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Crisis intervention team training for law enforcement: Analyzing the factors that influence verbal de-escalation skills knowledge attainment in the Memphis Model

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CRISIS INTERVENTION TEAM TRAINING FOR LAW ENFORCEMENT: ANALYZING THE FACTORS THAT INFLUENCE VERBAL DE-ESCALATION SKILLS KNOWLEDGE ATTAINMENT IN THE "MEMPHIS MODEL"

by

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This dissertation is dedicated to my children,

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Abstract

Crisis intervention team (CIT) training has been proven to be effective at increasing officers' knowledge of mental health, improving attitudes toward those with a mental illness, and reducing use of force rates and arrest leading to incarceration of mental health consumers. Prior research has been primarily limited to outcome evaluations of CIT programs. The current study had 105 participants and examined officer-level variables identified in the literature that may affect verbal de-escalation skills knowledge attainment in the "Memphis Model" of CIT training. This was accomplished through the use of a hierarchal regression analysis. Results of the study found that officers who identified as male and officers who identified as White, scored higher on the De-escalation Skills Scale than their respective counterparts. The findings suggest that these populations may be more effective at utilizing verbal de-escalation skills knowledge during scenarios presented in the "Memphis Model" of CIT training.

Keywords: crisis intervention team, law enforcement, mental health, Memphis Model

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Introduction

Interventions by law enforcement officers (LEOs) with persons with a mental illness have been under intense public scrutiny in recent years due to high profile deaths (Tully & Smith, 2015). With the deinstitutionalization movement of the 1950s, community-based mental health services have replaced long stays in psychiatric hospitals. Communities now find themselves ill-equipped to handle the needs of persons with a mental illness who are experiencing crises. Police officers are now on the front lines answering those crisis calls. The National Institute of Mental Health (NIMH) estimates that 25% of the United States population will suffer from a mental illness each year (The National Institute of Mental Health, 2017). For all calls requiring police services, it is estimated that 7% to 14% of those calls involve a person with a mental illness (Hails & Borum, 2003; Watson & Angell, 2007). Saleh, Appelbaum, Liu, Stroup, and Wall (2018) compiled a database of civilian-police interactions during 2015 to examine how many contacts resulted in a person with a mental illness being killed by police. While there is no comprehensive tracking system currently in place, authors were able to identify 1,099 civilian deaths, 23% of whom had a mental health diagnosis (Saleh et al., 2018). An analysis by Torrey (n.d.) reports similar findings with shootings of mental health consumers being four times that of the general public. Rossler and Terrill (2017) found that one out of every three calls involving a person with a mental illness resulted in an injury. Police departments are exploring ways to train LEOs in how to better handle crisis situations. This is partly due to increased risk for negative attention (Vickers, 2000).

Literature Review

Historically, calls with mental health consumers have been under reported. This may be due to police dispatchers and law enforcement personnel not being trained to identify mental

health calls (Compton et al., 2010; Ritter, Teller, Marcussen, Munetz, & Teasdale, 2011). Crisis Intervention Team (CIT) training teaches law enforcement officers how to identify, interact, and de-escalate persons in crisis. This specialized training is needed to help reduce the risk of injury to mental health consumers and police officers. Livingston (2016) reported that one in four people with a mental illness has a history of arrest. The Federal Bureau of Investigation (FBI) tracks police officers who are assaulted and killed through the use of a Law Enforcement Officer Killed and Assaulted (LEOKA) form (Federal Bureau of Investigation, 2018). The risk of physical injury to police officers is 5 times higher when interacting with mental health consumers than when interacting with other types of criminals (Fisher et al., 2011). Additionally, Torrey (n.d.) found that LEOs are more likely to be killed when interacting with a person with a mental illness, than with a person who had a prior arrest for assaulting police officers.

Need for Training

Historically, police officers have often felt unprepared when dealing with mental health consumers (Bittner, 1967; Tully & Smith, 2015; Wells & Schafer, 2006). This lack of training and understanding can lead to miscommunications which can escalate already volatile situations. When officers are able to recognize a person has a mental illness and can communicate in a non-threatening way, mental health consumers may feel less apprehensive. According to Wells and Schafer (2006), 33% of officers reported not having the proper training to effectively resolve a crisis situation, and 58% percent of officers reported that their department needed to improve their training on mental illness. This results in officers not feeling confident in their ability to identify and communicate with persons with a mental illness. Police officers also reported feeling undertrained when it came to making contact with suicidal persons and knowing what resources were available for that person after the crisis (Fry, O'Riordan, & Geanellos, 2002).

Law enforcement training related to mental health is typically limited to departmental policy and state laws related to protective custody (Hails & Borum, 2003). Wells and Schafer (2006) reported that 62% of the time officers did not feel the options available for mental health consumers were helpful. Officers reported wanting more training and information on mental illness, including alternatives to incarceration such as diversion programs and regular updates about resources available within the community (Tully & Smith, 2015).

Crisis Intervention Team

In 1987, Memphis police officers fatally wounded a man known to have paranoid schizophrenia. This event was the catalyst for the creation of the Memphis police department's crisis intervention team training program (Vickers, 2000). This program, also referred to as the "Memphis Model," trains officers on how to use verbal de-escalation techniques specific to working with individuals in a mental health crisis. This model is based on eight core elements that include partnerships between law enforcement and mental health advocates, community ownership, updated policies and procedures, recognition of CIT officers' accomplishments, availability of mental health facilities, training for law enforcement officers and other support personnel, evaluation, and outreach (Ellis, 2014).

An officer's first look at in-depth information of mental illness might be at CIT training. The national CIT curriculum includes topics covering psychotropic medications and side effects, mental health issues with juveniles, substance abuse and co-occurring disorders, Post-traumatic stress disorder (PTSD), Traumatic brain injury (TBI), developmental disabilities, suicide intervention, rights and civil laws, legal aspects, personality disorders, and cultural awareness along with verbal techniques and de-escalation strategies (The Memphis Police Department, 2015). Officers also spend 8 hours in the community, having dialogue with mental health

consumers about previous experiences and lessons learned. In the 30 years since the program's creation, the most significant change in curriculum has been the increase in time allotted to verbal de-escalation skills training. According to Duckett (2017), training focused on verbal de-escalation has increased from 3 hours to 13 hours, constituting an increase of 25% and overall comprises 32.5% of the CIT curriculum.

The de-escalation skills training is conducted in steps beginning with didactic basic verbal de-escalation skills training, and then moving on to more complex subjects such as stages of crisis and advanced verbal de-escalation skills. The capstone of the week-long training is two 4-hour long practicum sessions beginning with simple scenario-based applications and ending with complex crisis scenarios. After each scenario, trainees are provided feedback by veteran CIT officers and volunteer mental health professionals. Feedback offered highlights how an officer's verbal and non-verbal communication skills, as well as their presence, influence situations (Bonfine, Ritter, & Munetz, 2014). Ritter, Teller, Munetz, and Bonfine (2010) report that training scenarios have the ability to increase officers' feelings of preparedness when dealing with mental health consumers. CIT de-escalation skills training is especially helpful if there is a risk of violence with mental health consumers (Morabito et al., 2012). All officers, regardless of CIT training, are capable of using their discretion to divert mental health consumers from jail to a treatment facility. However, Canada, Angell, and Watson (2010) found that CIT officers have an enhanced knowledge of options. This is due to the involvement of community agencies providing training on mental health issues for adults and adolescents, as well as procedures for referring individuals for services to their organizations.

Crisis Intervention Team Research

Kane, Evans, and Shokraneh (2018) conducted a meta-analysis reviewing 3,179 articles from 1980-2016. Only 23 articles met the criteria of having an experimental group and pre/post-test comparison. Of those 23 articles, only nine used the CIT method developed by the Memphis police department. It is worth noting that Steadman, Deane, Borum, and Morrissey (2000) conducted a study that examined three primary responses to mental health calls in law enforcement. The "Memphis Model" was found to be most effective in connecting persons with services and providing crisis response services on the scene of the call (Steadman et al., 2000).

Early research on crisis intervention programs indicated that CIT officers were more likely to transport individuals involved in mental disturbance calls to psychiatric facilities than their non-CIT counterparts (Teller, Munetz, Gil, & Ritter, 2006). Additionally, after attending CIT training, officers reported a better understanding of how to communicate with persons with a mental illness, anticipate the symptoms of mental illness, and understand their disposition options (Wells & Schafer, 2006). In a focus group of officers, it was reported that using their CIT skills reduced the risk of injury to themselves and persons with mental illness (Hanafi, Bahora, Demir, & Compton, 2008).

According to Ellis (2014), police officers in Miami-Dade County showed statistically positive changes in knowledge, perception, and attitude scores at the conclusion of training. Knowledge about mental illness was improved by 25.17%. Perceptions of mental illness changed in a positive way by 39.81% and officers' attitudes towards mental illness changed by 34.18%, meaning officers looked more favorably at persons with a mental illness. The difference between perceptions and attitudes should be highlighted here for context. A

perception is how something such as an event is interpreted. An attitude is how you react towards that perception.

Verbal De-escalation

Approximately one-third of the 40-hour CIT training program is devoted to teaching verbal de-escalation skills knowledge (Duckett, 2017). Officers are taught to utilize active listening, engage in communication that is non-threatening in nature, and ask open-ended questions (Oliva, Morgan, & Compton, 2010). When an officer engages in active listening, they are searching for an overall theme to a person's crisis. Officers are also taught to respond with reflection statements that convey they understand what the person in crisis is trying to communicate (Oliva et al., 2010). Communication involves both verbal and non-verbal attributes. Officers are educated on how their physical presence conveys meaning and how to respond with appropriate tone and speed. Watson and Angell (2007) found when officers displayed respect and acted in a non-demeaning way, individuals in crisis situations were more cooperative. Additionally, officers who were fair and just were ranked higher by persons with a mental illness than officers who used negative pressure, coercion, or apprehension (Livingston et al., 2014). Verbal de-escalation relies heavily on eliciting information from the person in crisis. Officers are taught the proper timing and use of open-ended versus close-ended questions (Oliva et al., 2010). Open-ended questions are designed to gain knowledge about the current situation. Close-ended questions are generally used to assess understanding and commitment. Effective verbal de-escalation requires all of these skills and tools to be utilized.

The paucity of research on CIT programs is evidenced by Kane et al. (2018). Effectiveness of CIT programs are generally assessed through the reduction in arrest of mental health consumers and increased referrals to mental health treatment facilities (Bower & Pettit,

2001; Steadman et al., 2000). Some studies counter this finding and report there has not been a reduction in arrest of persons with a mental illness (Teller et al., 2006; Watson et al., 2010). These outcome-based assessments have done little to assess factors that influence skill attainment during training, in particular, verbal de-escalation skills knowledge. Validation of additional components of the CIT training program could transition it from a "best practices" approach to an evidence-based practice (Kohrt et al., 2015; Thompson & Borum, 2006).

Previous Exposure to Mental Health

Prior literature has identified previous exposure to mental health as a strong forecaster for officers who attend CIT training. Officers who have more familiarity with mental illness have fewer negative views about mental health, are more understanding, and are willing to help those struggling with a mental health issue (Bahora, Hanafi, Chien, & Compton, 2008; Bonfine et al., 2014; Compton et al., 2011a; Ritter et al., 2010). Officers with a personal connection to mental health are more open to help someone with a mental illness by referring or diverting them to a treatment facility rather than taking them to jail (Watson et al., 2010). Additional studies found that CIT officers had more experience with personal and family mental illness than their non-CIT counterparts (Bahora et al., 2008; Compton et al., 2011a; Tully & Smith, 2015). Davidson (2016) found that officers who reported previous exposure had higher scores on the pre-test than those who had no prior experience. Officers' personal experience may provide them with a knowledge base and motivation to hone their de-escalation skills in order to interact more effectively in their personal and professional lives.

Education

Higher levels of education improve attitudes towards mental health and reduce stigma related to mental illness (Gonzalez, Alegría, Prihoda, Copeland, & Zeber, 2011; Psarra et al.,

2008). Higher levels of education are also associated with lower levels of perceived danger of persons with a mental illness (Parcesepe & Cabassa, 2013). While numerous studies evaluating the effectiveness of CIT programs collected data on educational levels of police officers, few examined interaction effects on crisis intervention skills knowledge. Compton, Bakeman, Broussard, D'Orio, and Watson (2017) found that officers who volunteered for CIT training had higher levels of education. Watson and Angell (2007) discovered that officers with less education were more likely to arrest persons with a mental illness. Officers with only a high school education did not have as much confidence in their abilities to interact with persons with a mental illness (Bonfine et al., 2014). The impact of educational level attainment should be examined due to recruitment criteria for some agencies requiring higher levels of education (Reuland, 2004). A police officer's level of education has the potential to improve outcomes for persons with a mental illness experiencing a crisis.

Race

Similar to education, demographic data on race was collected in studies evaluating CIT training effectiveness; however, few studies examined any interaction effect. A systematic literature review on public stigma in the United States by Parcesepe and Cabassa (2013) suggest that non-White individuals were more likely to believe that persons with a mental illness were dangerous compared to White individuals. Compton, Broussard, Hankerson-Dyson, Krishan, and Stewart-Hutto (2011b) found that race, when comparing White versus non-White, showed significance in previous exposure to mental health, with 60% of White officers reporting exposure compared to 40% of non-White officers. Additionally, a study by Ritter et al. (2010) found that White officers (83%) who volunteered to attend CIT training had fewer stigmas towards persons with a mental illness. Furthermore, Watson et al. (2010) found that White

officers were more likely to provide contact only. This means they were able to de-escalate the situation to a level where transportation to jail or a mental health facility was not necessary. Parcesepe and Cabassa (2013) reported as contact with persons with a mental illness increased, White individuals perceived danger was reduced; however, dangerousness was not reduced in non-White populations. The difference in reporting rates and recruitment for CIT training could be explained by current issues related to stigma and mental illness, especially in the non-White community.

Gender

According to the National Center for Women and Policing, females make up only 13% of police officers across the United States (http://womenandpolicing.com). Historically, males and females have had less favorable views toward female police officers (Steffensmeier, 1979). When it comes to interacting with persons with a mental illness, this view may be antiquated. Clayfield, Fletcher, and Grudzinskas (2011) found that female officers were more likely to report positive attitudes towards mental health consumers. Female officers were also found to be more understanding of persons with a mental illness prior to attending CIT training (Bahora et al., 2008). Additionally, female officers reported more self-efficacy after attending CIT training than their male counterparts (Davidson, 2016). In a study by Coonen (2016) examining emotional intelligence among CIT officers, females had higher scores when using emotions in problem solving. Inversely, males were found to be better at identifying their own emotions, implying females may not be as good as maintaining their emotions during stressful situations (Coonen, 2016). Other studies on gender influence in crisis intervention were neutral. Bahora et al. (2008) found that gender had no effect on self-efficacy. Furthermore, female officers are no

more likely than male officers to have force used against them on calls with mental health consumers (Rabe-Hemp & Schuck, 2007).

Job Longevity

After attending the police academy, officers enter a period known as field training and are paired with a more senior officer. This period can last from months to a year depending on the agency. During this time, rookie officers receive on-the-job training in how to deal with stressful situations and engage critical thinking skills. This is an important period as younger officers' perceptions of mental illness can be influenced by officer and organizational factors (Watson & Angell, 2007). Officers who have experienced calls with mental health consumers often feel better prepared to handle similar future situations. Ritter et al. (2010) found that CIT training followed by experience in the field improved officers' perceptions and preparedness in handling a mental health call from 26% to 97%. Clayfield et al. (2011) similarly found that officers with more years on the job and previous experience with mental health consumers felt better prepared and had more positive attitudes. Officers with less police experience were more likely to arrest persons with a mental illness than more experienced officers (Watson & Angell, 2007). While a good portion of literature supports experience as a predictor for self-efficacy and preparedness, it does not necessarily reduce uses of force. Rossler and Terrill (2017) found that more experienced officers use more force with persons with a mental illness compared to less experienced officers. Alternatively, Watson, Swartz, Bohrman, Kriegel, and Draine (2014) found that experience did not have a significant effect in preparing officers to handle crisis situations.

Considering the literature identified, there has been no study to date that systematically identifies all of these demographic variables combined. Therefore, the purpose of this study is to identify demographic factors of police officers that contribute to verbal de-escalation skills

knowledge attainment. In particular, race, gender, previous personal exposure to mental illness, education, and job longevity are assessed to account for variances in verbal de-escalation skills knowledge attainment. Narrowing down demographic factors that influence skill knowledge attainment could help agencies recruit more effective CIT officers. Additionally, it could reduce the strain on community mental health resources that provide a significant portion of CIT training.

Methods

The current study uses a correlational design to examine the relationships between the demographic factors (race, gender, previous exposure to mental illness, education, and years of job experience in their current occupation) and verbal de-escalation skills knowledge attainment.

Participants

The number of participants required to establish statistical power for this research design at the .85 level base on a $\alpha = .05$ was identified by conducting a priori power analysis using the G*Power 3 statistical power analysis program (Faul, Erdfelder, Lang, & Buchner, 2007). This analysis revealed that a sample size of 102 was necessary to detect a medium effect between the predictor variables for verbal de-escalation skills knowledge attainment. The total sample consisted of 105 participants which was more than required for a medium effect.

The sample of participants in this study were from the United States and International law enforcement agencies. The total sample consisted of 105 participants who identified as police officers (see Table 1). Most participants, 92 (87.6%) were male and 13 (12.4%) were female. Just over half identified as White, 60 (57.1%) and 45 (42.9%) were non-White. Participants age ranged from 22 to 63 years old (Mean = 35, SD = 8.7). Participants highest level of education was reported at 5 high school (4.8%), 5 vocational/technical (4.8%), 55 some college (52.4%),

35 bachelor's degree (33.3%), 4 master's degree (3.8%), and 1 missing response (.9%). Participants reporting previous exposure to mental health was 64 (61%) and those with no previous exposure was 41 (39%). Participants job longevity (Mean = 7.42, SD = 6.13) 0-2 years was 24 (22.9%), 3-7 years 44 (41.9%), and 8+ years 37 (35.2%).

Instrumentation

Demographic questionnaire. The 9-item demographic questionnaire includes gender, age, race, marital status, education, occupation and place of employment, duration of employment, and extent of exposure to persons with a mental illness.

De-escalation Skills Scale. This 25-item multiple choice instrument is used to measure knowledge of de-escalation skills knowledge as taught during the verbal de-escalation component of the International CIT curriculum (James, Kirchberg, Cochran, & Dupont, 2015). This instrument was developed by key personnel in the development and continued evolution of the Memphis CIT program (R. James, personal communication, July 22, 2017). There was no formal psychometric evaluation of this instrument. It was reviewed by three subject matter experts in the field of crisis intervention and determined to be a strong measure of de-escalation skills knowledge (R. James, personal communication, July 22, 2017). Three items (#6, #9, #22) were removed from the instrument as participants were found to answer them incorrectly after training. This left 22-items for analysis. The Cronbach's alpha for the revised scale was .630 which was considered acceptable for this study.

Through an agreement with a local CIT training center, existing data was provided to the researcher. Data provided was collected between October 2015 and July 2016. The data was de-identified prior to being given to the researcher. The University of Memphis Internal Review

Board (IRB) classified this study as a secondary analysis of archival program evaluation data (Appendix A). Therefore, IRB approval was not needed. The data was entered into SPSS 25.

The research question was, "Which demographic variables are most influential in predicting verbal de-escalation skills knowledge utilization as measured by the De-escalation Skills Scale?". First, I will discuss the rationale for the variables selected for analysis. Then, I will discuss the hierarchical regression analysis assumptions of normality, homogeneity of error variance, and lack of multicollinearity.

Choice of Predictor Variables

The demographic variables of race and gender were tested in model one. These variables were identified in the literature to have minimal affect and were chosen as a control for the remaining independent variables (Tabachnick & Fidell, 2013). Rossler and Terrill (2017) found that race nor gender had any effect on amounts of force used against persons with a mental illness. Additional studies found that race did not significantly impact CIT literature (Compton et al., 2011b; Parcesepe & Cabassa, 2013; Ritter et al., 2010). In some studies, gender was found to have significance in attitudes and self-efficacy regarding CIT training; however, there is minimal evidence that supports one gender performing better than the other in verbal de-escalation (Bahora et al., 2008; Clayfield et al., 2011; Coonen, 2016; Davidson, 2016; Rabe-Hemp & Schuck, 2007).

For model two, previous personal exposure to mental health was entered as a predictor for verbal de-escalation skills knowledge attainment while controlling for race and gender. Literature is available that supports the concept that officers with previous personal exposure to mental health have fewer negative views about mental health and are more comfortable interacting with persons with a mental illness (Bahora et al., 2008; Bonfine et al., 2014; Compton

et al., 2011b; Davidson, 2016; Ritter et al., 2010; Tully & Smith, 2015; Watson et al., 2010). Officers who display these attributes may be more effective crisis interventionists because of their personal feelings about mental health.

For model three, level of education of the participant was entered as a predictor for verbal de-escalation skills knowledge attainment while controlling for race, gender, and previous personal exposure to mental illness. More positive views, less perceived dangerousness of mental health consumers, and higher rates of self-efficacy were associated with police officers with higher education levels (Bonfine et al., 2014; Compton et al., 2017; Gonzalez et al., 2011; Parcesepe & Cabassa, 2013; Psarra et al., 2008; Reuland, 2004; Watson & Angell, 2007).

For model four, job longevity was inserted as a predictor for verbal de-escalation skills knowledge attainment while controlling for race, gender, previous personal exposure to mental health, and education. Officers with higher years of service on the job have improved perceptions of persons with a mental illness and report higher levels of preparedness for future crisis situations (Clayfield et al., 2011; Ritter et al., 2010). Experience gained by police officers in the field is difficult to duplicate in a controlled classroom setting. The knowledge they have attained through handling real-world situations may give them an advantage in learning and utilizing verbal de-escalation skills knowledge.

The assumptions of normality, homogeneity of error variance, and lack of multicollinearity were examined. The histogram of standardized residuals indicated the data were approximately normally distributed (see Figure 1), as did the normal P-P plot of standardized residuals. The random pattern on the scatterplot of standardized residuals of the predicted values showed the data met the assumption of homogeneity of variance (see Figure 1).

Multicollinearity was not a concern, as none of the variance inflations factors (VIF) were observed to be greater than 10 (VIF min = 1.018, VIF max = 5.772; see last column in Table 3).

A hierarchical multiple regression was conducted to examine the relationship between verbal de-escalation knowledge attainment as the dependent variable and demographic variables of race, gender, previous exposure to mental health, education, and years of job experience in their current occupation as independent variables (Tabachnick & Fidell, 2013; see Table 1 for descriptive statistics).

Results

Model one included the demographic variables race (indicator for White) and gender (indicator for male). The F-test for model one was significant (p = .045; see Table 2). There was a significant difference in the scores for White participants (Mean = 16.3, SD = 2.55) and non-White participants (Mean = 15.06, SD = 2.92; p = .009). White participants scored higher than non-White participants on the verbal De-escalation Skills Scale. There was also a significant difference in the scores between males (Mean = 15.89, SD = 2.80) and females (Mean = 14.92, SD = 2.46; p = .001). Male participants scored higher than female participants on the verbal De-escalation Skills Scale. Approximately 6% of the variance of verbal de-escalation skills knowledge attainment could be accounted for by race and gender.

Model two added previous personal exposure to mental health as a predictor for verbal de-escalation skills knowledge attainment while controlling for race and gender. Participants who reported previous personal exposure to mental health had an average score of 15.87 (SD = 2.73), while those who did not averaged 15.60 (SD = 2.86). The F-test for the model and the change in R-square indicate that previous personal exposure to mental illness did not significantly explain verbal de-escalation knowledge attainment in the presence of race and

gender (p = .092). Approximately 0.2% of the variance of verbal de-escalation skills knowledge attainment could be accounted for by previous exposure to mental illness.

Model three introduced level of education (high school, vocational/technical, some college, Bachelor's degree, Master's degree, professional degree) as a factor for verbal de-escalation skills knowledge attainment when controlling for race, gender, and previous exposure to mental illness. Participants who reported their highest level of education as high school scored 14.80 (SD = 3.49), vocational/technical school 15.80 (SD = 3.49), some college 15.81 (SD = 2.72), Bachelor's degree 15.77 (SD = 2.65), Master's degree 15.75 (SD = 4.19), and missing education level 18. The F-test for the model and the change in R-square indicate that level of education did not significantly predict verbal de-escalation knowledge attainment when the other variables were present in the model (p = .400). Only 0.9% of the variance of verbal de-escalation skills knowledge attainment could be accounted for by level of education.

Model four included years of job experience in their current occupation (grouped as 0-2 years, 3-7 years, 8+ years) as a factor influencing verbal de-escalation skills knowledge attainment when controlling for race, gender, previous exposure to mental illness, and education. Participants with 0-2 years scored 16.41 (SD = 2.18), 3-7 years 15.65 (SD = 2.71), and 8+ years 15.48 (SD = 3.16). The F-test for the model and the change in R-square indicate that job experience did not significantly contribute to explaining verbal de-escalation knowledge attainment with the other variables present in the model (p = .439). Only 1.7% of the variance of verbal de-escalation skills knowledge attainment could be accounted for by years in current position.

Discussion

The current study did not find the same significances in regard to previous exposure to mental health, education, or job longevity as other studies identified in the literature review (Bahora et al., 2008; Clayfield et al., (2011); Gonzalez et al., 2011; Psarra et al., (2008); Ritter et al., 2010; Watson & Angell, 2007). However, race and gender appear to contribute as predictive factors in verbal de-escalation skills knowledge attainment and utilization as measured by the De-escalation Skills Scale.

White officers had higher verbal de-escalation skills knowledge scores than non-White officers. This result is not surprising when considering existing literature. Watson et al. (2010) reported that White officers were more likely than non-White officers to de-escalate a situation through talking, rather than transporting someone to jail or a mental health facility. While few studies reported differences beyond post-tests, Davidson (2016) found that non-White officers experienced a greater deterioration in their perceptions of verbal de-escalation skills one month following CIT training. Additionally, Bonfine et al. (2014) found that even after CIT training, non-White officers did not believe their department was effective in meeting the needs of persons with a mental illness. There may be larger implications from this finding. Stigmas related to mental illness among minority populations should be addressed further in training. It may be advisable to include more educational material on mental illness among minorities in the CIT curriculum.

When examining gender, current results counter existing literature that suggest women may be more effective at interacting with mental health consumers due to having more positive attitudes about mental illness (Bahora et al., 2008; Clayfield et al., 2011; Davidson, 2016). This result counters additional literature that supports overall favorable views of female police

officers (Barnes, Beaulieu, & Saxton, 2018; Simpson, 2017). Female officers are believed to be more approachable and less threatening. Additionally, Todak and James (2018) found that female police officers tend to engage citizens by involving them in the decision-making process. This is further supported by Coonen (2016), who reported women use emotional intelligence in problem solving. While the current sample had 13 (12.5%) female participants, nearly matching the national average of female police officers (13%) on the force in the United States, additional responses are needed before making generalizations in regard to verbal de-scalation skills knowledge attainment.

While previous exposure to mental health was not found to be significant in the current study, existing literature supports the concept that police officers who have had prior experience may make more effective CIT officers. This may be due to their more positive views, increased willingness to help, and better understanding of mental illness. Alternatively, this variable may not have any impact on verbal de-escalation skills knowledge attainment. Prior research indicates that officers who complete CIT training have increased knowledge of mental illness, improved perceptions of persons with mental illness, and improved attitudes towards those with mental illness (Bonfine et al., 2014; Ellis, 2014; Wells & Schafer, 2006). Additionally, Tully and Smith (2015) found officers with no previous experience report increased compassion towards persons with a mental illness. Further research should evaluate the role of previous exposure to mental health in verbal de-escalation skills knowledge attainment.

Education levels in the current study are skewed and do not provide a representative sample of education levels of police officers across the United States. Law enforcement agencies vary in minimal education requirements from a high school diploma, two years of college, a four-year college degree, or equivalent military service. A 2017 survey of 958 law enforcement

agencies across the United States found that 51.8% of police officers had at least a two-year degree, 30.2% had a four-year degree, and 5.4% had a graduate degree (Gardiner, 2017). Of the 105 participants in the current study, 89.5% reported having at least some college. Paoline and Terrill (2007) reported that just having exposure to higher education increases officers' understanding of the varying forms of verbal force. Additionally, higher education stimulates critical thinking skills which have the propensity to enhance ethical and professional policing behavior (Paterson, 2011). Future studies on educational impact on verbal de-escalation skills knowledge should include a more representative sample of police education levels across the United States.

Job longevity was not found to be significant in the current study. This result is not unexpected considering the varying literature available. It was hypothesized that more time on the job as a police officer would increase verbal de-escalation skills knowledge attainment. This was supported by research that reported increased rates of self-efficacy and preparedness when handling calls involving persons with a mental illness (Clayfield et al., 2011; Ritter et al., 2010). Additionally, Paoline and Terrill (2007) found that verbal and physical force were reduced with officer experience. Officers with more than 10 years of experience used force 51% of the time, compared to officers with 3-5 years who used force 65.3% of the time (Paoline & Terrill, 2007). When considering the sample in the current study, 74.2% (n = 78) of officers had 10 years of service or less and the median years of service was 7.42. The sample in the current study may not have enough variability in years of service to detect a significance. Alternatively, Watson, Swartz, Bohrman, Kriegel, and Draine (2014) found that experience did not prepare officers to handle crisis situations. For future studies, evaluation of self-efficacy and preparedness in

relation to years of service may correlate to better outcomes for mental health calls than verbal de-escalation skills knowledge attainment.

The inclusion of community partners and resources in policy making is a significant component of the CIT program. As the literature indicates, collaborative efforts between community organizations and law enforcement have the potential to connect those in need to mental health services. Universities are a part of that community and play a key role in preparing future counselors. The Council for Accreditation of Counseling and Related Educational Programs (CACREP) 2016 standards (2015) identify crisis intervention as foundational knowledge for counselors in training. Thereby, crisis intervention courses may benefit from collaborating with local law enforcement agencies to familiarize students with CIT programs and other crisis intervention resources (Watson & Fulambarker, 2012).

Limitations

A limitation of the current study was the use of the De-escalation Skills Scale (form B). This assessment was created by subject-matter expert in the field of crisis. However, this instrument has not been empirically validated for reliability or consistency. The initial Cronbach's alpha was .583. After reviewing each item, it was determined that over 85% of participants missed questions #6, #9, #22. The items were determined to be poorly constructed and were removed. The revised Cronbach's alpha was .630. The scenario-based questions are an additional limitation of this scale. The questions were designed to address common situations that law enforcement officers in the Southeastern United States encounter. To strengthen reliability and consistency, this instrument should be validated with other law enforcement agencies across the Nation. (Sullivan, 2011).

A lack of true experimental condition is another limitation of this study. Statistical significance of de-escalation skills knowledge attainment results can be challenged due to the lack of an external control group. For future consideration, it may be suggested that all police department recruits complete form B of the De-escalation Skills Scale to establish a baseline of non-CIT trained officers.

Finally, there is no formal objective evaluation process that determines if a participant attending CIT training passes or fails (The Memphis Police Department, 2015). The Peace Officers Standards and Training Commission (2014) sets minimal passing scores on new police basic recruits and yearly in-service training at 75% for a passing score. The lack of a formal evaluation process may cause participants to have a low level of motivation to interpret questions accurately (Huang, Bowling, Liu, & Li, 2015). For future studies, a formal written evaluation process should be established to ensure that participants are meeting program objectives.

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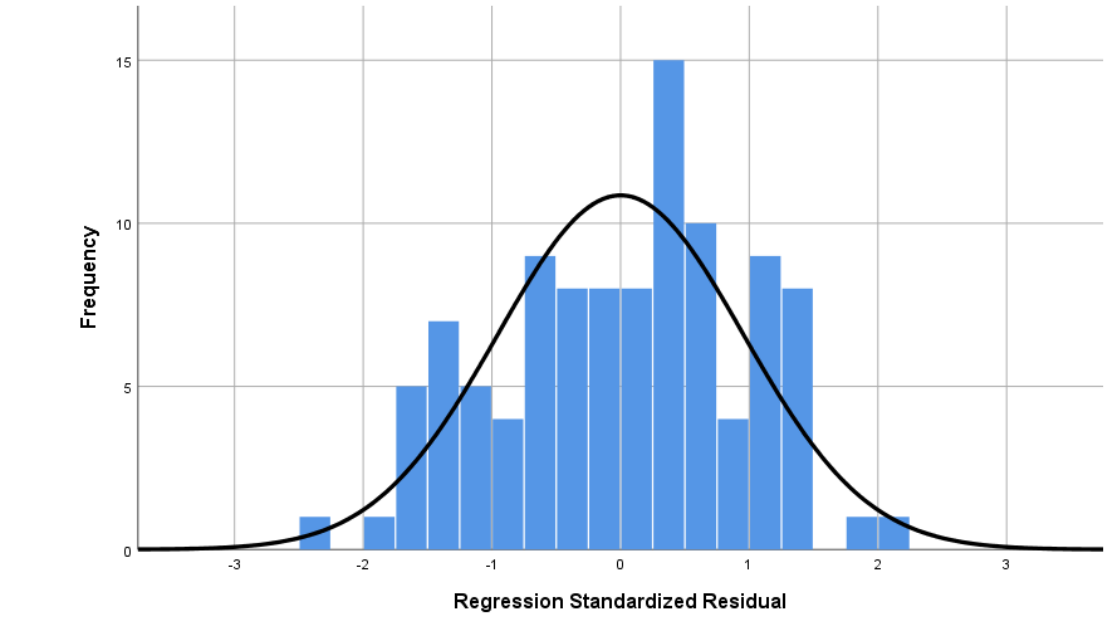
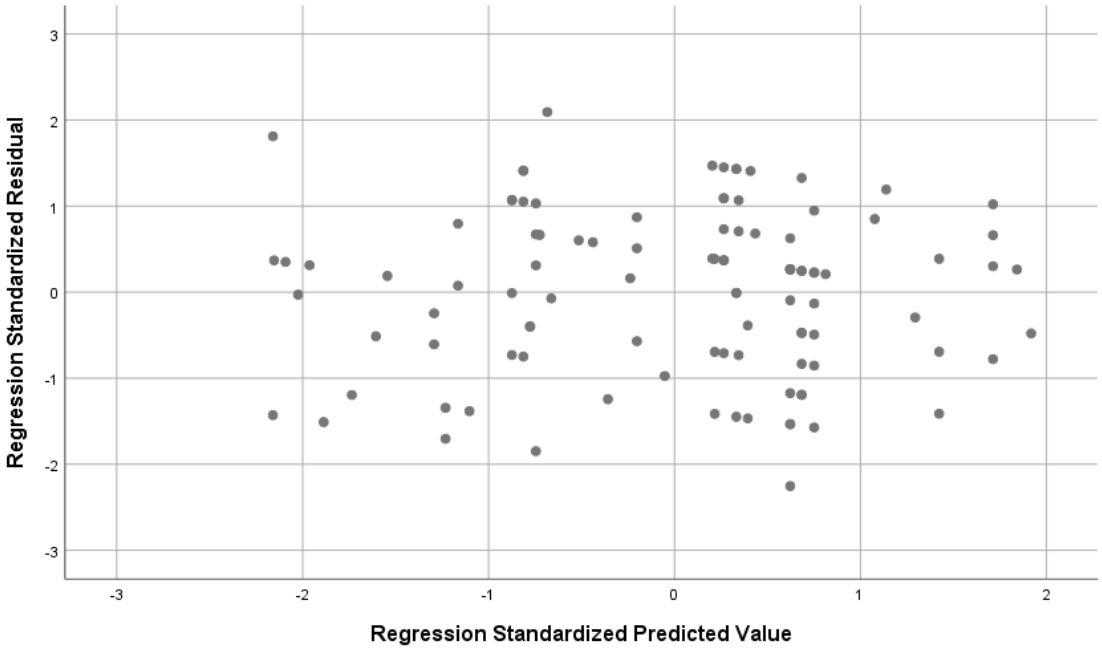


(a)



(b)

Figure 1. Histogram (a) and Scatterplot (b) of Standardized Residuals

Table 1

Descriptive Statistics

Demographic Variables	*n*	Percent
Gender		
Male	92	87.6%
Female	13	12.4%
Total	105	100.0%
Race		
White	60	57.1%
Non-white	45	42.9%
Total Scale	105	100.0%
Education		
High School	5	4.8%
Vocational/Tech	5	4.8%
Some College	55	52.4%
Bachelor's Degree	35	33.3%
Master's Degree	4	3.8%
PhD, JD, MD	0	.0%
Total	104	100.0%
Previous Exposure to Mental Health		
No	41	39.0%
Yes	64	61.0%
Total	105	100.0%
Job Longevity (Mean = 7.42, SD = 6.13)		
0-2 years	24	22.9%
3-7 years	44	41.9%
8+ years	37	35.2%
Total	105	100.0%

Table 2

Summary of Regression Model Tests

Model		Overall Model Tests				R-square Change Tests			
		R^2	df	F	Sig.	ΔR^2	F	Df	Sig.
1	Gender, Race	.060	2, 101	3.200	.045	.060	3.200	2, 101	.045
2	Gender, Race, Exposure to Mental Illness	.062	3, 100	2.207	.092	.002	.266	1, 100	.607
3	Gender, Race, Exposure to Mental Illness, Education	.071	7, 96	1.053	.400	.009	.238	4, 96	.916
4	Gender, Race, Exposure to Mental Illness, Education, Job Longevity	.088	9, 94	1.008	.439	.017	.863	2, 94	.425

Table 3

Summary of the Regression Analysis Results

Model	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta	T-Test	Sig.	VIF
Model 1						
Intercept	14.472	.791		18.289	.000	
Race – White	1.168	.566	.209	2.062	.042	1.099
Gender – Male	.683	.876	.079	.780	.437	1.099
Model 2						
Intercept	14.328	.842		17.024	.000	
Race – White	1.174	.568	.210	2.066	.041	1.099
Gender – Male	.643	.882	.074	.728	.468	1.108
Exposure to Mental Health	.285	.553	.050	.516	.607	1.008
Model 3						
Intercept	13.069	1.575		8.297	.000	
Race – White	1.173	.582	.210	2.015	.047	1.118
Gender – Male	.759	.932	.088	.815	.417	1.198
Exposure to Mental Health	.336	.564	.059	.595	.553	1.018
Education – Vocational/Technical	1.302	1.762	.101	.739	.462	1.921
Education – Some College	1.121	1.302	.202	.861	.391	5.705
Education – Bachelor's	1.224	1.338	.209	.915	.363	5.400
Education – Master's	1.548	1.920	.108	.806	.422	1.842
Model 4						
Intercept	13.763	1.689		8.149	.000	
Race – White	1.234	.587	.220	2.103	.038	1.133
Gender – Male	.709	.934	.082	.760	.449	1.200
Exposure to Mental Health	.345	.572	.061	.603	.548	1.044
Education – Vocational/Technical	1.486	1.771	.115	.839	.404	1.934
Education – Some College	1.111	1.311	.200	.847	.399	5.772
Education – Bachelor's	1.217	1.368	.208	.889	.376	5.634
Education – Master's	1.280	1.942	.089	.659	.512	1.879
Longevity –3-7 years	-.899	.729	-.161	-1.234	.220	1.747
Longevity –8+ years	-.849	.765	-.147	-1.110	.270	1.747

APPENDIX A

Monday, December 3, 2018 at 10:57:27 AM Central Standard Time

Subject: Determination PRO-FY2019-261
Date: Friday, November 30, 2018 at 15:32:28 Central Standard Time
From: Kellie Watson (kwtson10)
To: Paul M Dunaway (pdunaway)
CC: Leigh Falls Holman (lfalls)
Attachments: image001.jpg, image002.jpg, image003.jpg, image004.jpg

Good afternoon Mr. Dunaway,

Based on the information provided in your determination PRO-FY2019-261 - Crisis Intervention Team Training for Law Enforcement: Analyzing the Factors that Influence Verbal De-escalation Skills Attainment in the "Memphis Model" the IRB has determined that your activity does not meet the Office of Human Subjects Research Protections' definition of human subjects research and 45 CFR part 46 does not apply.

This study does not require IRB approval nor review. Your determination file will be administratively withdrawn from Cayuse IRB and you will receive an automated email similar to this correspondence. Your protocol will be archived in Cayuse IRB

Thanks,
-KW

Kellie Watson
Research Compliance Coordinator
Division of Research and Innovation

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