory alliance than if the same characteristics brought to the supervisory relationship by supervisees. This finding further demonstrates the importance of a relational bond between supervisor and supervisee in the creation of a supervision environment that is perceived as supportive and effective. It also highlights

the critical role that the supervisor plays in facilitating an emotional bond and secure attachment with supervisees that appears to be critical to an effective supervision environment.

### **The Learning Environment (LE)**

To provide adequate supervision, Borders (1989b) suggested that supervisors must consider their supervisees as "learners" and themselves as "educators" who create productive learning environments (p. 6). More specifically, she and several other researchers have concluded that competent supervisors can create a learning environment in which their knowledge and skills are appropriately imparted to supervisees according to each supervisee's level of cognitive complexity (Borders, 1989a; Borders & Fong, 1989; Borders, et al., 1986; Ladany et al., 2001; Lovell, 1999). A developmentally matched supervision environment ensures that supervisees can accurately comprehend their new learning experiences; such an environment has also shown to promote supervisee capacity to comprehend increasingly complex learning concepts (Granello, 2002, 2010). In a study of 63 counseling practicum and internship students, Borders et al. (1986) found that students at lower ego levels used more simplistic, concrete descriptors of their experiences. In contrast, those at higher ego development levels used more sophisticated and interactive descriptors. In a study of 27 counseling practicum students, Borders (1989a) found that students with higher levels of cognitive complexity (i.e., a higher level of ego development) reported

significantly fewer negative thoughts about clients and their performance and were better able to remain objective and neutral in the counseling sessions. A longitudinal study of cognitive development among 43 counseling students by Fong et al. (1997) found that the students' cognitive complexity increased from the beginning to the end of their counselor training program and that students with higher levels of cognitive development used more sophisticated and effective verbal skills, had more confidence in their work, and found counseling less difficult.

These studies support the importance of providing a learning environment in counselor training that facilitates learners' cognitive development, given that counselors at higher levels of cognitive development are better able to formulate a thorough, objective understanding of the client and communicate effectively and confidently in the counseling sessions. Research supports the notion that supervision is an ideal setting to promote counselors' cognitive complexity by matching supervisory interventions to each supervisee's current level of cognitive functioning and slightly mismatching those interventions such that supervisees are challenged toward more complex thinking (Borders et al., 1986; Borders, 1989a; Fong et al., 1997). Thus, it seems that the effectiveness of the learning environment within a supervision setting strongly depends upon the supervisor's ability and effort to understand each supervisee's current level of cognitive functioning and to

administer supervisory interventions that are gauged upon that understanding.

### **The Power Environment (PE)**

Counseling supervisors are responsible for evaluating the professional performance of their supervisees (ACA, 2014; CACREP, 2015), and this evaluative component of supervision bestows supervisors with an important source of power and interpersonal influence (Bernard & Goodyear, 2019). Evaluation and discussion of supervisees' personal challenges are inherent qualities of supervision that can provoke anxiety among supervisees, even within the best supervisory relationships (Pearson, 2000). Supervisees are often expected to discuss their vulnerabilities and disclose their fears to the same supervisors that evaluate them; such expectations may generate tension for both supervisees and supervisors, leading to potential relational conflicts (Ladany et al., 2005; Nelson & Friedlander, 2001).

Because students are emotionally vulnerable in the context of their supervision, they are in a poor position to advocate for themselves should the boundaries of that relationship break down (Jacobs, 1991). Supervisees may be hesitant to communicate their needs in supervision because of their perception that supervisors are in a position of higher authority, and that doing so could result in negative evaluation. Ladany et al. (1996) demonstrated this hesitancy by examining 108 therapists in training and investigating the nature, content, and reasons behind supervisees'

nondisclosure. They found that 97 (90%) of the supervisees had experienced at least one negative reaction to a supervisor and that most supervisees (97.2%) did not disclose their negative experiences in supervision for fear of retaliation, therefore placing supervisors in a difficult position to receive adequate feedback about their supervision performance. Thus, due to their position of authority alone, counseling supervisors may routinely be denied the benefits that formative feedback from supervisees, even if they are open to receiving it.

Nelson et al. (2008) have emphasized the importance of a strong supervisor-supervisee alliance in overcoming supervisee resistance to disclosure of supervision needs due to the power differential with their supervisor. Through a study involving interviews with 12 supervisors recognized by their professional peers as being highly competent, the researchers found that supervisors who understand the hierarchical, evaluative nature of the supervisory relationship and take purposeful steps to create a trusting supervision environment are most likely to receive honest feedback from supervisees. The specific steps to be taken by supervisors include discussing the nature and scope of their evaluative role early in the supervisory relationship, inviting feedback from supervisees regularly, being willing to acknowledge their weaknesses to supervisees, and discussing strategies with supervisees about how conflicts of perspective will be addressed. While supervisors may not be able to eliminate the imbalance of power that exists innately in

the relationships with their supervisees, they can take proactive steps to lessen the deleterious effects of that power differential on the supervision environment.

Despite the essential role of the supervision environment in the development of counselors, there is a lack of research evaluating the quality of clinical supervision and a critical need for more structured and methodologically sound research (Bernard & Goodyear, 2019; Kilminster & Jolly, 2000; Wheeler & Richards, 2007). Furthermore, the quality of existing supervision research is reported as “substandard” (Ellis & Ladany, 1997, p. 492), suggesting that few conclusions can be legitimately drawn from it to inform the preparation of supervisors. Given the lack of available instruments for the evaluation of supervisors, we designed the Optimal Supervision Environment Test (OSET) to assess the supervisor’s ability to create a supervisory environment that promotes counselor development.

## **Method**

Construction and field-testing of the Optimal Supervision Environment Test (OSET) took place in five phases. The first phase involved reviewing the relevant literature to identify important elements of supervision to serve as the basis for creating a blueprint for the OSET. The researchers defined the construct (i.e., optimal supervision environment) and distilled from the literature three essential components of an optimal supervision environment. The instrument blueprint delineated three scales

(i.e., Emotional Environment, Learning Environment, and Power Environment), each deemed to be separate but important aspects of counselor supervision. The blueprint was constructed to have equal numbers of items reflecting the three elements.

The second phase involved writing items to populate the test blueprint cells. The OSET was designed as an attitudinal measure that uses a Likert scale response format. To avoid response sets of central tendency, the items were constructed using 4-point response options, with no neutral option. Over three hundred items were written by the researchers and then edited by a recognized expert in test construction. Following this initial content review, the initial item pool was reduced to 200 items.

The third phase involved piloting the OSET with 14 doctoral students and faculty members from a counselor education program to improve the clarity of items and reduce their total number. The participants reviewed and completed the 200-item version of the OSET. Item-descriptive statistics (i.e., response frequencies, means, standard deviations, and range) were calculated to identify and modify items that were difficult to answer and to delete items that did not contribute to the instrument's variability. Using a Cronbach's Alpha reliability criterion of .80, the number of items in the instrument was reduced to 81.

In the fourth phase, an expert panel of five supervisors was used to conduct an initial assessment of OSET face and content

validity. The raters were experts in the field based on their extensive research experience, scholarly research in supervision, and experience in providing supervision. The reviewers rated the 81 items based on their fit to the OSET model and overall quality; the criterion for item determination was the support of at least three of the five experts who agreed to either add, remove, or modify items. Based on the raters' responses and comments, several items were modified and eliminated, resulting in a total item pool of 78 items, with 26 items in each of the three subscales.

The fifth phase consisted of the administration of the initial OSET to a national sample of 93 counseling supervisors. As in the earlier analyses of the pilot data, an alpha coefficient of .80 was used to evaluate the internal consistency among both items in the OSET total scale and for each of the three subscales. In addition, a series of exploratory factor analyses (EFA) was used to estimate the total variance explained by the specific items, to reduce the data set into a smaller number of variables, and to reveal the underlying structure of the OSET. This analysis resulted in a final OSET composition of 15 items (5 items per subscale). The researchers submitted the final collection of 15 items to confirmatory factor analysis (CFA) to identify the initial factor structure and to estimate the construct validity of the OSET.

## Participants

The target population of this study was counselor educators and clinical supervisors across the United States, and the convenience sample was drawn from the target population. The researchers distributed an invitation to participate in the study on the CESNET listserv, which is used by counselor educators and counseling supervisors. Invitations were also distributed to university and mental health agency settings known to the researchers. The final group of participants included 93 clinical supervisors between the ages of 26 and 74 years, with a mean of approximately five years of supervisory experience. Of the 93 subjects, 31 (33.3%) were male, and 62 (66.7%) were female. Additionally, the sample included 77 (82.8%) White/European/Caucasian Americans, 10 (10.8%) African or Black Americans, two (2.2%) Asian American or Pacific Islanders, and one (1.1%) each of the following ethnic groups: Hispanic or Latino Americans, Native Americans and multiracial, and international.

Fifty-eight of the participants identified themselves as Licensed Professional Counselors (LPC), 19 as doctoral students in counselor education, three as Licensed Marriage and Family Counselors (LMFC), three as counselor educators, and 10 as others. Fifteen of the participants had less than one year of supervision experience, 41 had one to five years, 19 had six to 10 years, five had 11 to 15 years, three had 16 to 20 years, and 10 over 21 years.

## Results

### Demographics

To examine whether demographic variables (i.e., age, race, and gender) systematically affect the score of the OSET, a three-way analysis of variance (ANOVA), with age, gender, and ethnic group as independent variables, was conducted. Because of the small group sizes, the underrepresented ethnic groups were combined, resulting in two levels of race/ethnicity: Caucasian/European/White American ( $n = 77$ ) and underrepresented groups ( $n = 16$ ). For the purpose of analysis, age was coded into five groups: 26 to 30 years ( $n = 13$ ), 31 to 40 years ( $n = 26$ ), 41 to 50 years ( $n = 17$ ), 51 to 60 years ( $n = 21$ ), and 61 and above ( $n = 14$ ). Two participants did not indicate their age in the survey. ANOVA of variance showed no significant main effects at the  $p < .05$  level for age: [ $F(4, 74) = 2.34, p = .06$ ], gender, [ $F(1, 74) = 2.53, p = .146$ ], or race/ethnicity, [ $F(1, 74) = .41, p = .52$ ]. There were also no significant interactions. Because of these results, the sample was treated as one homogeneous group, regardless of age, gender, or race/ethnicity.

### Validity

#### *Internal Structure of the OSET*

An exploratory factor analysis (EFA) was conducted using a principal component analysis (PCA) and a Varimax rotation to reduce the data set into a smaller number of variables and to reveal the underlying factor



structure of the OSET. The number of factors to be extracted was determined by eigenvalues of greater than 1.0, an inspection of the scree plot (Cattell, 1966), and extraction criteria of .40 (Kline, 2015).

The 15 OSET items were subjected to exploratory factor analysis (EFA). The significance of Bartlett's test of sphericity, [ $\chi^2(105) = 751.76, p < .001$ ], and the size of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, .87, showed that the 15 OSET items had an adequate common variance for factor analysis. The communalities were all above .3, further confirming that each item shared some common variance with other items.

Based on these criteria, three factors emerged with eigenvalues of greater than 1.0 after five iterations, accounting for 66.2% of the overall variance. The OSET items loaded onto three factors that correspond to Emotional Environment (EE), Learning Environment (LE), and Power Environment (PE). Each factor equally contained five items. The first factor, the EE, accounted for 23.9% of the variance, with factor loadings for this factor ranging from .77 to .82. The second factor, the LE, accounted for 20.7% of the variance with the factor loading on this factor ranging from .47 to .89. The last factor, the PE, accounted for 21.6% of the variance with factor loadings on this factor ranging from .64 to .80. The total variance was distributed approximately equally to the three factors of OSET.

## Descriptive Statistics

Analysis of the data provided basic descriptive results of the supervisors' scores on the OSET. Overall, participants scored a mean of 52.49 (SD = 5.39). The minimum and maximum possible overall OSET scores are 15.00 and 60.00, respectively. The minimum and maximum possible subscale scores are 5.00 and 20.00. The EE scores ranged from 11.00 to 20.00, with a mean of 17.69 (SD = 2.33). The LE scores ranged from 13.00 to 20.00, with a mean of 17.58 (SD = 2.18). The PE scores ranged from 13.00 to 20.00, with a mean of 17.23 (SD = 2.18). The minimum and maximum possible scores for each OSET factor are 5.00 and 15.00, respectively. Means and standard deviations for each OSET item, as well as item-scale correlations, are shown in Table 1.

To determine the internal consistency of the OSET, Cronbach's coefficient alpha was computed on the 15 items of the OSET total scale and each of the factors derived from the exploratory factor analysis. The overall total test alpha coefficient for this sample was .90. Alpha coefficients for the three factors were .89 (Emotional Environment), .86 (Learning Environment), and .84 (Power Environment). Wasserman and Bracken (2013) suggested that scales intended for research applications should minimally be reliable at a level of .70, and preferably .80. The reliability scores for this sample were considered excellent since the reliability scores for both the overall scale and each subscale were well above the preferred .80 for scale reliability.

Overall, the reliability analyses provide support for the OSET as a reliable instrument.

Table 2 presents the intercorrelations for the OSET subscales and the total scale scores. As can be seen in Table 2, the three OSET subscales correlated to a moderate to a strong degree with the OSET total scale. Subscale to total scale intercorrelations coefficients ranged from a low .77 for EE and total scale, to a high of .85 for LE and total scale. These findings suggest that the three indices of the OSET are related but not sufficiently explained by one score alone. The results support the discriminant validity of the factor scores and suggest that interpreting the total test and the three subscales is acceptable.

### Measurement Model

A confirmatory factor analysis was used to compare the estimate of fit for each of two measurement models: a one-factor model and a three-factor model. For the one-factor model, there was one latent variable, the Optimal Supervision Environment, which had 15 indicators. For the three-factor measurement model, three latent variables, Emotional Environment (EE), Learning Environment (LE), and Power Environment (PE), each had five indicators. The three latent variables were allowed to correlate, as shown in the correlation analyses among the factors.

The adequacy of measurement and structural model fit was based on the chi-square ( $\chi^2$ ) statistic and several additional indices, including the minimum value of the

discrepancy-C divided by the degree of freedom (CMIN/df), comparative fit index (CFI), the non-normed fit index (NNFI), and the root mean square error of approximation (RMSEA). Various cutoffs ranging from 2 to 5 have been suggested for CMIN/df. In this study, the researcher used 2.00 as the cutoff, with higher values indicating an inadequate fit (Schumacker & Lomax, 2015). In addition, values less than .06 for the RMSEA (Hu & Bentler, 1999) and values above .95 for the CFI and NNFI (Hu & Bentler, 1999) indicated a generally good fit to the data.

The two models were tested using maximum likelihood estimation. Standardized regression weights on each item were  $> .40$ , highlighting good factor loading. The hypothesized one-factor model of OSET was examined and the data showed a poor fit to the model according to the approximate fit indices:  $\chi^2$  (90,  $N = 93$ ) = 341.473,  $p < .001$ ; CMIN/df = 3.79; CFI = .64; NNFI = .58; and RMSEA = .17. On the other hand, the model fit statistics for the three-factor model of OSET indicated a very good fit to the data,  $\chi^2$  (87,  $N = 93$ ) = 116.33,  $p = .02$ ; CMIN/df = 1.34; CFI = .96; NNFI = .95; and RMSEA = .06. Item scores loaded strongly on the intended factor. Modification indices were inspected, and no items appeared to cross-load. Therefore, the results of fit indices for the two models suggest that the three-factor model is superior to the one-factor model. The confirmatory factor analysis also supports the interpretation of the three respective scales, as well as the total test score as an overall measure.

## Discussion

The primary purpose of this study was the construction and initial validation of the Optimal Supervision Environment Test (OSET). The five phases of scale development provided preliminary evidence of reliability and validity for the OSET. The results are largely supportive of the OSET as a scale to assess supervisors' creation of optimal supervision environments.

### Descriptions of the OSET

The OSET assesses supervisors' perceived ability to create an optimal supervision environment through three subscales: (a) the Emotional Environment (EE), (b) Learning Environment (LE), and (c) Power Environment (PE). The OSET is designed to be administered by counselor educators, supervisors, and supervisors in-training in the group or individual test administration venues. Although the OSET does not have administration time limits, the instrument can be administered in approximately five minutes. The OSET contains 15 Likert-type self-report items with four response options and no neutral option. Each subscale contains five items. Administration of the OSET results in four scores: (a) the total OSET score; (b) the EE score; (c) the LE score; and (d) the PE score. The raw scores of three subscales are combined to create the overall raw OSET score. The score for the total OSET ranges from 15 to 60; the three subscale scores range from 5 to 20.

The content of the items on the EE subscale describes the supervisor's understanding of supervisees' emotional needs and the ability to create a healthy supervisory relationship that promotes counselor development. Items on this subscale captured the notion that supervisors should initiate the supervisory relationship by appreciating the emotional needs of supervisees and creating an environment that allows supervisees to feel safe and supported. The items of the LE subscale assess supervisors' perceived ability to understand supervisees' learning needs and to intervene during supervision according to the supervisees' developmental level. Competent supervisors are skilled educators who impart their counseling knowledge and skills by matching supervision interventions according to their supervisees' cognitive developmental levels (Borders, 1989a). The PE assesses the supervisor's perceived ability to understand the hierarchical, evaluative nature of the supervisory relationship and to create an evaluative environment that promotes counselor development. Evaluation and feedback are essential roles for supervisors when monitoring the quality of professional services supervisees offer to clients. Such evaluation and feedback position the supervisor as a gatekeeper for the profession, monitoring and facilitating supervisee growth and development (Bernard & Goodyear, 2019), modeling effective feedback for supervisees (Freeman, 1985), and encouraging supervisees' self-evaluation (Farnill et al., 1997). Items on this subscale address the importance of

supervisors' provision of useful feedback and sensitive evaluation during supervision.

### **Reliability**

The total scale and each OSET subscale were shown to have strong internal consistency. The OSET subscale scores had sufficient reliability for research purposes with alpha coefficients above .80 and .90 for total scales as recommended by Wasserman and Bracken (2013). The estimates of internal consistency of the total OSET and its subscales suggest that examiners can expect examinee item responses to be consistent within scales. The high alpha coefficients also suggest that the OSET will likely perform reliably in future research and training applications.

### **Validity**

This study used a principal component analysis (PCA) as the exploratory factor analysis (EFA) method to examine the initial factor structure and construct validity of this scale. Based on the results of the EFA, a three-factor solution appeared to describe the dimensions of the optimal supervision environment. The final OSET contained 15 items with three subscales: the Emotional Environment (EE), the Learning Environment (LE), and the Power Environment (PE). Primary factor loadings for each of the three factors were identified, and only one of the 15 items on the OSET had a primary loading of less than .50 on its respective scale. The results of the EFA provide initial evidence in support of the OSET construct validity, in that it

demonstrates an interpretable underlying factor structure that coincides with the instrument's theoretically-based blueprint.

The final factor analysis performed on the 15-item OSET had a ratio of participants to items greater than 6:1, with items per factor and the majority of factor loadings greater than .60. Only two of the 15 items' communalities were less than .60. Worthington and Whittaker (2006) suggested that smaller samples may be adequate for factor analysis if the analyses yield communalities of .60 or greater or there are at least four items per factor, and the factor loadings are greater than .60.

Concerning the total sample size for EFA, Gorsuch (1983) also recommended at least a 5:1 ratio of participants to items. This sample, therefore, satisfied Gorsuch's recommended ratio and satisfied Worthington and Whittaker's (2006) recommendation of items per factor and factor loading magnitudes. Additionally, the size of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was good (> .60), which further supports the appropriateness of the sample for this study.

Ellis and Ladany (1997) recommended the use of confirmatory factor analysis (CFA) in instrument development and the testing of an a priori factor model in supervision research. This study satisfied their recommendations by using the CFA to test the hypothesized three-factor structure of the OSET. The results indicated that the model's goodness-of-fit with the data was good but not excellent; however, it still

satisfied all the recommended criteria. One possible explanation for a less than excellent fit is that the field study employed a relatively small sample. Because the exact sample size needed to perform a reliable CFA is not well established (Kline, 2015), it is difficult to identify the extent to which sample size affected the overall statistical fit of the model. The CFA also provided support for the multidimensionality of the supervisory construct. The three-factor model had slightly better fit indices than the alternate proposed one-factor model. These results indicate that not only does the OSET assess the nature of the optimal supervision environment, but also demonstrates that the optimal supervision environment can be viewed as a multidimensional construct.

The intercorrelations of the OSET subscales were moderate, suggesting that the three factors of the OSET are related. This result was to be expected, since they are each part of counseling supervision but not sufficiently explained by a single total test score. The results support the discriminant validity of the three-factor scores; importantly, the minor differences between the one and three-factor CFA solutions suggest that interpreting either or both, the total test and the three subscales, would be appropriate. Since the OSET was based on a comprehensive blueprint that guided instrument development, it seems likely that the three-factor structure for the OSET will also be supported with future samples of clinical supervisors.

A three-way analysis of variance (ANOVA), using supervisees' age, gender,

and ethnic group as independent variables and the OSET score as a dependent variable, was conducted and found no significant effects for all independent variables. This finding demonstrates that the scale performs consistently across demographic groups, thus suggesting that the OSET scores are affected more by supervisors' ability rather than the characteristics of the participants.

### **Implications for Counselor Education and Supervision**

Counselor educators and supervisors need to be proactive in providing positive and meaningful supervision experiences for counselors and counseling students. The 2014 ACA Code of Ethics states that counselor supervisors, trainers, and educators have an ethical duty to promote meaningful and respectful professional relationships and to monitor client welfare, as well as supervisee performance and professional development. The three factors of optimal supervision environment (i.e., emotional, learning, and power environments) could provide clinical supervisors with a framework to understand and evaluate their supervision performance. Studies have shown that supervisors are mainly responsible for perceived negative consequences in supervision due to poor performance (Ellis, 2010; Gary et al., 2001). One of the main problems for poor supervision was that supervisors did not have a framework to monitor their supervisory performance. For example, the emotional environment can serve as an indicator that supervisors will need to provide emotional support depending on the

supervisees' counselor development level. The learning environment can help supervisors understand and promote supervisees' cognitive development by creating an effective learning environment. Supervisors also can monitor the hierarchical, evaluative nature of the supervisory relationship to create an evaluative environment that promotes counselor development. This model can be a useful framework to monitor the supervisor's ability to create an optimal supervision environment.

Counselor educators can use this model to monitor and provide feedback to training supervisors on their supervisory behaviors. Novice supervisors can use this model as a guide to understanding the core elements of supervision. This model may offer valuable information regarding the ability of novice supervisors to engage in accurate self-reflection. This model can also allow counselor educators and supervisors to help the supervisors-in-training more accurately understand their professional development.

This model looks to be an ideal model for use in future supervision research. The model can be used to build a supervision instrument using the three identified factors. An assessment can be designed to measure the supervisor's ability to create an optimal supervision environment. Counselor educators and supervisors can use this model to measure supervisory functions that work effectively and the functions that may need additional attention. It may be used as a measurement

for supervisors' developmental growth as a professional.

### **Conclusion**

The goal of this study was to develop and evaluate the psychometric properties of the Optimal Supervision Environment Test (OSET). Results based on 93 counselor educators and clinical supervisors indicated that the instrument yields three factors: Emotional Environment, Learning Environment, and Power Environment. Sixty-six percent of the variable was explained. The OSET demonstrated high internal consistency with an overall Cronbach's alpha of .90. The three-factor model met all the model fit statistics criteria. The findings of the current study provide an important first step toward validation, but further efforts to assess the psychometric properties of the OSET are needed.

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Table 1  
*Means, Standard Deviation, and Item-Scale Correlations of OSET*

Item	M	SD	Scale Correlation
My supervisee felt “safe” during our supervisory sessions.	3.48	.54	.58
My supervisee interacted with me in a genuine manner.	3.55	.58	.66
Our supervisory relationship was characterized by a sense of mutual trust.	3.48	.60	.70
There was a positive atmosphere during our supervisory sessions.	3.58	.52	.60
My supervisee and I shared mutual respect as part of our supervisory relationship.	3.59	.54	.68
I was aware of and sensitive to my supervisee's training needs.	3.49	.50	.67
I matched my supervision approach to my supervisee's level of experience.	3.46	.60	.73
I tailored supervision to my supervisee’s level of competence.	3.45	.60	.64
I valued my supervisee's explanations about clients' behaviors.	3.58	.52	.68
I modeled appropriate personal and professional boundaries.	3.59	.52	.66
I acknowledged when my supervisee had made progress towards supervision goals.	3.55	.52	.60
I consistently provided evaluation feedback to my supervisee.	3.31	.53	.64
I was aware of and sensitive to the supervision evaluative process.	3.47	.54	.63
I provided evaluative feedback based on observations of my supervisee’s performance.	3.43	.60	.58
I regularly monitored my supervisee’s ethical behaviors.	3.46	.58	.71

*Note.* M = mean; SD = standard deviation

Table 2

*Means and Intercorrelations for EE, LE, and PE*

Variables	M	SD	1	2	3	4
1. Emotional Environment	17.69	2.33	-	.47*	.37*	.77*
2. Learning Environment	17.58	2.18		-	.60*	.85*
3. Power Environment	17.23	2.18			-	.81*
4. Total Scale	52.49	5.39				-

*Note.* M = mean; SD = standard deviation

\*  $p < .01$