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Editor’s Introduction to This Issue
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On behalf of my co-founders and editorial colleagues, Dr. Roy Chen and Dr. Veronica Umeasiegbu, I am pleased to present the next issue of Contemporary Research in Disability and Rehabilitation (CRDR).

This issue contains two articles. In the first article, Autism Spectrum Disorder Screening Practices in the United States and Mexico, Maria Valdez and colleagues present survey results using qualitative data and descriptive statistics to explore the screening and diagnostic practices of 35 professionals (30 in the U.S. and 5 in Mexico) who routinely work with children with ASD. In this study, Valdez and colleagues found many similarities in screening and diagnostic practices between professionals in the U.S. and Mexico. For example, in both the U.S. and Mexico the most frequently reported screening tool was the Modified Checklist for Autism in Toddlers (M-CHAT, Robins et al., 2001, 2009). Other similarities included parent involvement, key concerns around language development, a lack of routine screening for ASD, and the screening of children between the ages of 2 to 4 years old. Differences in screening and diagnostic practices involved the professionals engaged in screening for ASD and the referral process in the aftermath of failed ASD screenings.

In the second article, Multicultural Counselor Supervision and Perceived Differences on Client Outcomes, Dr. Perez and colleagues present original research exploring the differences in perceptions among counselor supervisors and supervisees about the impact of multicultural supervision upon client outcomes. In this study, sixty-one participants consisted of faculty, counselor supervisors, counselors, and graduate students in counseling programs. This study found that multicultural supervision/competence predicted supervisor perceptions of client outcome, thus highlighting the importance of multicultural supervision and the need to improve training in multicultural competence.

With that being said, I hope you enjoy this publication of CRDR.

Sincerely,

Saara Terry Grizzell, Ph.D., CRC, LVRC, LCDC, LPC
Outgoing Editor, CRDR
Autism Spectrum Disorder Screening Practices in the United States and Mexico

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Abstract

Purpose: The purpose of this study was to explore screening practices for autism spectrum disorder (ASD) in Mexico and the United States (U.S.).

Methods: Data from a larger study exploring the knowledge, screening, and diagnostic practices of healthcare practitioners from Mexico and the U.S. was used for the current study. The original survey was created by experts in ASD and consisted of 63 questions: 15 demographic questions, 20 questions relating to knowledge of ASD, 11 questions relating to screening practices, and 17 questions relating to diagnostic practices. All surveys were completed by professionals engaging in the screening and diagnosis of ASD. For this study, a total of thirty-five survey responses for the screening portion of the survey (30 from the U.S. and 5 from Mexico) were explored. Qualitative data and descriptive statistics were utilized.

Results: Many of the responses relating to screening practices from professionals practicing in Mexico and the U.S. were consistent with best practice guidelines from the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP), and the Mexican Public Health Guide. Furthermore, many similarities were found in the screening practices of professionals from both countries. Differences in screening practices reported by professionals from Mexico and the U.S. were found in the type of professional involved in the screening process and professional referrals after a failed ASD screening. Additionally, some professionals from both the U.S. and Mexico reported the use of inappropriate
screening tools, and the average age reportedly screened was much higher than the current recommendations of the American Academy of Pediatrics (Hyman et al., 2020).

**Conclusion:** An understanding of the screening practices currently being used in Mexico and the U.S. provides both researchers and clinicians with a better understanding of what is being implemented by different professionals. This study identified areas of strength and areas of weaknesses in the screening process for ASD in both countries. These results can now be used in future studies and programs targeting improved screening processes in Mexico in the U.S. Improved screening processes are important because of the potential to result in an earlier age of diagnosis of ASD and provision of services at a younger age. The latter of which is associated with better outcomes for children with ASD.

**Keywords:** autism spectrum disorder, screening, Mexico, United States.

**Introduction**

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by deficits in social interaction and communication, and restricted and/or repetitive behaviors (American Psychiatric Association [APA], 2013). In the United States (U.S.) the current prevalence rate of ASD is 1 in 44 individuals and males are more likely to receive a diagnosis of ASD than females (Centers for Disease Control and Prevention [CDC], 2021). Furthermore, fewer Hispanic children receive a diagnosis of ASD when compared to non-Hispanic black, and non-Hispanic white children and the average age of diagnosis of ASD is 4 years and 4 months (CDC, 2020).

In Mexico, the prevalence of ASD is unknown. Differences in identification procedures and limited systemic ASD tracking have been identified as possible reasons as to why the prevalence is unknown (Marquez-Caraveo & Albores-Gallo, 2011; Harris & Barton, 2017).

Researchers have attempted to estimate the prevalence rate of ASD in Mexico. These estimates have varied from 1.43 per 1,000 (Tuman et al., 2008) to 1 in 115 individuals (Fombonne et al., 2016). Most children in Mexico received a diagnosis of ASD at a later age than children in other countries (Harris & Barton, 2017). While the average age of diagnosis of ASD in Mexico is not known, children from Mexico often receive a diagnosis after 4 years of age (Harris & Barton, 2017).

**Screening for ASD in the U.S.**

The American Academy of Pediatrics currently recommends that all children in the U.S. be screened specifically for ASD at 18 and 24 months (Johnson & Myers, 2007; Hyman et al., 2020). Typically, screening for ASD is conducted at a pediatric office when the children and their parent(s) or caregiver are present for wellness visits. At this visit, the parent or caregiver is asked to complete a screening tool which is then scored and reviewed by the clinical staff and/or provider. The provider will discuss the results with the parent or caregiver and make subsequent referrals as necessary (CDC, N.D.).

In the U.S. some commonly used screening tools for ASD include the Modified
Checklist for Autism in Toddlers, Revised with Follow Up (M-CHAT-R/F; Robins et al., 2001; 2009) and the Screening Tool for Autism in Toddlers and Young Children (STAT; Stone & Ousley, 2008). Below is a brief description of each of these screening tools:

- **M-CHAT-R/F**: A valid and reliable screening tool consisting of 20 questions that are completed by the parent or caregiver. The M-CHAT is validated for children between 16 and 30 months of age.

- **STAT**: An empirically based, 12 item interactive screener designed to be administered by the provider. The STAT is designed for children between the ages of 26 and 36 months.

**Screening for ASD in Mexico**

In Mexico, screening practice recommendations are stated in the 2012 Mexican Public Health Service’s Clinical Guide to Diagnosing and Managing ASD (Secretaría de Salud, 2012). This manual recommends that multiple instruments be utilized for screening individuals for ASD including the Checklist for Autism in Toddlers (CHAT), the Quantitative Checklist for Autism in Toddlers (Q-CHAT), and the M-CHAT (Secretaría de Salud, 2012). Few researchers have examined if these recommendations are being followed and what screening practices related to ASD are being used in Mexico.

While it is unclear what screening practices are being followed in Mexico, there have been investigations exploring parental concerns and reasons for seeking ASD screening and diagnosis in Mexico. A study conducted by Bravo Oro and colleagues (2014) investigated ASD in Mexico, including screening practices. This study found that in Mexico, parents are often the first individuals to express concerns about their child’s development and either seek the assistance of physicians or school personnel. The most frequently reported parent concerns found in this study were that their child had not learned to speak, their child was struggling with speaking, or their child seemed to have lost language abilities (Bravo Oro et al., 2014). Secondary concerns reported included behavioral challenges and social issues.

A study conducted by Albores-Gallo et al. (2008) found that many families in Mexico first began to suspect their child had ASD around the age of 4 years. This is interesting, considering this is the most common age for children to receive a diagnosis of ASD in the U.S. It is possible that family beliefs and perceptions toward having a child with ASD and gender roles could be influencing parents seeking screening and formal evaluations for ASD in Mexico. According to Campbell & Duarte (1993), families raising children with ASD in Mexico face multiple challenges such as potential social stigma, feelings of isolation, possible distance from family members, and depression. Additionally, in Mexico parenting is typically left to mothers and there is a prevalent notion that deficits in the child are caused by the mother (Santana & Santana, 2001). Cohen & Miguel (2018) found that social stigma, child characteristics, factors supporting development, and emotional stress were all linked to beliefs about ASD in Mexican-heritage families which directly translate to the seeking of services related to this disorder.

While studies have explored parental characteristics, concerns, and the seeking of screening and diagnosis of ASD in Mexico, it remains unclear what screening practices are being implemented. This is an area in need of much more research.

**Purpose**

Much is known about the screening practices for ASD in the U.S. This can be partially attributed to the Individuals with Disability Education Act (IDEA) which ensured that all children with disabilities receive free appropriate education, directly
linked to free and appropriate screening and diagnostic processes. While there is much that we know about the screening practices for ASD in the U.S., little is known about the screening practices for ASD in Mexico. Furthermore, a better understanding of adherence to best practice guidelines in both the U.S. and Mexico is necessary. This information is of great importance to ensure children with ASD are being identified and receiving the best possible care. Furthermore, a better understanding of screening practices relating to ASD in Mexico is of great importance for professionals practicing in the U.S. because the largest minority population in the U.S. is the Hispanic minority population (U.S. Census Bureau, 2019), and most individuals identifying as Hispanic, report origins in Mexico (U.S. Census Bureau, 2017). It is likely that professionals practicing in the U.S. will encounter individuals on their caseloads who have been screened, diagnosed, or received services related to ASD in Mexico. For professionals in the U.S. to provide the best care for individuals with ASD from Mexico, it is paramount that we understand the screening practices related to ASD in both countries. The focus of this paper will be on the screening practices related to ASD in Mexico and in the U.S. More specifically, the aim of this study is to determine current screening practices for ASD in Mexico and the U.S. and compare and contrast the screening practices for ASD in Mexico and the U.S.

**Methods**

The data used for the current study was obtained from a larger study conducted by the authors of this paper. Approval from the University of Texas Rio Grande Valley (UTRGV) Institutional Review Board (IRB) was obtained.

**Procedure**

Data for the current study was obtained from a larger study exploring ASD related knowledge, screening, and diagnostic practices in Mexico and the U.S. Participants for this study included healthcare professionals from the following fields: Medical Doctors, Pediatricians, Neurologists, Psychiatrists, Neuropsychologist, Psychologists, Early Childhood Professionals, Teachers, Counselors, Speech and Language Pathologists, Occupational Therapists, and Behavior Analysts. The decision was made to include these specific professionals in this study because these professionals are frequently involved in the screening and diagnosis of ASD and are recommended to be part of a multidisciplinary team for the diagnosis of ASD (CDC, 2018).

Participants were recruited via e-mail in both English and Spanish. The recruitment e-mail contained a detailed description of the research study and healthcare professionals interested in participating were directed to select a link to the survey in English or Spanish depending on preference. Participation in the survey was completely voluntary and there was no incentive for participation.

The original survey consisted of a total of 63 questions designed by experts in ASD: 15 demographic questions, 20 questions addressing knowledge of ASD, 11 questions addressing screening of ASD, and 17 questions addressing diagnosis of ASD. For this study, only data related to screening practices was utilized. This section of the survey included a total of 11 multiple choice and fill in the blank questions. The first question asked the participant if he/she was currently involved in the screening process for ASD. If the participant selected ‘Yes’, then his/her responses were included in this analysis. If the participant selected ‘No’, their responses were not included in this analysis. The remaining ten questions
addressed the following: screening tools used by participants, validation of the screening tool for English and/or Spanish speakers, involvement in the screening process, referral process after screening, parent involvement, primary concerns, routine screening of children, and age range of most frequent population screened. See Appendix A for the screening portion of the survey.

Participants

For the screening portion of the survey, 30 professionals from the U.S. indicated that they currently participated in screening practices associated with ASD: 18 speech-language pathologists, 7 psychologists, 2 early childhood professionals, 1 teacher, 1 psychiatrist, and 1 Board Certified Behavior Analyst (BCBA). Five professionals from Mexico indicated that they currently participated in screening practices associated with ASD: 1 speech-language pathologist, 2 pediatricians, 1 neuropsychologist, and 1 psychologist. Therefore, the sample for the current study included 35 professionals currently engaged in screening of ASD, 30 from the U.S. and 5 from Mexico. See Table 1.

Below are the inclusion criteria for participation in the study:
1. Licensed health care professional in one of the following medical fields: general medicine, neuropsychology, pediatrics, neurology, psychiatry, speech and language pathology, psychology, early childhood, education, counseling, occupational therapy, and behavior analysis.
2. Current practice in Mexico or the U.S.
3. Encounter individuals diagnosed with ASD in their practice and/or screen and/or diagnose ASD.

Results

Screening Instruments Used

For the survey question addressing which screening instrument(s) was being used, participants had the option to select more than one appropriate answer as a variety of screening instruments are often used dependent multiple factors. In Mexico, the most frequently reported screening tool used was M-CHAT (n=5, 100%), followed by the Childhood Autism Rating Scale (CHAT; n=3, 60%), and the Quantitative Checklist for Autism in Toddlers (Q-CHAT; n=1, 20%). One participant indicated use ‘other screening instruments not listed’ (n=1, 20%) which were the Autism Diagnostic Observation Schedule (ADOS) and the Toddler Autism Symptom Interview (TASI).

In the U.S. the most frequently reported screening tool used was also the M-CHAT (n=18, 60%), followed by the Ages and Stages Questionnaire (ASQ; n=6, 20%), the Communication and Symbolic Behavior scale (CSBS; n=3, 10%), CHAT (n=3, 10%), STAT (n=2, 6%), Q-Chat (n=2, 6%), and the Parents Evaluation of Developmental Status (PEDS; n=1, 3%). A total of 16 participants designated use of ‘other screening instruments’ and when asked to describe ‘other’ the following were indicated: the Battelle screener, the Comprehensive Assessment of Spoken Language (CASL)-Pragmatics Subtest, ADOS, Social Communication Questionnaire (SCQ), informal screenings with guidelines learned from ADOS, Children’s Communication Checklist-2 (CCC-2), the Developmental Indicators for Assessment of Learning (DIAL), Developmental History Questionnaire (a measure based off ADOS questions which is clinic specific), the Gilliam Autism Rating Scale, third edition (GARS-3), M-CHAT R/F, the Childhood Autism Rating Scale (CARS), social and emotional learning competencies, student interview, and teacher input, and pragmatic
### Table 1

**Demographic Information for Participants in the U.S. and Mexico**

<table>
<thead>
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<th>U.S. (n=30)</th>
<th>Mexico (n=5)</th>
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<tr>
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</tr>
<tr>
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<td>31-35</td>
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<tr>
<td>36-40</td>
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</tr>
<tr>
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<tr>
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<tr>
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<tr>
<td>Early childhood professional</td>
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<tr>
<td>Teacher</td>
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<td>0</td>
</tr>
<tr>
<td>Psychiatrist</td>
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<tr>
<td>BCBA</td>
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</tr>
<tr>
<td>Pediatrician</td>
<td>0</td>
<td>2</td>
</tr>
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</table>

*Note.* Participants were able to select more than one answer for the question regarding setting. SLP=speech-language pathologist; BCBA=board certified behavior analyst.
informal assessment, informal and formal observations, teacher interview, parents interview and language/pragmatic questionnaires and checklists. See figure 1 above.

Professionals Involved in Screening Process

When asked what professionals were involved in the screening process participants had the option to select more than one appropriate answer as a variety of healthcare practitioners are often involved in screening for ASD. In Mexico, the most frequently reported professional involved were pediatricians (n=5, 100%), followed by neuropsychologists (n=4, 80%), speech-language pathologists (n=4, 80%), medical doctors (n=3, 60%), neurologists (n=3, 60%), psychiatrists (n=3, 60%), early childhood professionals, (n=3, 60%), parents (n=3, 60%), teachers (n=2, 40%), counselors (n=2, 40%), psychologists (n=1, 20%), and occupational therapists (n=1, 20%). Participants did not indicate the participation of other healthcare practitioners.

In the U.S. the most frequently reported professional involved was a speech-language pathologist (n=21, 70%), followed by parents (n=20, 66%), psychologists (n=19 63%), early childhood professionals (n=16, 53%), teachers (n=14, 46%), pediatricians (n=10, 33%), occupational therapists (n=9, 30%), counselors (n=6, 20%), medical doctors (n=4, 13%), other healthcare practitioners not listed (n=4, 13%), psychiatrists (n=3, 10%), neurologists (n=1, 3%), and neuropsychologists (n=1, 3%). Participants also indicated the participation of the following healthcare practitioners not listed: diagnostician, school psychologist, and other trained/qualified study personnel. See figure 2.
Valdez et al.

Figure 2

Professionals Involved in Screening

Referral Process

When professionals were asked which professional(s) they refer to after a failed ASD screening, professionals were allowed to select more than one answer as a variety of referrals are often made. In Mexico, the most frequently reported professionals individuals were referred to for a diagnostic evaluation were neurologists \((n=3, 60\%)\) and speech-language pathologists \((n=3, 60\%)\), followed by the participant themselves (self-referral) \((n=2, 40\%)\) and psychologists \((n=2, 40\%)\). Only one participant reported referral to psychiatrists \((n=1, 20\%)\), occupational therapists \((n=1, 20\%)\), and other healthcare practitioners not listed \((n=1, 20\%)\). Participants from Mexico indicated the following as other professionals that individuals failing ASD screenings are referred to for a diagnostic evaluation: pedopsychiatrist/child psychiatrist.

In the U.S. the most frequently reported professional an individual was reported to be referred to for a diagnostic evaluation was psychologists \((n=19, 63\%)\), followed by the participant themselves (self-referral) \((n=10, 33\%)\), medical doctors \((n=8, 26\%)\), pediatricians \((n=8, 26\%)\), other healthcare practitioners not listed \((n=8, 26\%)\), neurologists \((n=7, 23\%)\), speech-language pathologists \((n=6, 20\%)\), psychiatrists \((n=5, 16\%)\), neuropsychologist \((n=4, 13\%)\), early childhood professionals \((n=4, 13\%)\), and occupational therapists \((n=3, 10\%)\).

Participants indicated the following as other professionals that individuals failing ASD screenings can be referred to for a diagnostic evaluation: community mental health, special education, Licensed Specialist in School Psychology (LSSP), and developmental pediatrician. The U.S. participants also expressed that “it depends on the context/situation, as well as the resources available and the complexity of the case.” See figure 3.
Parent Involvement

In Mexico, parent involvement was reported by 100% \((n=5)\) of healthcare professionals. In the U.S. participants reported 96% \((n=29)\) parent involvement and only 3% \((n=1)\) reported no parent involvement. See figure 4 above.
Primary Concern(s)

When asked about the individual’s or family’s primary concern at the time of ASD screening, participants in Mexico reported language as the primary concern \( (n=4, 80\%) \), followed by behavior \( (n=1, 20\%) \). Participants in the U.S. also reported language as the primary concern \( (n=14, 46\%) \), followed by behavior \( (n=10, 33\%) \), social skills \( (n=4, 13\%) \), and other concerns not listed \( (n=2, 6\%) \). Participants in the U.S. indicated speech as other primary concerns reported. In addition, participants expressed “it’s different for every family, but most are worried about their child’s future and what kind of life they will have.” See figure 5.

**Figure 5**

*Reported Percentages of Primary Concern*

![Graph showing primary concerns with percentages for Mexico and U.S.](image)

Routine Screening for ASD

When professionals were asked if they completed routine ASD screenings for children, 20% of participants in Mexico reported ‘yes’ \( (n=1) \), and 80% reported not routinely screening children for ASD \( (n=4) \). In the U.S. 33% of participants reported ‘yes’ to routinely screening children for ASD \( (n=10) \) and 66% reported not to \( (n=20) \). See figure 6.

**Age Range Most Frequently Screened**

Regarding the age range most frequently screened, participants in Mexico reported the age range of 2-4 years \( (n=4, 80\%) \), followed by >8 years \( (n=1, 20\%) \) as the most frequently screened. In the U.S., participants reported the most frequent age range screened, \( (n=17, 56\%) \), followed by 4-6 years \( (n=7, 2-4 years 23\%), 6-8 years \( (n=2, 6\%), \) and >8 years \( (n=2, 6\%) \). See figure 7.
Discussion

At the outset, the authors would like to acknowledge that the sample sizes in this study were unbalanced and small. All conclusions should be interpreted within this context and there is a great need for future studies before these findings should be translated into clinical practice. Having said that, this is one of the first studies exploring screening practices related to ASD in Mexico. Additionally, this study provided descriptive information pertaining to screening practices being implemented across disciplines in both Mexico and the U.S. which is of great importance because the current average age of diagnosis of ASD in the U.S. is four years and four months (CDC, 2020) and the current average age of diagnosis of ASD in Mexico continues to be unknown but is suspected to be higher than the age of 4 years. If screening practices are explored and improved, we can potentially lower the average age of diagnosis of ASD and begin providing children with ASD appropriate interventions at much younger ages which is known to be associated with better outcomes (Estes et al., 2015; Sullivan et al., 2014). Furthermore, the largest minority population in the U.S. is the Hispanic population (U.S. Census Bureau, 2019), and most individuals identifying as Hispanic, report origins in Mexico (U.S. Census Bureau, 2017). Professionals practicing in the U.S. likely will encounter individuals on their caseloads that have been screened, diagnosed, or received services related to ASD in Mexico. For professionals in the U.S. to provide the best care for individuals with ASD from Mexico, it is paramount that we understand the practices related to ASD in both countries.

This study found that in both Mexico and the U.S. the most frequently reported screening tool was the M-CHAT which is consistent with recommendations from both the Mexican Public Health Guide (2012), the American Academy of Pediatrics (Johnson & Myers, 2007; Hyman et al., 2020), and the Centers for Disease Control and Prevention (CDC, 2018). However, in both Mexico and
the U.S., participants reported use of standardized assessment tools as screeners. (e.g. the ADOS and the GARS-3). Standardized assessments are intended to be used during a diagnostic process and not for screening purposes. In addition, participants in the U.S. indicated the use of informal observations, pragmatic checklists, and parent/teacher interviews. The results demonstrate consistent screening practices in Mexico and in the U.S. (e.g. use of the M-CHAT); however, differences are also present and, in both countries, inappropriate screening tools were reported to be used. While more research is needed to confirm these findings, it is possible that education about appropriate screening tools for ASD could result in earlier and more appropriate identification.

In Mexico the most frequently reported professionals involved in the screening process were pediatricians followed by neuropsychologists and speech-language pathologists. This finding was consistent with recommendations stated in the Mexican Public Health Guide that ASD be screened and diagnosed by a family doctor, a medical psychiatrist, or a developmental psychiatrist with a primary focus on infants and adolescents (Secretaría de Salud, 2012). These findings also support the results obtained from a study conducted by Harris and Barton (2017) which found that psychologists followed by medical doctors and neuropsychologists most commonly were involved in screening and diagnostic assessments (Harris & Barton, 2017). The findings of the current study and those of Harris and Barton (2017) support that in Mexico medical doctors (including pediatricians) and neuropsychologists are most likely to be involved in the screening. This is consistent with pediatricians frequently screening ASD in the U.S. It appears that similarities do exist in the screening practices for ASD in both Mexico and the U.S. More research is needed to investigate this topic.

In the U.S., the most frequently reported individuals involved in the screening process were speech-language pathologists, followed by parents, and psychologists. This finding was interesting as the American Academy of Pediatrics (Hyman et al, 2020) currently recommends that all children be screened for ASD at their 18- and 24-month well visits. Primary healthcare providers, such as pediatricians, are currently the ones in the position to screen children at an early age for developmental delays and disabilities during regular well-child doctor visits (CDC, 2018). Parents and/or caregivers are more likely to contact primary health providers than speech-language pathologists or psychologists at young ages. If primary health providers are not screening for ASD and children are being screened by speech-language pathologists and Psychologists, this could ultimately be impacting the age of identification of ASD. However, it should be noted here that most participants from the U.S. were in fact speech-language pathologists, so this may have skewed the results.

In both Mexico and the U.S. over 90% of the participants indicated that parents were involved in the screening process. These results are consistent with recommendations stated by the CDC (2018) as parent information is critical to the screening process. Additionally, in both Mexico and the U.S. professionals indicated that the primary concern reported by parents was language followed by behavior. These results are consistent with the results obtained from Bravo Oro et al. (2014) study in which language and then behavior challenges were the primary concerns reported in Mexico.

Results obtained regarding routine screening showed that in both Mexico and U.S., more than 60% of the participants reported not routinely screening individuals for ASD. This finding could reflect the sample in this study. Medical doctors, the
primary profession to routinely screen for ASD, were poorly represented in the sample. The participants that did indicate routinely screening for ASD were speech-language pathologists, psychologists, behavior analysis, teachers, and early intervention specialists. It was interesting to observe that participants in the medical field that are recommended to screen for ASD did not indicate doing so. The fact that only 60% of the sample in this study reported routinely screening for ASD demonstrates that there is room for improvement. If professionals other than medical doctors begin to routinely screen for ASD in the U.S. and in Mexico, it is possible that we can identify more children with ASD at younger ages and provide these individuals with services at much younger ages, resulting in better outcomes.

Professionals from both Mexico and the U.S. most frequently reported screening between the ages of 2 and 4 years. These results are inconsistent with recommendations stated by the American Academy of Pediatrics which indicate that all children be screened for ASD at their 18- and 24-month well-child visits (Hyman et al., 2020). Regarding Mexico, these results are consistent with results obtained from the Harris and Barton study (2017) which state that as of 2014, it was found that families in Mexico first began to suspect ASD around the age of 4 (Albores-Gallo, et al., 2008). This information is of great concern because the earlier a child can be screened and diagnosed the earlier they can begin to receive services for ASD which is crucial for their development.

In Mexico, when individuals failed their screenings for ASD, the most frequently reported healthcare practitioners an individual was referred to for a diagnostic evaluation was a psychologist, followed by medical doctors, and pediatricians. These results are somewhat consistent with recommendations from the CDC (2018), which state that if screening instruments indicate the possibility of ASD, a more comprehensive evaluation by a multidisciplinary team including a psychologist, neurologist, psychiatrist, speech therapist, and other professionals is recommended.

In conclusion, many similarities in screening practices were evident in Mexico and the U.S. These included use of the M-CHAT, parent involvement, language being reported as the primary concern, lack of routine screening for ASD, and screening individuals between the ages of 2 and 4 years. Differences were also evident in the responses of professionals from the U.S. and Mexico. Differences included the professionals involved in the screening process and professional referrals after a failed ASD screening. Results of this can be used to guide future studies and projects targeting improved ASD screening processes in both the U.S. and Mexico which can ultimately impact the age of diagnosis of ASD, resulting in better outcomes for individuals diagnosed with this disorder.

Clinical Implications

The results of this study have clinical implications for practitioners in both the U.S. and in Mexico. While many of the professionals from Mexico and the U.S. provided responses that were consistent with current recommendations, professionals also provided responses that were not consistent with current recommendations (e.g., use of inappropriate screening tools). This directly
impacts the accuracy of screening and can delay appropriate diagnosis for a child with ASD. Additionally, differences were found in screening practices conducted in the U.S. and in Mexico. Professionals in the U.S. need to be aware of these differences when encountering patients that were screened for ASD in Mexico (and vice versa) to provide the best possible care. This is of particular importance when considering that the largest minority population in the U.S. is the Hispanic population (U.S. Census Bureau, 2019), and most individuals identifying as Hispanic, report origins in Mexico (U.S. Census Bureau, 2017). It is likely professionals providing services to individuals diagnosed with ASD in the U.S. will have children from Mexico on their caseloads.

Limitations of the Present Study

The sample of this study was the largest limitation. Our sample was relatively small, especially the sample from Mexico, and there was an underrepresentation of medical doctors. A small sample size affects the ability to use stronger statistical analysis and affects generalization of the results. A larger and more diverse sample could have created different results.

Acknowledgments

The authors would like to acknowledge the professionals for their dedication and care of children with ASD and thank them for their participation in this study. We would also like to thank the individuals that served on the thesis committee for Maria F. Valdez and Vincente Valdez Gutierrez, Patricia Valdez, Alejandra Valdez, Vincente Valdez, and Joel Mize for their support. Furthermore, the authors would like to thank Laruen Lendowski for her assistance in the preparation of this manuscript.

References


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Appendix A

Survey questions relating to Screening practices

1. Are you involved in the screening process for ASD?
   • Yes
   • No
   • Other

2. What screening instruments/tools do you currently use? Select all that apply.
   • Modified Checklist for Autism in Toddlers (M-CHAT)
   • Screening Tool for Autism in Toddlers and Young Children (STAT)
   • Ages and Stages Questionnaires (ASQ)
   • Communication and Symbolic Behavior Scales (CSBS)
   • Parents’ Evaluation of Developmental Status (PEDS)
   • Checklist for Autism in Toddlers (CHAT)
   • Quantitative Checklist for Autism in Toddlers (Q-CHAT)
   • Other (If other specify)

3. Is the screener that you currently use validated or standardized for English speaking individuals?
   • Yes
   • No
   • I don’t know

4. Is the screener that you currently use validated or standardized for Spanish speaking individuals?
   • Yes
   • No
   • I don’t know

5. Who is typically involved in your screening process? (Select all that apply)
   • Medical Doctors
   • Pediatricians
   • Neurologists
   • Psychiatrists
   • Neuropsychologists
   • Psychologists
   • Early childhood professionals
   • Teachers
   • Counselors
   • Speech and Language Pathologists
   • Occupational Therapists
   • Parents
   • Other (If other please indicate)
6. When an individual does not pass his/her ASD screening, which healthcare professional(s) do you refer them to? Select all that apply

- Myself
- Medical Doctors
- Pediatricians
- Neurologists
- Psychiatrists
- Neuropsychologists
- Psychologists
- Early childhood professionals
- Teachers
- Counselors
- Speech and Language Pathologists
- Occupational Therapists
- Other (If other please indicate)

7. Are parents involved in the screening process?

- Yes
- No

8. In your opinion, when an individual is suspected of having ASD, what are the majority of the families’ or individuals’ primary concerns?

- Behavior
- Language
- Social
- Motor skills
- Other (If other specify)

9. Are you required to routinely screen children for ASD in your practice?

a. Yes
b. No

10. At what age(s) are you required to screen children for ASD?

a. Fill in the blank

11. What age range represents the most frequent population that you screen?

- 2-4 years
- 4-6 years
- 6-8 years
- >8 years old
Abstract

The purpose of this study was to examine the differences between counselor supervisors’ and supervisees’ perceptions of the impact of multicultural supervision on client outcome. Counselor supervisors and supervisees may have differences in how much they believe multicultural factors affect client outcome and this study aimed to determine what differences exist. There were 61 participants in the study consisting of faculty, counselor supervisors, counselors, and graduate students in counseling-related fields. The current study found that multicultural supervision/competence alone predicted supervisor perceptions of client outcome. The findings suggest that training in supervision and multicultural supervision is vital to the professional development of counselors and trainees in counseling-related fields. This training is also necessary because of the impact it has on clients. The implications of this study highlight the need to improve the knowledge of those in counseling-related fields as to the importance of multicultural counseling and competence in training.

Keywords: multicultural, supervision, counselor self-efficacy
Introduction

Counselor supervision is vital to the development of counseling professionals. Clinical supervision is defined by Bernard and Goodyear (2018) as an intervention that involves those with more experience guiding those with less experience. Counselor supervision has been recognized as an area of importance and having its own expertise among all counseling related fields (Burnes & Manese, 2008; Shulman, 2005; Somerville et al., 2019). Despite the development of counselor supervision as a specialty area, and considering the existence of counselor training as an area of importance, research in the area has been limited (Bernard & Luke, 2015). Clinical supervision is considered so important among counseling professionals that ethics boards, state licensing boards, professional credentialing groups, and accrediting bodies have set standards for how supervision is conducted (Bernard & Goodyear, 2018) and who is qualified to provide supervision. In addition, the Council for Accreditation of Counseling Related Programs (CACREP) (2016) has outlined requirements for students and supervisors in counseling field programs. CACREP standards require supervision of students in practicum and internships for those completing masters and doctoral degrees. CACREP outlines how often and what type of supervision should take place, stating that internship students have one hour per week of individual and/or triadic supervision and 1 ½ hours of group supervision per week. CACREP also outlines the supervisor qualifications, stating that faculty members should have relevant experience, professional credentials, and counselor supervision training and experience (CACREP, 2016).

Multicultural factors play a role in counselor supervision. Changing demographics across the USA has increased the need to address cultural differences in counseling (Swazo & Celinska, 2016; Hope & Chappell, 2015; King & Jones, 2019; Soheilian et al., 2014). Supervisors, counselors, and clients vary from each other in many different ways. They can vary by age, gender, gender identity, race/ethnicity, religion/spirituality, sexual orientation, and disability. These differences among people bring different worldviews to the counseling environment. A framework involving these differences among supervisors, supervisees, and clients has been developed to address multicultural supervision. This framework is the Multidimensional Ecological Comparative Approach (MECA) (Falender et al., 2014). MECA along with competency-based clinical supervision seeks to fill the gaps of how supervision and counseling can be implemented in a way that considers similarities and differences among supervisors, supervisees, and clients. This framework focuses on the development of multicultural competence for supervisors and supervisees. It is the responsibility of the counselor supervisor to teach multicultural competence to their supervisees (King & Jones, 2019).

Soheilian et al., (2014) defined multicultural competence as the supervisor’s ability to discuss culture in supervision, use culturally appropriate counseling skills, culturally appropriate client conceptualizations, and assess multicultural competence among supervisees. These researchers conducted a study in which they examined cultural topics discussed in supervision and how these discussions impacted counselor work with their clients. Results of their investigation revealed that supervisors frequently educated and facilitated exploration of specific cultural issues with their supervisees. Furthermore, they discussed culturally appropriate therapeutic interventions and skills,
facilitated supervisee self-awareness within the supervision session, and challenged and encouraged cultural openness of supervisee’s understanding of client and cultural issues.

Little research exists in the area of multicultural training and supervisory competencies with respect to specific groups. Toward this end, Hope and Chappell (2015) called for including competencies on sexual orientation in multicultural training due to gaps and shortages among students and practitioners. Chopra (2013) also called for research limited to and specifically about sexual orientation in areas of multiculturalism. In a related vein, little research exists on multicultural supervision regarding disability. However, the author was able to locate a case study on a hearing supervisor and a Deaf supervisee (Hanks & Hill, 2015). Supervision was provided using an interpreter. The key finding in the study highlighted the relationship as being of primary importance. The study also highlighted the openness of the supervisor to learn about the supervisee’s culture.

Multicultural counseling is vital, as research underscores the impact of the counselors’ cultural sensitivity and awareness upon the clients’ counseling outcomes (D’Andrea et al., 2008; Griner & Smith, 2006; Sue et al., 2009). The same importance should be given to understanding how culture plays a part in the supervision of counselors. Despite the ethical dimension of multicultural supervision, Ellis (2010) suggests that multiculturalism is often neglected and considered secondary rather than primary by supervisors. Although some studies on multicultural counseling and factors affecting supervision have been conducted, they have been limited to examining gender, racial/ethnic differences, and spirituality, with generally few studies including gender identity, sexual orientation, and disability as multicultural factors.

Despite the growth in the supervision literature (Forshaw et al., 2018), relatively little empirical studies on multicultural supervision have been published that include these differences in multicultural counseling supervision. This is particularly relevant to practitioners because differences in multicultural supervision can influence counselor development and client outcomes in a variety of ways. For example, counselor supervisors and supervisees may have differences concerning how much they believe multicultural factors affect client outcome. This is important in understanding how supervisors might better serve supervisees and in turn clients. When supervisors do not feel that multicultural factors are as important as their supervisees, this can lead to problems between them. When problems exist between supervisors and their supervisees, this will impact the relationship between the supervisee and their clients, leading to potentially harmful outcomes for the client.

Toward this end, the purpose of this study was to examine the relationship among supervision factors (e.g., supervision satisfaction, self-efficacy, supervisory working alliance, multicultural supervision) and supervisor and supervisee perceived client outcome, as well as the differences between supervisor and supervisee perceptions of client outcome.

**Literature Review**

To appreciate the potential impact of multicultural supervision, it is necessary to review the relevant factors that affect the supervisor/supervisee relationship in general. These factors include supervision satisfaction, counselor self-efficacy, and supervisory working alliance.

**Supervision Satisfaction**

Supervision satisfaction has been found to be an important component of supervision
because of the impact that it can have upon supervisee development and client outcome (Best et al., 2014; Matthews et al., 2018). Consistent with previous studies, a study of psychologists in Ireland (McMahon & Errity, 2014), found the relationship with the supervisor was cited as the top reason for satisfaction with supervision, followed by the need for more supervision. Satisfaction with supervision may be affected by the multiple roles that a supervisor plays. For example, McMahon and Errity (2014) examined the impact of having a supervisor who was both administrative and clinical. The psychologists in this study preferred to attend clinical supervision with someone other than their administrative supervisor and outside of the workplace. Consistent with the prior studies, the quality of the relationship between the supervisor and supervisee was what made the difference.

Supervisor/counselor relationships are affected by satisfaction. However, satisfaction with supervision can also be affected by other variables. Studies on the satisfaction of supervision of international students (Lau et al., 2019; Mori et al., 2009) and foreign-born therapists in the United States (Kissil et al., 2013; McKinley, 2019) represent multicultural aspects. Mori et al. (2009), based on research, suggest when supervising international students, discussions on culture must take place. They suggest that when this communication does not take place, there will be a direct impact on satisfaction with supervision. They also found that, when supervisees perceive their supervisors as culturally competent, there is a higher degree of satisfaction as well. Kissil et al. (2013) explored foreign-born counselors and their satisfaction with supervision, counselor self-efficacy, and multicultural competence. The researchers found that the more they perceived their supervisors as multiculturally competent, the more they viewed themselves as having high self-efficacy.

Counselor Self-efficacy

Counselor self-efficacy is also another vital factor in clinical supervision. Counselor self-efficacy is defined as the confidence one has in his/her counseling abilities (Kissil et al., 2013; Matthews et al., 2018). Bernard and Goodyear (2018) suggest that trainees have a need to feel competent and that this need may decrease with experience. Studies conducted on self-efficacy and its impact on trainee success have varied (Goreczny et al., 2015; Kozina et al., 2010; Lam et al., 2013). Research on the self-efficacy of trainees undergoing training and coursework (Goreczny et al., 2015; Kozina et al., 2010) have shown positive results. For example, Goreczny et al. (2015) and Kozina et al. (2010) showed that as trainees undergo their training experiences, they gain more self-efficacy. Similarly, counselor self-efficacy has been determined to be an important factor to assess in multicultural supervision and counseling, due to varying levels of self-efficacy across people and potentially those from different backgrounds (Lam et al., 2013; Schauss et al., 2017). Toward this end, counselor supervisors work with supervisees to help establish multicultural attitudes, beliefs and skills that will guide them through the beginning stages of their practice, as well as throughout their careers (Fietzer et al., 2018; Morrison & Lent, 2018).

Supervisory Working Alliance

The supervisory working alliance has been deemed an essential factor in supervision research, with it being one of the top themes in the counselor supervision literature (Bernard & Luke, 2015). The supervisory working alliance is made up of agreement on goals, agreement on tasks, and the bond between the supervisor and supervisee (Bordin, 1983). The quality of the
supervisory working alliance is impacted by several factors involving supervisor factors, supervisee factors, and the supervision process (Bernard & Goodyear, 2018). Bernard & Goodyear (2018) describe the factors that affect the quality of the supervisory working alliance. Supervisor factors that affect the supervisory working alliance include: supervisor style, supervisor use of expert and referent power, supervisor self-disclosure, supervisor attachment style and emotional intelligence, and supervisor ethical/unethical behavior. Supervisee factors that affect the supervisory working alliance include: supervisee attachment style and emotional intelligence, supervisee experience of negative supervision, and supervisee stress and coping. Factors of the supervision process that affect the supervisory working alliance include: supervisor evaluative practices, role conflict and ambiguity, racial identity matching, discussions of racial and ethnic differences, and supervisor-supervisee complementarit y. Of importance to highlight are discussions of racial and ethnic differences. Previously it was mentioned that these communications increase satisfaction with supervision (Mori et al., 2009). The supervisory working alliance itself also affects satisfaction with supervision (Bernard & Goodyear, 2018).

Bernard and Goodyear (2018) also indicate that the supervisory alliance affects supervision processes and supervision outcomes. For example, the supervisory alliance affects supervisees’ willingness to disclose information in supervision and adhere to treatment protocols (Bernard & Goodyear, 2018). Accordingly, as a function of the supervisory alliance, the supervisee internalizes the presence of the supervisor (Geller et al., 2010). In turn then, the supervisory alliance directly impacts the therapeutic alliance of counselors and their clients. This is of particular importance because the impact will directly affect client outcomes (Horvath & Symonds, 1991; Norcross & Wampold, 2011).

Methodology

Participants

Power analysis was conducted to determine the minimum sample size needed. Using a large effect size of .26 and a statistical power of .80 at the p = .05 level for multiple regression, a sample size of 51 participants was calculated. A large effect size of .26 or higher was determined to be appropriate by Cohen (1988). The power analysis was conducted using Calculator: A-Priori Sample Size for Multiple Regression from Free Statistics Calculators Version 4.0 (https://www.danielsoper.com/statcalc/calculator.aspx?id=1).

Research participants were categorized into supervisees and supervisors based on a question about professional years supervising. Those with less than three years were categorized as supervisees and those with more than three years were categorized as supervisors.

A total of 61 participants consisted of faculty, counselor supervisors, counselors, counselor-interns, and graduate counseling students. The survey consisted of an informed consent page, and questions about demographic information, supervision satisfaction, self-efficacy, the supervisory working alliance, and perceived client outcomes. A majority responded that they were: between 25 and 34 years old, female, Hispanic/Latino, licensed professional counselors, not licensed supervisors, and had fewer than 3 years of professional supervision experience (see Table 1).
<table>
<thead>
<tr>
<th>Demographics</th>
<th>Frequency</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Female</td>
<td>49</td>
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</tr>
<tr>
<td>Male</td>
<td>12</td>
<td>19.67%</td>
</tr>
<tr>
<td>Age in years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 – 34</td>
<td>24</td>
<td>40%</td>
</tr>
<tr>
<td>35 – 44</td>
<td>21</td>
<td>35%</td>
</tr>
<tr>
<td>45 – 54</td>
<td>8</td>
<td>13.33%</td>
</tr>
<tr>
<td>55 – 64</td>
<td>5</td>
<td>8.33%</td>
</tr>
<tr>
<td>65 and over</td>
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<td>3.33%</td>
</tr>
<tr>
<td>Identified cultural group</td>
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<td></td>
</tr>
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<td>African American</td>
<td>4</td>
<td>6.56%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1</td>
<td>1.54%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>38</td>
<td>62.30%</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>18</td>
<td>29.51%</td>
</tr>
<tr>
<td>Professional Licensure/Credential a</td>
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<td></td>
</tr>
<tr>
<td>No response</td>
<td>7</td>
<td>11.47%</td>
</tr>
<tr>
<td>Not Licensed</td>
<td>12</td>
<td>19.67%</td>
</tr>
<tr>
<td>School Psychology</td>
<td>3</td>
<td>4.91%</td>
</tr>
<tr>
<td>Psychology</td>
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</tr>
<tr>
<td>Social Work</td>
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</tr>
<tr>
<td>Rehabilitation Counseling</td>
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<td>11.47%</td>
</tr>
<tr>
<td>Licensed Chemical Dependency Counselor</td>
<td>9</td>
<td>14.75%</td>
</tr>
<tr>
<td>Licensed Professional Counselor</td>
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<td>32.78%</td>
</tr>
<tr>
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</tr>
<tr>
<td>Not licensed</td>
<td>40</td>
<td>65.57%</td>
</tr>
<tr>
<td>Licensed</td>
<td>14</td>
<td>22.95%</td>
</tr>
<tr>
<td>Year professionally supervising</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>9</td>
<td>14.75%</td>
</tr>
<tr>
<td>3 years or fewer</td>
<td>33</td>
<td>63.46%</td>
</tr>
<tr>
<td>More than 3 years</td>
<td>19</td>
<td>36.54%</td>
</tr>
</tbody>
</table>

*Note. This table demonstrates participant descriptive statistics: gender, age in years, identified cultural group, professional licensure/credential, supervision licensure, and years professionally supervising

*a Some participants indicated licensure/credential in more than one field
Table 2

Supervisor/Supervisee Characteristics: Descriptive Statistics (N = 61)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Experience Supervising Students</td>
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<td></td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>1.63%</td>
</tr>
<tr>
<td>No student supervised</td>
<td>18</td>
<td>30.00%</td>
</tr>
<tr>
<td>Very little experience</td>
<td>10</td>
<td>16.67%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>15</td>
<td>25.00%</td>
</tr>
<tr>
<td>Most of the time</td>
<td>11</td>
<td>18.33%</td>
</tr>
<tr>
<td>All of the time</td>
<td>6</td>
<td>10.00%</td>
</tr>
<tr>
<td>Experience Supervising Professionals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>1.67%</td>
</tr>
<tr>
<td>No professionals supervised</td>
<td>28</td>
<td>46.67%</td>
</tr>
<tr>
<td>Very little experience</td>
<td>9</td>
<td>15.00%</td>
</tr>
<tr>
<td>Sometimes</td>
<td>13</td>
<td>21.67%</td>
</tr>
<tr>
<td>Most of the time</td>
<td>4</td>
<td>6.67%</td>
</tr>
<tr>
<td>All of the time</td>
<td>6</td>
<td>10.00%</td>
</tr>
<tr>
<td>Participant differences from their supervisor a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion/Spirituality</td>
<td>43</td>
<td>17.92%</td>
</tr>
<tr>
<td>Gender</td>
<td>43</td>
<td>17.92%</td>
</tr>
<tr>
<td>Cultural group</td>
<td>47</td>
<td>15.42%</td>
</tr>
<tr>
<td>Age</td>
<td>48</td>
<td>20.00%</td>
</tr>
<tr>
<td>Gender identity</td>
<td>17</td>
<td>7.08%</td>
</tr>
<tr>
<td>Sexual orientation</td>
<td>27</td>
<td>11.25%</td>
</tr>
<tr>
<td>Disability</td>
<td>25</td>
<td>10.42%</td>
</tr>
<tr>
<td>Participant differences from their supervisees b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion/Spirituality</td>
<td>42</td>
<td>19.09%</td>
</tr>
<tr>
<td>Gender</td>
<td>44</td>
<td>20.00%</td>
</tr>
<tr>
<td>Cultural group</td>
<td>40</td>
<td>18.18%</td>
</tr>
<tr>
<td>Age</td>
<td>53</td>
<td>24.09%</td>
</tr>
<tr>
<td>Gender Identity</td>
<td>14</td>
<td>6.36%</td>
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<tr>
<td>Sexual Orientation</td>
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<td>6.36%</td>
</tr>
<tr>
<td>Disability</td>
<td>13</td>
<td>5.91%</td>
</tr>
</tbody>
</table>

Note. This table demonstrates participant descriptive statistics: experience supervising students, experience supervising professionals, participant differences from their supervisors, and participant differences from supervisees (N = 61)

a Some participants indicated more than one difference
Specific demographic questions were asked of the participants concerning their supervision experiences. A majority of the participants responded that they had experience supervising students ranging from sometimes, most of the time and all of the time (all totaled n = 32, 53.33%). The remaining participants reported that they had no experience supervising professionals (n = 28, 46.67%) (see Table 2). However, participants did report that they had experience from very little to sometimes supervising professionals (n = 22, 36.67%). Participants reported a mean of 3.69 (SD = 7.56) number of supervisees. Concerning participants multicultural differences from their supervisor, the major difference was age (n = 48, 20.00%). Participants also reported age as the major multicultural difference from their supervisees (n = 53, 24.09%) (see Table 2).

**Instrumentation**

Five instruments were used to operationalize the variables for each research question. For example, the Trainee Personal Reaction Scale (TPRS) (Holloway & Wampold, 1984) was used to measure supervision satisfaction from a student perspective. Self-efficacy was measured using the Counseling Self-Estimate Inventory (COSE) (Larson et al., 1992). Supervisory working alliance was measured via the Supervisory Working Alliance Inventory-Supervisor Form (SWAI-S) (Efstation et al., 1990), whereas multicultural supervision was measured using the Cross-Cultural Inventory-Revised (CCI-R) (LaFromboise et al., 1991). Perceived client outcome was measured using a modified version of the Supervision Outcome Scale (SOS) (Tsong & Goodyear, 2014). In addition, for those participants who were students, the trainee version of was used for the supervisory working alliance (SWAI-T) (Efstation et al., 1990). This study, using the above variables, added to the theory of Multicultural Counseling and Therapy (Sue et al., 1996) to counselor supervision.

More specifically the properties of each instrument are given below. The Trainee Personal Reaction Scale-Revised (TPRS-R) (Holloway & Wampold, 1984) is an instrument with 12 items measuring supervision satisfaction via a 5-point Likert scale ranging from “not characteristic of my feelings (1)” to “highly characteristic of my feelings (5).” The scores range from 12 to 60 with higher scores indicating a higher level of satisfaction with supervision. The three areas covered in the instrument are the trainee’s evaluation of the supervisor (or vice versa), self-evaluation, and comfort level. The internal consistency based on Cronbach’s alpha ranged from .71 to .89 depending on the study.

The instrument used to measure counselor self-efficacy was the Counseling Self-Estimate Inventory (COSE) (Larson et al., 1992). The COSE was designed to measure self-efficacy and consists of five subscales that examine microskills, the counseling process, dealing with difficult client behaviors, cultural competence, and values. The scale consists of 37 statements that participants answer on a 6-point Likert scale ranging from strongly disagree (1) to strongly agree (6). The subscales range from zero to 45 and the overall score ranges from 37 to 222, with the higher score indicating stronger self-efficacy. Larson et al. (1992) reported an internal consistency alpha of .93 for the total scale. The subscale coefficients were as follows; .88 for Microskills, .87 for Process, .80 for Difficult Client, .78 for Cultural Competence, and .62 for Awareness of Values. The reported item-total correlations were reported as ranging from .32 to .65 excluding three items. Other studies found similar internal consistency...

The instrument used to measure the Supervisory Working Alliance was the Supervisory Working Alliance Inventory-Trainee Form (SWAI-T) (Efstation et al., 1990). This instrument is used to measure the working alliance between supervisors and supervisees. The measure is a 19-item measure with two subscales of Rapport and Client Focus. Respondents answer statements on a 7-point Likert scale ranging from almost never (1) to almost always (7). The Cronbach’s alpha for the subscales was reported as .90 for the Rapport subscale and .77 for the Client Focus subscale. Sterner (2009) reported an alpha of .97 for the overall scale and higher internal consistency levels for the subscales in this study. Sterner also reported inter-item correlations ranging from .32 to .91 for Rapport and .35 to .71 for Client Focus. The Working Alliance Inventory-Supervisor Form is similar but has 23-items (Efstation et al., 1990) and has three scales of Rapport, Client Focus, and Identification. The alpha coefficients reported for the Supervisor version are .73 for Rapport, .71 for Client Focus, and .77 for Identification. Sterner reported higher internal consistency levels for the subscales in this study using the Supervisor version and an overall internal consistency of .89.

Multicultural supervision was measured using the Cross-Cultural Inventory-Revised (LaFromboise et al., 1991) (CCI-R). The instrument was developed for supervisors to measure their supervisees’ multicultural competence, but was modified in a study by Gloria et al., (2008) so that supervisors can measure their own multicultural competence with their supervisees. The modification was done by changing the word client(s) to supervisee(s). The instrument is 20-item, 6-point Likert instrument that examines cross-cultural counseling skills, sociopolitical awareness, and cultural sensitivity. In validating the instrument, LaFromboise et al., (1991) reported an internal consistency coefficient of .95 overall. Expert raters were used to classify items into the three categories the instrument measures. Criterion-related validity was also examined by above-average ratings by counselors with high multicultural competence. Exploratory factor analysis identified one single factor as well. In the study by Gloria et al. an internal consistency coefficient of .87 was found.

To measure perceived client outcome, the Supervision Outcome Scale (Tsong & Goodyear, 2014) (SOS) was utilized. The instrument was developed to measure the effectiveness of clinical supervision from the view of the supervisee. The instrument is a 7-item, 5-point Likert instrument that examines clinical competence and multicultural competence. Responses range from not helpful at all (1) to extremely helpful (5). The original instructions indicate that supervisees endorse items based on the level of which current or recent supervision has led to improvement (2014). A sample item is “Your relationship with clients.” In the development of this instrument, Tsong and Goodyear (2014) reported an overall Cronbach’s alpha of .90, .86 for the Clinical Competence subscale, and .94 for the Multicultural Competence subscale.

For this study, supervisees completed the measure as originally instructed, but the instructions were modified for supervisors. Supervisors were instructed to endorse items based on the level of which their current or recent supervision of supervisees has led to the improvement of supervisees. The items were modified to measure supervisors’ views of their supervisees. This modification was done by changing statements starting with “Your” to “Your supervisee’s” (e.g., “Your
counseling skills” was changed to “Your supervisee’s counseling skills”).

**Procedures**

Participants were recruited online via direct email contact and direct contact via solicitation for survey respondents on Facebook. Participants were solicited via a snowball method (Dusek et al., 2015, Goodman, 1961). They were asked complete the survey and then in turn to distribute the link to those that they knew who were faculty, counselor supervisors, counselors, counselor-interns, and graduate students in counseling-related fields. Participants completed the online survey via Qualtrics (Provo, Utah). The survey consisted of an informed consent page, and questions that entailed demographic information, supervision satisfaction, self-efficacy, the supervisory working alliance, and perceived client outcomes.

**Data Analysis**

The mean scores of the respondents on the four independent variables (supervision satisfaction, self-efficacy, the supervisory working alliance, multicultural supervision) and the dependent variable (supervisor perceived client outcome) were calculated and multiple linear regression used. Independent variables were regressed on the dependent variable via the forward selection procedure on SPSS .25 to determine the most significant relationship.

Similarly, the mean scores of the respondents on the four independent variables (supervision satisfaction, self-efficacy, the supervisory working alliance, multicultural supervision) and the dependent variable (supervisee perceived client outcome) were calculated and a multiple linear regression analysis using the forward selection procedure was conducted.

Finally, to evaluate differences between supervisor and supervisee perceptions of client outcome, the mean scores were calculated. An independent t-test was also conducted for the supervisors and supervisees on the dependent variable. Data met the assumption of equal variance.

Before statistical analysis the limitation of multicollinearity for multiple regression analysis was addressed. Multicollinearity occurs when predictor variables are highly correlated with one another. Variance Inflation Factor (VIF) on SPSS .25 was calculated to determine if multicollinearity was problematic. No high correlations between independent variables were detected. All VIF measures were below 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
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<tbody>
<tr>
<td>CCI-R**</td>
<td>.28</td>
<td>.07</td>
<td>.68*</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.44</td>
<td></td>
<td></td>
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<tr>
<td>R</td>
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*p < .01, **Cross-Cultural Inventory-Revised
Results

There was a statistically significant finding among multicultural supervision (CCI-R) and supervisor perceived client outcome (SOS) (see Table 3). The model explains 44% of the variance based on the predictor variable.

There were no statistically significant results among supervision factors (supervision satisfaction, self-efficacy, supervisory working alliance, multicultural supervision) and supervisee perceived client outcome, indicating that none of the independent variables predicted supervisee perceived client outcome. The overall model does not show significance F (4, 27) = .88, Adjusted R2 = -.01, p > .05. The model explains 1% of the variance based on the predictor variables.

An independent t-test was conducted to determine differences between supervisor and supervisee perceptions of client outcome. There was no statistically significant difference between the supervisor and supervisee perceived client outcome, t(49) = -4.8, p = .62.

Discussion

A major limitation of the study is that it used a sample of convenience. The sample was collected online via direct email contact and direct contact via solicitation for survey participants on Facebook. Based on sample collection, the study cannot be generalized to all faculty, counselor supervisors, counselors, counselor-interns, graduate students and practitioners in counseling-related fields. Another limitation is that there were fewer supervisors than supervisees, few licensed supervisors in their field, and a minority of supervisors who supervised professionals while having had more than three years supervising experience. Therefore, comparing supervisors and supervisees in how they responded is limited.

The demographic data provided some information relevant to the results of the study. First, the majority of the participants were younger and perhaps newer licensed professionals in their field. Second, the majority were not licensed supervisors in their field and a little over half reported that supervising students at least sometimes or more. In addition, a minority of the participants reported supervising professionals. Those reporting on their supervision experience had been supervised by and had also supervised someone different from them in some cultural way. The majority of the participants had less than three years of experience professionally supervising. Finally, the majority came from a minority cultural group, Hispanic/Latinos.

The characteristics of the participants are essential in understanding the results of the study. Prior research indicates that supervision satisfaction, self-efficacy, the supervisory working alliance, and multicultural supervision/competence are related (Crockett & Hays, 2015; Kissil et al., 2013). Crockett and Hays (2015), examined the supervisory working alliance, self-efficacy, and satisfaction with supervision among American Counseling Association (ACA) graduate student members. The study tested a mediation model on the relationships among supervisor multicultural competence, the supervisory working alliance, supervisee counseling self-efficacy, and supervisee satisfaction. The authors explain that the supervisory working alliance is a mediator variable in that it explains how supervisor multicultural competence impacts counselor/supervisee self-efficacy and satisfaction with supervision. The main finding in regards to satisfaction was that a strong supervisory working alliance leads to increased satisfaction with supervision. When it came to self-efficacy, supervisor
multicultural competence led to the development of supervisee self-efficacy. Unlike prior research, however, this study found that multicultural supervision alone predicted perceived client outcome for the supervisors but not the supervisees. The authors of this study used the Cross-Cultural Inventory-Revised (CCI-R, LaFromboise et al., 1991) to measure multicultural supervision and the Supervision Outcome Scale (SOS, Tsong & Goodyear, 2014) to measure perceived client outcome. This suggests for this group that multicultural supervision is the most influential predictor of perceived client outcome. The CCI-R does not measure multicultural supervision per-se, but measures multicultural competence, which is an important aspect of multicultural supervision. The Supervision Outcome Scale can be considered both a direct and indirect measure of perceived client outcome because participants rate what is helpful from supervision on a Likert scale. The SOS examines what supervisors believe are the outcomes of their supervision and the current results indicate that the supervisors in this study believe that multicultural supervision and competence impacts the outcomes significantly. In fact, through an item analysis of the SOS measure, the supervisors in this study had stronger beliefs than supervisees as to how much cultural competence impacted client outcomes.

The findings indicate that the supervisors in this sample had strong beliefs that multicultural supervision and competence play a more prominent role in perceived client outcome than the other variables. The current study was also consistent with the ideas of Bernard and Goodyear (2018) who suggested that a strong working alliance is needed in multicultural supervision. Prior research supports this idea as well (Crockett & Hays, 2015; Kissil et al., 2013).

There was no statistically significant result when examining perceived client outcome between supervisees and supervisors, which suggests that supervisors and supervisees had no differences in what they felt supervision provided when it comes to client outcome. The lack of differences might imply that the supervisory working alliance between supervisees and their supervisors might be strong in this sample of supervisees. Or it could also mean that supervisees are receiving supervision in which little attention is being paid to multicultural competence and how it impacts clients.

The participants in the study stated that they had supervised and been supervised by someone who was different from them in some cultural way. Nonetheless, this still needs to be considered because of the multiple facets of diversity. In order to further refine the meanings of supervisors’ and supervisees’ experiences, it is recommended that the questions regarding supervising someone different and having been supervised by someone different should be examined as a continuous variable rather than a categorical variable as was done in this study.

Second, the results of this study may be different from other studies because of the sample being mostly Hispanic/Latino. Few of the studies described in the literature review consisted of samples made up primarily of Hispanic/Latino participants. The one study (Lam et al., 2013) that did have a sample of primarily Hispanic/Latino participants examined self-efficacy with graduate students in a counseling program. None of the studies in the literature review had samples of supervisors and supervisees that were primarily Hispanic/Latino. Furthermore, most of the studies described in the literature review consisted of primarily White participants. Therefore, race/ethnicity
is likely to impact the results and to provide a different viewpoint than prior research.

This study supports previous literature in highlighting the importance of multicultural supervision and competence in supervisee development and the need for a greater focus in this area. This is particularly relevant for practitioners who supervise others, as this study suggests that differences exist between supervisors and supervisees that can be attributed to certain factors. In addition to providing areas for further exploration when it comes to such differences, this study adds to the literature by examining Latino/Hispanic supervisors and supervisees. By highlighting the importance of multicultural supervision, this study also potentially informs supervising practitioners in the development of supervisees.

Conclusion

Broadly speaking, this study looked at the extent to which supervisors and supervisees believe multicultural factors affect client outcomes. As such, this study examined the impact of several independent variables (e.g., supervision satisfaction, self-efficacy, the supervisory working alliance, and multicultural supervision) upon perceived client outcomes both from the perspective of the supervisor and the supervisee. This study also explored the differences between supervisor and supervisee perceptions about client outcomes. The current study found a statistically significant relationship between multicultural supervision and supervisor perceived client outcome, highlighting the important role that multicultural supervision training plays in the professional development of counselors and trainees in counseling-related fields.

References


