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Letter from the Editor:

Dear Reader,

On behalf of the Tennessee Counseling Association and the Tennessee Association for Counselor Education and Supervision, I am pleased to offer you the 2024 edition of the Tennessee Counseling Association Journal. We hope the information presented contributes to your knowledge regarding counseling and encourages your exploration of new topics.

The purpose of the *Tennessee Counseling Association Journal* remains constant: to promote professional growth and creativity of TCA members, Tennessee counselors, counselors nation-wide, and other helping professionals. We hope the research and ideas shared in this journal hearten readers to provide best practices to clients, expand notions of counseling, and share innovative counseling strategies with peers.

The target audience for this journal is counselors in all specialty areas, and we invite manuscripts of interest for professionals in all areas of counseling. We welcome manuscripts that: (a) integrate theory and practice, (b) delve into current issues, (c) provide research of interest to counselors in all areas, and (d) describe examples of creative techniques, innovations, and exemplary practices.

As this edition is completed, we would like to express our sincere appreciation to the TACES and TCA leadership for their continued support of the journal.

Sincerely,

Patrick Murphy, PhD, NCC, LPC-MHSP
Assistant Professor
University of Memphis

Lisa Davies, EdD
Assistant Professor
Lipscomb University

Tennessee Counseling Association Journal Editorial Board

Analysis of Mental Health Disaster Response in Tennessee

Dessie Avila
Mason A. Hale
Amanda Nowlin

Tennessee Technological University

The purpose of the current investigation is to examine the current mental health disaster protocols in the state of Tennessee. An analysis of these protocols, more specifically, areas of strength, weakness, opportunities for growth, and observed threats will be explored. In Tennessee, the roles of mental health professionals are obscure when a disaster occurs. The purpose of this manuscript is to analyze Tennessee's mental health disaster response plan to provide implications for further organization and implementation of a standardized plan across the state in which mental health providers are actively involved.

Analysis of Mental Health Disaster Response in Tennessee

With the number of disasters reported in Tennessee, integrating a structured mental health response protocol is imperative to providing Tennesseans effective mental health care services. Thirty-five tornadoes have hit Tennessee in 2021 alone, according to the National Weather Service's last reporting on October 11, 2021 (National Weather Service, 2021). According to the Federal Emergency Management Agency (FEMA) disasters in the last 70 years, most are due to flooding and severe thunderstorms. While there is a standardized mental health service structure in place for the state of Tennessee amidst disasters, this structure and how mental health workers are involved remain obscure. Several considerations must be examined to evaluate the current service structure in Tennessee that include best practices, ethical considerations, opportunities for provider collaboration and training, and promoting this structure to mental health providers. This review addresses these specific areas to gain a better understanding of the mental health disaster response structure currently in place. Implications for further research and action will also be discussed.

Natural Disasters

While natural disasters have always been a part of our ecological existence, according to Our World in Data, natural disasters have increased significantly over the last century (Ritchie & Roser, 2021). The United States has had a total of 308 disasters since 1980 (NOAA National Centers for Environmental Information, 2021b). Natural disasters are defined by FEMA as "the negative impact following an actual occurrence of natural hazard in the event that it significantly harms a community" (n.d., para. 5). A natural hazard is a recognized as an environmental phenomenon that may have the potential to impact a community or environment (FEMA, n.d.). The types of natural disasters are vast including: earthquakes, tornadoes, volcanoes, flooding, landslides, droughts, hurricanes, wildfires, extreme temperatures, among others (Ritchie & Roser, 2021). The prevalence and diversity in disaster types makes disaster mental health services that much more complex.

The exact number of disasters that have occurred in Tennessee is unknown. Tennessee has experienced multiple types of natural disasters such as floods, snowstorms, and tornados. On January 10th, 2020, "50 tornados were confirmed in Louisiana, Texas, Missouri, Arkansas, Texas, and Tennessee" (NOAA National Center for Environmental Information, 2021a, para. 2). March of 2020, EF-3, and E-4 tornados hit middle Tennessee causing billion-dollar damage and 25 fatalities (NOAA National Center for Environmental Information, 2021a).

Current TN Disaster Mental Health Initiatives

In April of 2020, in response to the tornadoes that struck Chattanooga Tennessee, a grassroots coalition was formed called The TN Disaster Mental Health Strike Team. After much training, logistics planning, and team building the group is now supported by the State of Tennessee and International Critical Incident Stress Foundation, Inc. (ICISF) validated (Lewis, n.d.). Their team consists of various roles including executive and regional representatives, 1st responders, dispatch, reporting, training, and mental health practitioners. In 2019, the TN Disaster Mental Health Strike Team received a five-year contract from the State of Tennessee that included funding to grow their strike team (Lewis, n.d.). While this initiative provides a platform of progression towards a comprehensive disaster mental health strategy for the state, a barrier has been getting this information out to mental health practitioners. If more practitioners were aware of these initiatives and trainings, the strategic plan could be fully effective.

Mental Health

Common mental health issues that arise from experiencing disasters are depression, complicated grief, PTSD, Substance use, anxiety disorders, somatic disorders, and psychosis (Goldmann, 2014; Henley, 2010). While it is evidenced that the risk for mental health disorders increases after experiencing a natural disaster, more research is needed to better understand

risk and protective factors, and mental health interventions that treat the acute and long-term needs of survivors (Pfefferbaum et. al., 2010).

Mental Health Pathology for Survivors

Holder et. al. (2017), wrote there needs to be a mental health focus after the first few days to weeks after a disaster. Posttraumatic Stress Disorder (PTSD), Major Depressive Disorder (MDD), and substance use disorders are the most common disorders that can occur after major disasters (Holder et. al, 2017). Authors propose interventions that target symptoms related to exposure to a disaster need to be conducted immediately to mitigate distress. However, it is important to differentiate distress and psychiatric disorders because different interventions are needed (Pfefferbaum, 2010). For example, psychosocial interventions would be used soon after a disaster while counseling and medications may be recommended when a psychiatric disorder occurs like PTSD (Holder et. al. (2017) as cited in Shelton et. al. (2010), Jonas et. al. (2013). Refeils et. al. (2013), provide a twofold emphasis on the importance of mental health response teams; the first being the continuity of care for those with pre-existing mental health conditions, and the second, providing support systems for survivors who may develop mental health issues. Implementation of multidimensional care is important when triaging survivors' needs by providing differing levels of interventional care (Reifels et. al., 2013).

Best Practices

The National Institute of Mental Health (NIMH) arranged a workshop in 2002 to create best practice guidelines to provide communities with an efficient way to respond to disasters (McIntyre & Groff, 2011). Three states had their disaster mental health plans evaluated for compliance with best practices in mental health disaster response plans. The authors found state-one scored 12%, state-two with 42%, and state-three scored 71% for compliance of best practice guidelines. These scores did not represent mental health response to disasters but an adherence to the best practices for response plans. Authors wrote plausible reasons for the scores being inaccurate such as inconsistent state plans and time it takes for implementation of best practice plan (McIntyre & Groff, 2011). Each state has different local resources and needs regarding disaster response. Authors suggested there is a need for a formal protocol for trained individuals to respond in their area when a disaster occurs, a localized disaster response plan (McIntyre & Groff, 2011).

Implications

In her review of national disaster response plans, Juntunen (2011) recognizes the need for collaboration efforts to strengthen disaster mental health strategic plans. She argues the necessity of collaboration between mental health practitioners,

other health professionals, scientists, educators, and government leaders, to create an effective response plan. Such collaboration can focus on issues such as culturally sensitive protocols, media exposure considerations, and conducting more research (Juntunen, 2011). Findley et. al. (2015), discuss the lack of education of disaster mental health within graduate education programs. The authors highlight the importance of implementing curriculum and fieldwork into graduate programs for comprehension in disaster behavioral health (Findley et. al., 2015).

Social justice is an area of needed research within existing disaster response models when examining variables such as inequality, power and privilege, resource availability, and fairness (Juntunen, 2011). Strategies for identifying at-risk groups of survivors are important social justice ethical considerations. Some common at-risk populations in disasters are those that are displaced and those who are experiencing bereavement (Reifels et. al., 2013). The American Counseling Association (2014) code of ethics reads, “Counselors are expected to advocate to promote changes at the individual, group, institutional, and societal levels that improve the quality of life for individuals and groups and remove potential barriers to the provision or access of appropriate services being offered.”

Practitioners need also to be aware of ethical considerations when working is disaster areas. Disaster mental health is often provided in environments that can pose a threat to a practitioner’s safety and well-being. It is common to not have electricity, running water, and other conveniences, adding to the level of stress that a mental health provider experiences. Another ethical aspect that mental health professionals need to assess is their level of competency while working in extreme conditions (Juntunen, 2011).

Overall Preparedness

Disasters are becoming increasingly apparent with an annual average of 16.2 natural disasters within the last five years (2016-2020) (NOAA National Centers for Environmental Information, 2021). The National Institute of Mental Health (NIMH) arranged a workshop in 2002 to create best practice guidelines to provide communities with an efficient way to respond to disasters (McIntyre & Groff, 2011). A look into strengths and weaknesses of mental health counselor preparedness will be explored.

Strengths

Counselors often provide pro-bono sessions for victims of disasters. With the increase rate of disasters, an increase in counselors is needed. According to the U.S Bureau of Labor Statistics (2021), the average growth rate is 8 percent for all occupations. However, substance abuse behavioral disorder, and mental health counselors projected rate of growth is 23

percent between the years of 2020 to 2030 (U.S. Bureau of Labor Statistics, 2021). The increase of counselors could be utilized in disaster mental health response for communities impacted by disasters.

Another notable strength is the various training and certification opportunities counselors can pursue for disaster preparedness. Training courses are accessible and available to counselors two ways: 1) in-person and/or 2) online. The trainings and certifications can help reach counselors across the state of Tennessee. Additionally, the disaster response training courses appeal to different financial budgets ranging from free to $2,000. Some courses can be used for continuing education (CE) credits [Table 1 & Table 2].

Weaknesses

Each state has different local resources and needs regarding disaster response. McIntyre and Groff (2011) suggested there is a need for a formal protocol for trained individuals to respond in their area when a disaster occurs, a localized disaster response plan. While researching, authors ran into several questions: 1) Are there lists of local counselors and/or mental health agencies that are available to provide counseling for those impacted by disasters? 2) If so, where is the list of resources? 3) How many free counseling sessions would an individual or family receive? Finding the answer to these questions was difficult and not easily available and accessible, especially in the central Tennessee area. One author suggested that local police officers and emergency responders, more than likely, had disaster response plans. What about local disaster response plans for counselors in the state of Tennessee?

Advocacy

During disasters, the cooperation of community agencies is necessary to provide mental health services to all who are affected. The American Red Cross accepts qualified volunteers for Disaster Mental Health Volunteer positions to provide mental health care to those affected by disasters (American Red Cross, 2017). Additionally, the Mental Health Active Response Team (MHART) was created in response to mental health needs during disasters in Tennessee. This organization accepts fully licensed counselors in their referral list for bro bono care for individuals in any area of Tennessee that have been deemed a disaster area (Mental Health Active Response Team, 2021). These two organizations request volunteer help to provide desperately needed care for people recovering from a disaster.

Programs

The Federal Emergency Management Agency (FEMA) funds the Crisis Counseling Assistance and Training Program (CCP). This program provides supplemental funding to provide mental health training and assistance to areas that have been presidentially declared a major disaster location. The Substance Abuse and Mental Health Services Administration. (SAMHSA)

coordinates these efforts with FEMA to implement this program to mental health professionals at the state and local levels. The CCP has two levels of grants available for areas affected by major disasters: 1) The Immediate Services Program (ISP), and 2) The Regular Services Program (RSP). The ISP funding is granted 60 days (about 2 months) after the presidential declaration, and the RSP funding lasts up to nine months after the presidential declaration. The CCP provides funding specifically for individual and group counseling, distributing educational materials, and training for mental health disaster response (Substance Abuse and Mental Health Services Administration, 2019). Completing an application is necessary to obtain ISP and RSP funding (Substance Abuse and Mental Health Services Administration, 2020).

Conclusion

Obtaining mental health resources for communities impacted by disasters appears to be elusive in the state of Tennessee and its central areas. Efforts to make a localized resource list of available counselors and mental health professionals in communities could have positive impacts on communities, especially for mental wellbeing.

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Appendix

Table 1

Trainings

Organization	Title	Structure	Cost
American Association of Christian Counselors	Crisis Response & Trauma Care through Light University (n.d.)	5 online courses – 12 to 15 hours for each course.	$299 + tax
American Institute of Health Care Professionals (n.d.a)	Crisis Intervention CE Courses Program	7 online courses that provide 30-50 CEs for each course	About $200
American Red Cross	1) Disaster Mental Health Training (American Red Cross, n.d.)	1) Online	1) Free
	2) Psychological First Aid (American Red Cross, 2021)	2) Online	2) $20
FEMA (2015)	National Incident Management System (NIMS)	8 online lessons over 3.5 hours	Free
Mental Health First Aid	1) Mental Health First Aid Training	1) Online or In-Person	1) Free (Mental Health First Aid, n.d.a)
	2) Mental Health First Aid Instructor	2) Online or In-Person	2) $2000-$3000. (Mental health First Aid, n.d.b)

Northwest Center for Public Health Practice (n.d.)	Various titles listed for mental health crisis training	5 online courses	All courses are free
The National Child Traumatic Stress Network (n.d.)	1) Psychological First Aid 2) Skills for Psychological Recovery	Both are online courses	Cost is unknown for either

Table 2

Certifications

Organization	Title	Structure	Cost
American Association of Christian Counselors	Board Certified Crisis Response _____ (International Board of Christian Care, n.d.)	4 levels of certification: Responder (Lowest), Specialist, Chaplain, Therapist (Highest)	$200 every 2 years
American Institute of Health Care Professionals (n.d.b)	Crisis Intervention Counselor-Certified Specialist (CIC-CSp.)	275 hours of lecture/study in crisis intervention courses.	$200 every 2 years + 50 CEs

University students' self-reported stressors and experiences during the first months of the COVID-19 pandemic

Dorinda K. Harriss
Kevin A. Doyle
Elizabeth D. Hathaway
Karissa Peyer

University of Tennessee at Chattanooga

The global COVID-19 pandemic required unprecedented adaptations in the lives of university students. The purpose of this study was to better understand the perceived stressors of college students during the COVID-19 pandemic. *Participants:* 229 college students at a Southeastern US University. *Methods:* A cross-sectional survey methodology was utilized during summer 2020 which asked participants to identify their greatest stressors during the COVID-19 time period to that point. Data were then analyzed using a general inductive approach. *Results:* Students responded with the following greatest stressors in order of frequency: (a) online classes, (b) social/relational, (c) occupational, (d) COVID-19, (e) financial/resource, (f) not knowing, (g) living situation, (h) milestone events, (i) politics and media, (j) caregiving, and (k) physical activity. *Conclusions:* Universities need to be aware of student concerns about the transition to online classes and the numerous concomitant stressors that students face because of that transition. The mental health team on campus should be a vital part of this process to ensure that students have both the psychological and physical resources that they need.

COVID-19 pandemic

As is well known by now, an unusual cluster of viral pneumonia was first recognized in Wuhan, China in the last week of 2019. This was soon identified as an illness caused by the SARS-CoV-2 coronavirus and the disease was named COVID-19. By March 11, 2020 it had been declared a worldwide pandemic by the World Health Organization (2020). After the first case was

identified in the United States on January 20, 2020 (Holshue et al., 2020), it was soon obvious that the pandemic would have a significant impact on students in the United States.

State after state shut down schools and all but the most essential businesses. Of the 1442 colleges and universities ranked by U.S News, 1388 (96%) transitioned to online learning in Spring 2020 (Davidson College, 2020). In Summer 2020, a survey of 2958 colleges and universities found that nearly half (1302) planned to be fully or primarily online for Fall 2020 (Davidson College, 2020). These school closures were often necessarily rushed due to the rapid increase in cases in the region, for example national news outlets reported that Harvard University gave its 20,000 students only 5 days to "evacuate" the campus (Hess, 2020).

Mental Health and Emerging Adulthood

It is well documented that college student mental health has worsened over the past several years. In 2018 the National College Health Assessment Survey found that 41.9% of students had "felt so depressed it was difficult to function" in the past year and 63.4% had experienced overwhelming anxiety in the past year (American College Health Association, 2018). This was a significant increase from the 2008 survey which found that 30.6% of students had experienced feelings of depression that affected their ability to function and 49.1% had experienced overwhelming anxiety in the past year (American College Health Association, 2008). The addition of the COVID-19 pandemic to the already worsening mental health of college students has been difficult. In the United States, Germany, and Austria, quantitative studies examining the mental health of emerging adults or college students have found a significant increase in mental stress and decrease in life satisfaction compared to pre-pandemic levels (Pieh et al., 2021; Pierce et al., 2020; Preetz et al., 2021). Qualitative studies have reached similar conclusions. Both Farris et al. (2021) and Son et al. (2020) interviewed undergraduate students about their pandemic stress; the researchers identified a variety of pandemic specific stressors experienced by the students, such as anxiety over health, fear of contracting the virus, decreased social interaction due to social distancing, and financial strain and unemployment.

Information on young adult mental health during the pandemic can be used to inform higher education institutions and mental health providers on how they can support their college students. During the pandemic researchers have used information from studies on college mental health to offer support and recommendations to higher education institutions and administration about how best to alleviate their students' distress. Their recommendations include alternate learning plans, engaging remote learning, and access to tele-mental health resources (Patterson et al., 2020; Zhai & Du, 2020).

With the already rising rates of mental health problems on college campuses, it is important to better understand the continuing impacts of the pandemic on college students and be more prepared to address these effects during future disease outbreaks or natural disasters. The purpose of this study was to determine the most stressful experiences of college students during the pandemic and to learn in their own words how they were affected by the changes surrounding these unprecedented events.

Building on the work of Erickson and other developmental theorists, the theory of emerging adulthood attempts to explain the modern experiences of young adults ages 18-25 that differ from the traditional models of adolescence or young adulthood (Arnett, 2000). Arnett (2000) observed that American youth were no longer reaching the usual measures of adulthood in love, work, and worldview by their mid-twenties. The expanded period of independence and instability is a phenomenon unique to certain cultures and marked by delays in marriage and career along with a longer period of self-discovery and worldview formation (Arnett, 2011). Arnett (2000) argued that having not attained the usual standards of adulthood, these individuals could not be described as young adults, a term which would better apply to those who had married, had a child, or started a career. Therefore, he described them as "emerging adults".

Methods

Local Shut Down

On Monday, January 6th, Spring 2020 classes began normally at the Southeastern university where participants were attending. Classes ran according to schedule through Friday, March 6th when classes paused for Spring Break. Due to the increasing concern regarding COVID-19, on March 11th the University announced that Spring Break would be extended by one week to allow faculty and staff time to transition all courses online. All classes started online on Monday, March 23rd (Week 12 of the semester), the same day that the first local orders for all but essential workers to stay home went into effect. In addition to courses moving to an online format, the university dormitories were also closed. When students were sent home, the housing email let students know that certain groups such as international students would be exempted from leaving along with others who were “truly unable to return home.” Technology resources were made available for rent, and existing resources such as the campus food pantry and emergency assistance fund were still accessible. How much students were aware of these resources or utilized them, was not assessed by this study.

Study Design and Procedure

A cross-sectional survey methodology was utilized in this study, with students enrolled at the Southeastern university during July 2020 asked to complete an online survey using QuestionPro. The university's research ethics board granted approval for this study and students consented to participate before proceeding to the online survey questions. Students responded to questions pertaining to demographics, stress, resilience, and physical activity levels. Stress, resilience, and physical activity levels are reported elsewhere (Peyer et al., 2022). Students also responded to the following open-ended question: *In a few sentences, please tell us about what situations or factors most contributed to stress you may have experienced during the Spring 2020/COVID time frame.* Of the 312 participants who completed the survey, 229 responded to this final question of the survey which is the focus of this article.

Qualitative Data Analysis

Student responses were examined using a general inductive approach, a systematic set of procedures for analyzing qualitative data that can produce valid and reliable findings through grouping data with similar meaning into themes in order to gain a better understanding of responses (Elo & Kyngas, 2008; Thomas, 2006). After preparation of the raw data file, evaluators (DH, EH) completed numerous close readings of the text in order to gain familiarity with responses (Hsieh & Shannon, 2005). The two evaluators each completed independent open coding of student responses, creating subthemes as appropriate in order to describe data. Following this process, the evaluators identified repeated themes needed to create higher-order headings. Data were collapsed into appropriate higher-order headings and a coding manual was created and utilized for appropriate classification. Agreement between the two evaluators was required for a response to be categorized. In the event of disagreement, the evaluators discussed the coding until consensus was achieved. Finally, theme names were given to each higher order heading and subtheme, producing the final research results.

Results

Study Population

Student survey respondents (N=229) were 74% female, 90% white, and included a mix of academic class status (Table 1). Student respondents varied according to class standing with 131(57.2%) identified as upper classmen and forty-one (17.9%) students in their last semester of college. Seventy percent of students self-described their health as excellent or very

good. Of the 229 students, only six (2.6%) had been diagnosed with COVID-19 themselves, 64 (27.9%) had someone close to them diagnosed with COVID-19, and nine (3.9%) had someone close to them pass away due to COVID-19.

Table 1

Demographic Characteristics and Academic Level of Participants

Category		N(%)
Gender	Female	169(73.8%)
	Male	56(24.5 %)
	Non-binary	2(0.9%)
	Prefer not to say	2(0.9%)
Race	White	206(90.0%)
	Black or African American	5(2.2%)
	American Indian or Alaska Native	3(1.3%)
	Asian	3(1.3%)
	Native Hawaiian or Other Pacific Islander	1(0.4%)
	Other	11(4.8%)
Class Standing	Freshman	50(21.8%)
	Sophomore	39(17.0%)
	Junior	62(27.0%)
	Senior	69(30.1%)
	Missing Data	9(3.9%)
Self-Reported Health	Excellent	61(26.6%)
	Very good	99(43.2%)
	Good	54(23.6%)
	Fair	15(6.6%)
Last Semester		41(17.9%)

Themes

Twelve major themes summarize thirty-nine sub-themes which emerged from the participant responses. Many participants named a wide variety of stressors which were coded into multiple major themes. Likewise, the sub-themes are overlapping, with some individual's responses being coded into multiple sub-themes within a major theme category. For example, some students reported both poor communication from teachers online and an increased workload online, both of which are subthemes within the major theme of online learning.

Online Learning. Nearly half of students reported the transition to online learning as a stressor, although three of them stated that it ended up being better than in person classes. The abruptness of this change, the increased workload, and poor utilization of technology were just some of the often-cited causes of stress. For the majority of the students who were stressed with online classes, it was a negative experience and many were in classes that were not conducive to an online modality, such as clinical or lab classes. As one student explained, "Classes that didn't work well at all online, were moved to online. I took on a larger class load than I would have considered doing online only" [Participant (P)130].

An increased workload was another common stressor. According to the students, many teachers increased the number of assignments in classes online. Some students reported that classes took longer online than their previous in person classes. To compensate for not having proctored tests, some professors changed the type or difficulty of exams. Through the transition many students felt that better communication would have alleviated their stress. To some students there was a sense of being abandoned due to the uncertainty of the online classes. Others recalled a limited availability of their instructors.

Social and Relational. For many college students, socialization is the highlight of their college experience (Gavazzi, 2020). The pandemic greatly curtailed many aspects of life, including social life. Change in socialization was reported as a stressor by nearly a third of participants and affected both platonic and romantic relationships. Not only were students missing their usual social circles and specific relationships, but some students were forced into living arrangements that created more relational conflict.

Occupational Stress. Employment changes were an enormous stressor for the participants. An often-repeated phrase, "I lost my job." (P301), was reported by many students and several students had problems with their internships or clinical rotations. Importantly, some of these were requirements for graduation or employment. Those who remained employed

were still prone to having job situations change considerably. In the upset of businesses due to COVID-19, students saw work hours increase and/or decrease.

COVID-19 Related. Twenty percent of students discussed how the pandemic affected them directly. The majority had concerns about the general risk of COVID-19 and the safety measures being taken. A few had more specific concerns related to living with high-risk family members or having health risks themselves.

Financial and Resources. A fifth of students specifically reported stress related to finances or access to resources. Campus residential housing closures were reported as a financial hardship for some. Many students were dependent on the physical resources of the campus to have a safe learning environment or needed access to the tools and technology used in their classes. These included the use of labs, a place to study, and even access to a printer. No one stated any attempts to apply for campus assistance programs.

Even at a time when access to internet is assumed by those in urban centers, two students did not have reliable internet for doing their online classes. Several parts of the state where the university is located are rural farmlands or portions of the Appalachian Mountain range. Many of these regions still lack full cellphone coverage and access to broadband internet (McGee, 2016).

Not Knowing. The unpredictable nature of the pandemic was a stressor, with many students expressing a level of uncertainty, and several of them specifically using the phrase “not knowing” to describe this feeling. Future plans such as graduation and looking for work were also interrupted or in question during this time. There continued to be ambiguity about plans for the fall.

Living Situation. For a large number of students changing living arrangements was a stressor. This is in addition to the financial strain noted above. While many students moved back home with parents, several did not have this option and ended up in unstable housing situations. Some reported moving in with friends or extended family, and one student expressed concerns about becoming homeless.

Milestone Events. Several students reported additional stressors such as missing graduation, having to change their wedding plans, or having to delay graduation. These were events they had looked forward to and had put a lot of effort into achieving. While some were able to delay their plans, others had to drastically change or cancel plans.

Politics and Media Coverage. Some students related that news coverage, and "incendiary political climate" (P251) were creating stress. Others commented on particular political concerns or disapproval of how national leaders had handled the pandemic. A few directly shared their political views about COVID-19 restrictions.

Caregiving. A few students were juggling childcare and homeschooling of younger children along with completing their own homework. In some cases, this was combined with students having to work remote jobs from home. This responsibility was not always limited to their own children but included siblings and stepchildren.

Physical Activity. Some recognized that their usual coping mechanisms of exercise and athletics were hindered by gym closures and the end of organized sports. They related that they were not "able to relieve some stress through sports play" (P357) or "rock climbing" (P399). Others noted that they were stressed by lack of gym access which contributed to a lack of life balance.

Discussion

This study examined the stressful experiences of college students during the early months of the COVID-19 pandemic. The primary findings of the study were that students faced substantial stress in multiple aspects of their lives, with the transition to online learning as the most frequently mentioned stressor. Additional stressors fell under the themes of Social/Relational, Occupational, COVID-19 associated, Financial/Resource, Not knowing, Living situation, Milestone events, Politics and Media, Caregiving, and Physical Activity.

Implications

Struggles with Online Learning. Universities initially transitioned to online instruction because of health concerns related to COVID-19. As local disease outbreaks and future global pandemics are likely, greater attention needs to be given to the quality of online class offerings, particularly the user interface and experience. Students who paid for in-person classes made the choice to enroll in a physical university rather than a completely online program but were forced to transition to online classes. Several students in clinical or lab courses did not find their online classes to be an acceptable substitute for this experiential learning. While the transition to online learning may seem like a minor nuisance in the scope of the pandemic where there were a multitude of health, social and economic concerns, it was the most frequently cited concern amongst the students.

Students expressed concern over academic milestones, hardship, and career concerns, which all weigh heavily in the search for meaning within emergent adulthood (Arnett, 2011).

While studies have found online and in-person education comparable (McCutcheon et al., 2015), counselors should be mindful that the recurrent and ongoing disruption to educational processes due to the COVID-19 pandemic not only impact the academic progression of students, but their career development (confidence, self-efficacy, etc.) as well. These individuals who are already in a period of instability have had to face continued disruptions and challenges caused by the COVID-19 pandemic. Counselors working with emergent adults should review career development and career counseling procedures as they work with this generation of clients and students who are struggling with career upheaval before they even enter the workforce.

Financial, Occupational, and Housing Concerns. Financial and resource issues are a very real part of the college experience for many students. A useful indicator of the financial stress of college students prior to the pandemic is that rates of food insecurity were much higher in the college student population than in the general US population (Freudenberg et al., 2019). Those who live off-campus and therefore do not have meal plans are more likely than on-campus students to report food insecurity problems (El Zein et al., 2019).

College age young adults usually work jobs that are more susceptible to layoffs during economic down turns (J. O. Lee et al., 2019). These periods of unemployment are not just temporary setbacks and can have long-term consequences. Young adult unemployment is predictive of higher levels of depression and anxiety in middle adulthood (J. O. Lee et al., 2019). While reemployment can reduce the mental health effects, employment not matching the previous level of employment does not have this beneficial effect (Nagatomi et al., 2010).

Access to internet is not only important academically, but also reduces social isolation and loneliness (Kearns & Whitley, 2019). Given the large negative impact COVID-19 had on participant's social interactions, internet access is more important than ever. Social support has been shown to reduce the negative mental health effects of illness uncertainty (Lee & Park, 2020) and online learning is impossible without internet access.

Establishing an independent residence is a step on the path to financial independence and adulthood. The abrupt change in housing, while frequently cited by students as a stressor in and of itself, also separated students from all the resources available to them on campus. The impacts on access to technology, labs, health care, mental health services, and even food need to be considered when making the transition to a closed campus. Financially this increased the economic strain on

students who had already faced homelessness, didn't have family to go home to, or were continuing to pay rent for housing near campus that they no longer needed.

As stated earlier, emergent adulthood is characterized by a period of instability (Arnett, 2011). The pandemic has heightened this instability through changes to the financial, occupational, and physical worlds that students inhabit (Germani et al., 2020; Hotez et al., 2021). Perhaps most impactful though, is the period of identity exploration characteristic of emergent adulthood (Arnett, 2011). Changes to financial resources and housing can be limiting factors in opportunities for exploration that emergent adults need for identity development. Recognizing these challenges that emergent adults have confronted, counselors would stand to benefit from an existential stance in therapy, pushing clients to make meaning of their experiences and better understanding their unique worldview through the pandemic to gain insight into their stressors.

Mental Health Needs

Uncertainty and Illness Concerns. Uncertainty in life is the primary cause of what we perceive as "stress." Adaptations to these uncertainties include the brain organizing available information to reduce this uncertainty and learning strategies for managing life with uncertainty (Peters et al., 2017). Some individuals have an intolerance for uncertainty and are unable to adapt to it in ways that are mentally and physically healthy. It would be expected that students with an intolerance for uncertainty could have much higher levels of perceived stress during the pandemic. This perceived stress and uncertainty is associated with worse outcomes for both anxiety and depression (Bardeen et al., 2017).

Many participants described being stressed about the safety of themselves, or their families directly related to COVID-19. College students and adolescents coping with chronic diseases have been well studied and have been found to experience higher levels of anxious symptoms (Mullins et al., 2017; Szulczewski et al., 2017), however little is known about this demographic facing the risk of a life-threatening infectious disease. Grenard et al. (2020) found that emerging adults in a caregiving role had substantial mental health distress. A preliminary study of young adults in the United Kingdom during this pandemic found them to have disproportionately high levels of depression, anxiety, and self-perceived stress when compared to other age groups (Jia et al., 2020) and students have demonstrated high anxiety levels on standardized screening tests during the pandemic (Diaz-Jimenez et al., 2020). It is still unclear how much of this anxiety will result in long-term mental health problems. It is possible that the mental health effects of the pandemic in this developmental group are a combination of new caregiving roles and concerns for their own physical health or situation. While mentioned less frequently as a stressor than the researchers anticipated,

decreased access to sports and physical activity was identified as contributing to stress, potentially contributing to their concerns about physical wellbeing.

Social Isolation. Prior to the COVID-19 pandemic, social isolation and loneliness were already recognized as significant health threats in the modern world (E. E. Lee et al., 2019). Loneliness has long been correlated with negative mental and physical health in adults (Richard et al., 2017). This has been particularly studied in cancer patients facing the uncertainty of prolonged illness (Hill & Hamm, 2019; Lee & Park, 2020) and in the elderly (Kandasamy et al., 2018), but despite being less researched, young adults have higher levels of loneliness than those over age 65 and have the same correlation with depression as older populations (Richard et al., 2017). Social support from close relationships helps moderate the negative effects of uncertainty in the elderly and in cancer survivors (Kandasamy et al., 2018; Lee & Park, 2020). Yet, those facing the uncertainty of a COVID-19 diagnosis for themselves or their family are restricted from social interaction due to the pandemic. This leaves them with few of the usual resources for managing this uncertainty.

Milestone Events and Life Changes. Many students listed changes to their life plans as stressors. These changes included missing or changing plans for graduation and for weddings. It is not yet known what the long-term effects will be for those who do not have the opportunity to look back on memories of graduation or a large wedding with their friends. Certainly, some can be expected to grieve the loss of these highlights of young adulthood.

There were also a number of students who suddenly found themselves caring for and homeschooling young children. A study from Spring 2020 found newly homeschooling parents to be reporting higher levels of anxiety symptoms than the general population (Zhao et al., 2020). As periods of homeschooling became the norm for many schools globally, it is an important area for follow-up study.

Recommendations and Looking Forward

Mental health professionals need to be prepared for the ongoing, cumulative stress from the pandemic; just as they would be for another campus trauma such as a shooting or suicide. Students and clients are struggling both with the traumatic, global stressors from the pandemic (unknowing, health, financial, occupational concerns), but also from the personal developmental stressors that have accumulated over the past few years (career and identity development setbacks). Mental health professionals can help ensure that campus communication reduces uncertainty and provides more information about changes as they occur. Additionally, existing campus resources and programs will need to be widely advertised for students to

be aware of their options, and more robust screening and intervention services would be beneficial. As discussed above, problems with unemployment and loss of housing will negatively affect the mental health of a number of students, not only from the burden of the stressor itself but also from the developmental setbacks they could cause to their identity development in emergent adulthood. Mental health professionals on campus should be able to ensure that students with existing mental health diagnoses have extra resources during a time that certainly increases their perceived stress.

Strengths and Limitations

An advantage of this study is that it collected survey data from students while the pandemic was still ongoing and recall bias would have been minimal. The participants were only a few months out from the abrupt closure of their campus and were still dealing with that aftermath. They provided large quantities of qualitative information about their experiences. This contributes to the existing knowledge of college students' stressors during a pandemic and provides a starting point for further exploring the effects of natural disasters on this population.

A limitation of this study was that it was part of an electronic survey so that we were unable to reinterview participants to elicit more details about their responses or review these responses with them to clarify their intended meaning. Additionally, the stressors shared were not a comprehensive review of stressors and students may have been coping with stress in areas that they did not disclose in their comments. We were also limited to their current experiences and could not evaluate the distant psychological effects on their lives. The majority of participants were white females and respondents represented only a small percentage of the total university enrollment. Future studies will be needed over the next few years to determine the true effects of this unprecedented pandemic and the variances between gender and race.

Conclusion

This study shows the wide range of life stressors faced by college students during the pandemic. Both large scale stressors (i.e. health/safety, financial, occupational) and small scale stressors (academic upheaval, social disconnection, loss of milestone events) weighed heavily on students. Counselors will need to be mindful of stressors, both large and small, in their work with students and clients, recognizing that the cumulative stress provided by the pandemic has been impactful, and is tied to important themes for emergent adults regarding career development and identity exploration.

The numerous stressors reported by the participants provide justification for maintaining a robust mental health department on campus and suggest the need for their involvement in administrative decisions affecting students. Having a plan in place to support the most at-risk students and provide mental health services in general are important to providing a smooth transition through emergent adulthood. This level of disruption to campus life requires the same mental health and social services as any other campus disaster or trauma.

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Body Image Cognitive Distortions during Sexual and Nonsexual Situations: Differentiating the Effects on Appearance Investment

Nicole E. Henniger
Derrick Edwards
Sandra K. Terneus

Tennessee Tech University

Body image cognitive distortions may lead to problematic outcomes, including low self-esteem, negative mental health, and low sexual satisfaction. However, it is unknown whether body exposure concerns during sexual activities function similarly to more general body image cognitive distortions in their effect on appearance investment. This study measured body image cognitive distortions as a general pattern of thought across a variety of non-sexual situations and also specifically in the context of body exposure during sexual activities. It was predicted that these distorted thought patterns would be associated with higher levels of appearance investment, assessed as the self-evaluative and motivational salience of appearance. A sample of 581 undergraduate students completed an online survey containing established measures of each construct. Cognitive distortions predicted the salience of appearance-related motivated behaviors and self-evaluative cognitions. For the motivational salience of appearance, both general cognitive distortions and sexual body exposure concerns had unique predictive effects. In contrast, when self-evaluative salience of appearance was the outcome, general body image cognitive distortions fully accounted for the effect of more specific concerns about body exposure during sexual activity. Females scored higher than males on every measure, but gender did not moderate the effect of cognitive distortions on appearance investment.

Differentiating the Effects on Appearance Investment

Body image is a multidimensional construct that incorporates the complexities of persons' perceptions or schemas of their physical appearance and attitudes about their own body (Cash & Pruzinsky, 1990). Negative body-related thoughts can manifest in behaviors aimed at achieving the cultural norm of beauty especially valued in Western cultures, which includes

thinness and sexiness for females and muscularity for men (Murnen, 2011). These cultural ideals of beauty continue to be difficult to achieve (Murnen, 2011) as people have tried to change and align their bodies to these esthetical standards (Goswami et al., 2012).

Appearance Investment

Appearance investment is the extent to which one engages in appearance self-evaluative or appearance improvement behaviors (Cash, Melnyk, & Hrabosky, 2004). Appearance self-evaluative salience includes the weight given to appearance in a person's identity, while appearance improvement behaviors include cosmetics, diet, clothing choices, and fitness routines. Female undergraduates who report more negative body image perceptions have stronger investment in their appearance than males, and also have more frequent body image dysphoria (Vartanian et al., 2001). Sarwer et al. (2005) found that female college students not only maintained a greater investment in physical appearance but also a greater internalization of mass media images of beauty, and thus, favored cosmetic surgery more. Females also perceived themselves with larger discrepancy between their real self and their ideal body image (Lokken et al., 2003). The present study will test the effects of body image cognitive distortions on appearance investment, as well as potential gender differences in these effects.

Body Image Distortions

National samples of both genders have maintained negative body image distortions (Rutledge et al., 2013). According to Forrest & Stuldreher (2007), "although body image dissatisfaction and cognitive distortions are separate constructs, they are closely correlated and strong predictors of eating disorders, low self-esteem, and depression" (p. 22). Negative body image has been consistently related to high self-consciousness, low physical intimacy satisfaction, and overall low life satisfaction (Ackard et al., 2000) as well as low self-esteem, depression, anxiety, and eating disorders (Goswami et al., 2012). Although both genders are affected by body image issues, most research has focused on females' negative self-appraisals of appearance (public body-consciousness) and internalization (private body-consciousness; Forrest & Stuldreher, 2007; Howard et al., 2020; Kelson et al., 1990). Specifically, females indicated significantly higher dissatisfaction than males with all body parts except for forearms (Hoyt & Kogan, 2001). This preoccupation with beauty and physical appearance dissatisfaction can lead to body surveillance and body comparison (Hargreaves & Tiggemann, 2004). However, the question remains whether body image cognitive distortions are associated with higher appearance investment. The present study tested this question.

Body Image Concerns During Sexual Activities

In addition to the engagement in body comparison, poor body-image negatively impacts sexual functioning and partner intimacy (Woertman & van den Brink, 2012). Thoughts surrounding body dissatisfaction during sex are associated with excessive psychological investment in one's physical appearance and may lead to higher levels of self-consciousness (Cash, Maikkula, & Yamamiya, 2004). Specifically, females who perseverate about weight, body image, sexual attractiveness during sexual intimacy report low sexual satisfaction (Pujols et al., 2010). Compared to males, female undergraduate students were more likely to disclose that their body esteem influenced sexual relationships (Ambwani & Strauss, 2007). However, both males and females report negative body image impacts sexual arousal and pleasure (Sanchez & Kiefer, 2007), and dissatisfaction with genital appearance is associated with increased levels of self-consciousness in both females (Schick et al., 2010) and males (van den Brink et al., 2017). However, the question remains whether body exposure concerns during sexual activities are best explained as a continuation of more general patterns of body image cognitive distortion, or whether sexual activities are a unique context in which body image concerns may present independently from body image concerns in other daily life activities. Due to stigma surrounding sexual activities, young adults may develop separate body image concerns that independently predict appearance investment cognitions and behaviors. The present study will test whether any associations between appearance investment and body exposure concerns during sexual activities can be explained by more general patterns of body image cognitive distortions across situational contexts.

The Current Study

The current study used a large undergraduate student sample to evaluate the relationship among three body image assessments (described in Method Section) measuring 1) body image cognitive distortions during daily life situations, 2) body exposure concerns during sexual activities, and 3) appearance investment through the salience of appearance-related motivated behaviors and self-evaluative cognitions. A strong positive relationship was predicted among all scales, with both the cognitive distortion assessment (ABCD) and body image concerns during sexual encounters (BESAQ) hypothesized to independently predict the Motivational Salience and Self-Evaluative Salience subscales of the ASI-R, the extent to which people are invested in their appearance. Additionally, it was predicted that female scores would be significantly higher than male scores on each of the body image distortion and investment measures, in replication of previously-observed gender differences. Gender was also tested as a potential moderator of the effects of body image cognitive distortions on the appearance investment dimensions.

Method

Participants

Five hundred and ninety-one undergraduate college students were recruited from introductory psychology courses at a rural state university in the southeastern United States. Ten participants were excluded from analysis because they skipped items (n = 8) or completed the study in less than 90 seconds (n = 2). Of the remaining sample (n = 581), the majority were young adults (89% age 18-20 years, 9% age 21-25 years, 2% over age 25 years) and White (89% White or European, 4% Asian or Pacific Islander, 3% Black or African, 2% Hispanic or Latino, 2% Other). Fifty-four percent (n = 313) identified as female, and 46% (n = 268) identified as male.

Measures

Three body image assessment scales were purchased and used with permission from the scale author.

Assessment of Body-Image Cognitive Distortions (ABCD)

The Assessment of Body-Image Cognitive Distortions (ABCD) was developed to assess distorted thinking about one's physical appearance (Jakatdar et al., 2006). Form A of the ABCD contains 18 items answered on a five-point Likert-type scale from 0 "Not at all like me" to 4 "Exactly like me." Each item asks participants to imagine a hypothetical situation, such as shopping for new clothes, going on a blind date, or seeing a photograph of oneself with a group of friends. Then the item asks whether the participant would have particular distorted thoughts about their physical appearance in that situation, such as thinking they look terrible, negatively comparing their looks to others, or attributing negative outcomes to their appearance. In this sample, the scale showed excellent internal consistency (Cronbach's alpha = .93). None of the items in the ABCD assess cognitions during sexual activities.

Body Exposure during Sexual Activities Questionnaire (BESAQ)

The Body Exposure during Sexual Activities Questionnaire (BESAQ) measures body image experiences during sexual relations such as self-consciousness, anxious attentional focus on their body's appearance, and desires to avoid exposure of certain parts of their body during sexual activity (Cash, Maikkula, & Yamamiya, 2004). This 28-item scale is answered on a five-point Likert-type scale from 0 "Never" to 4 "Always or almost always." The participant is asked to report the extent to which they worry during sex that their partner will respond negatively to their body and the extent to which they feel self-conscious and try to

hide their body. Nine reverse-coded items assess this content with positive statements, such as feeling comfortable being naked in front of a partner. In this sample, the scale had excellent internal consistency (Cronbach's alpha = .95).

Appearance Schemas Inventory-Revised (ASI-R)

The Appearance Schemas Inventory-Revised (ASI-R) assesses the extent to which the participants are invested in their physical appearance, which is a construct distinct from self-evaluation or social stereotypes about appearance (Cash, Melnyk, & Hrabosky, 2004). This 20-item scale contains two subscales, each with three reverse-coded items. The Self-Evaluative Salience of Appearance subscale (12 items; Cronbach's alpha = .88 in our sample) assesses how much attention and time the participant spends on thoughts about their own appearance, including thinking that looks are important to their identity, dwelling on feeling good or bad about their appearance, and comparing themselves to others. The Motivational Salience of Appearance subscale (8 items; Cronbach's alpha = .82 in our sample) assesses how much effort and importance the participant places on looking good, including having high standards for themselves, prioritizing looking good, and spending time on their appearance. Participants respond to these items on a 5-point Likert scale from 1 "Strongly Disagree" to 5 "Strongly Agree."

Procedure

After obtaining Institutional Review Board approval, the survey was placed online via Qualtrics, and faculty of undergraduate psychology courses were invited to send the survey link to interested students. The participants gave informed consent and then completed the ABCD Form A, the BESAQ, and the ASI-R. Participants then answered three demographic questions on their age, gender, and ethnic group, and were thanked for their participation.

Results

Gender Differences

A series of independent samples t-tests were conducted to test for gender differences in scores on each of the scales. Due to inequality in the variances of males and females for the ABCD and BESAQ (Levene's tests for equality of variance: p's < .001), Welch's unequal variances t-tests were used to test gender differences in those variables. Gender differences for the two ASI-R subscales were tested with Student's independent samples t-tests (Levene's tests for equality of variance: p's > .05).

Consistent with previous research, women scored higher on average for every scale. On the ABCD, female participants more strongly endorsed body image cognitive distortions (M = 1.73, SD = 0.89) than male participants did (M = 1.04, SD = 0.72), t(577) = 10.56, p < .001. On the BESAQ, women reported more frequent body image thoughts and exposure

avoidance behaviors during sex (M = 1.50, SD = 0.86) than men (M = 1.05, SD = 0.67), t(574) = 7.13, p < .001. On the ASI-R, female participants reported that their appearance had higher Self-Evaluative Salience (M = 3.44, SD = 0.78) than males reported (M = 2.96, SD = 0.71; t(579) = 7.61, p < .001), and the same pattern was found for the Motivational Salience of Appearance (Females: M = 3.67, SD = 0.71; Males: M = 3.44, SD = 0.73; t(579) = 3.81, p < .001).

Associations between Negative Cognitions and Appearance Salience Variables

Scores on the ABCD, BESAQ, and two ASI-R subscales were all positively correlated with one another (see Table 1), supporting the hypothesis that stronger and more frequent negative thoughts about one's body (both in daily life and during sex) are associated with appearance having greater self-evaluative and motivational salience.

In order to test whether gender moderated the association between Cognitive Distortions (ABCD Score) and each ASI-R subscale, two hierarchical multiple regression analyses were performed. The first step of each regression included Gender and ABCD Score, accounting for a significant amount of variance in the dependent variables Self-Evaluative Salience (R^2 = .544, F(2, 578) = 346.47, p < .001) and Motivational Salience (R^2 = .130, F(2, 578) = 43.14, p < .001). The second step of each regression added the interaction term between Gender and ABCD Score. This addition did not account for any additional variance for either outcome (Self-Evaluative Salience: ΔR^2 = .000, ΔF(1, 577) = 0.63, p = .43; Motivational Salience: ΔR^2 = .000, ΔF(1, 577) = 0.11, p = .75), indicating that gender did not moderate the effect of Cognitive Distortions on either component of Appearance Salience.

The association between negative body image thoughts during sex (BESAQ) and the two ASI-R subscales also was not different for males versus females. Two more hierarchical multiple regressions tested whether there were interactions between gender and the BESAQ in their effects on Self-Evaluative Salience and Motivational Salience. In the first step of each regression model with Gender and BESAQ Score as predictors, a significant amount of variance was accounted for in both Self-Evaluative Salience (R^2 = .258, F(2, 578) = 101.72, p < .001) and Motivational Salience (R^2 = .031, F(2, 578) = 9.29, p < .001). The addition of the interaction term Gender x BESAQ Score did not significantly account for any additional variance in Self-Evaluative Salience (ΔR^2 = .002, ΔF(1, 577) = 1.25, p = .27) or Motivational Salience (ΔR^2 = .003, ΔF(1, 577) = 1.95, p = .16). Therefore, gender also did not moderate the effect of Body Exposure during Sexual Activities on the two Appearance Salience factors.

Independence of Predictive Factors

Finally, we tested whether Cognitive Distortions (ABCD Score) and concerns about Body Exposure during Sex (BESAQ Score) were independent predictors of Self-Evaluative Salience and Motivational Salience, or whether the ABCD measure of Cognitive Distortions across a variety of situations accounted for same variance measured by the BESAQ measure of negative body thoughts specifically in a sexual context.

A multiple linear regression was conducted with ABCD Score and BESAQ Score entered as predictors of the ASI-R Self-Evaluative Salience Score. The model accounted for a significant proportion of the variance in Self-Evaluative Salience (R^2 = .548, $F(2, 578) = 349.89$, $p < .001$). With BESAQ in the model, ABCD Score remained a significant predictor of Self-Evaluative Salience (b = .70, t = 20.15, p < .001); however, BESAQ Score was no longer a significant predictor (b = .06, t = 1.80, p = .07) once the variance in ABCD Score was controlled for (VIF = 1.55). Therefore, the association between participants' negative thoughts about Body Exposure during Sexual Activities and their Self-Evaluative Salience scores may be accounted for their more general patterns of Cognitive Distortions measured by the ABCD.

A second multiple linear regression assessed whether ABCD Score and BESAQ Score independently predicted the ASI-R Motivational Salience Score. As expected, the model explained a significant amount of variance in Motivational Salience (R^2 = .378, $F(2, 578) = 48.12$, $p < .001$). In this case, both the ABCD Score (b = .45, t = 9.28, p < .001) and the BESAQ Score (b = -.14, t = -2.97, p = .003) remained as significant predictors in the model together (VIF = 1.55). Unexpectedly, with Cognitive Distortions controlled for, the BESAQ revealed a statistically significant negative independent association with Motivational Salience.

Discussion

The result indicate that cognitive distortions about body image in everyday life situations and specifically during sexual activities were both positively related to appearance investment. A person's pattern of distorted thinking about their body was predictive of the self-evaluative salience of appearance. People with more distorted cognitions about their bodies also valued and invested more effort in their appearance (motivational salience). Self-evaluative salience was also associated with the more specific measure of body exposure concerns during sexual activities, but this association was entirely explained by the more general predictor of body image cognitive distortions. In contrast, body exposure concern during sexual activity was a unique independent predictor of the motivational salience component of appearance investment beyond body image cognitive

distortions. On its own, body exposure concern showed a slight positive correlation with motivational salience, but this association became negative once the level of cognitive distortion was accounted for. This finding may be explained by examining the Body Exposure During Sexual Activities Questionnaire (BESAQ), which measures concerns about body exposure through both thoughts (e.g., worrying about their partner's response to their body) and avoidance actions (e.g., hiding their body under a sheet during sexual activity). Our findings suggest that these components have opposing relationships with the motivational salience of appearance. The cognitive component of concerns about body exposure during sex may be explained by a more general pattern of body image cognitive distortion that is positively associated with investment in improving appearance, but behaviors to avoid body exposure during sexual activity might be part of a more general pattern of avoidance that includes lower motivation to engage in behaviors to improve appearance.

As expected, female participants reported significantly higher levels of cognitive distortion, body image awareness during sex, and appearance investment. However, gender did not function as a moderator of the associations between the cognitive distortion variables and the appearance investment variables. Instead, our findings suggest that even though female participants represent many of the higher scores on all of these measures, the associations among these variables are consistent across genders.

Limitations and Future Research

One limitation of the present research is that the measures were all self-report scales. Although self-report is an appropriate method for measuring internal thoughts and feelings, future research should consider conceptual replications using other methods such as observing actual appearance-maintenance behaviors. Another limitation is that the sample was entirely young adult American college students, limiting the generalizability. The characteristics of this sample were excellent for testing concerns about body image, since body dissatisfaction decreases with age (Mellor et al., 2010) and young adults are the age group most likely to report self-evaluative social comparisons related to their looks (Henniger & Harris, 2015). However, body image concerns persist throughout the lifespan (Mellor et al., 2010), and future research should test these effects in other age groups. In addition, future research could investigate whether sexual orientation affects body exposure concerns during sexual activities. Quality intimate relationships across sexual orientations involve partners who are satisfied with their appearance and body consciousness during physical intimacy (Kashubeck-West et al., 2017). More research is needed to assess whether sexual orientation moderates the association between body exposure concerns and appearance investment.

Literature has explored body image issues among college students contingent in specific contexts such as mental health issues, relationships, and self-appraisal, and yet, there is a consistent need for more detailed understanding of the manifestation and pervasiveness of body image issues upon human development. In research of body image and self-esteem in college students, Lowery et al. (2005) found that females consistently held negative body image perceptions and attitudes as compared to males. In later studies, Grossbard et al. (2009) proposed that both genders experienced body-contingent self-esteem, but that female self-esteem was contingent on weight (thinness) and male self-esteem was contingent on muscularity. Hoyt and Kogan (2001) examined body image issues and relationships among female and male college students and found that females indicated significantly higher dissatisfaction with body image. However, males indicated significantly greater dissatisfaction with their relationship status and overall sex life than did females. Thus, it would appear that females equated life satisfaction with their appearance and males equated life satisfaction with the quality of sex and relationships. Perhaps appearance is more important for females because males typically emphasized physical attractiveness significantly more than women in desiring and selecting a partner (Hoyt & Kogan, 2001).

Continuing research on social media's usage of posting photos with "likes" and "dislikes" may prove substantial. Hargreaves & Tiggemann (2004) have reported that people who have higher levels of investment in appearance engage in greater social comparison to others' appearance, especially when using social media to post images according to socially attractive ideals. Rutledge et al. (2013) reported that the majority of college students revealed body image dissatisfaction and negative body image issues since evaluations by peers as being physically attractive carried more social approval on campus. Since overwhelming cognitive distortions of body image have been linked to symptoms of obsessive thinking such as eating disorders and muscle dysmorphia for both males and females, Rutledge et al. (2013) proposed that the social media networking such as Facebook would trigger satisfaction or dissatisfaction of an individual's appearance due to the accessibility of friends who can comment on the individual's multiple profile photos and vice versa. Smith and Caruso (2010) reported that more than 96% of Facebook consumers are undergraduates students who spend approximately 1 to 1.5 hours daily utilizing this social media, and recent research has identified the influence of Facebook on psychological factors such as life satisfaction, self-esteem, and body image issues. Similar to Rutledge et al. (2013) results, Hendrickse et al. (2017) found female undergraduate students' usage of Instagram positively predicted both desired drive for thinness and body dissatisfaction, and therefore, also warned of the potential for harm regarding exposure to images on social media networking.

Many remaining questions exist as to how distorted cognitions arise and influence body image and associated mental health struggles. One ponders how self-esteem within the Personal and Social Domains in the school classrooms are facilitating positive growth in youth. Given the importance of both general body-related cognitions and sexual body exposure concerns, one ponders how the proposed curriculum model of removing or minimizing emotional health issues by state-level education administration impact youth? On the end of the age spectrum, do young adults and couples have the awareness that if they give credence to concerns about body appearance and/or odor of genitalia, they are sabotaging reciprocal sexual pleasure with their partner? As social media influences society, have people become desensitized to contentment or is "self-diversity" a model to explore as a healthy standard? Thus, continual research on the cognitive distortions and its triggers across the lifespan would prove helpful in identifying problematic tendencies in behaviors. More data on how the issues of body image perseverate or act as a contagion would further understanding of body image cognitive distortions and their effects.

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Appendix

Table 1

Correlations for Study Variables

Variable	1	2	3	4
1. ABCD Score	---			
2. BESAQ Score	.60***	---		
3. ASI-R Self-Evaluative Salience Score	.74***	.48***	---	
4. ASI-R Motivational Salience Score	.36***	.12**	.61***	---

Note: ABCD = Assessment of Body-Image Cognitive Distortions; BESAQ = Body Exposure during Sexual Activities Questionnaire; ASI-R = Appearance Schemas Inventory-Revised.
** $p < .01$. *** $p < .001$.

A Conceptual Understanding of Spiritual Attachment to God

Mason Hale
Tony Michael

Tennessee Tech University

How a person relates to God is an essential perspective of spirituality. Parental and spiritual attachments have parallel components that explain attachment bond development. Individuals who experience God as an attachment figure relate to God through the corresponding or compensation models. Anxious, avoidant, and secure attachments to God describe an individual's attachment styles with God. These attachment styles are identified and described through the Attachment to God Inventory and the God-10 measures. How a person solves problems and copes with adverse experiences provides additional understanding for attachment to God styles. Factors such as God-image and specific personality disorder traits further articulate the intricacies of attachment to God. Identifying the parental attachment bond of an individual provides the observer with the individual's internal working model for relating to one's world and God. This literature review is meaningful for understanding that one's attachment bond to God influences their psychological, social, and spiritual wellness exhibited through coping mechanisms and problem-solving. Discovering what additional factors influence specific attachment styles to God will be necessary.

Theologians have sought to understand spirituality's nature and inner workings within the human experience. Spirituality interlaces with the relational experience of monotheistic Judeo-Christians. Scholars continue to postulate how attachment theory explains relational patterns. One particular theory is attachment to God. Attachment to God is a relational experience that describes how a person relates to the divine. Similar to how one relates to a parent as an attachment figure, some may similarly relate to God as a significant attachment figure.

This review aims to provide an analysis and synthesis of the literature on the relationship between parental attachment patterns and the development of spiritual attachment. Specifically, adverse experiences challenge parental attachment patterns. These adverse experiences naturally demand coping defense mechanisms that force adjustments within one's attachment

bonds. Some develop an insecure parental attachment resulting from adverse experiences, which seem to parallel adjustments in their attachment to God. Others develop an insecure parental attachment but substitute God as a surrogate secure attachment figure. Understanding attachment to God illuminates how one's spiritual attachment style may encourage or discourage healthy psychological, social, and spiritual wellness.

Spirituality

Although attachment has recently garnered many scholars' attention (e.g., Bock et al., 2021), the concept of spirituality has been difficult to conceptualize (Elsass, 2008). However, Pargament (1999, p. 12) has focused much of his research on exploring the psychology of religion and spirituality, where he defined spirituality as the "search for the sacred." Pargament (1999) identified the sacred as 1) concepts of God, 2) the divine, and 3) transcendence. Shults and Sandage (2006) have more recently refined the conceptualization of spirituality as ways of relating to God. Spirituality's fundamental purpose is to search for ways of understanding God, relating to the divine, and experiencing transcendence. Spirituality is an existential exposition of the relational pursuit of the divine. This spiritual pursuit can be explored through the lens of attachment as a person relates to the Judeo-Christian monotheistic God (Counted, 2016).

Attachment Theory

Attachment theory provides a foundational lens for understanding the ways that individuals relate to God. Bowlby (1969) proposed that early childhood attachment bonds generate a schema for future relationships. These childhood attachment bonds construct the child's conceptualization of the self. Conceptualizations of the self are reflected within one's social relationships from childhood through adulthood (Bowlby, 1988).

Internal Working Model

These conceptualizations of the self create a person’s internal working model (IWM) framework. An IWM is the lens through which every individual engages all social relationships (Bowlby, 1969). Although one’s IWM provides the framework for interacting within relationships, particularly challenging adverse experiences can force adjustments to this schema. For example, adverse experiences could affect parental attachments and subsequently shape one’s attachment to God which will be addressed further in a later section of this literature review.

Spiritual Attachment

Spiritual attachment mirrors the structure of attachment theory, where identified attachment figures and their relationships to the individual are defined (Ainsworth, 1985). One's unique life experiences influence the development of secure

or insecure attachment bonds. The themes that characterize secure and insecure attachment bonds parallel spiritual attachment bonds within research (Counted, 2016; Granqvist & Kirkpatrick, 2008; 2013; Kirkpatrick, 1999; Kirkpatrick & Hazan, 1994; Kirkpatrick & Shaver, 1990, 1992).

Correspondence and Compensation Models

Two competing views surround the development of one's spiritual attachment to God. Granqvist (2002) describes these two mutually exclusive models as the correspondence and compensation models. Hall et al. (2009) offer a nuanced understanding of these models challenging Granqvist's (2002) initial proposal. One of the determining factors that navigated individuals through either model was one's IWM. Their IWM for parental attachment also influenced whether their attachment to God corresponded or compensated for their parental attachment (Hall et al., 2009). Each parental attachment style seems to influence which model through which a person relates to God (Granqvist & Kirkpatrick, 2013).

Correspondence Models

The correspondence model framework is an implicit response to insecure parental attachments where one's IWM is reflected in one's relationship with God (Granqvist, 2002; Hall et al., 2009). In other words, parental attachment patterns mirror attachment patterns with God (Granqvist & Kirkpatrick, 2013). Positive parental attachments corresponding with positive attachments to God and negative parental attachments corresponding with negative attachments to God could explain the correspondence model (Exline et al., 2013).

Motivational Correspondence Model

Hall et al. (2009) further differentiated the correspondence model's intricacies by presenting the motivational correspondence model and the religious change correspondence model. The motivational correspondence model incorporates insecure individuals who use religion as an emotion regulation tool more often than securely attached individuals. One's attachment to God corresponds to the behavioral attachment patterns exhibited in the person's IWM (Hall et al., 2009).

Religious Change Correspondence Model

The religious change correspondence model exhibits one's IWM as the framework through which individuals utilize religiousness for affect regulation. This model is often observed among individuals who experience crises (Hall et al., 2009).

Compensation Model

The compensation model is a more intentional response where an individual overtly compensates for insecure childhood attachments by focusing on more symbolized beliefs and spiritual behaviors. An individual must purposefully choose

God as a surrogate secure attachment figure to compensate for insecure parental attachments (Hall et al., 2009). Granqvist (2002) noted that individuals who compensated for their insecure attachment bonds sought an attachment to God for emotional security. Additionally, individuals with insecure attachment bonds exhibited higher levels of religiousness than securely attached individuals for affect regulation (Hall et al., 2009). Insecurely attached individuals compensating with God as a surrogate attachment figure relied on more concrete aspects of religiousness like church attendance and the belief in a personal God (Hall et al., 2009).

Measures Relating to Attachment to God

The correspondence model has been the theoretical framework from which several studies have examined attachment to God in the past 15 years. In particular, researchers have created the Attachment to God Inventory (Beck & McDonald, 2004) and the God-10 measure to measure an individual's perceptual image of God (Exline et al., 2013). Attachment to God measures are used to understand the effects of adverse experiences on attachment bonds (Ainsworth, 1985; Granqvist & Kirkpatrick, 2008; Kelly, 2009; Miner, 2009). Researchers use these measures to understand how coping strategies are related to attachment bonding, especially to attachment to God (Belavich & Pargament, 2002; Hernandez et al., 2010; Kirkpatrick & Shaver, 1992; Rasar et al., 2013). Understanding the measures relating to attachment to God provides a fuller conceptual framework for discerning the role attachment to God plays in one's relational well-being.

The Attachment to God Inventory

The Attachment to God Inventory (Beck & McDonald, 2004) conceptualizes attachment to God tendencies on a continuum within two factors. The development of the Attachment to God Inventory utilized the Experiences in Close Relationship inventory (Brennan et al., 1998). Beck and McDonald (2004) identified anxiety about abandonment and avoidance of intimacy with God as the two crucial factors in how individuals relate to God, rated on a 7-point Likert scale. The anxiety dimension extends from themes of lovability, jealousy, angry protest, and the fear of God abandoning the individual. The avoidance dimension extends from needing self-reliance, reluctance to communicate intimacy with God, and difficulty relying on God (Beck & McDonald, 2004).

God-Image

Exline et al. (2013) describe God-image as how a person perceives God's character. The God-10 measures three qualities of God in three subscales: Loving, Cruel, and Distant (Exline et al., 2013). These God images appear to mediate the relationships of avoidant and anxious parental attachments with anxious and avoidant attachments to God (Zarzycka, 2019).

Cruel God-Image

Cruel and distant God images mediate the relationship between religious and spiritual struggles and an avoidant attachment style to one's father and mother (Zarzycka, 2019), supporting the correspondence model of attachment to God. Specifically, perceiving one's parental attachment as cruel was positively correlated with the cruel God image. Additionally, the cruel God image mediated the corresponding relational transference between an initial anxious parental attachment and with anxious attachment to God. Fearing the abandonment of parents also positively correlates with fearing abandonment within one's attachment to God (Exline et al., 2013).

Relational Development of Attachment to God

Secure attachment to God reflects themes in a secure child-parent attachment (Ainsworth et al., 1978). If a child is unable to form secure attachments with parents, then secure attachment will be sought in other people with attachment figure qualities (Ainsworth, 1985). The early attachment theory literature did not mention God as a potential attachment substitute. However, God has all the characteristics of a perfect attachment figure (Granqvist & Kirkpatrick, 2008; Hall et al., 2009; Miner, 2009). Secure spiritual attachment is characterized by a spiritual attachment figure that is stronger and wiser, a safe-haven, a target for proximal closeness, and a response to separation and loss (Counted, 2016; Granqvist & Kirkpatrick, 2008). These themes parallel those of secure attachment within attachment theory (Ainsworth, 1985).

Secure Attachment to God

Researchers interviewed Roman Catholic priests to explore themes around God as a secure-base. Rajagopalreddy and Varghese (2021) found consistent themes between God as a secure attachment figure and secure parental attachment figures. During alarming or frightening events, the participants perceived God as stronger, wiser, and a safe haven. In their return to God as their secure attachment figure, they sought proximity to God (Rajagopalreddy & Varghese, 2021), similar to a child's response toward a secure parental attachment during a frightening or alarming event (Ainsworth et al., 1978). Children seek proximity to their secure attachment figure during frightening or alarming events (Ainsworth et al., 1978). This proximal pursuit of God cannot look the same as a child pursuing a parent because of God's incorporeal nature. However, proximity can be increased through spontaneous talking with God or meditation over scriptures, as evidenced among Catholic priests in Rajagopalreddy and Varghese's (2021) study.

Proximity

Proximal maintenance is one of the hallmark behaviors of children with a secure parental attachment bond (Bowlby, 1988). Children seek proximal closeness to the secure attachment figure when alarmed or frightened. Secure parental attachment figures appear stronger and wiser, which leads to perceptions of safety in the immediate proximity of this attachment figure (Ainsworth et al., 1978; Bowlby, 1982). This relational security appears to inoculate the effects of adverse experiences. Additionally, secure attachment bonds allow for exploration away from the proximal security the attachment figure provides (Ainsworth et al., 1978). In separation and loss, a person may pursue proximity to God if God is a secure attachment figure.

Insecure Attachment to God

Attention and safety provided by the attachment figure appear to reinforce secure attachment bonds. In contrast, insecure attachment bonds derive from adverse experiences and maladaptive coping mechanisms (Ainsworth, 1985). When an attachment bond displays security and comfort, the attachment relationship is labeled a secure-base (Bowlby, 1988), and adverse childhood experiences such as divorce, loss, betrayal, illness, and abandonment interfere with a healthy bonding process (Granqvist & Kirkpatrick, 2008). Consequently, coping defense mechanisms are required to adjust to these adverse experiences that interfere with attachment bonding development.

Spiritual Coping and Problem-Solving

Spirituality can provide adaptive coping and problem-solving strategies for individuals. Coping strategies include faith (McCrae, 1984), prayer (Neighbors et al., 1982; Rajagopalreddy & Varghese, 2021), religious thought, and activity (Koenig et al., 1992). Adaptive spiritual problem-solving strategies in response to adverse events include 1) self-directing, 2) deferring, and 3) collaborative.

Self-Direction. Self-direction describes how a person retains the belief that God is not directly involved in the process while emphasizing the individual's autonomy (Pargament et al., 1988). Avoidantly attached individuals seem to ascribe to the self-directed problem-solving style to take control because they typically believe that God has no interest in the individual's problems (Belavich & Pargament, 2002; Kirkpatrick & Shaver, 1992).

Deferring. Individuals who related to God with an anxious attachment style commonly approached problem-solving with the deferment style (Belavich & Pargament, 2002; Kirkpatrick & Shaver, 1992). The deferring approach is passive in how a person relinquishes control to the omnipotence of God and their responsibility in the problem-solving process.

Collaborative. The collaborative style demonstrates jointly held responsibility for the process between God and the individual as active contributors (Pargament et al., 1988). Securely attached individuals are more likely to solve problems using the collaborative style (Belavich & Pargament, 2002; Kirkpatrick & Shaver, 1992). These coping and problems solving strategies seem to influence the effect of adverse experiences on attachment bonds, especially attachment to God.

Maladaptive Coping and Proximity

Insecure attachment styles of self-reliance and distrusting others result from maladaptive mechanisms utilized to cope with adverse childhood experiences (Granqvist & Kirkpatrick, 2008). Attachment-interfering events commonly develop disorganized, avoidant, and anxious attachments (Ainsworth et al., 1978; Main & Solomon, 1986). Since the protective security of a secure attachment is absent in avoidant and anxious attachments to God, proximity is not pursued, consequently reinforcing the avoidant and anxious attachments.

Spiritually Grandiose Attachment to God

Spiritual grandiosity, derived from narcissistic personality disorder (Schults & Sandage, 2006), mediates the relationship between insecure attachment styles and an insecure attachment to God and further contributes to the support of the correspondence model (Sandage et al., 2015). Spiritual grandiosity derives from previous relational patterns where the person presents an exceptionally high perception of themselves, holds limited self-awareness, and deems others as objects to meet their needs (Sandage & Crabtree, 2012). Schults and Sandage (2006) connect experientially inflating intense spiritual experiences to the activation of psychological tendencies toward grandiosity. Spiritual grandiosity appears to be a maladaptive response to God's love and an inflated perspective of God's interest in one's life. Sandage and Crabtree (2012) propose attachments to God that include a spiritual grandiosity component exhibit a belief that their relationship with God entitles them to withhold forgiving others to the detriment of interpersonal relationships. Even though it appears that spiritual grandiosity may provide a strong attachment to God, this attachment is an unhealthy attachment derived from the insecurities of previous attachment patterns (Schults & Sandage, 2006).

Conclusion

Attachment theory and the IWM concept generated the framework for understanding relational patterns, while spirituality has defined the significance of searching for ways of relating to God. One’s IWM from parental attachment patterns appear to correspond with one’s attachment to God. Adverse experiences, coupled with problem-solving and coping strategies, are presented as pieces to the puzzle for understanding the correspondence and compensatory models of attachment to God.

Although much of the literature has explored support for the correspondence models of attachment to God, the compensation model has lacked a similar level of exploration.

Implications for Counselors

Attachment to God reflects IWM patterns of relating to others. Psychological, social, and spiritual wellness seems to intertwine with a person's relationship with God. Since the seemingly natural order of attachment relations follow the correspondence model, relational patterns' positives and negatives appear to stem from one's family of origin, which continue to impact the individual's spiritual wellness.

Recommendations for Future Study

Although the correspondence model has been the focus of many researchers recently, the compensation model seems to incorporate themes of resilience which need to be formally studied. Questions arise around the factors influencing a person to break away from the natural correspondence model progression to compensate for unhealthy attachment patterns. Researchers may search to discover variables that influence an individual's path toward the compensatory model for influencing healthy spiritual attachment.

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Literature Review: Warrior Mentality and its Impact on Law Enforcement Officers' Perceptions of Mental Health Care

Amanda Nowlin

Tennessee Technological University

Warrior mentality is a concept that has deep historical roots, found in the stories of samurai, knights, amazons, and bushido, among other ancient cultures. This mentality, which modern times have coined *warrior mentality*, is the foundational focus of police training and responsibility in the United States (Stoughton, 2014). Training academies argue that warrior mentality is crucial not only for the safety of each Law Enforcement Officer (LEO) but that it also helps to create a successful police force (Simon, 2021). However, warrior mentality may also explain LEO's deterrence to receiving mental health services (Jetelina et al., 2020). Discovering the characteristics of warrior mentality and its effects on well-being can allow counselors to understand this population better. This understanding will also contribute to the available mental health services provided to LEOs. The following literature review examines several vital concepts. A conceptualization for defining warrior mentality in policing organizations and describing the complex nature of police work and its effects on officers' mental health is examined. Current research on warrior mentality reveals a gap in examining its relationship to mental health perceptions and implications for counselors to serve this population better. Further understanding of the role warrior mentality plays in law enforcement officers' lives is needed. Mental health clinicians and other agencies could better serve this population and discover more effective treatment methods for mental health care.

The demands of police work can take a toll on Law Enforcement Officers' (LEOs) mental health and their families (Fox et al., 2012; Gilmartin, 2002; Miller, 2007; Papazoglou & Anderson, 2014). Mental health data reveals critical concerns for LEOs, specifically regarding suicide. Police officers are more likely to die by suicide than in the line of duty, with the suicide rate quadrupling the rate compared to firefighters (NAMI, 2023). NAMI (2023) reports that 1 in 4 LEOs have suicidal ideation at some point in their lifetime. In other mental health areas, LEOs report much higher rates of depression, PTSD, burnout, and other

anxiety-related mental health conditions than the general population (NAMI, 2023). These statistics emphasize the importance of understanding policing culture and providing meaningful care to this population. Workforce expectations, public perceptions and scrutiny, as well as daily exposure to trauma, may contribute to the stress officers' experience throughout their careers (Gilmartin & Artwohl, 2002). Current research suggests that police officers' distress is complex and includes direct, vicarious, and cumulative trauma (Landers et al., 2020). Researchers have examined the unique complexities of police officers as they are required to work in various settings. These complexities can range from being called to domestic disputes, pursuing armed criminals, working with child protective services, and supporting fellow officers (Papazoglou & Andersen, 2014).

Furthermore, police officers experience these various settings in the span of a few hours during a single work shift. The multifaceted variables may contribute to police officers having a higher risk for mental health pathology and affect work efficacy, mental health, well-being, and familial relationships (Fox et al., 2012). Therefore, mental health services are essential for law enforcement professionals. While mental health care resources are often available, stigma can deter law enforcement professionals from seeking mental health support (Soomro & Yanos, 2018). If mental health clinicians better understand the complex nature of LEOs' responsibility and the role of warrior mentality in their performance, perhaps the stigma could be reduced and improve LEO perceptions of receiving services.

This manuscript will analyze and synthesize literature on warrior mentality within policing organizations. Specifically, the impact of warrior mentality on police officers' perceptions of mental health care will be examined. Implications are discussed on how understanding the complexities of warrior mentality could help provide more effective mental health interventions and reduce barriers to treatment.

Warrior Mentality as Defined in Law Enforcement

The concept of a warrior mindset has been conceptualized for centuries. Initially, the warrior mindset described someone in battle or war. In today's culture, the concept of warrior mentality is commonly used in motivational speeches and self-help literature on success and performance. However, when defined in law enforcement, warrior mentality is recognized in relation to an LEO's roles and responsibilities. Stoughton (2014) defines the warrior mindset as "the mental tenacity and attitude that officers, like soldiers, are taught to adopt in the face of a life-threatening struggle" (p. 226). This mentality emphasizes the importance and value of an officer's safety and creates an attitude of military-like fortitude (Britten et al., 2012).

Foundations of Warrior Mentality

Police psychologists are an integral part of personnel in most policing organizations. Police psychologists provide assessments, clinical interventions, support, and consultation for all personnel including the trainees at police academies. Psychological assessments have been administered to trainees and used within most agencies since the early 1900s. Pre-employment and Fit for Duty (FFDE) psychological evaluations have been a universal standard since the 1960s (Weiss & Inwald, 2018). While the evaluations focus on assessing emotional stability, they also evaluate individual characteristics and personalities that would be desirable or detrimental to police work (Weiss & Inwald, 2018). Some personality characteristics of successful entry-level police officers include heightened awareness, emotional control, extraversion traits such as social assertiveness and a need for stimulation, self-discipline, wariness, and guardedness (Detrick & Chibnall, 2006). These personality characteristics also happen to be some of the same characteristics that describe warrior mentality (Stoughton, 2014; Fox et al., 2012: Bullock & Garland, 2018; Gilmartin & Artwohl, 2002). Police officers who possess these characteristics tend to be valued by police supervisors and receive higher ratings (Detrick & Chibnall, 2006). Therefore, police training and policing organizations promote a warrior mentality to create a resilient police force (Gilmartin & Artwohl, 2002).

Police Organizational Culture

Warrior mentality is emphasized in organizational socialization, which begins from the very beginning of a police recruit's training (Simon, 2021). Van Maanen & Schein (1979) describe social organization as the way individuals gain understanding and master the skills to accomplish their duties. During police academy training, recruits learn the values and norms of the organization. Most attitudes and standards have developed alongside societal changes to cope with the inherent risks of police work, explicitly emphasizing officer safety (Paoline et al., 2000). Simon (2021) discusses several necessary attitudes of police officers, including a heightened sense of suspicion and a perception of policing as warfare. Paoline et al. (2006) describe a we-versus-they attitude that includes themes of social isolation due to enforcing authority, group loyalty, and suspiciousness. Recruits' attitudes and identities are shaped into a warrior mindset (Simon, 2021). Officers are trained to treat every interaction as a potential life-or-death situation, causing a sense of constant hypervigilance. Thus, warrior mentality also alters how officers perceive their role, regarding *guardian-versus-warrior*, *us-versus-them*, and *enemy-versus-partner* type themes (Simckes et al., 2019). Over time, police officers' attitudes and norms become normalized into a police officer's everyday life and mindset, thus further describing warrior mentality. Furthermore, these same norms and attitudes may also influence how police officers view mental health and seek services.

Impact of Policing Duties on Mental Health

The strains of being a police officer are multifaceted and can affect mental health in all areas of their life. Police officers commonly face stressors such as public expectations, political perceptions, work performance expectations, trauma exposure, and family strain, among many other factors (Gilmartin & Artwohl, 2002; Bullock & Garland, 2018; Fox et al., 2012; Landers et al., 2020; Miller, 2007; Soomro & Yanos, 2018; Velazquez & Hernandez, 2019). These stressors can affect work productivity (Roberts & Levenson, 2001; Fox et al., 2012), professional relationships (Fox et al., 2012; Velazquez & Hernandez, 2019), family relationships (Duxbury et al., 2021; Miller, 2007), community relationships (Bullock & Garland, 2018; Velazquez & Hernandez, 2019; Capellan et al., 2020; Torres et al., 2018), and even have adverse effects on an officer's moral compass (Boesser-Koschmann, 2012; Malmin, 2013). Understanding how warrior mentality impacts each of these stressors is essential in assessing and providing intervention to LEO clients.

Prevalence

In a study on the prevalence of mental health pathology, Jetelina et al. (2020) reported that 12% of officers reported a lifetime diagnosis of a mental illness, and 26% had positive screenings for depression, anxiety, PTSD, and suicidal factors. Furthermore, these statistics may not accurately reflect the actual percentage of mental health pathology of officers. Due to mental health stigma, police officers are less likely to report symptoms in mental health screenings. The likelihood of reporting symptoms decreases as symptoms increase (Marshall et al., 2021). Current research on mental health statistics and its relationship to mental health stigma is readily available. However, continued investigation is needed to distinguish how a warrior mindset impacts pathology and the stigma of receiving mental health services. A deeper understanding of warrior mentality may help to interpret the complexities of the mental health perceptions of officers.

Work Performance

Excessive job assignments and general work overload places police officers in a cycle of perpetual emotional and physical exhaustion (Roberts & Levenson, 2001). LEOs are involved in response to calls for service, arrests, community service, court testimony, emergency response, legal documentation and processing, and conducting interviews and investigations, among many other duties. Work shifts and hours can be extensive and change from day to day. This chronic fatigue negatively impacts work performance and the work environment (Roberts & Levenson, 2001). Fox et al. (2012) discuss the loss of productivity among police officers with mental health pathology. Officers with mental ill health reported having problems

managing time, engaging in social relationships, and completing their duties (Fox et al., 2012). Work duties and responsibilities directly impact the mental health and overall well-being of LEOs.

Impact on Police Families

Family and spousal relationships are often the most affected aspect of a police officer's life. Factors such as an unconventional schedule, overtime work, and being on-call directly impact a family (Miller, 2007). These scheduling expectations create a challenge in forming a healthy work-life balance. Perceptions among officers about achieving a healthy work-life balance are complex. Stressors include work demands, work environment, working conditions, and the organization's culture (Duxbury et al., 2021). Work overload and the resulting stress on LEOs are regularly explored in law enforcement.

Roberts and Levenson (2001) found that higher work-related stress levels negatively impacted spouses' interactions. Policing organizations emphasize loyalty to the force over other commitments, causing conflicts in marriage and engagement. Schedule conflicts can create instability and unpredictability in a family system (Miller, 2007). Miller also describes qualities of overprotectiveness, suspiciousness, and hypervigilance police officers develop that produce adverse effects within their family system (2007). Many officers tend to protect their loved ones from knowing what they experience in the line of duty. Also, the keen sense of awareness that warrior mentality teaches, in turn, can promote suspiciousness and a tendency to question everything (Miller, 2007). These factors can create communication issues and levels of distrust in familial relationships.

Community/ public relations

Police officers are often expected to act as "Heroes" instead of ordinary citizens. LEOs are not expected to be impacted by exposure to trauma (Bullock & Garland, 2018). Bullock and Garland (2018) explain a "virtual social identity" in which the public perceives that police officers should possess characteristics such as courage, stoicism, resilience, and dependability under all circumstances. This expectation places a significant amount of pressure on a police officer. This virtual social identity puts even more pressure on LEOs to ignore the mental health pathology they may be experiencing.

Negative publicity and other high-profile cases have impacted police officers' mental health. The current political climate has shown a dramatic shift in the public's perception and treatment of law enforcement officers in recent years, commonly recognized as the Post-Ferguson Era. In 2014, Michael Brown's death in Ferguson, Missouri, gave rise to public scrutiny of policing organizations, specifically regarding the use of deadly force (Capellan et al., 2020). Coverage of police responses to events throughout the nation has continued to occur. More recently, deaths of minoritized unarmed citizens, specifically George Floyd and Breonna Taylor, have been a common part of the national dialogue on policing in the United

States. These deaths, along with mass and school shooting events across the nation, have been the primary platform for scrutinizing LEO efficacy and performance in the community. This scrutiny creates added pressure on LEOs in both responsibilities and the general public's expectations of them (Velazquez & Hernandez, 2019). The current socio-political environment gives rise to additional pressures for LEOs to address the cumulative trauma to which they are exposed. Torres et al. (2018) describe one symptom as an attitude of cynicism police officers develop about the public and society. Torres et al. (2018) further discuss that officers in the post-Ferguson era feel less motivated, have increased apprehensiveness, are concerned about working with minority populations, and have an increased concern for their safety. As mental health clinicians working with LEOs, it is vital to understand the full scope of symptoms that may arise for officers. Our current socio-political environment on policing perceptions is ever-changing. Staying abreast of these societal trends and their impact on LEO mental health is a component of best practices for mental health clinicians.

Values and Spirituality

Police workload and stressors also contribute to an officer's moral compass and values (Boesser-Koschmann, 2012; Malmin, 2013). In her auto-ethnographic manuscript, Boesser-Koschmann (2012) recounts the emotions and healing process of police officers who experience the death of a fellow officer. She describes the complex process of forgiveness and servant leadership that must develop to continue in the line of duty (Boesser-Koschmann, 2012). Her description of servant leadership offers a juxtaposition to the warrior mindset that is developed in training and active duty.

Malmin (2013) explores the connection between warrior mentality and spirituality. He contends that warrior culture promotes ideological beliefs that emotional pain equals weakness. He explains that police officers resist asking for help because they must exude a warrior mindset and adapt. Furthermore, Malmin discusses the relevance of using prayer to bring healing while helping change the mindset that emotions equate to weakness (2013).

Both examples above provide insight into the complex impact of LEOs' roles and experiences. While LEOs must exude warrior mentality traits for effective work performance, these qualities can inhibit LEOs from fully addressing their experiences of grief and emotional turmoil. Mental health clinicians must see the relationship that warrior mentality has with an LEO's spirituality and values and utilize interventions that help validate their beliefs while also embracing a warrior mindset.

Mental Health

While warrior mentality within police training models and police organizational culture serves a valuable purpose in creating successful police forces, it may be a principal factor to consider when examining police officers' stigma of mental health.

Much of the research on mental health stigma concentrates on identifying the pathology of law enforcement professionals and finding ways to decrease stigma. The most common reasons law enforcement officers are reluctant to seek mental health care include confidentiality concerns, the negative impact seeking services could have on their careers, and mental health stigma (Fox et al., 2012). These studies are limited in that further investigation is needed into how a warrior mindset directly impacts mental health stigma.

Implications of Warrior Mentality

Much of the available research on the warrior mentality of police officers focuses on external concerns concerning police organizational effectiveness and public relations. While the complexities of LEO training, roles, and responsibilities are extensively examined, much of this research focuses on the perceptions of individuals whom LEOs are called to protect and serve. In much of the literature on the warrior mentality of LEOs, there is often a construct that villainizes law enforcement agencies and portrays LEOs as corrupt.

Police Brutality

Warrior mentality is researched as a subcategory under the militarization of policing by focusing on external factors such as community relations, public perspectives of police (Simckes et al., 2019), and violent or confrontational interactions among officers and citizens (Li et al., 2021). Such research reveals themes of warrior mentality as a contributor to police brutality and a desire to shift from a warrior mindset to a guardian mindset.

Guardian vs. Warrior Training

The Task Force on 21st Century Policing during the Obama administration did just that and concluded that police reform to a guardian mindset was needed to make effective change within agencies and public relationships ("Final Report of the President's Task Force," 2015). Li, Nicholson-Crotty, S., & Nicholson-Crotty, J. (2021) explored the impacts of using a guardian training model in police academies versus a militaristic training model. Their research provides insight into the relationship between warrior mentality and policing outcomes.

Instilling a warrior mindset has been an effective training regimen for many decades. Further research is needed on the implications of changing policing to a guardian mindset, specifically regarding the impact of current LEO duties and responsibilities of safety and security. Even though current literature offers rich insight into warrior mentality and the external effects of community relations, they fail to highlight possible inward implications, such that warrior mentality affects individual police officers' mental health.

Resiliency Training

Resiliency training is an intervention tool discussed in the literature to combat mental health stigma among police officers. Papazoglou & Anderson (2014) discuss using resilience programs within police academy training to improve police officers' help-seeking behaviors. These programs include psychoeducation for instructors and interventions such as mindfulness techniques, journaling, communication skills, and exploring irrational beliefs about mental health. They suggest that resilience training could address mental health stigma and other barriers to mental health services (Papazoglou & Anderson, 2014).

Grabbe et al. (2021) performed a study to measure the effectiveness of a resilience training model on the mental health outcomes of frontline workers. The results concluded that resilience training improved overall well-being and decreased secondary traumatic stress levels (Grabbe et al., 2021). Further research could be conducted, specifically with resilience training of LEOs. Not only do LEOs face pressures and responsibilities that other frontline workers do not experience, but other frontline professionals do not have to exude a warrior mentality.

Conclusions

Warrior mentality is a prevalent research topic in policing; however, there is a gap in how warrior mentality affects the lived experiences of police officers, specifically regarding mental health perceptions. While current research argues the critical role warrior mentality has played in training effective and resilient police officers, this knowledge poses an important question. How can policing organizations continue to instill the essential qualities of warrior mentality while also paying particular attention to the potential negative mental health impacts warrior mentality can have on LEOs?

Clinicians may be able to incorporate more effective treatment modalities or alternative therapies to cater to this population. There is a gap in the literature on modalities and counseling styles that are effective specifically for LEOs. Mental health clinicians who work with LEOs should seek specific training and certifications that specifically cover the concept of warrior mentality and its role in police officer performance. Warrior mentality impacts all areas of well-being. Mental health providers can more effectively identify mental health symptoms if the nuances of warrior mentality are clearly understood.

Understanding warrior mentality is an advocacy issue. According to the ACA code of ethics section A.7, “counselors advocate at individual, group, institutional, and societal levels to address potential barriers and obstacles that inhibit access and/or growth and development of clients (ACA, 2014, p. 5).” Mental health clinicians can advocate for LEOs to help strengthen public relations and support. The more providers understand the complexities of warrior mentality, the better suited they are to

provide advocacy for LEO mental health and its impact on LEO overall well-being, explicitly regarding socialization and public relationships.

This review aims to build a framework for examining the specific personality characteristics of warrior mentality to understand police officers' perceptions of mental health and mental health care. Much is to be gained by discovering the complexities of the warrior mentality. Mental health providers can provide more effective treatment to police officers if they understand the complexities of warrior mentality and how these characteristics impact an LEO's lived experience.

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Cultural Meaning of Client Gifts

Jade M. Stubbs
Hannah L. Carothers
Michael Jones

University of Arkansas
University of the Cumberlands

The ACA code of ethics permits the acceptance of gifts from clients as long as the cultural significance - as well as other factors including monetary value, timing, and motivations - is thoroughly considered (A.10.f.). However, there is minimal research on what the cultural significance of client gifts could be and how to navigate this ethical dilemma with culturally diverse clients. This lack of research limits counselors' interpretation of gift meanings strictly to their own cultural experience rather than that of their clients. The current article reviews a variety of cultural implications that should be considered when presented with a gift in order to assist counselors in processing them with increased cultural accuracy and making more therapeutically beneficial decisions. The cultural foundations around gift-giving that will be highlighted in the current article are from the Asian-American, Latinx, and Hispanic communities.

ACA Code of Ethics: A.10.f. Receiving Gifts

"Counselors understand the challenges of accepting gifts from clients and recognize that in some cultures, small gifts are a token of respect and gratitude. When determining whether to accept a gift from clients, counselors take into account the therapeutic relationship, the monetary value of the gift, the client's motivation for giving the gift, and the counselor's motivation for wanting to accept or decline the gift" (American Counseling Association, 2014). Counselors should take all aspects mentioned by the ACA Code of Ethics into consideration when presented with a gift from a client. However, there is not much information on how the therapeutic relationship could be affected, how to determine the gift's value, what a client's or counselor's motivation might be, or best practices for the gifting process. This article will review literature on these specific topics from a multicultural perspective, with focus on the Asian-American and Latinx communities.

Gifts in a Therapeutic Relationship

Currently, there is a dearth of research that focuses on how client gift giving could impact the therapeutic relationship. According to a study by Knox and colleagues (2009), most clients who give gifts described having a good relationship with their counselor. The study also found a strong correlation between clients who chose to give their counselor a gift and relationship issues being their main therapeutic concern. These findings emphasize the importance of accepting or declining a client gift in a way that benefits the therapeutic relationship. If a client struggles with personal relationships but feels safe in their counseling relationship, that therapist must do their best to accept or decline the gift in a way that continues to strengthen the therapeutic foundation. When appropriate, it is most beneficial to the therapeutic relationship for the counselor to accept the gift from their client. When a counselor accepts a gift from their client, they minimize reinforcement of conditions of worth for the client (Brown & Trangsrud, 2008). For many clients, their relationship with the counselor is one of the few, if not the only, relationship in their life where they feel safe and are able to show vulnerability. Most theories build this foundation by teaching the counselor how to allow the client to be vulnerable and honest without judgment or conditions (Holm et al., 2018). By adding conditions to receiving a gift, the therapist could lose some of that client's trust, ultimately damaging the therapeutic relationship. There are situations where declining the gift is ethically necessary, in which case, of course the counselor must decline. However, the counselor needs to have an honest but careful conversation with that client so that the rejection does not reinforce conditions of the client's worth.

Saleeby (2016) and Knox et al. (2009) also concluded that clients give gifts most often during a nontermination session to express appreciation or mark an important life event. An important life event could be a holiday, graduation, birthday, or some other event marked by recognition and celebration. Although a therapeutic relationship is different than a personal relationship, it is still a relationship all the same. That sounds simple but is often forgotten in research when the researchers are trying to examine as many perspectives as possible. Counselors are human; clients are human; humans are unpredictable, and each person has a unique perspective based on their personal experiences. Sometimes clients give gifts to their counselor simply because that is how they prefer to strengthen their relationships. Other times, clients give gifts to their counselor simply because they want to celebrate an important life event with another human. These are signs of a strong therapeutic relationship and are ethically appropriate for the counselor to accept. Sometimes the reason for a client to give their counselor a gift is simple, strengthening their relationship with another person.

Determining a Gift's Value

The therapeutic relationship counselors have with their clients can benefit from considering all areas of a gift's value because gifts are comprised of so much more than their price tags. The meaning of a gift correlates closely to the values associated with it. According to Larsen and Watson (2001), a gift's overall value is comprised of its economic value, functionality, social value, and expressive value. These values are not concrete, the appropriate range within each value will vary based on the client and circumstance. Because a gift's perceived value can vary so drastically, counselors should avoid assumptions based on their own experiences. When a gift's overall value is unclear the counselor can gain insight by having a conversation with their client about these four value categories.

Economic Value

Economic value is what most people are familiar with and usually the first or only value considered when assessing a gift (Larsen & Watson, 2001). Assessing a gift's economic value is when you determine how much money was spent. There is not a specific price for counselors to adhere to when making this decision, because the range of an appropriate cost will vary for everyone. First, the counselor must understand their own demographics and financial bias. When a counselor does assess and understand their own financial perspective, they are able to better recognize when they are determining the gift's economic value from their own experiences instead of their client's. Understanding where the client is socioeconomically is also crucial to determining economic value. A $20 gift from a client of high socioeconomic background would be considered a small gesture in their eyes and would be ethically appropriate to accept. However, a $20 gift from a client below the poverty line who struggles to buy groceries would be an extremely large amount for them to spend and should be cause for pause from the counselor.

Functionality

"[Sheth et al.] define functional value as the perceived utility acquired from an object's capacity for functional, utilitarian, or physical performance" (Sheth et al., 1991, as cited in Larsen & Watson, 2001). When determining the functional value of a gift the following question should be asked: What purpose does this serve? Functional items are usually purchased for yourself rather than for others as a gift because a gift that is too functional can be perceived as cold or emotionless. For example: people purchase toilet paper for their own homes often because this item is necessary in everyday life and serves an important purpose, but it is not usually gifted to others because it may be too functional. On the other hand, items that have no functional value could be viewed as a waste of money because the person receiving it has no use for it. Functional value also varies from person to

person. Some people prefer a gift that will be used often and serves an important purpose, and others prefer gifts that do not fill a need.

As counselors, the functional value of a client's gift is important to consider because it gives insight to how the client views the relationship (Larsen & Watson, 2001). If the client's gift has a high functional value, they most likely see the relationship as clinical or their job. This could be dangerous because people usually do not feel safe enough to be fully vulnerable with their coworkers or bosses in fear of offending or being fired. Clients may feel like going to counseling is just another work task or box to check off their to-do list, and this mentality can hinder their growth because they are too focused on doing it "right." If a client's gift has little or no functional value, they could view the relationship as silly, fun, or inappropriate. A client viewing the counselor as a personal relationship could be dangerous because the client may consider the counselor a friend or potential romantic partner. The counseling relationship should be a balance of both business and personal, not strictly one or the other. Ideally, clients would feel safe enough in the relationship to be vulnerable and honest but not so close to the counselor that they might try to cross a boundary. This type of counseling relationship would be reflected in a client gift that is both fun and useful. Examples of this type of gift could be a seasonal coffee mug, cookies, or a piece of art.

Social Value

According to Larsen and Watson (2001), social value refers to when and why a gift is given rather than focusing on what the gift is. Is a gift being given because it is socially expected at that time? There are a variety of socially valuable reasons to give a gift across cultures, such as holidays, birthdays, or reciprocation from a previous gift that was received. Socially valuable gifts are common and are usually appropriate to accept if the previously discussed values are also considered. This value varies based on the client's social norms and personal beliefs. Most gifts of high social value are not surprising to a counselor and are usually given to show respect and strengthen the counseling relationship. A counselor can determine a gift's social value by having an open conversation with their client. Through this conversation, counselors give their client an opportunity to share more about themselves, strengthening their understanding of who the client is while avoiding assumptions due to a lack of insight.

For situations involving gifts with no apparent social value, it is once again encouraged to consider the other areas of value to determine whether or not it is therapeutically beneficial to accept the gifts. Zhang's (2019) research concluded that without enough information to understand a gift's social value people tend to determine the gift's overall value based on its economic value.

Expressive Value

Sherry (1983) defines (as cited in Larsen & Watson, 2001) the fourth value of a gift as expressive value because gifts pass a portion of the giver's identity to the receiver. Expressive value consists of not only the giver's self-expression but also the receiver's identity. The amount of expressive value a gift has can be determined by how much consideration went into purchasing or making the gift. This consideration can be of the giver's or receiver's identity. A home cooked meal from the client's cultural background would be an example of a gift with high expressive value from a self-expressive perspective. However, a personalized blanket would have high expressive value because of the consideration of the counselor's identity. Both would be considered expressive gifts but for different reasons. In a counseling relationship these gifts are usually given to strengthen the therapeutic bond; by accepting the gift, a message is sent to the client that the counselor also values their relationship. In most cases, when a counselor accepts a gift with high expressive value, they strengthen the counseling relationship. However, there are some gifts that could be too expressive, such as a precious family heirloom. These cases should cause the counselor concern for how personal the client views their relationship.

Client's Potential Motivations

Every client is unique and will have motivations for giving their counselor a gift that are just as unique as they are. However, there are general motivations for gift-giving based on the client's cultural background. It should be clarified that the information in this article represents a generalized version of a client from Asian or Hispanic descent and will not be a universal answer for every client who identifies with one of these cultures. Instead, the following is intended to give counselors more insight into the Asian-American and Latinx cultural norms when giving gifts. This insight will assist the counselor in approaching conversations with their client about their gift in a more culturally informed way.

Asian-American Clients

Seeking and starting counseling can be anxiety-producing for anyone. However, it can be especially difficult for individuals who have been consistently exposed to mental health stigma and a lack of culturally-appropriate resources. Augsberger and colleague's (2015) study emphasized these issues for clients of Asian descent. This study found that Asian-American women had a high prevalence of depression symptoms and suicidal behavior but did not utilize mental health care. It was determined that influence of Asian family and community stigma on mental health utilization were main reasons for not seeking out mental health services. The women in this study who did seek out mental health services reported a lack of culturally

appropriate mental health interventions. The current article will explore these cultural stigmas and how accepting or declining a gift can help disprove or reinforce their assumptions on mental health services.

Asian-American Communities & Families

Asian communities are traditionally more of a collectivist culture, which emphasizes the needs and goals of the group, as a whole, over the needs and desires of each individual. “Collectivist culture stands in stark contrast to individualist culture, which fosters independence, autonomy, assertiveness, and personal achievement” (Ma et al., 2020). Understanding the drastic difference between collectivist cultures and individualistic cultures will give a counselor better insight into their Asian-American clients.

Most participants in Augsberger et al. (2015) study reported a common theme within their families, they often denied the existence of mental illness because of the stigma that is deeply rooted in Asian culture. This denial leads to intense feelings of isolation and loneliness, which is partially why depression is so prevalent in Asian-Americans. In many Asian-American families, mental health problems are considered a weakness that could bring shame on the entire family. Because of this, it “saves face” (i.e., keeping potentially harmful information private so that others do not view the individual or family negatively) for the family to deny the problem in hopes it will resolve itself rather than seeking help.

In relation to mental health stigma, saving face is intended to show others that the family is strong and healthy, but instead sends a message to the family member struggling that the family’s public reputation is more important than their mental health (Augsberger et al., 2015). This message is extremely isolating and can intensify severity of many mental health conditions. Understanding the potential that an Asian-American client might also be trying to “save face” with their own family by handling their emotions on their own may help the counselor avoid assuming the client has a strong family support system to assist in their counseling journey. Having a conversation to clarify who is part of the client’s support system and who the client feels comfortable opening up to about their mental health - if anyone at all - can also be helpful in avoiding assumptions.

Establishing an effective therapeutic relationship with an Asian-American client is also reliant on the counselor’s ability to provide culturally appropriate services (Augsberger et al., 2015). Talking about feelings or being overly emotional is generally frowned upon in an Asian-Americans. It may, therefore, be helpful to utilize a therapeutic approach that focuses more on solving the problems the client identifies than deeply processing the emotions they may be experiencing regarding those problems. Recognizing the alternative means of displaying emotions that are common to these clients can also assist the counselor in

identifying how the client is feeling even if they do not want to verbally express it. One common way that Asian-American clients may express themselves is through gift-giving.

Formal Occasions

Just like any culture, there are both formal and informal occasions that are socially appropriate times to give a gift (Larsen & Watson, 2001). Formal occasions in most Asian communities include holidays and special celebrations such as Christmas, birthdays, weddings, and the new year. Formal gift-giving is often motivated by feelings of obligation, desire to uphold social integrity, earn respect from and show respect toward others, and to receive validation of one's identity from others (Feng et al., 2011; Lotz et al., 2002). These gifts tend to be more expensive and "flashy"; cash is also not uncommon to receive for one of these formal occasions.

In fact, cash in a red envelope is traditionally the gift given for each new year (Siu, 2001). In many Asian cultures cash is given to others in a red envelope each new year to wish them good luck and fortune for that year. As a counselor it is important to know this is a sign of respect and a way for the client to share a small piece of their culture. It is still important to have a conversation with the client about the gift so that they have the opportunity to explain why this gift represents them. There are also proper ways to accept formal gifts in order not to offend the gift giver, which is why traditions like the red envelope are important to know about if the counselor works with an Asian American client. For example, it is disrespectful to open the red envelope in front of the gift giver. It is actually "good luck" to wait an entire year to open the envelope but not necessary.

Informal Occasions

Informal occasions, such as social gatherings, are significantly different than gifts given at formal occasions in Asian culture (Feng et al., 2011). Asian-Americans bring gifts to social gatherings and other informal occasions to show respect and their appreciation for the host's hospitality. These gifts are given out of obligation in order to show others respect. Informal gifts tend to be inexpensive and thoughtful (Lotz et al., 2002). One of the most common gifts an Asian-American might bring for an informal occasion is food or drink. Once again, this information is important for a counselor to know so that they do not offend the client who is giving the gift; in most Asian cultures refusing consumables is considered extremely disrespectful (Eckstein, 2001). In a counseling relationship the counselor and client will not attend any social gatherings together but there are still many possibilities for what the client might consider an informal occasion. An informal occasion that prompts gift giving in a counseling setting could be when the client finally feels comfortable with the counselor, an apology for when the client misses an

appointment, or some other general event. These occasions are more difficult to predict which is why it is vital for the counselor to start a discussion about the gift and what the client's motivations for giving it are.

Dynamics Between Gift Giver & Recipient

Power and social distance between a gift giver and a gift recipient is usually clear but unspoken (Feng et al., 2011). When giving a gift for a formal occasion that unspoken message is "I want you to know that I respect this specific occasion" but an informal gift says, "I want you to know that I respect you" (Lotz et al., 2002). These are two very different messages, but both show respect and tradition; both are equally important in most Asian cultures. In both situations it is usually disrespectful to decline a gift, especially if the recipient is in a position of power or an elder. In a counseling relationship the counselor would be viewed as someone in a position of power which is why, if ethical and beneficial to the therapeutic relationship, the counselor should accept the gift. Although accepting a gift is the social norm and a sign of respect in most Asian cultures, it is not uncommon for someone to decline a gift especially if they view themselves as a subordinate or younger than the gift giver. When a gift is declined it is usually to avoid the feeling of indebtedness they would experience if they cannot reciprocate (Shen et al, 2011). In most Asian cultures whoever receives a gift is then expected to reciprocate with a gift to show that the respect is mutual. There is no blatant mention in the ACA Code of Ethics about giving a gift to a client, which makes deciding how to reciprocate respect difficult. Based on the literature reviewed in the current article, it is recommended the counselor follows up with a small gift to show they also respect the client and their traditions.

Because most Asian-Americans feel obligated to reciprocate gift giving (Shen et al., 2011), counselors need to be careful with what they give their clients. An example of a counselor accidently pressuring a client into giving a gift would be if an Asian-American client needs to borrow a pen to fill out paperwork then, when trying to give it back, the counselor insists the client keep it. The counselor may be doing this to be nice, considering the twenty-five cent pen to be a simple "gift," but to an Asian-American client this could be seen as a gift that requires reciprocation. In order to avoid unintentionally pressuring the client, the counselor should take the pen back when the client hands it in with the paperwork. However, asking for the pen back if they forget to hand it to you, will most likely make them feel uncomfortable and could harm the therapeutic relationship. If they accidentally take something small and inexpensive that is not considered a gift, it is recommended to allow the client to take it home, the counselor does less harm than pointing it out and embarrassing them.

Latinx Clients

Similar to the Asian-American population, Latinx people have historically struggled with negative mental health stigma and a lack of culturally-appropriate resources. Because of this, it is crucial for counselors to assist their Latinx clients in processing their emotions around seeking counseling, connect their counseling experience to their culture, and access useful cultural resources. Allowing the client to share their cultural identity and preferred cultural expression is the first step to establishing a safe therapeutic relationship. There are several different ways a client from Latin background might prefer to identify with such as Latina, Latino, etc., but for the purposes of the current article, this group will be referred to as Latinx to be inclusive of all gender identities.

Latinx Communities & Families

As previously discussed with Asian-Americans, collectivist culture has a prominent influence on the mental health and gift-giving traditions of Latinx and Hispanic individuals. The Spanish word used by researchers to describe the traditionally collectivistic Latinx family culture is *familismo*, (familism in English). "*Familismo* is one culturally grounded way of valuing family that emphasizes an ideal for family relationships to be warm, close, and supportive and that family be prioritized over self" (Campos et al., 2014). Piña-Watson and colleagues (2019) published research that confirms higher levels of famislismo values are beneficial to a person's mental health when in good standing with their family. However, unmet familismo expectations due to a toxic or nonexistent relationship can have negative effects on mental health.

A traditional Latinx family also adheres to strict gender roles which can be detrimental to someone who does not identify with the gender assigned to them at birth. Nuñez and colleagues, (2016), published an article that further explains traditional gender roles in Latinx families and their effects on mental health. *Marianismo* are the traditional values Latinx women hold. A woman who adheres to a marianismo lifestyle is virtuous, she is strong in her spiritual faith and is highly respected by her family. However, she must be subordinate to others, and self-silencing. Expectations of women are extremely different than those of men, *machismo* are the traditional values Latinx men hold. Machismo men tend to be more chauvinistic, dominant over others, aggressive, but not allowed to show emotions. Both traditional gender roles can be beneficial in understanding Latinx family dynamics and an individual client's beliefs about themselves but can be the source of many mental health problems.

Client Gifts from Latinx Women

Latina women who align with the traditional marianismo values tend to be givers. They were thought to be kind and strong but tend to avoid disagreeing with others so as not to cause problems, especially with men. A Latina may come to

counseling because she feels pressured to sacrifice her time and energy to appear perfect and care for everyone else (Campos et al., 2014). As a counselor, it is vital for these clients to feel seen and heard. They might rarely feel safe enough to speak their mind without being viewed as loud or selfish. Learning appropriate self-care would be the recommended priority with this type of client. Each theory has different ways of approaching self-care with clients, but no matter what theory a counselor chooses to use they must understand that marianismo values cannot be de-programed quickly. When all someone has ever known is to put themselves last, it will be extremely difficult to start putting themselves first. But how does this affect why they give gifts?

A Latina woman who aligns with traditional marianismo values might give their counselor a gift because she is putting the counselor first and is trying to earn their respect. Gifts given with these motives are inappropriate to accept because that acceptance perpetuates their idea of earning the right to be seen. Clients should feel seen and respected throughout the entire therapeutic relationship and not feel as though they have to earn that respect from their counselor. Especially if that client is used to making themselves smaller for the convenience of others. These gifts will most likely be something the counselor likes or needs, something that reflects who the counselor is rather than who the client is. However, a counselor will only be able to know if the gift is an attempt to earn space by having a conversation with their client about their intentions. These clients may not initially realize their motive for giving the gift, but through an honest, therapeutic conversation the counselor will be able to help both themselves and the client come to a better understanding. This conversation could also bring new insight to the client about how they view themselves in relationships.

On the other hand, it is appropriate for a counselor to accept a gift from a client if they are giving it to share a piece of themselves. These gifts are saying, “you hear me, so I will use this gift as another language for you to listen to and understand me further.” These gifts will most likely reflect a piece of who the client is. Similar to Asian-American clients, these gifts could be food from their culture, handmade gifts or something that reflects the client’s personal style. As previously stated, it is not safe for a counselor to assume the client’s motives strictly based on the gift itself. There should always be a conversation that allows the client an opportunity to explore their own reasons for giving the gift.

Client Gifts from Latino Men

Latino men who align with the traditional machismo values tend to believe they are not allowed to talk about certain emotions. They were taught to be dominant, aggressive, and not to show weakness. Due to this way of thinking, many Latino men do not believe therapy would help them, so they do not go. Due to the lack of Latino men in therapy, there is a lack of research on the dynamics between them and counselors. The current article is not able to confidently assume why most Latinx

men go to therapy. However, understanding the values of traditional machismo does help counselors better understand their gift-giving motivations.

Latino men who do give their counselor a gift most likely do so as a sign of respect. Respect is a major factor in traditional Latino values and is one of the emotions men believe is acceptable for them to show. If these clients are giving their counselor a gift to show their respect, then the gift is most likely appropriate to accept. However, if they are giving the gift to *earn* the counselors respect, there needs to be further exploration just like when Latina women give gifts for a similar reason.

Gifts from Nonbinary Latinx People

There is even less research on nonbinary Latinx people in a counseling setting than Latinos and Latinas, making recommendations for the current article extremely difficult. This is an area of research that needs to be studied further. One thing that is important to highlight is, *espiritismo*, the importance of religion and spirituality in traditional Latinx culture (Nuñez et al., 2016). The expectation to uphold the family's religious beliefs can leave a nonbinary person feeling unwanted or unaccepted in their own culture. This can lead to many mental health problems and should be considered as a factor when writing their treatment plan. However, the counselor should not assume espiritismo has an impact on the client's mental health. Instead, counselors should allow each client to tell their own story and not assume what their life is like based on these generalizations. Once again, honest communication is key in the conversation about why this client is giving their counselor a gift.

Counselors' Potential Motivations

The motivations behind accepting client gifts will vary from counselor to counselor and from client to client. However, every counselor should attempt to recognize these motivations so they can set them aside and focus on what is best for their client. In order to do this consistently the counselor must work on understanding who they are and what biases and stereotypes they have. Having biases and stereotypes is not a good or bad thing because they serve an evolutionary function of categorizing overwhelming amounts of information into easier to comprehend generalizations (Zeigler-Hill et al., 2015). Everyone has them no matter how in tune with the world they are. The goal is to know oneself well enough to recognize present biases and actively prevent them from interfering with a one's work. Having therapy sessions even as a counselor is the most effective way to stay in tune with oneself and work on recognizing biases and motivations. No matter the counselor's motivations, the decision to accept or decline a gift should always be decided based on what is best for the client.

Best Practices

Findings from Hahn (1998) suggest relational approaches, such as the *intersubjective approach*, to be best practices when accepting or declining a client's gift. Relational approaches allow the client to engage in honest conversation about their intentions so that the therapist can avoid making assumptions. The intersubjective approach is defined as, "an attitude that consistently seeks to comprehend the meaning of a patient's expression from a perspective within, rather than outside, the patient's own subjective frame of reference" (Stolorow, 1994, p. 44). When building a relationship, each person influences the characteristics of the relationship with their personal views (Markley et al., 2020). These differing points of view then interact with one another to create a unique, subjective relationship experience that provides crucial insight about the characteristics of each individual. An intersubjective approach can complement most theoretical perspectives that a counselor might operate from. Understanding that the client's perspective is different from the counselor's and having a conversation with the client about how these perspectives intersect, is the foundation of this approach.

One of the theories that is supported by research to be effective is Narrative Therapy, which is heavily driven by the intersubjective approach. Lopes and colleagues (2014) did a study comparing narrative therapy to Cognitive Behavioral Therapy (CBT) in clients with depression and found positive results. Haws (2021) agreed that narrative therapy was effective but wanted to further explore its impact on multicultural clients. Their study used the Tree of Life, a common narrative therapy technique, with multicultural clients then assessed whether the clients and counselors found it effective. In the results, Haws explained that both counselors and their clients found this narrative therapy technique extremely effective and would recommend continuing to use this technique with others. Because narrative therapy is fairly new there needs to be more research but so far it appears to be an effective approach with multicultural clients.

Conclusion

The current article found that there are many factors that play a part in whether a counselor should accept or decline a client's gift. The factor most important to implement is the conversation that the counselor has with their client about the gift. Although this article gave insight into some of the potential factors for Asian-American and Latinx client gifts, a counselor should not make assumptions based on these generalizations. An effective way to encourage a client to tell their own story is to use an intersubjective approach such as narrative therapy.

In the future, research on theory-specific techniques for accepting or declining gifts from culturally diverse clients would give counselors even more guidance on supporting their clients, especially if they do not utilize narrative therapy regularly.

Additionally, research on the best practices regarding counseling a non-gender conforming person - both from the cultures mentioned in this article and other cultures, as well - is especially important. The intended takeaway from this article is that counselors would benefit from giving their clients space to tell their own cultural story and utilizing this information to make effective decisions around gift-giving.

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Treating Traumatic Memories: A Comparative Study of the Effectiveness of EMDR and Constructed Awareness

Tyler Orr
Oliver McMahan
Debra Gladden

Constructed Awareness Institute
Pentecostal Theological Seminary
Lee University

This comparative study evaluated the effectiveness of a recently developed approach to therapy called Constructed Awareness (CA) compared to Eye Movement Desensitization and Reprocessing (EMDR) for clients who experienced trauma symptoms resulting from memories of at least one traumatic event. Thirty (n = 30) volunteer subjects were randomly assigned to a group that received CA treatment and a group that received EMDR treatment. Investigators met with each participant for three sessions and took three measures (pretest and posttest). The Trauma Symptom Checklist-40 (TSC-40) was used to measure trauma symptoms, the Central Sensitization Inventory (CSI) was used to measure central sensitization, and the Subjective Unit of Disturbance Scale (SUDS) was used to measure participants' disturbance before and after processing a memory. Mann-Whitney U tests were used to analyze the differences between the two groups. The data provided statistical significance that CA was more effective than EMDR at reducing trauma symptoms on the TSC-40, sensitization on the CSI, and subjective disturbance on the SUDS.

Constructed Awareness

Reexperiencing intrusive and distressing memories of traumatic events is a hallmark symptom of post-traumatic stress disorder (PTSD). The American Psychiatric Association (APA, 1980) introduced PTSD in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III). Since then, various therapeutic models have emerged to treat traumatic memories, perhaps the most well-known being Eye Movement Desensitization and Reprocessing (EMDR) (Shapiro, 2017). In this study, we introduce a recently developed therapeutic model called Constructed Awareness (CA), which was derived from the

lead author's experience as an EMDR clinician, consultant, and trainer. This comparative study aims to test the effectiveness of CA versus EMDR for clients who experience trauma symptoms (i.e., flashbacks, dissociation, anxiety, depression, intrusive thoughts, sleep disturbances, chronic pain, etc.) resulting from memories of at least one traumatic event.

In 1987, Francine Shapiro (2017) made her initial observations that would lead to the creation of EMDR after realizing that eye movements decreased the negative emotions she experienced when recalling distressing memories. The Adaptive Information Processing (AIP) model provides the theoretical basis of EMDR, positing that most pathology results from unprocessed, dysfunctionally stored memories. EMDR processing has been shown to facilitate spontaneous access to other memory networks containing adaptive information, which leads to integrating new learning and resolving symptoms. Shapiro (2017) stated that EMDR could treat pathology across the clinical spectrum. This claim is confirmed by literature that supports EMDR as an effective treatment to alleviate mental health conditions associated with traumatic memories, such as anxiety, depression, bipolar disorder, addiction, and obsessive-compulsive disorder (Gauhar, 2016; Hase et al., 2017; Logsdon et al., 2023).

EMDR treatment consists of eight phases (Shapiro, 2017) and differs from other trauma therapies by using bilateral dual attention stimuli (DAS), i.e., eye movements, tapping, or tones (Shapiro, 2017). Research has indicated a direct effect of DAS on working memory (van den Hout & Engelhard, 2012) and brain connectivity (Nieuwenhuis et al., 2013). DAS appears to titrate disturbance and enhance the processing of disturbing memories (Shapiro, 2017).

CA is a resource- and process-oriented treatment for trauma and other mental health conditions. It relies on three foundational principles: 1) Bringing awareness to a client's experience changes their experience (Schuman-Olivier et al., 2020). Instead of relying on willpower to overcome emotional states, CA relies solely on awareness to bring about change. 2) The human experience is comprised of three Building Blocks: thoughts, sensations, and external senses. Improving awareness of these Building Blocks improves how clients regulate themselves and connect with the world. 3) Most clients naturally orient their awareness more strongly to one of the three Building Blocks. The Building Block they rely on the most determines their orientation. According to CA, “orientation” is defined as how a client uses the three Building Blocks to direct their attention, connect with others, and regulate their emotions.

The lead author, a certified EMDR therapist and EMDR International Association (EMDRIA) approved consultant, first witnessed clients orienting to specific Building Blocks while doing EMDR in his private practice in 2017. The most common phrase used by EMDR therapists is “What are you noticing now?” The lead author noticed that some clients answered that

question mostly with thoughts. He realized these clients were Mentally Oriented, meaning they rely on logic and reason to regulate their emotions and prefer to connect with others intellectually. He observed that other clients were more Externally Oriented. These clients replied by saying what they thought he wanted them to say or edited themselves to ensure he was not uncomfortable with their response. In life, Externally Oriented clients rely on external factors like people, substances, and information to regulate themselves. When upset, they will likely organize and clean their surroundings, fawn, or turn to others for advice. They tend to connect with others by caring for them or adapting to fit in. Other clients would cry, shake, and move their bodies cathartically. The lead author saw that these individuals were Sensation Oriented. These clients rely on their bodies to regulate themselves and tend to connect with others by touching or sharing space. They are prone to express themselves more physically with strong emotional responses because they have a greater capacity to feel than other orientations.

This discovery revealed that individuals tended to rely more strongly on one part of their experience and less on the other parts when asked what they were noticing. The lead author wondered what would happen if he returned to the history-taking phase to understand how clients are oriented and the resourcing phase to improve awareness of the Building Blocks that were less developed. Would this improve history-taking and resourcing? Would this improve reprocessing in phases 3-7? As he experimented and developed the model that would become CA from 2017-2020 with approximately 200 private-practice clients, he found that clients processed more safely and efficiently and gave more robust responses to the question "What are you noticing now?" when they could connect with all parts of themselves. This type of history-taking and resourcing was initially intended to address the problems the lead author saw with EMDR Phases 1 and 2 but eventually led to the development of a new approach to therapy that moved away from the definition and tenets of EMDR.

CA's organization of experience is informed by the theory of constructed emotion (Barrett, 2017a, 2017b), which breaks away from classical theories of emotion (Darwin, 1872; Ekman & Friesen, 2003) by proposing that the brain predicts and constructs experiences of emotion as needed based on internal and external stimuli. CA incorporates Barrett's theory by defining *emotion* as experiences that arise in the moment as thoughts, sensations, and external senses combine. CA views emotional words that are traditionally used to understand emotions as concepts that merely describe the collective experience of the three Building Blocks. Therefore, CA clinicians do not rely on emotional words to understand emotion. Rather, they explore the Building Blocks that construct them.

The CA treatment model consists of two phases, i.e., Resourcing Phase (similar to EMDR phases 1 and 2) and Reconstructing Phase (similar to EMDR phases 3-7). In the Resourcing Phase, counselors help clients understand how their

reality is constructed by the three Building Blocks and identify how the client is oriented. Understanding a client's orientation helps counselors determine which resources best meet the client's needs. For example, if a client is Externally Oriented, the counselor would likely focus on resources that bolster awareness of their body sensations and thoughts (the Building Blocks that are less developed), so the client can learn to look inward instead of exclusively looking outward for clues on navigating life. As a result, they learn to trust themselves and self-regulate without solely relying on external factors. The Resourcing Phase is taught in the level one CA training program.

In the Resourcing Phase, clients also learn how to shift awareness between the three Building Blocks. This style of shifting focus is referred to as "tuning"—a technique unique to CA derived from an aspect of mindfulness known as the "self-regulation of attention" (Bishop et al., 2004). Tuning is defined as a systematic practice of self-regulation of attention that helps clients regulate and improve self-awareness of all three Building Blocks by intentionally shifting their attention from their mind to their sensations and their external senses. An example would be a client noticing details about a mental image, then shifting awareness to a sensation in their body or an object in their environment.

Tuning shares similarities with Siegel's (2009) concept of "internal attunement," which he defines as "the linkage of differentiated elements of a system that leads to the flexible, adaptive, and coherent flow of energy and information in the brain, the mind, and relationships" (p. 137). Tuning awareness between the Building Blocks acts as a means to link the differentiated elements that lead to a balanced state known in CA as being "in tune."

The Reconstructing Phase focuses on processing disturbing memories and is taught in the level two CA training program. CA clinicians guide clients through a scripted process called Memory Reconstructing, which relies on tuning to desensitize disturbing material. Memory Reconstructing is informed by mindfulness (Chen et al., 2021; Kabat-Zinn, 2013; Siegel, 2010) and memory reconsolidation (Alberini et al., 2013; Nader, 2013).

Whereas EMDR relies on DAS to initiate change during processing (Shapiro, 2017), CA utilizes tuning to guide the process of Reconstructing. The lead author found that the EMDR question, "What are you noticing now?" was overwhelming for many clients. He theorized that the question was too broad. The unlimited potential for what could be noticed led some clients to dissociate or become hyperaroused. Instead of asking the broad question, "What are you noticing now?" CA practitioners make this task more tenable by narrowing the scope of awareness, i.e., asking for details about specific elements of their experience. The counselor may ask, "What colors do you see when you look at the picture in your mind?" Next, they could tune to an object in the environment by asking something like, "Do you notice anything in this room that is the same color?" The counselor could

then invite the client to notice a sensation arising in their body and ask for specific details like its temperature and weight. This restricting and shifting of attention titrates the process and helps the client remain present and regulated.

Rationale for Current Study

CA Resourcing and Reconstructing were developed through the lead author's clinical observations in his private practice in which clients reported and demonstrated reductions in trauma symptoms. However, no empirical evidence has been published to support the CA model. This study's rationale emerged from the need for research regarding the effectiveness of CA as a treatment for trauma and trauma-related symptoms. This comparative study aims to clinically test the efficacy of the novel CA model as a treatment for clients who experience trauma symptoms resulting from memories of at least one traumatic event.

In this study, we explore three research questions. 1) How effective is the CA model compared to EMDR at reducing trauma symptoms resulting from memories of at least one traumatic event? 2) How effective is the CA model compared to EMDR at reducing central sensitization syndromes resulting from memories of at least one traumatic event? 3) How effective is the CA model compared to EMDR at desensitizing disturbance associated with traumatic memories?

Method

This study used a between-groups design (Sheperis, 2016) to compare CA and EMDR's effectiveness at treating trauma-related and central sensitization symptoms. Thirty-six volunteer participants suffering from traumatic memories were randomly divided, using a random numbers table (Spence et al., 1990), into a CA Group, which received CA treatment, and an EMDR Group, which received EMDR treatment. Investigators met with each participant for three sessions, and data were collected over the span of six months. Data was collected using Google forms (Rayhan, 2013). In Session 1, investigators built rapport with the participants and offered psychoeducation about the treatment they were administering. In Session 2, participants learned resources specific to the group they were randomly assigned. In Session 3, the investigators processed one traumatic memory. The investigators and participants knew the randomized group assignments, making the study unblinded.

Each participant was assessed before Session 1 (pretest) to establish a baseline and after Session 3 (posttest) to measure changes in symptomology. Also, the Subjective Unit of Disturbance Scale (SUDS) was used at the beginning and end of Session 3 to measure each participant's levels of disturbance before and after processing.

CA was not administered to the EMDR Group participants after undergoing EMDR treatment because EMDR is considered a clinically effective approach to processing trauma. Also, participant inclusion required that all participants work with

a therapist at the time of the study. This criterion ensured that participants could process any positive or adverse experiences related to the study with their therapist after termination.

Participants

Data was collected from 38 counseling clients who were referred to the study by local therapists and agencies. Two participants were eliminated from the total sample based on the following exclusion criteria: 1) unable to give informed consent, 2) under the age of 18, 3) unable to speak, read, and write English, 4) not currently seeing a therapist, 5) not given a diagnosis by their referring clinician, 6) does not have a longstanding (i.e., six or more months) traumatic memory that is easily identified before participation in the study, 7) does not experience related symptomatology (i.e., flashbacks, dissociation, anxiety, depression, intrusive thoughts, sleep disturbances, intimacy problems, chronic pain, health conditions, etc.), and 8) have never received CA or EMDR. The remaining 36-subject sample was then randomly assigned to two groups, i.e., the CA Group and the EMDR Group. Eighteen participants were assigned to the CA Group and 18 to the EMDR Group. Of the sample of 36, 30 completed two rounds of measures (pretest and posttest). The six who did not complete the two measures (three from the CA group and 3 from the EMDR group) dropped out after the pretest.

Of the 30 participants who completed the study, 28 self-identified as white/Caucasian, and two as Hispanic/Latino. Twenty-one self-identified as female, seven as male, one as transgender, and one preferred not to say. Seven were single, 20 were married, one was in a domestic partnership, one was divorced, and one was widowed. We also received information from the participants' therapists regarding primary and secondary diagnoses and their length of time in therapy. Two participants were diagnosed with a neurodevelopmental disorder, four with a depressive disorder, nine with an anxiety disorder, one with obsessive-compulsive disorder, 19 with a trauma- and stressor-related disorder, one with somatic symptom disorder, one with bipolar disorder, and one with a substance-related and addictive disorder. The length of therapy ranged from 1 month to 44 months, with a mean of 12.43 months.

Investigators

Eight licensed clinicians voluntarily served as investigators in this study. Four were licensed professional counselors (LPC), one was a licensed clinical mental health counselor (LCMHC), and three were licensed clinical social workers (LCSW). The clinician inclusion criteria included 1) being licensed in their state, 2) having completed an EMDRIA-Approved EMDR Basic Training program, and 3) having completed CA levels one and two training programs. Six investigators were certified in EMDR,

and two were EMDRIA-approved consultants. Four were certified Constructed Awareness clinicians (CCAC). Seven investigators self-identified as female and one as male. Seven identified as White, and one as African American.

Setting

Each participant received three free 50-minute sessions regardless of the group to which they were assigned. This resulted in 90 total sessions administered among the eight investigators. 10 sessions were conducted in person in private practice settings, and 80 were conducted virtually on secure telehealth platforms.

Procedure

Before arriving at the initial appointment, all patients completed the pretest, which consisted of signing informed consent, providing basic demographic information, and self-administering the Trauma Symptom Checklist-40 (TSC-40) and the Central Sensitization Inventory (CSI). Also, participants' referring therapists were asked to help them identify a memory associated with their trauma symptoms. After Session 3, participants completed the posttest that consisted of the TSC-40 and CSI.

CA Group Procedure

CA Education. In session 1, participants were taught basic concepts of CA. They learned about the three principles of CA, the theory of constructed emotion, and orientation.

CA Resources. In Session 2, subjects in the CA Group practiced four resource activities unique to CA. "Talking With Your Hands" was taught to help participants develop a deeper awareness of sensations and vocabulary to describe sensations more accurately. Participants also learned specific resources for observing thoughts and external stimuli. These three resources were used to show participants how to bring awareness to all three building blocks. The session concluded with participants practicing tuning.

CA Reconstructing. In Session 3, Investigators guided participants through an eight-step process called Memory Reconstructing. Participants were asked to bring up the traumatic memory as briefly as possible to activate the memory but not overwhelm them (Step 1). Investigators then invited participants to practice external awareness to regulate and ground them in the moment so they could begin the next step in a regulated state (Step 2). In Step 3, investigators invited participants to recall the memory and identify a single image. Investigators then asked subjects to notice how their bodies responded to the picture (Step 4). In Step 5, investigators invited participants to hold the image together with the sensations and noticed if any words

came to mind—words about themselves, others, or the world. These statements are referred to in CA as “actual affirmations.” After Step 5, investigators asked participants to rate their disturbance using the SUDS.

For all CA participants, most of Session 3 took place in Step 6, which consists of tuning back and forth between the three building blocks. Investigators used “tuning techniques,” which are adaptions of CA resources that accentuate the process and keep the participant present. Currently, 38 Tuning Techniques are taught to CA practitioners in the level two training program. Step 7 marked the completion of the Reconstructing process by achieving what is referred to as "Constructing Mind Body Agreement." By this, we mean participants could recall the picture and notice no bodily disturbance. Investigators ended the session with Step 8 by asking participants to connect with their bodies and external environment to gauge if they were present and regulated before leaving. At the end of the session, investigators checked the participants' SUDS scores to compare their disturbance levels to the EMDR Group after processing.

EMDR Group Procedure

EMDR Education. In session 1, subjects learned about the AIP model, the three prongs of EMDR (past, present, and future), the eight phases of EMDR, and DAS (Shapiro, 2017).

EMDR Resources. In Session 2, participants practiced four EMDR resources. Since the founding of EMDRIA in 1995, EMDR therapists have adapted and integrated resources from other therapeutic approaches (Forgash & Knipe, 2012; Schwartz & Maiberger, 2018). We felt it necessary to hold to the fidelity of Shapiro's approach by only using resources detailed in her book *Eye Movement Desensitization and Reprocessing (EMDR) Therapy: Basic Principles, Protocols, and Procedures* (2017). These resources include “calm/safe place,” “light stream,” “butterfly hug,” and “breathing shift.”

EMDR Desensitizing and Reprocessing. In Session 3, investigators used phases 3-7 of EMDR to process one memory. Phase 3 is known as the Assessment Phase, where the memory is activated. In phase 4, investigators used DAS while participants noticed what arose in their experience. After each set of DAS, investigators requested feedback by asking, “What are you noticing now?” Participants responded, and investigators continued the process by saying, “Go with that.” This process repeated until the participants rated their SUDS as 0 or they ran out of time. In phase 5 (Installation Phase), participants reevaluated their PC and VOC from phase 3. DAS continued until the participants' VOC reached 7 or they ran out of time. In phase 6 (Body Scan), investigators used DAS to resolve somatic disturbance. Phase 7 (Closure) concluded the session by allowing participants time to share what they learned and practice resources if needed.

Measures

Trauma Symptom Checklist-40 (TSC-40)

The TSC-40, a research assessment developed by John Briere and Marsha Runtz (1989), was used in this study to measure participants' trauma symptoms. The TSC-40 was not designed to inform PTSD diagnosis but merely to measure symptoms associated with trauma. The TSC-40 assesses 40 symptoms of trauma and other symptom clusters. Participants rated the severity of each symptom using a four-point Likert scale ranging from (0 = never; 3 = often), which yields a total range of 0 to 120 points. Studies using the TSC-40 indicate subscale alphas ranging from .66 to .77, with alphas for the full scale averaging from .89 to .91 (Briere & Runtz, 1989).

Central Sensitization Inventory (CSI)

The CSI, a 25-question self-report assessment, was used to identify Central Sensitization Syndromes (CSS). Neblett et al. (2013) define CSS as a group of nonspecific medical disorders that may result from Central Sensitization. Neblett et al. describe Central Sensitization as dysregulation of the central nervous system, which can cause neuronal dysregulation and hypersensitivity to noxious and non-noxious stimuli. These syndromes can include fibromyalgia, chronic fatigue, tension headaches, migraines, irritable bowel, chemical sensitivities, and PTSD (Yunus, 2008), conditions that have been linked to past trauma (Mansiz-Kaplan, 2020). Mayer et al. (2011) demonstrated strong psychometric properties (test-retest reliability = 0.817; Cronbach's alpha = 0.879) of the CSI in a cohort of normative subjects.

Subjective Unit of Disturbance Scale (SUDS)

We assessed the participants' levels of disturbance regarding their traumatic memories using the SUDS. SUDS is an 11-point (0 = no disturbance; 10 = highest disturbance possible) scale originally developed by Joseph Wolpe (1982). Francine Shapiro (1989) used the SUDS to measure subjects' disturbance in her original paper on the effectiveness of her approach, which was initially called EMD. Since then, SUDS has become a foundational part of the EMDR protocol, which assesses emotional disturbance in phases 3 and 4 of EMDR. It has been confirmed to have significant psychometric properties with evidence of convergent and discriminant validity, concurrent validity, and predictive validity when compared to Beck Depression Inventory, State and Trait Anxiety Inventory, and Clinical Global Impression-Change Scale (Kim et al., 2008). The CA protocol does not use SUDS. However, we added two SUDS to the CA protocol for this study to create a comparable measure.

Results

Three assessments were used (CSI, TSC-40, and SUDS) on two groups of subjects. The EMDR Group of 18 participants was treated with EMDR. The CA Group of 18 participants was treated with CA. Both groups had three subjects leave

the study after the initial pretest, for an attrition rate of 16.67%, resulting in sample sizes of 15 in each group. The pretest scores of the six participants who dropped out were removed from the dataset.

Given that the data collected were ordinal and the sample size was small, non-parametric tests were more appropriate than parametric tests such as t-tests. Mann-Whitney U tests were used to analyze the differences between the two groups in this study. Medians for both groups were determined for the pretest (baseline) and posttest (after treatment).

Regarding the TSC-40, CSI, and SUDS, a reduced gain score indicated a reduction in trauma symptomology. For the EMDR Group, the TSC-40 pretest yielded a median score of 47 and a median posttest score of 31. For the CA Group, the TSC-40 pretest yielded a median score of 50 and a median posttest score of 23. These results are summarized in Figure 1.

For the EMDR Group, the CSI pretest gave a median score of 42 and a median posttest score of 38. For the CA Group, the CSI pretest gave a median score of 49 and a median posttest score of 25. These results are summarized in Figure 1, and the Mann-Whitney U test results are summarized in Table 1.

At a significance level of 0.05, there was enough statistical evidence from the pretest to the posttest to reject the null hypothesis that there was no difference in the medians before the treatment and after the treatment in favor of concluding that EMDR and CA were both effective at reducing the median for the TSC-40. However, the p-value for the CA method (0.0009) was much smaller than the EMDR method (0.01928), and the results would hold for CA if the significance level were decreased to 0.01, while the results would not hold for EMDR. At a significance level of 0.05, there was enough statistical evidence to conclude that the CA method effectively reduced the median for the CSI test. Whereas there was not enough statistical evidence to conclude that the EMDR method was effective at reducing the median for the CSI test. Therefore, this data provided statistical evidence that the CA method was more effective at reducing the median scores on both the CSI and the TSC-40 tests from the pretest to the posttest.

Additionally, a SUDS pretest and posttest were given during Session 3 to measure participants' disturbance before and after processing their memory. For the EMDR group, there were 15 subjects. For the CA group, one subject did not take the assessment, resulting in a sample size of 14. For the EMDR Group, the pretest yielded a median of 7, while the posttest resulted in a median of 2. For the CA Group, the pretest resulted in a median of 8, while the posttest yielded a median of 0. As the p-values were very low in both cases, p-value<0.00001, there is enough statistical evidence to conclude that both methods were effective. These results are summarized in Figure 2.

Discussion

This comparative study aimed to introduce CA and test its effectiveness as a treatment for symptoms associated with traumatic memories by comparing it to EMDR. We set out to answer three research questions: 1) How effective is the CA model compared to EMDR at reducing trauma symptoms resulting from memories of at least one traumatic event? 2) How effective is the CA model compared to EMDR at reducing central sensitization syndromes resulting from memories of at least one traumatic event? 3) How effective is the CA model compared to EMDR at desensitizing disturbance associated with traumatic memories?

The data from this study show that CA and EMDR were both effective at treating trauma (measured by the TSC-40) and central sensitization (measured by the CSI) over the course of treatment. Also, the data revealed that CA and EMDR both effectively desensitized disturbance associated with traumatic memories in one session (measured by the SUDS). However, the gain effect for CA was more significant than EMDR in every measure. Also, participants in the CA group began with higher levels of trauma and central sensitization symptoms and concluded treatment with lower levels than EMDR. The effectiveness of CA over EMDR, demonstrated through more significant reductions in trauma symptoms and central sensitization symptoms from the pretest to posttest, indicates that CA Reconstructing was superior to EMDR Reprocessing. These results effectively answered the first two research questions.

While EMDR and CA produced significant reductions in SUDS scores from the pretest to the posttest, the CA reduction was more significant. EMDR resulted in a reduction of 5 points (7 to 2). CA resulted in a reduction of 8 (8 to 0). The fact that CA resulted in a final score of 0 further demonstrates the effectiveness of CA Reconstructing in one session over EMDR Reprocessing. These results effectively address the third research question.

In conclusion, CA and EMDR share similarities. They are both resource- and process-oriented approaches to therapy. Though CA has roots in EMDR, its development steered away from the theories and tenets of EMDR in fundamental ways. EMDR utilizes the AIP model, whereas CA employs the theory of constructed emotion and memory reconsolidation as its theoretical underpinnings. EMDR uses DAS to stimulate change, whereas CA uses tuning. Likewise, the results between groups were similar in that they were both found to be effective but different in that CA was found to be significantly more effective in reducing the effects of trauma symptoms, central sensitization, and SUDS.

Limitations and Future Research Directions

There were limitations to the present study. First, we collected demographic information that included race, gender, and sexuality. However, the data did not represent a normative sample. Thirty-four participants self-identified as

white/Caucasian, and two as Hispanic/Latino. Twenty-five self-identified as female, eight as male, one as transgender, and two preferred not to say. Therefore, we did not have adequate data to analyze these factors.

Second, the study used a sample size of $n = 30$, reducing the power and necessitating a switch from parametric to nonparametric tests. The study was conducted with counseling clients in clinical settings with licensed therapists who volunteered their time. The investigators selected for the study were trained in EMDR and CA. EMDR is well established, whereas CA is relatively new, meaning there are far fewer CA therapists. We were limited by the small number of counselors trained in both EMDR and CA who would donate time to the study, which limited the number of participants we could admit. In the future, more counselors will be trained in CA, making it possible to do CA research on a larger scale. Though the results of this study were promising, further research is warranted with sufficient samples to analyze parametric dynamics.

Third, the participants represented a diversity of diagnoses. However, our sample size did not yield significance regarding CA's effectiveness at treating specific diagnoses. In light of the present study's positive results, we propose further studies exploring CA's effectiveness on specific conditions and special populations, such as military trauma, complex trauma, and sexual trauma.

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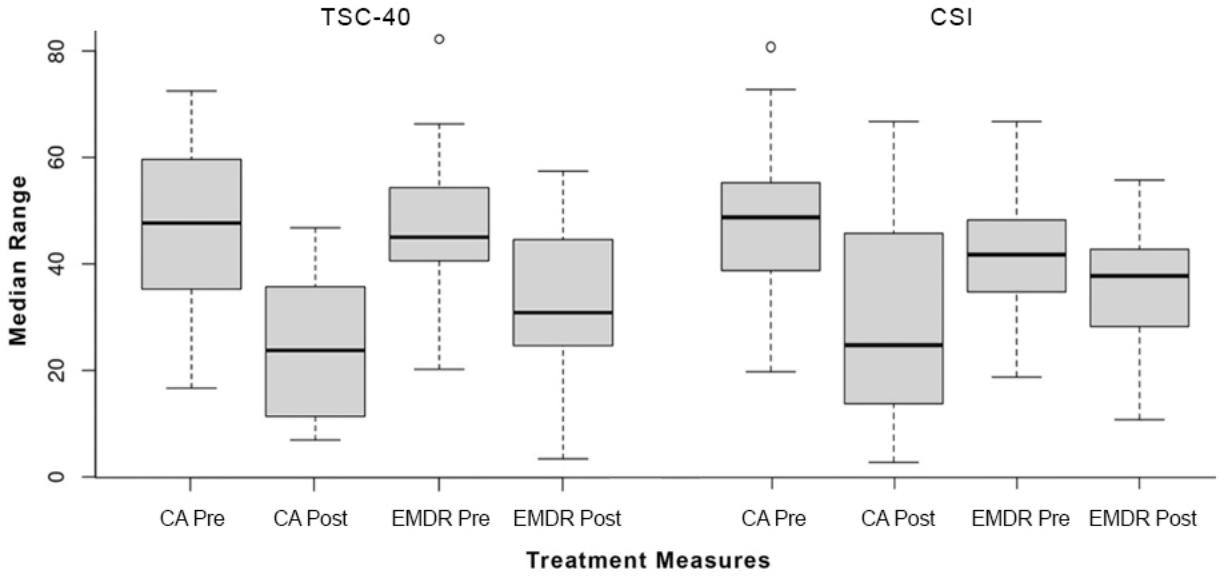
Appendix

Figure 1

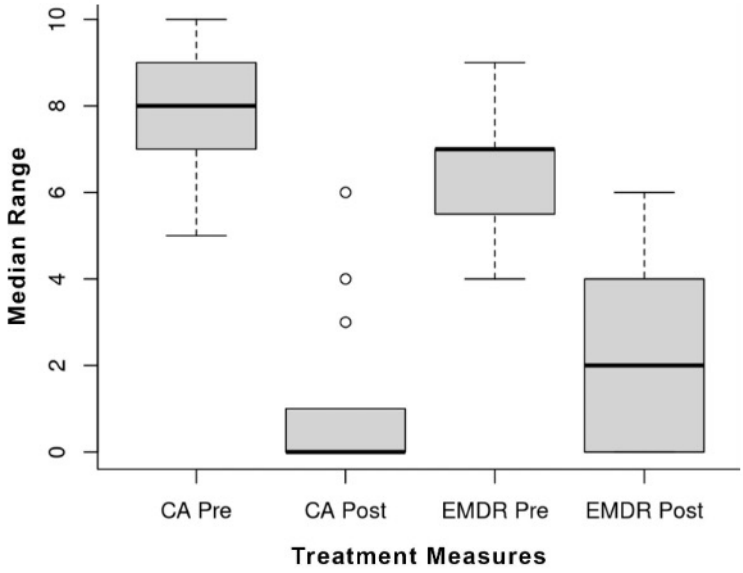
TSC-40 and CSI boxplots of CA and EMDR Groups



Note. N = 30 (*n* = 15 for each group)

Figure 2

SUDS boxplots for EMDR and CA Groups



Note. N = 30 with 14 for the CA Group and 15 for the EMDR Group

Table 1

Mann-Whitney U test results

	Pretest versus posttest					
	EMDR			CA		
	CSI	TSC-40	SUDS	CSI	TSC-40	SUDS
U	86	55	13	57	32	2
p-value	0.28014	0.01928*	0.00001**	0.0226*	0.0009**	0.00001**

*Note: n = 30 with 15 for each group (CA and EMDR) for CSI and TSC-40; and 14 for CA Group, and 15 for EMDR group for SUDS. * indicates significance at the 0.05 level; ** indicates significance at the 0.01 level.*

Examining the Efficacy of Neurofeedback for ACE-exposed Adolescents in Residential Treatment

Eraina Schauss, Haley Zettler, Debra Bartelli, Surabhi Naik, Kiersten Hawes, Paige Dixon, Frances Ellmo, Pam Cogdal, Steven West, & Greg Horn

University of Memphis
University of North Texas

This study examined the application of neurofeedback therapy for ACE-exposed adolescents in residential treatment for mental health and trauma-related sequalae. The results revealed more statistically significant positive changes in impulsivity, self-control, emotion regulation and sleep patterns among participants who received neurofeedback therapy than among those who received treatment as usual. The findings provide preliminary support for the inclusion of neurofeedback as a promising practice for the treatment of trauma-exposed adolescents in residential care. Implications for counselors and future research are discussed.

Treatment

The association between adverse childhood experiences (ACEs) and an array of psychological and physical disorders has been extensively documented (Felitti et al., 1998; Malvaso et al., 2018). For example, higher reported ACE scores have been shown to significantly increase the likelihood of developing negative outcomes such as poor impulse and self-control, poor emotion regulation, increases in dissociative experiences and unhealthy sleep habits (Chapman et al., 2013; Wardell et al., 2016). Research suggests that prolonged exposure to adverse childhood experiences compromises the ability to regulate emotions (Teicher et al., 2016). Childhood trauma interferes with the critical period of emotional development when early processes of identifying and regulating emotional experiences are being cultivated (Kim & Cicchetti, 2010). Developmental trauma research suggests that abuse and neglect alter subcortical functioning and influence an individual's ability to organize mental/emotional states, as well as psychosomatic integration commonly related with dissociative experiences (Schimmenti, 2017).

Recent studies exploring adverse experiences found that individuals with higher ACE scores are at greater risk for impulsive decision-making, which has been shown to increase the risk for substance abuse disorders (Wardell et al., 2016). Studies of childhood trauma reveal that youth with a high number of ACEs tend to interpret ordinary situations as threatening and respond negatively and impulsively when stressed (Cyders & Smith, 2007). Additionally, there is evidence that ACEs increase the likelihood of sleep problems. Chapman and colleagues (2013) compared individuals who had experienced one ACE to those who had experienced at least five or more ACEs and reported that the latter group had an almost two-fold greater experience of frequent insufficient sleep.

The role of resilience is of particular interest in trauma-exposed youth because it is often viewed as a protective factor or buffer against the negative effects of stress and therefore may help traumatized youth in their coping processes (Beutel et al., 2017; Munoz et al., 2019). Self-regulation refers to the ability to manage one's thoughts and emotions to engage in goal-directed tasks, which involves organizing behavior, impulse control, and problem-solving while maintaining the capability to cope and self-soothe under stress (Heard-Garris et al., 2018). Therefore, engaging in interventions that enhance resilience is optimal when working with adolescents who have experienced ACEs.

Neurofeedback Research

Given the literature connecting ACEs with significant mental health disorders, individualized, neuroscience-informed interventions are in critical need. Neurofeedback is a form of biofeedback that utilizes electroencephalogram (EEG) and operant conditioning to promote brain-wave regulation (Rogel et al., 2020; Schauss et al., 2019; Van Der Kolk et al., 2016). Neurofeedback has been associated with improved memory, sleep, mood, and increases in affect regulation, executive function, sustained attention, and working memory (Van Der Kolk et al., 2016; Zoefel et al., 2011).

Of particular interest is the efficacy of neurofeedback to those exposed to developmental trauma and PTSD. Van Der Kolk et al. (2016) examined the effect of neurofeedback on adults with complex-PTSD who had been resistant to other trauma-focused interventions. Using a randomized wait-list control trial, participants reported statistically significant improvements in affect regulation, abandonment concerns, and tension reduction activities, and over 70% no longer met criteria for PTSD following the intervention (Van Der Kolk et al., 2016). Rogel and colleagues (2020) examined the effects of neurofeedback on 29 children ages six to thirteen who were exposed to chronic developmental trauma. The study yielded positive results including decreases in PTSD symptomology, internalizing problems, externalizing problems, and behavioral and emotional problems.

Purpose

The current study examines pre-and post-differences in emotion regulation, sleep disorders, dissociation, impulsivity, self-control, and reported resilience outcomes for ACE-exposed adolescents in residential treatment who received either 2-Channel, bilateral asymmetry neurofeedback training based on QEEG z scores, or standard of care treatment. Our methods employed a precision medicine approach to treatment through the use of an individualized neurofeedback protocol for each participant. Our specific research questions are as follows: What is the impact of 21 sessions of neurofeedback on: a) self-control, b) impulsivity, c) dissociative experiences, d) sleep patterns, e) emotion regulation, and f) resilience abilities of ACE-exposed adolescents in residential treatment?

Materials and Methods

Recruitment and Design

Participants were recruited from a residential treatment facility in the southeastern United States. Upon admission to the facility, parents or legal guardians were approached by trained study personnel to inquire as to whether they would be interested in having their child participate in a randomized controlled trial assessing the effectiveness of neurofeedback for adolescents with a range of mental health and behavioral symptoms. Once a parent or guardian provided consent, their child was given the opportunity to assent within seven days. Once assented, participants were randomly assigned to either a treatment group or a control group. All participants were nested within a residential treatment facility and received treatment as usual at the facility. Treatment included daily programming, individual therapy, family therapy, group therapy, and trauma-focused behavioral therapy.

Participants were enrolled in the study for nine weeks, meeting with researchers three times weekly. Participant inclusion criteria were as follows: 1) between age 11 and 17, 2) not actively suffering from a psychotic episode, 3) IQ within 2 standard deviations of normal, 4) language ability (i.e., English proficiency), 5) physical and visual ability to interact with neurofeedback equipment, 6) would be a resident of the facility for the length of the intervention, 7) participant is considered non-violent and not at-risk of hurting themselves or study personnel (determined by the treatment facility), and, 8) able and permitted by treatment facility staff to adhere to the research design of the three meetings per week schedule.

Participants

Demographic, substance use, and juvenile justice data were collected via chart abstraction. Thirty-four participants were initially enrolled; however, pre-post analyses consist of the 20 participants that completed the 9-week intervention; 13

participants did not complete the study as they discharged from the facility prior to collection of post-intervention data. One additional participant completed the study, however, due to missing data, they were excluded from analysis.

Study Completers

Table 1 provides the characteristics of the entire sample and study completers. Among participants who completed the study (n=20), 13 (65%) were assigned to the intervention group and 7 (35%) to the control group. In total, most completers (85%) were female, 10% were Black, 60% were White, and 30% reported more than one race. Regarding age, 40% of the completers were between age 11-14 years and 60% were between 15-17 years. Most completers (70%) had a history of substance use, and 50% were reported to have any (prior or current) justice involvement. For study completers, 65% of participants had high ACE scores (ACE score >=4); and the mean ACE score was 4.6 (*SD* = 2.78, Range = 0-10).

Table 1 *Participant*
Demographic Characteristics

Variables	Total Enrolled (n=34)		Intervention (n=13)		Control (n=7)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Race						
Black/African America	5	14.7	1	7.7	1	14.3
White	22	64.7	7	53.8	5	71.4
More Than One Race	7	20.6	5	38.5	1	14.3
Gender						
Female	25	73.5	12	92.3	5	71.4
Male	9	26.5	1	7.7	2	28.6
Age						
11 – 14 years	12	35.3	6	46.2	2	28.6
15 – 18 years	22	64.7	7	53.8	5	71.4
Mean age						
ACE Score						
High	20	58.8	9	69.2	4	57.1
Low	14	41.2	4	30.8	3	42.9
Mean # ACEs	4.06 (SD=2.6)					
Justice Involvement						
No	15	44.1	6	46.2	4	57.1
Yes	19	55.9	7	53.8	3	42.9
Any Substance History						
No	10	29.4	5	38.5	1	14.3
Yes	24	70.6	8	61.5	6	85.7

Measures

Adverse Childhood Experience (ACE) Survey

The ACE instrument is a 10-item questionnaire that has been utilized in numerous clinical settings related to physical and mental health (Chatterjee et al., 2018 Felitti et al., 1998). In the original study by Felitti et al. (1998), 13,494 adults were surveyed about their ACEs in which their scores suggested that higher ACE scores were positively correlated with poor health outcomes. The ACEs instrument has high reliability and validity and has been validated in multiple settings with diverse subjects (Felitti et al., 1998; Ford et al., 2014).

Pittsburg Sleep Quality Index (PSQI)

The PSQI is a widely used assessment tool designed to measure sleep quality and disturbances in psychiatric clinical practice (Buysse et al., 1989). The self-report questionnaire is comprised of 19 items assessing seven components of sleep. The sum of the seven components of sleep scores generates one global score. Buysse et al., (1989) found evidence to support the PSQI in psychiatric clinical settings and research studies as acceptable measures of internal homogeneity, consistency, and validity were found (α =.83). PSQI scores greater than five indicate poor sleep quality.

Difficulties in Emotion Regulation Scale (DERS)

Participant levels of emotion dysregulation were measured using the DERS (Gratz & Roemer, 2004). The DERS is a self-report instrument with 36 items that produces scores for six subscales: impulse control difficulties, difficulty engaging in goal directed behavior, lack of emotional awareness, non-acceptance of emotional responses, limited access to emotion regulation strategies, and lack of emotional clarity. Participants answered each item on a scale of 1 (almost never) to 5 (almost always). Higher scores suggest greater problems with emotion regulation. The DERS has been found to be a reliable measure (α = 0.93).

Grasmick Self-Control Scale (GSCS)

Participant self-control was measured using the GSCS (Grasmick et al., 1993). Scores are provided for the following subscales: temper, simple tasks, risk seeking, impulsivity, physical activities and self-centered. The GSCS is a self-report measure and consists of 24 items. Participants rate items on a 4-point scale from 1 (“strongly disagree”) to 4 (“strongly agree”). Higher score indicates lower reported level of self-control. The GSCS is reported to have good reliability(α = 0.81).

Adolescent Dissociative Experiences (ADES)

The ADES scale was used to assess reported dissociative experiences in participants. The ADES is a self-report questionnaire with 30 items the participant rates on a 10-point scale, with 1 = “Never” and 10 = “Always.” A higher score

indicates higher levels of reported dissociative experiences. The ADES has been found valid (α = .93) and reliable (Spearman-Brown of .92) for a population ages 10-21 (Armstrong et al., 1997).

Brief Resilience Scale (BRS)

The BRS is a widely used 6-question inventory that assesses an individuals' beliefs regarding their ability to cope with stress and bounce back in the face of hardship. Questions are scored on a 5-point Likert scale from Strongly Disagree (1) to Strongly Agree (5) with three questions that are reverse scored. Higher scores indicate greater resilience. Smith et. al. (2008), reported Cronbach's alpha from .80 - .91.

Quantitative Electroencephalogram (QEEG)

All participants received a QEEG brain map prior to intervention. The map was collected for assessment purposes and was used to determine an individualized neurofeedback protocol for treatment group participants. Using a New Mind Technologies (NMT) four-channel amplifier, five minutes of eyes closed and five minutes of eyes open QEEG data were collected consecutively. The QEEG data sites were collected using a serial acquisition method. The files were then uploaded to New Mind Maps, a data analysis system with an algorithm that processed the raw waveform into five standard component bands of high beta, beta, alpha, theta and delta. These bands were further analyzed across five standard neurometric dimensions of magnitude, dominant frequency, coherence, phase, and asymmetry (Soutar, 2017). The New Mind QEEG Map Report System provided an automated QEEG assessment and recommended an individualized neurofeedback protocol that was used for 21 training sessions for each participant in the intervention arm.

Neurofeedback Protocols

Using NMT New Mind Trainer 4 channel amplifier system, 21 sessions of 2- Channel, bilateral asymmetry neurofeedback training based on QEEG z scores was given to participants using the same individualized protocol derived from the QEEG brain map described above (Soutar, 2017). The standard 10-20 site location reference system was implemented for participant sensor placement (Homan et al., 1987). Each of the 10-20 sites on the scalp were calculated through measures taken from five standard neurometric dimensions listed above (John et al., 1988). Determination of deviance is referenced to a normative database that is age regressed (John et al., 1988; Thatcher, 1999) for each neurometric dimension in the distinct site locations. Sites are then rank ordered based on computed deviance scores (Soutar, 2017). The highest-ranking site set is identified in terms of deviance of component band magnitude. Component bands are then enhanced or inhibited based on this

evaluation. The resulting pattern of enhancements or inhibitions in each hemisphere is adjusted based on known standard compensatory responses that occur throughout neurofeedback training (Soutar, 2017).

Procedures

Participants in the treatment group completed psychological assessments (ACE survey, PSQI, SCS, DERS, BRS and ADES) and two QEEG sessions (pre-intervention and post-intervention), as well as 21 neurofeedback sessions. Once a protocol was determined based on results from the pre-intervention QEEG, participants received 21 individualized neurofeedback training sessions. To assess for any reported symptom changes between sessions, participants completed a brief symptom checklist prior to each neurofeedback session. During each neurofeedback therapy session, participants watched a 20-minute video clip (TV show or movie rated PG or less from Netflix). A second QEEG assessment was conducted upon completion of 21 sessions of training in order to compare an individual's trained brain wave activity to their initial brain wave activity. An extensive two-person fidelity checklist was developed to ensure the fidelity for each neurofeedback therapy session.

Control group participants completed the same psychological assessments and two QEEG sessions, but did not receive neurofeedback sessions. Instead, the researchers met with control participants three times weekly and had them complete the same brief symptom checklist completed by the treatment group. Both treatment and control group participants followed the same 9-week timeline.

Statistical Analysis

Paired sample t-tests were performed in control and treatment groups separately to study the mean difference between the pre- and post-treatment. A priori power analysis was performed to estimate sample size required for 0.5 effect size, 80% power and 0.05 significance level (Faul et al., 2007). We found that 34 pairs of samples were needed in each group for performing paired t test (two-tailed) to attain the required power. Given that our study was terminated due to COVID-19 and we were unable to meet the required sample size we were unable to run comparisons between groups.

Results

Within group pre-and post-differences in the observed variables were analyzed separately for treatment and control groups. To investigate the effect of the neurofeedback intervention on our outcome variables, we compared the mean differences between the pre- and post-measures for each scale/subscale in our control (n = 7) and treatment (n = 13) groups separately. We also calculated Pearson's correlation and Cohen's d effect size to understand the strength of the differences in mean between pre- and post-treatment in our control and treatment groups separately. As described by De Winter (2013), the paired sample t-

test is attainable for small sample size if the correlation between the pair is high. Statistical power also improves when the within-pair correlation increases for small samples. De Winter (2013) also elucidated that Type II error could only be avoided if the effect size is large in these samples. Therefore, we performed paired t-tests for highly correlated sets and calculated their Cohen's *d* effect sizes (see Tables 2 and 3).

Control Group Differences

Table 2 reports the mean difference test results for the control group. There was a significant positive change between pre- and post-test for the simple tasks subscale of the GSCS. We observed a significant strong correlation ($r = 0.89$, $p \leq 0.01$) within this pair and demonstrate a significant change (mean diff. = 1.86, $p = 0.03$) with a large effect size of 1.05. We also observed a significant change (mean diff = 3.29, $p = 0.03$) in the Awareness subscale of DERS with a large effect size ($d = 1.08$) and noted weak evidence of a correlation within the pair ($r = 0.72$, $p = 0.07$). Although we observed strong significant within-pair correlations for ADES, the Impulsivity subscale of DERS, and the GSCS, we did not observe a significant change in any of these measures for our control group. There was also no statistically significant change in Resilience, Difficulties in Emotion Regulation Scale, clarity subscale of the DERS, the impulsivity subscale of GSCS, and the PSQI score.

Table 2

Descriptive statistics for control group (n = 7)

Variables	Mean diff.	Std. Deviation	Lower CI	Upper CI	t test	p-value	*r*	*p^*	*d*
BRS	-0.14	2.79	-2.73	2.44	-0.13	0.89	0.5	0.25	0.05
ADES	-16	34.68	-48.07	16.07	-1.22	0.26	0.98	0.001***	0.46
DERS	4.86	13.63	-7.75	17.46	0.94	0.38	0.52	0.23	0.36
IMP-DERS	0.57	2.51	-1.75	2.89	0.60	0.57	0.77	0.04**	0.23
AWR-DERS	3.29	3.04	0.47	6.09	2.86	0.03**	0.72	0.07*	1.08
CLR-DERS	-1	5.03	-5.65	3.65	-0.53	0.62	0.20	0.66	0.20
GSCS	0.43	13.33	-11.90	12.75	0.08	0.93	0.77	0.04**	0.03
IMPU-GSCS	0.29	2.56	-2.08	2.66	0.29	0.78	0.72	0.06*	0.11
SMTA-GSCS	1.86	1.77	0.22	3.50	2.77	0.03**	0.89	0.007***	1.05
PSQI	-2.43	9.20	-10.94	6.08	-0.70	0.51	0.57	0.18	0.26

*** *p-value* ≤ 0.01; ** *p-value* ≤ 0.05; * *p-value* ≤ 0.1

p^ = significance of Pearson's correlation, r = Pearson correlation coefficient, d = Cohen's effect size, BRS = Brief Resilience Scale, ADES= Adolescent Dissociation Experience, DERS= Difficulties in emotion regulation scale, IMP-DERS = Impulse subscale of DERS, AWR-DERS = Awareness subscale of DERS, CLR-DERS = Clarity subscale of DERS, GSCS= Grasmick self-control scale, IMPU_GSCS= Impulsivity subscale of GSCS, SMTA-GSCS = Simple Tasks subscale of GSCS, PSQI= increased Pittsburgh Sleep Quality Index

Treatment Group Differences

Tables 3 reports the mean difference test results for our treatment group. We observed a significant strong correlation (r = 0.73, $p \leq 0.01$) within the impulse control subscale of the DERS and a significant change (mean diff = 2, p = 0.02) with a fairly large effect size of 0.78 in our treatment group. We also observed a significant change in the overall DERS score (mean diff = 9.15, p = 0.04) with a medium effect size of 0.62; the correlation within the pair is medium (r = 0.49). In addition, we also observed a significant strong correlation (r = 0.65, p = 0.02) within the Impulsivity Subscale of the GSCS and weak evidence of a significant change (mean diff = 1.77, p = 0.05) with a medium effect size of 0.59 in our treatment group. Though there was a significant, strong, within-pair correlation for the PSQI score (r = 0.73, $p \leq 0.01$), GSCS (r = 0.69, $p \leq 0.01$), and its simple task subscale (r = 0.58, p = 0.04), they do not exhibit a statistically significant change in the effect of the outcomes. There is weak evidence that the change in the Awareness subscale (mean diff = 2.39, p = 0.07) and Clarity subscale (mean diff = 1.54, p = 0.06) of the DERS are significant. There was no significant change in Resilience and Adolescent Dissociation Experience scales.

Table 3
Descriptive statistics for treatment group (n = 13)

Variables	Mean diff.	Std. Deviation	Lower CI	Upper CI	t test	p-value	*r*	*p^*	*d*
BRS	-0.61	3.62	-2.80	1.57	-0.61	0.55	0.51	0.07*	0.17
ADES	12.15	54.52	-20.79	45.10	0.80	0.44	0.50	0.08*	0.22
DERS	9.15	14.85	0.18	18.13	2.22	0.04**	0.49	0.09*	0.62
IMP-DERS	2.0	2.55	0.46	3.54	2.83	0.02**	0.73	0.005***	0.78
AWR-DERS	2.39	4.37	-0.25	5.02	1.97	0.07*	0.05	0.86	0.55
CLR-DERS	1.54	2.76	-0.13	3.20	2.01	0.06*	0.53	0.05**	0.56
GSCS	4.92	11.91	-2.27	12.12	1.49	0.16	0.69	0.008***	0.41
IMPU-GSCS	1.77	2.98	-0.03	3.57	2.14	0.05**	0.65	0.02**	0.59
SMTA-GSCS	0.85	3.02	-0.98	2.67	1.01	0.33	0.58	0.04**	0.28
PSQI	2.0	8.06	-2.87	6.87	0.89	0.39	0.73	0.005***	0.25

*** *p-value* ≤ 0.01; ** *p-value* ≤ 0.05; * *p-value* ≤ 0.1

p^ = significance of Pearson's correlation, r= Pearson correlation coefficient, d = Cohen's effect size, BRS = Brief Resilience Scale, ADES= Adolescent Dissociation Experience, DERS= Difficulties in emotion regulation scale, IMP-DERS = Impulse subscale of DERS, AWR-DERS = Awareness subscale of DERS, CLR-DERS = Clarity subscale of DERS, GSCS= Grasmick self-control scale, IMPU_GSCS= Impulsivity subscale of GSCS, SMTA-GSCS = Simple Tasks subscale of GSCS, PSQI= increased Pittsburgh Sleep Quality Index

Discussion

The findings from our pilot study point to the promising effectiveness of adopting a precision medicine and individualized approach to mental health interventions in ACE-affected adolescents. Typically, residential treatment facilities

employ a standardized treatment curriculum that is provided to the vast majority of residents. While this approach can be effective for some individuals, it did not appear to be sufficient to bring about significant improvement in outcomes among our small control sample. On the other hand, use of an individualized neurofeedback treatment approach did result in statistically significant improvement in four of our six outcomes of interest (self-control, impulsivity, sleep patterns, and emotion regulation). In short, our study provides evidence in support of incorporating neurofeedback treatments for ACE- exposed adolescents in residential treatment facilities. This is not to say that other approaches do not work, however, we believe that treatment plans should be tailored to best suit the needs of individual clients and continuously re-assessed for progress and altered accordingly.

Factors such as ACEs negatively influence the development of self-regulatory processes and neural underpinnings (Harden & Tucker-Drob, 2011). These damaging effects highlight the need for interventions, such as neurofeedback, which is aimed at targeting specific internal states and processes within an individual to better manage their reactions and improve their overall mental and physical health.

Risky behavior in adolescence has been linked to the neurobiological development and rapid change in socioemotional pathways targeting an increase in reward- and sensation-seeking (Harden & Tucker-Drob, 2011). Lack of self-control and increased response spontaneity are often observed during the adolescent period. The findings of our study suggest that adolescence may represent an opportune time to integrate neurofeedback interventions with the intention of improved self-control and decreases in impulsivity.

Limitations

This study is not without limitations. Our greatest challenges were sample size and participant attrition. Our small sample size was impacted by the unexpected pause in enrollment and in-person interaction due to the onset of the COVID-19 pandemic. Due to the risk of exposure and spread of COVID-19, our study was terminated to ensure the safety of research participants and study personnel.

Due to the cyclical nature of residential treatment facilities and the many problems they face regarding insurance, court orders, facility transfers, parental demands, and outside circumstances, retaining participants for a 9-week intervention period proved challenging. Studies examining treatment retention among youth in residential programs found the risk of early dropout is high within the first 30 days to three months of treatment (Piotrkowski & Baker, 2004; Schroder et al., 2009). Further, adolescents presenting upon admission to treatment with more severe violent behaviors, substance use history and negative social environment are more likely to be at risk for early termination (Daughters et al., 2005; Orlando et al., 2003).

Our total pre-post sample size was small (*n*=20) and, therefore, this study is too low in power to generalize our findings to a larger population. In addition, our study experienced differential attrition in the two arms leading to non-equivalent groups. While large sample sizes are ideal to ensure power and reliability, neurofeedback research is commonly published with small sample sizes. Studies investigating individual differences in neurofeedback training have utilized a case study or case series design (Deilami et al., 2016; Fisher et al., 2016; Pazooki et al., 2019), and other neurofeedback studies have had sample sizes in the single digits, such as Eskandari and colleagues (2014) and La Marca and O'Connor (2016) with six and five participants, respectively. Although there are published neurofeedback studies with sample sizes from 30 to more than 70 (Gruzelier et al., 2014), Reiter and colleagues' (2016) review of five neurofeedback articles reported small sample sizes ranging from 10 to 29, which further underscores the commonality of small sample sizes for this type of research.

Additionally, our findings are limited in that they only assess change across a 9-week period and do not include long-term follow up. In addition, it is possible that our treatment group may have been influenced by the placebo effect which may have led them to self-report increased positive changes. However, it is relevant to note that seminal research conducted by Sternman (1977) empirically supported that EEG could be operantly conditioned with animals. Given these findings, measurable changes in EEG patterns and physiological status may not be attributed to placebo effect.

Implications for Mental Health Professionals and Future Research

The current research study was conducted by a team of counselors in partnership with colleagues across five other justice, health-related, and medical disciplines. Our study represents a trend in interdisciplinary research partnerships in the field of mental health diagnosis and intervention strategies. Counselors and other mental health professionals are increasingly working in interdisciplinary settings with peers in varied allied health and medical professions. It is imperative that they receive the requisite training in current neuroscience-informed and precision medicine approaches to treatment. For counselors lacking such training during their degree programs, seeking continuing education and training opportunities in addition to supervision is critical as the profession continues to integrate more neuroscience-informed interventions in mental health delivery. Future research is needed to substantiate the current study's findings on a larger scale. In addition, more randomized control studies examining the efficacy of neurofeedback on other mental health outcomes in adolescents in clinical and non-clinical settings which implement individualized protocol methodologies are warranted.

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